APPENDIX A

BASS LAKE HILLS SPECIFIC PLAN

County of El Dorado



November 7, 1995
Amended June 2024

3rd Draft

BASS LAKE HILLS SPECIFIC PLAN

County of El Dorado

1995 Planning Department
County of El Dorado

Conrad B. Montgomery, Planning Director
Thomas A. Parilo, Planning Director (1992-1995)
Steven Hust, Principal Planner
Pierre Rivas, Acting Principal Planner
Ken Greenwood, Planner

2024 Planning Department
County of El Dorado

Karen Garner, Director of Planning & Building
Bret Sampson, Long Range Planning Manager

1995 Consultants

Specific Plan:

Randy M. Chafin, AICP
Planning and Environmental Services
1125 Dartmouth Avenue
Roseville, CA 95678

Public Facilities, Resources Mapping, and Public Facility Financing:

David Crosariol, PE
Cooper, Thorne & Associates, Inc.
3233 Monier Circle
Rancho Cordova, CA 95742

~~***November 7, 1995***~~
Amended June 2024 by Torrence Planning & Design Inc.

3rd Draft

BASS LAKE HILLS SPECIFIC PLAN

County of El Dorado

Approved by the
El Dorado Planning Commission
April 9, 1992

Darol Rasmussen, District 1
Kathy Goltz, District 2
Albert "Bert" Harris, District 3
Ray Griffiths, District 4
George Osborn, District 5

Amended Specific Plan Approved by the
El Dorado Planning Commission
Insert Date

Brandon Reinhardt, District 1
Bob Williams, District 2
Lexi Boeger, District 3
Andy Nevis, District 4
Daniel Harkin, District 5

Approved by the
El Dorado County Board of Supervisors
November 7, 1995
Resolution No. 288-95

William S. "Sam" Bradley, District 1
Raymond J. Nutting, District 2
J. Mark Nielsen, District 3
Walt Shultz, District 4
John E. Upton, District 5

Amended Specific Plan Approved by the
County of El Dorado Board of Supervisors
Insert Date
Insert Resolution No.

John Hidahl, District 1
George Turnboo, District 2
Wendy Thomas, District 3
Lori Parlin, District 4
Brooke Laine, District 5

Amended: June 2024

3rd Draft

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1.0 INTRODUCTION & PROJECT SETTING

1.1 Purpose & Scope of the Specific Plan

The purpose of the Bass Lake Hills Specific Plan (herein referred to as the Plan) is to facilitate the orderly and systematic development of the Plan Area through the establishment of a comprehensive and coordinated planning program which is consistent with the El Dorado County ~~Public Review Draft~~ Amended 2004 General Plan (General Plan), and the development opportunities and constraints of the land.

The Plan provides a comprehensive framework for future development of the Plan area. The Plan establishes maximum residential land use densities and commercial development intensities for all land within the Plan area, specifies how those lands will be developed, describes the public facilities and services necessary to support allowed development, and describes the funding mechanisms necessary for implementation.

The Plan and the Bass Lake Road Area Program Environmental Impact Report (herein referred to as the EIR), and Addendum improves efficiency of development planning and review and provides correlation between land use, public facilities and services necessary to support allowed development. The environmental review process for subsequent residential and commercial development projects may be found exempt from CEQA pursuant to Section 15182. This section states that an EIR or negative declaration is not required for residential projects, including land subdivisions, zone changes, and residential planned unit developments, where an EIR has been certified by the County for the Plan.

Following are key components and features of the Plan:

- Land uses within the Plan area;
- Location, extent, and financing of area-wide public facilities required to serve ultimate development of the Plan area;
- Natural resources potentially affected by Plan area development;
- Goals and policies to guide development decision making;
- Implementation programs which describe land use regulation mechanisms, Plan adoption and amendment procedures, public property maintenance and financing, and a framework for public facility phasing; and
- Design guidelines for select public facility improvements.

The Plan is not an ordinance and is not intended to replace the El Dorado County Zoning Ordinance. Rather, the Plan refines the General Plan by providing detailed policy direction for the Plan Area beyond that provided in the General Plan. The Plan is, therefore, implemented by existing County regulations, and can be adopted and amended by resolution in the same manner as the General Plan (refer to Section 9.2).

1.2 Planning Approach & Methodology

The Plan is the result of an on-going planning effort initially involving simultaneous processing of tentative subdivision maps and zone change requests for several properties within the study area. The area-wide planning effort began with the preparation of an area-wide EIR analyzing potential impacts of developing the Plan Area at assumed densities consistent with the El Dorado Hills/Salmon Falls Area Plan land use designations in effect at the time. These densities would have yielded a maximum of 2,847 dwelling units.

As the EIR process proceeded, it became apparent that many area-wide planning issues addressed in the EIR required a mechanism which would help to ensure that adopted mitigation measures were applied in project approvals and that monitoring of mitigation measures occurred. Following is a listing of the planning issues which were identified:

- Circulation
- Cultural Resources
- Grading Limitations
- Noise
- Oak Woodland Habitat Conservation
- Open Space
- Parks and Recreation
- Public Facilities and Services
- U.S. Highway 50 Scenic Corridor
- Wetlands and Surface Hydrology

Development proponents and the County agreed that a comprehensive development plan should be prepared as a means to address these planning issues and develop a consistent policy program to coordinate the implementation of projects. Subsequently, the County determined that a specific plan would be prepared, as defined by California Government Code. The 1995 Plan is an outgrowth of the area-wide EIR that include the mitigation measures.

During the hearing process for Plan consideration, the General Plan Update project description became more defined. On December 8, 1992, the Board of Supervisors directed the Planning Department to incorporate "Alternative 3A" into the General Plan Project Description and to revise the draft Specific Plan to be consistent with that land use scenario. The revised Plan proposed a range of densities from 1 du/5 acres to 4 du/acre with a maximum yield of 1,458 dwellings. The Plan reflects consistency with the General Plan.

The Plan is a policy document to refine and implement the ~~draft~~ General Plan, and is implemented by existing ordinances and State law. Following is a summary of key assumptions of the Plan:

- Proposed and assumed zoning designations are consistent with the General Plan and densities described in the EIR.
- Implementation of the Plan will be provided through the El Dorado County Zoning Ordinance, and all other applicable County ordinances.

This Plan also incorporates the mitigation measures from the Plan's final EIR. Mitigation measures adopted for potential impacts associated with the EIR are incorporated as development standards for the Plan.

Per Government Code Section 65457, Planning and Zoning Law, "any residential development project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an environmental impact report has been certified is exempt from the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code". Further environmental analyses may be required if a project description deviates from the EIR project description to the extent that new, unmitigated significant environmental impacts are identified. This additional environmental analysis may take the form of a supplemental or subsequent EIR, or a mitigated negative declaration in accordance with Section 21166 of the State CEQA Guidelines.

1.3 Plan Area Location & Description

1.3.1 Regional & Local Setting

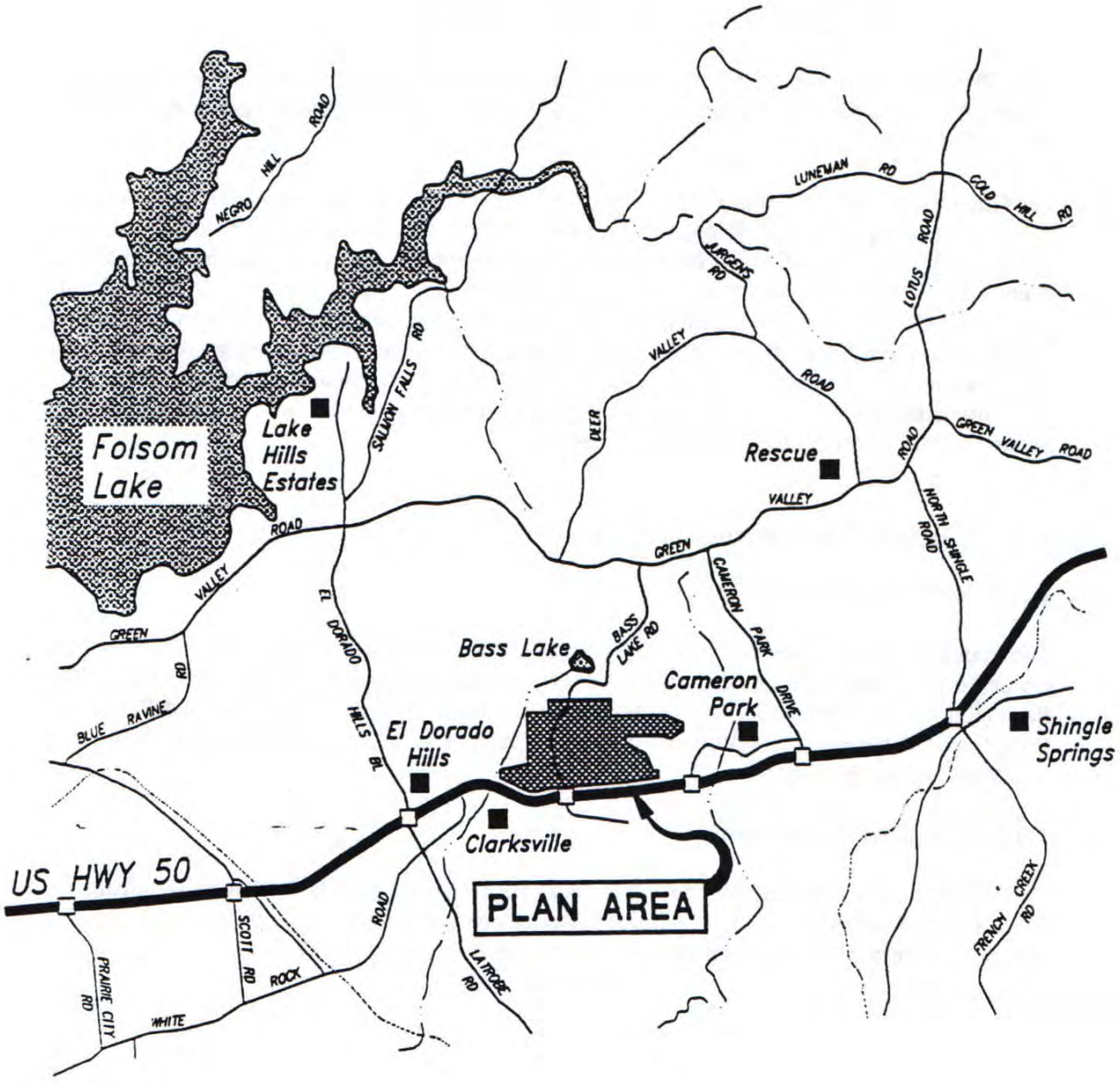
The Plan area is approximately three miles east of the Sacramento/El Dorado County line, within the underdeveloped eastern portion of El Dorado Hills and adjacent to the west end of Cameron Park (Figure 1-1). U.S. Highway 50 forms the southern Plan area boundary, and Bass Lake Road transects the area in a north/south direction. Bass Lake itself is approximately one-quarter mile north of the Plan area.

1.3.2 Plan Area Description

The Plan area is 1,196.<u>14</u>-acres in size and includes ~~88~~ individual parcels ranging in size from 1.1 to 96.4-acres (Appendix A). The majority of the parcels (78 percent) are approximately 10-acres in size. <u>In 1995,</u> there <u>were</u> ~~are~~ approximately 35 existing residential dwelling units in the Plan Area. <u>In the fall of 2023, approximately 470 new residential dwelling units have been constructed in the Plan Area.</u>

Figure 1-1

Regional and Local Setting



1.3.3 Plan Area Existing Conditions

The Plan area includes a variety of natural resources, including he following:

- Hillsides
- Oak woodland
- Wetland, intermittent streams and drainages
- Cultural resources

This section describes the identified natural resources in the Plan Area. Policies pertinent to these resources are contained in Section 7.0, Environmental Management. Figure 1-2 , Composite Resources Map, provides a conceptual mapping of all of the resources described in this section.

1.3.3.1 Hillside Viewsheds and U.S. Highway 50

Much of the Plan Area consists of rolling hills which are highly visible from off-site vantage points, particularly the U.S. Highway 50 corridor. From U.S. Highway 50, large portions of the Plan Area constitute prominent foreground and background viewsheds. The hillsides of the Plan Area are the prominent background feature from eastbound U.S. Highway 50 for the first two miles as one enters the County. Areas of greatest sensitivity are the hillsides within the viewshed of U.S. Highway 50 and Bass Lake Road.

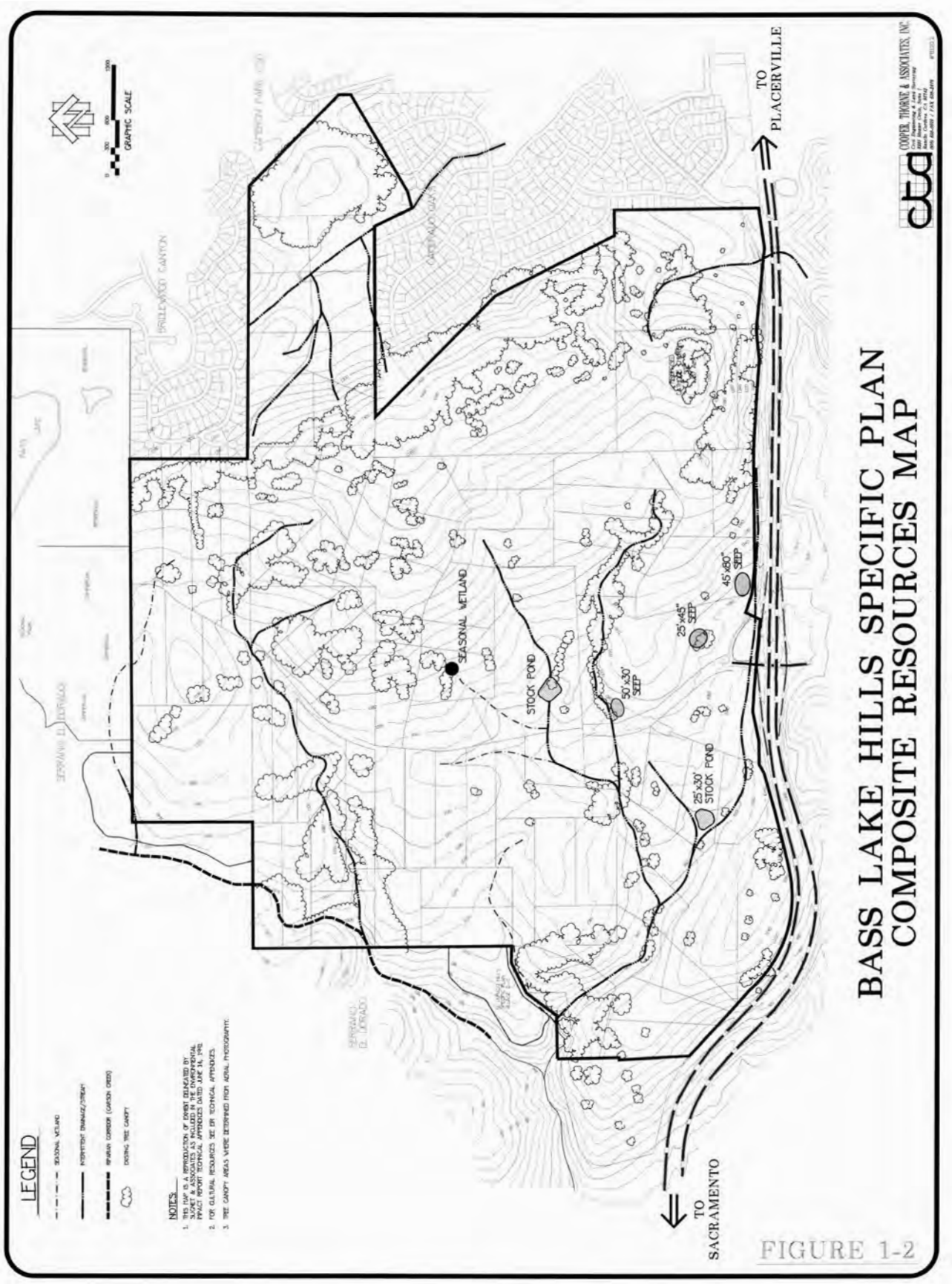
An analysis of the U.S. Highway 50 corridor was prepared by Sierra Land Design under contract with the County, and was accepted by the El Dorado County Board of Supervisors in June 1991. This analysis identified both foreground and background areas along the corridor from the west El Dorado County line to the City of Placerville. The ~~draft~~ 2004 General Plan directs that a ~~the establishment and application of the~~ Scenic Corridor Ordinance shall be prepared and adopted for the purpose of establishing standards for the protection of identified scenic local road and state highways. As of January 2024, the Board of Supervisors has not adopted a Scenic Corridor Ordinance and no identified scenic local roads or state highways exist in the Plan Area. ~~Combining Zone District to all lands, exclusive of Community Regions and Rural Centers, to lands determined to be scenic~~ (General Plan Policy 2.6.1.6~~1~~). Foreground and background areas for the Plan Area are shown in Figure 1-3.

At the residential densities and commercial development intensities proposed, the most noticeable effect of development will be modification of the natural topography through grading and removal of tree cover to accommodate roads and building sites. In addition to visual impacts, hillside grading also increases potential erosion impacts.

Hillside topography is subject to a variety of mechanisms to reduce viewshed impacts along the roadways. These include utilization of clustering, planned development, and transfer of development.

Figure 1-4, Slope Map, illustrates the Plan Area in accordance with the following slope categories. Table 1-1 describes the various slope categories in terms of percentages of the total Plan area.

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BASS LAKE HILLS SPECIFIC PLAN
COMPOSITE RESOURCES MAP
LEGEND
SEASONAL WETLAND
INTERMITTENT DRAINAGE/STREAM
RIPARIAN CORRIDOR (CARSON CREEK)
EXISTING TREE CANOPY
NOTES
1. THIS MAP IS A REPRODUCTION OF EXHIBIT DEVELOPED BY SUNET & ASSOCIATES AS INCLUDED IN THE ENVIRONMENTAL IMPACT REPORT TECHNICAL APPENDICES DATED JUNE 14, 1982.
2. FOR CULTURAL RESOURCES SEE EIR TECHNICAL APPENDICES.
3. TREE CANOPY AREAS WERE DETERMINED FROM AERIAL PHOTOGRAPHY.
GRAPHIC SCALE
TO PLACERVILLE
TO SACRAMENTO
SEASONAL WETLAND
STOCK POND
25'x30' STOCK POND
50'x30' SEEP
25'x45' SEEP
45'x80' SEEP
CARSON CREEK
SPRINGVALE
EL DORADO
cta
COOPER THORNE & ASSOCIATES, INC.
FIGURE 1-2

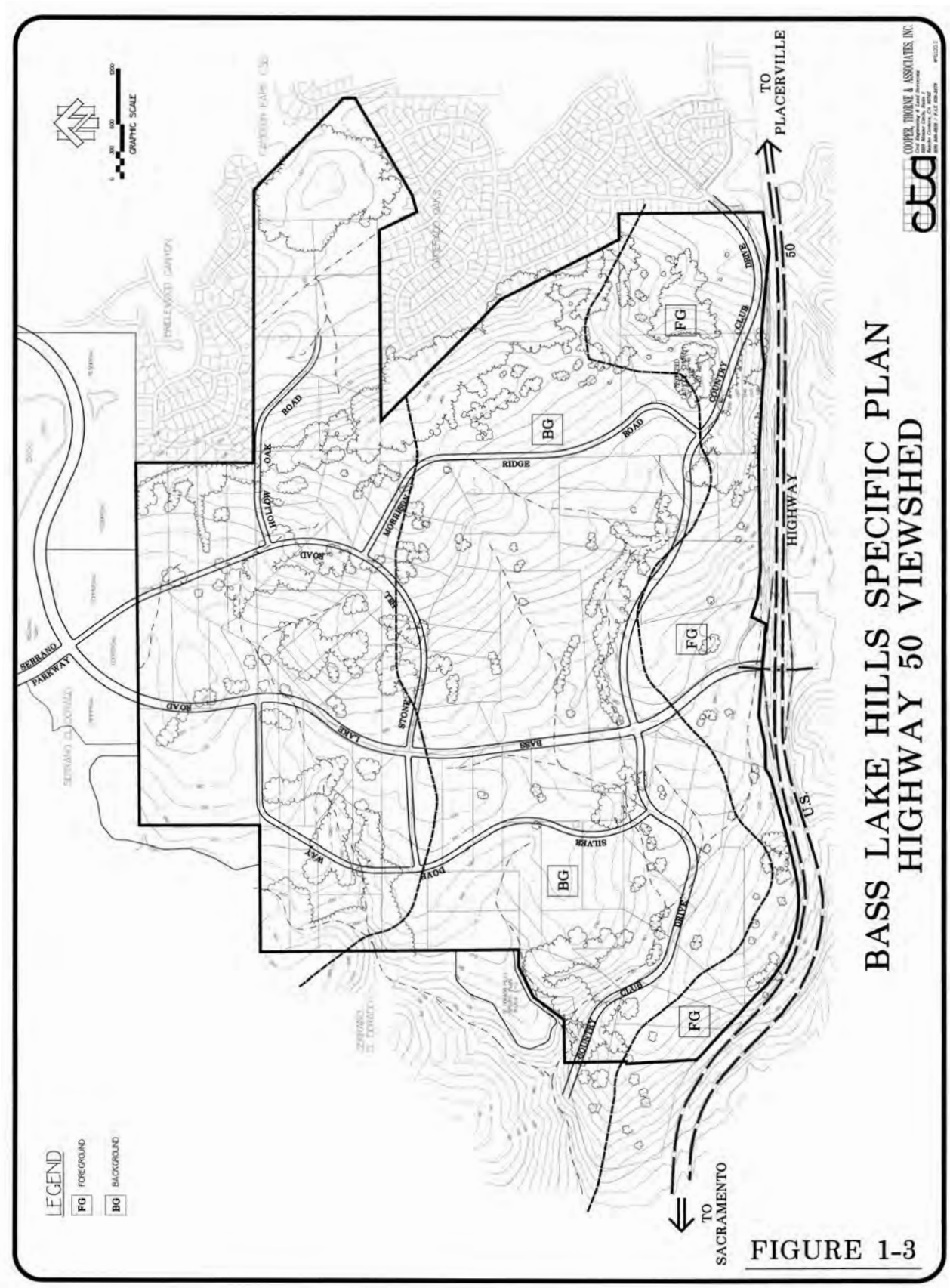

BASS LAKE HILLS SPECIFIC PLAN
HIGHWAY 50 VIEWSHED
TO PLACERVILLE
TO SACRAMENTO
HIGHWAY 50
U.S.
FG
BG
LEGEND
FOREGROUND
BACKGROUND
SERRANO PARKWAY
OAK HILL ROAD
MORRISON RIDGE ROAD
STONE LAKE
BASS LAKE ROAD
SILVER DOVE WAY
COUNTRY CLUB DRIVE
GRAPHIC SCALE
COOPER, THORNE & ASSOCIATES, INC.

FIGURE 1-3

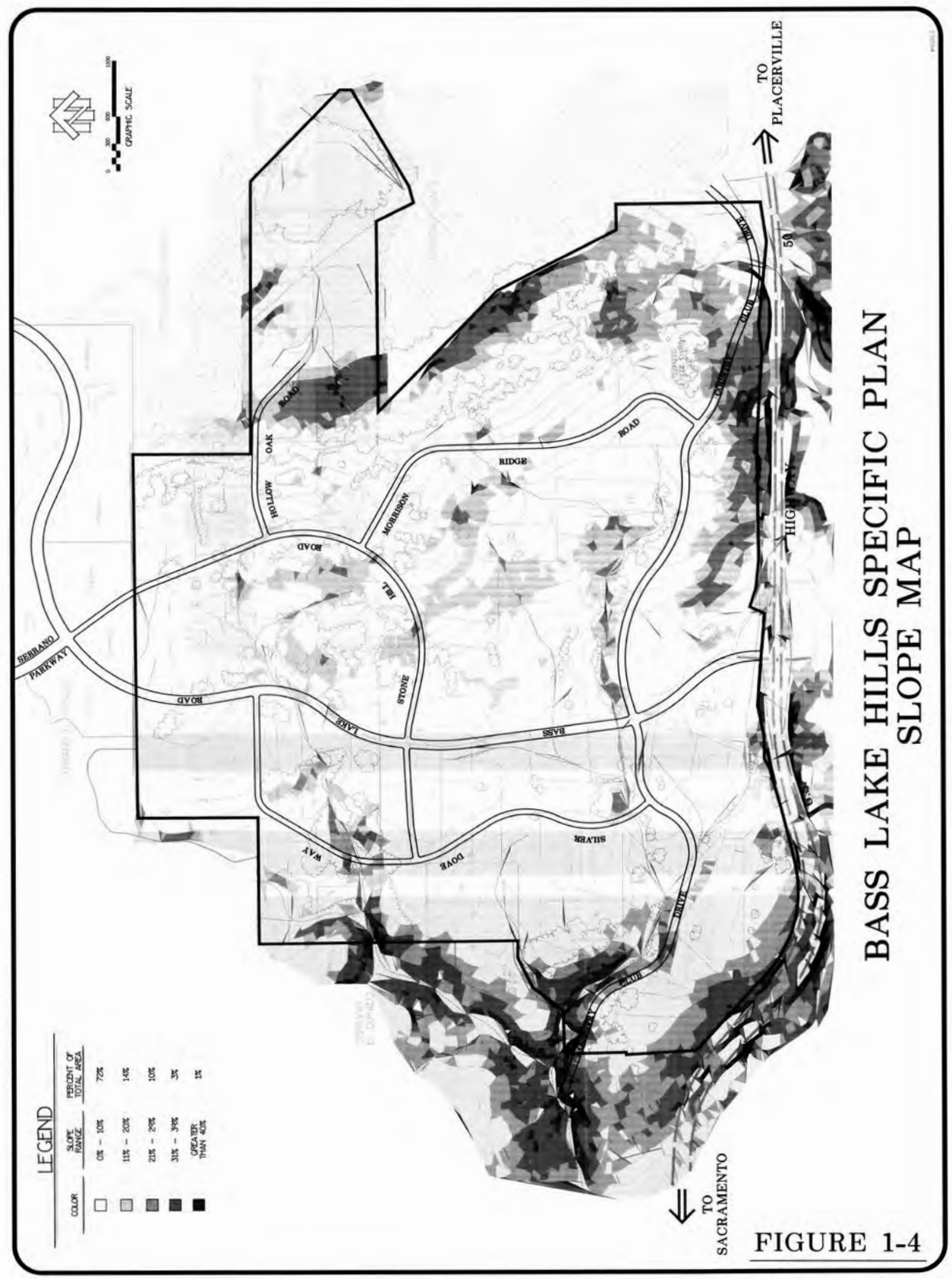


FIGURE 1-4

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Table 1-1

Slope Categories

Slope Category (% Slope)	% of Plan Area
0-10	40
10-15	29
15-20	21
20-30	9
30 or more	1

As shown in Table 1-1, 69 percent of the Plan Area has slopes of 15 percent or less with 31 percent of the Plan Area having slopes in excess of 15 percent.

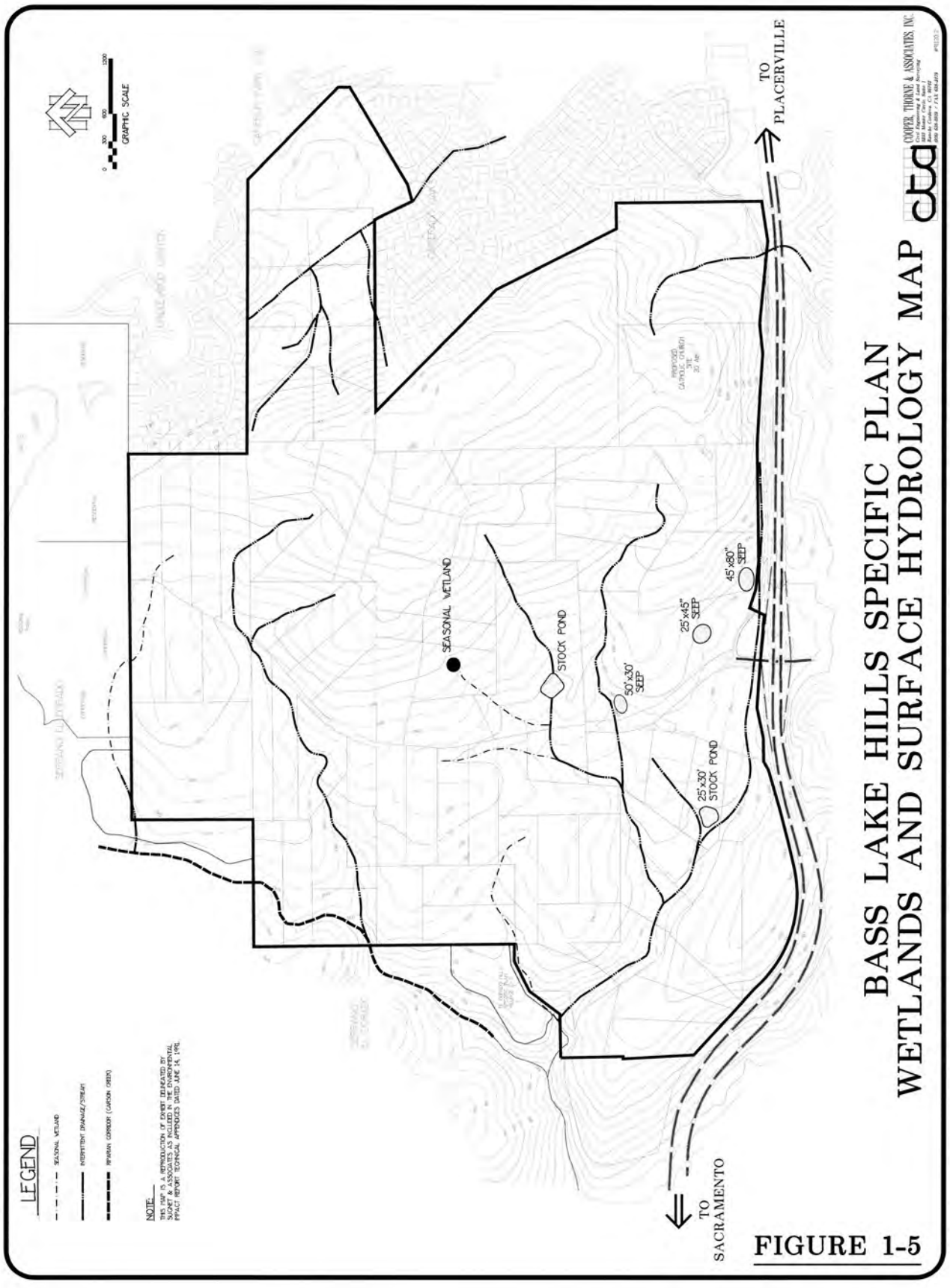
1.3.3.2 Oak Trees

The Plan Area is characterized by a variety of vegetative habitats. While annual grassland is the predominant form, oak woodland and savannah comprises a significant area. The oak woodland is characterized by trees with diameter at breast height (dbh) of 30 to 40 inches and a healthy middle story of oak saplings under 6 inches dbh. Also included is a rich understory of vegetation. Oak Savannah differs from the Oak Woodland primarily by the absence of significant understory. Figure 1-2, the Composite Resources Map, shows oak trees cover large areas of the eastern and western portions. While the Plan Area contains a variety of tree species, oaks are the dominant species and are deemed to be of greatest importance. The multitude of oak trees which grow in the Plan Area constitute a valuable natural resource for several reasons, including aesthetics, erosion control, temperature control, and wildlife habitat.

Oak tree conservation policies are set forth in Section 7.5.

1.3.3.3 Wetlands, Intermittent Streams, and Drainages

The EIR identifies a variety of wetlands, including intermittent streams, drainages, adjacent wetlands, and seeps. Other wetlands include a perennial stream riparian corridor (Carson Creek) and two stock ponds. Within the entire Plan Area, there are approximately 15 acres of wetland features. Wetlands, intermittent streams, and drainages are depicted conceptually in Figure 1-5, Wetlands and Surface Hydrology Map.


BASS LAKE HILLS SPECIFIC PLAN
WETLANDS AND SURFACE HYDROLOGY MAP
FIGURE 1-5
LEGEND
SEASONAL WETLAND
INTERMITTENT DRAINAGE/STREAM
RIPARIAN CORRIDOR (CARSON CREEK)
NOTE:
GRAPHIC SCALE
TO PLACERVILLE
TO SACRAMENTO
SEASONAL WETLAND
STOCK POND
50'x30' SEEP
25'x45' SEEP
45'x80' SEEP
25'x30' STOCK POND
PROPOSED CATHOLIC CHURCH SITE
20 Ac
COOPER, THORNE & ASSOCIATES, INC.

Carson Creek is a perennial stream, defined by the California Department of Fish and Game (CDFG) (Section 14.123 of the Fish and Game Code) as a stream (with bed and bank) that flows year-round under normal precipitation conditions. Intermittent streams are defined as streams (with bed and bank) that experience natural interrupted flow (i.e., do not flow year-round).

Wetlands within the Plan Area are defined by Section 404 of the Federal Clean Water Act as waters of the United States, and may be under the jurisdiction of the U.S. Army Corps of Engineers. Specific delineation of wetlands, as may be required by Section 404 of the Federal Clean Water Act, must be accomplished prior to approval of individual development requests.

Policies pertaining to intermittent streams, drainages, and wetland areas shown in Figure 1-5 are set forth in Section 7.4.

1.3.3.4 Cultural Resources

Seven prehistoric and historic resource sites have been discovered in the Plan Area as identified in the EIR. In addition, the Plan area contains a segment of the historic Clarksville Toll Road that includes a variety of resources on-and off-site.

Cultural resources presently known, or subsequently discovered in the development review and construction process, are addressed by policies set forth in Section 7 .2.

1.3.4 Adjacent Land Use

The Plan Area is located immediately adjacent to existing and proposed residential developments. The El Dorado Hills Specific Plan (EDHSP), now known as Serrano, ~~area~~ is located to the north, west, and northwest of the Plan Area. Approved in 1988, the EDHSP provides for the maximum development of approximately 6,100 dwelling units, at an average density of 1.6 dwellings per acre. Land use includes a variety of commercial uses, recreational facilities, and open space on approximately 3,800 acres. Development of the EDHSP area is nearly complete ~~has commenced~~. Due to topographical constraints, some residential portions of the EDHSP may be accessed through the Plan Area via Bass Lake Road. Immediately adjacent to the northern boundary of the Plan Area, is the Sienna Ridge retail center, a full service ~~40 acres of~~ commercial development ~~property is designated and zoned within the EDHSP~~ to provideing services for the surrounding residential developments.

The Bar J Ranch subdivision is located on the eastern boundary of the Plan Area. Approved in 1986, this residential development includes 503 lots within an area of approximately 267 acres, with an overall density of 1.9 dwellings per acre. Land immediately northeast of the Plan Area is within the approved Bridlewood Canyon development which will ultimately consist of 290 dwellings on 145 acres, resulting in a average density of 2.0 dwellings per acre. U.S. Highway 50 forms the southern boundary of the Plan Area. Land southeast of U.S. Highway 50 are designated Low Density Residential (LDR). The property to the southwest of the Plan Area, adjacent to U.S. Highway 50, is presently engaged in livestock grazing. The property is currently under Williamson Act Land Use Contract (Agricultural Preserve No. 71).

Existing land use surrounding the Plan Area is depicted on Figure 1-6

1.3.5 Infrastructure

Public infrastructure improvements, such as water and sewer trunklines, will connect with and/or be extended from adjoining development areas. Water ~~could be provided from the north via the Placerville Ridge Conduit and/or the Gold Hill Intertie~~. will be supplied from the two existing Bass Lake Hills water tanks located in the eastern portion of the Plan Area. Sewer service will be provided at the Deer Creek and El Dorado Hills treatment plants via the Cameron Park and the Silva Valley intercept lines. (See Figure 5-1, Master Water System, and Figure 5-2, Sewer Plan)

1.4 Legal Authority

Authorization for specific plans is found in California Government Code Section 65450 et seq. As specified by the State law, a specific plan must contain the following information:

A. A specific plan shall include a text and a diagram or diagrams which specify all of the following in detail:

1. The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan.

2. The proposed distribution, location and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land use described by the plan.

3. Standards and criteria by which development will proceed, and standards for the conservation, development and utilization of natural resources, where applicable.

4. A program of implementation measures including regulations, programs, public works projects and financing measures necessary to carry out paragraphs (1), (2) and (3).

B. The specific plan shall include a statement of the relationship of the specific plan to the general plan.

The Plan contains all components required by the Government Code.

The Plan is intended to function in concert with the implementation program for mitigation measures adopted in the final EIR, and Addendum and any future adopted amendments to the specific plan. Authority for mitigation monitoring is contained in the California Environmental Quality Act (CEQA) Section 21081. 6 of the California Public Resources Code (Mitigation Monitoring).

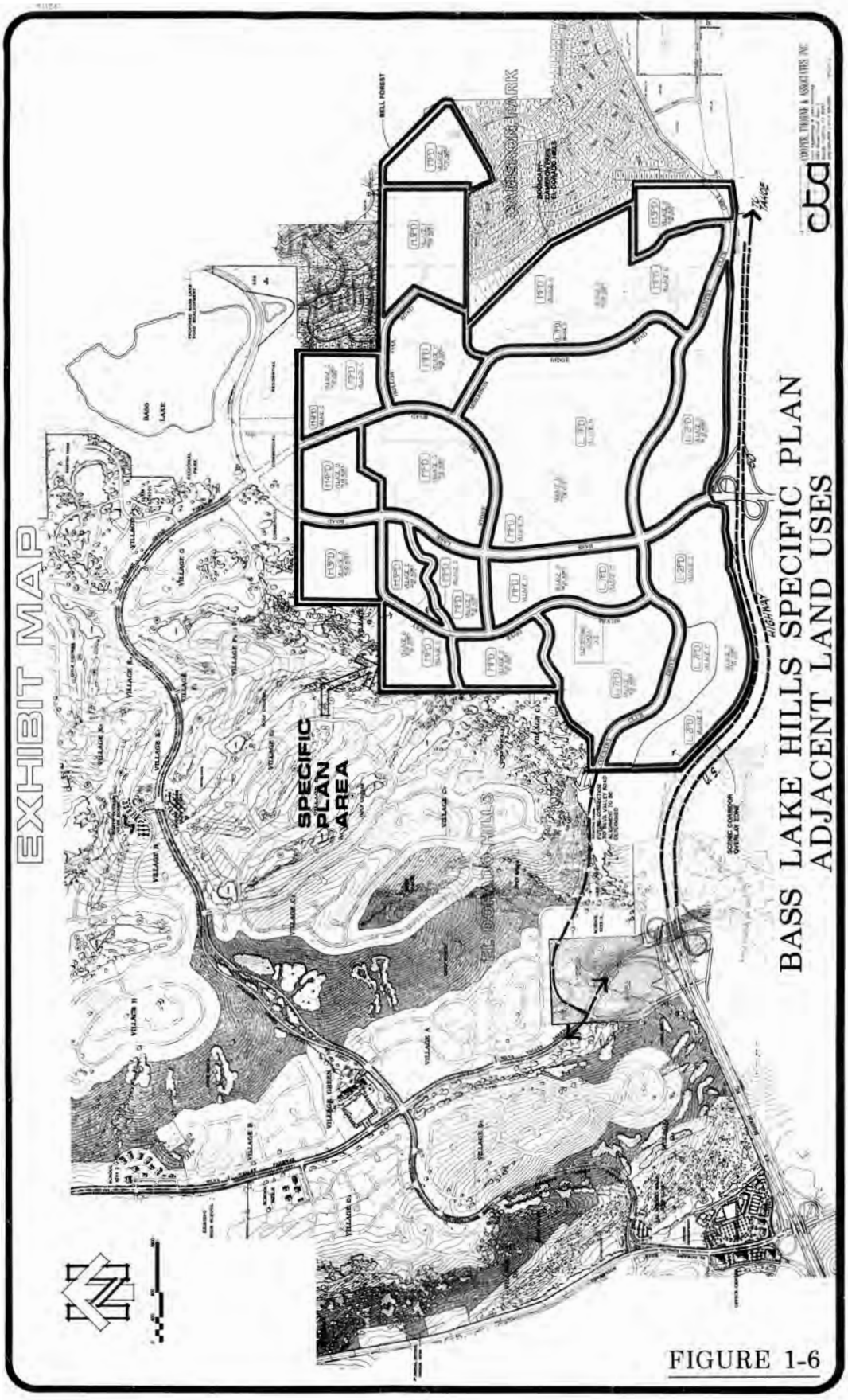

EXHIBIT MAP
SPECIFIC PLAN AREA
BASS LAKE HILLS SPECIFIC PLAN
ADJACENT LAND USES
BASS LAKE
BELL FOREST
RANCHO MURIETA
EL DORADO HILLS
VILLAGE A
VILLAGE B
VILLAGE C
VILLAGE D
VILLAGE E
VILLAGE F
VILLAGE G
VILLAGE H
VILLAGE J
VILLAGE K
VILLAGE L
VILLAGE M
VILLAGE N
VILLAGE O
VILLAGE P
VILLAGE Q
VILLAGE R
VILLAGE S
VILLAGE T
VILLAGE U
VILLAGE V
VILLAGE W
VILLAGE X
VILLAGE Y
VILLAGE Z
VILLAGE GREEN
U.S.
SCENIC CORRIDOR OVERLAY ZONE
dta

FIGURE 1-6

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2.0 VISION STATEMENT AND PLAN GOALS

2.1 INTENT OF THE EL DORADO COUNTY GENERAL PLAN

The Plan must be consistent with the County's General Plan. According to the 2004 General Plan Land Use Map, the site is shown as adopted plan and all land use designations are shown and described in the adopted BLHSP and the adopted BLHSP Amendment (SPA) ~~anticipated to accommodate residential development at various densities~~ (Figure 2-1). ~~The approximate developable acreage of the General Plan's land use designations for the property are summarized~~

Table 2-1

General Plan Land Uses for the Bass Lake Area

General Plan Land Uses	Acres*	% of Site
Community Regions		
High Density Residential	138.16	11.84
Medium Density Residential	855.33	73.31
Rural Regions		
Low Density Residential	173.31	14.85
Totals	**1,166.80**	**100.00**
*Acreage figures excludes area occupied by Bass Lake Road.		

~~in Table 2-1.~~

2.2 VISION STATEMENT

The Plan vision has been shaped through a series of public workshops and hearings. The vision for the Plan is as follows:

1. Maintain and protect the Plan Area's natural beauty and environmental quality, by maintaining natural landscape features and the rural character, while accommodating new residential and commercial development and necessary support uses;
2. Maintain a visual separation between the communities of Cameron Park and El Dorado Hills;
3. Maintain open space areas between villages, and along roadways and streams;
4. Provide a circulation system to serve the Plan Area that provides opportunities for circulation of vehicles, bicycles, and pedestrians;
5. Provide for a mix of housing types and densities designed for a range of home buyers;

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6. Improve and expand park and recreational facilities throughout the Plan Area; ~~and~~
7. Minimize visual impacts in the foreground area adjacent to U.S. Highway 50;
8. Preserve historic cultural features including remnants of the old Lincoln Highway, the Clarksville Toll Road and native American cultural artifacts; and
9. Encourage the creation of job opportunities in the Plan Area.

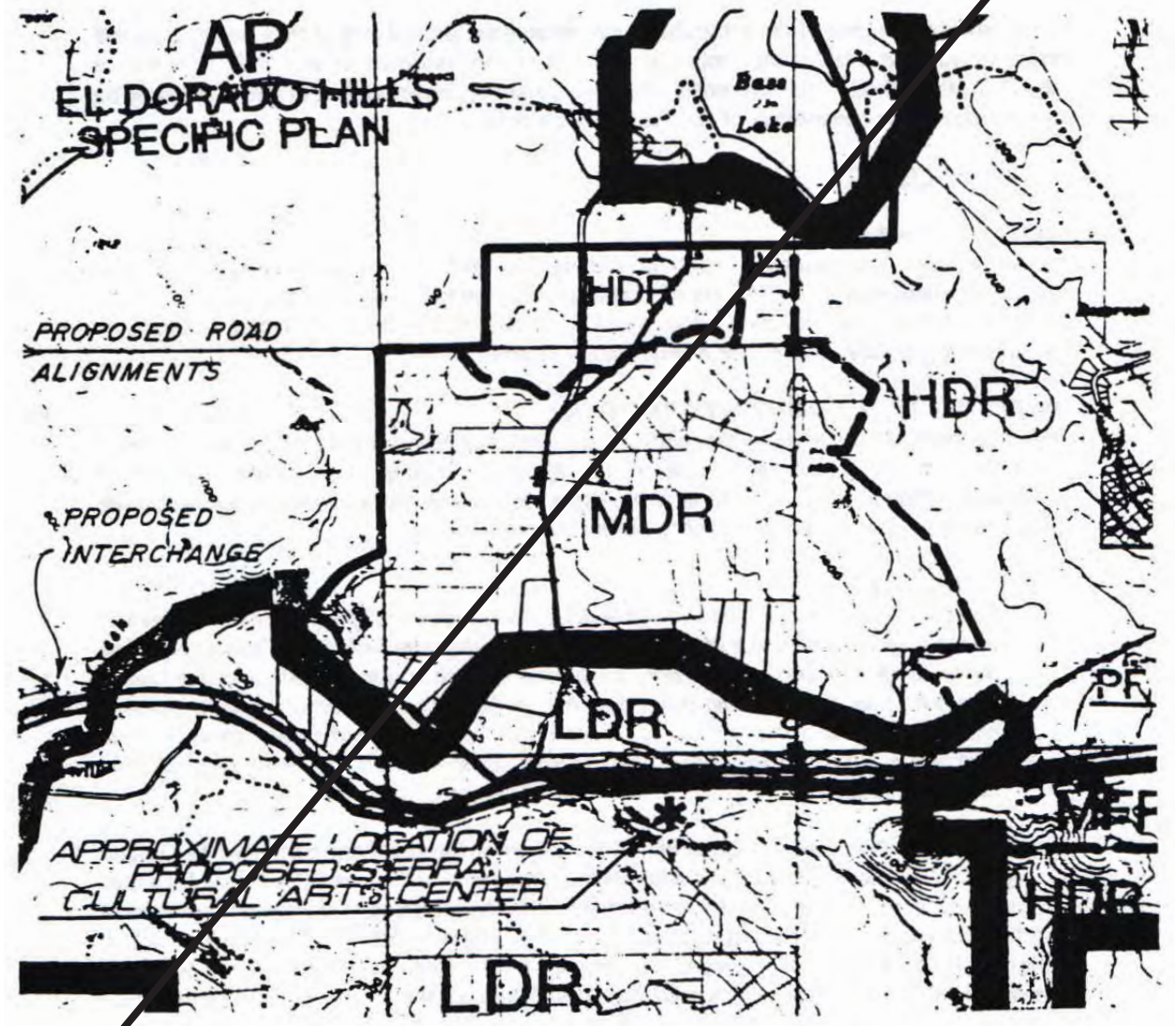
2.3 SPECIFIC PLAN GOALS

The Plan is intended to promote the ~~vision of the~~ Plan vision and the goals of the General Plan. Plan goals include the following:

1. To encourage comprehensively planned villages;
2. To create a functional, safe, and attractive residential community complimented by all necessary public facilities, and commercial services;
3. To create integrated open space and park amenities which enhance the quality of life for Plan Area residents;
4. To facilitate development, while respecting and conserving the natural resources of the Plan Area, that will continue to provide wildlife habitat;
5. To provide mechanisms for the implementation, funding, enforcement, and maintenance of all aspects of this Plan;
6. To provide for the perception of open space of the site within the viewshed of U.S. Highway 50;
7. To maintain visual and spacial separation between the Plan Area and the adjacent communities to the west and east;
8. To provide multi-family and commercial land uses adjacent to the Bass Lake Road/U.S. Highway 50 interchange to create Plan Area jobs, reduce traffic impacts and vehicle miles traveled, and increase community walkability,
9. To periodically update the BLHSP in order to incorporate new ideas in town planning;
10. To utilize sustainable design practices to reduce greenhouse gas emissions, water consumption and energy use;
11. To promote Agri-Tourism in the Plan Area.

Figure 2-1

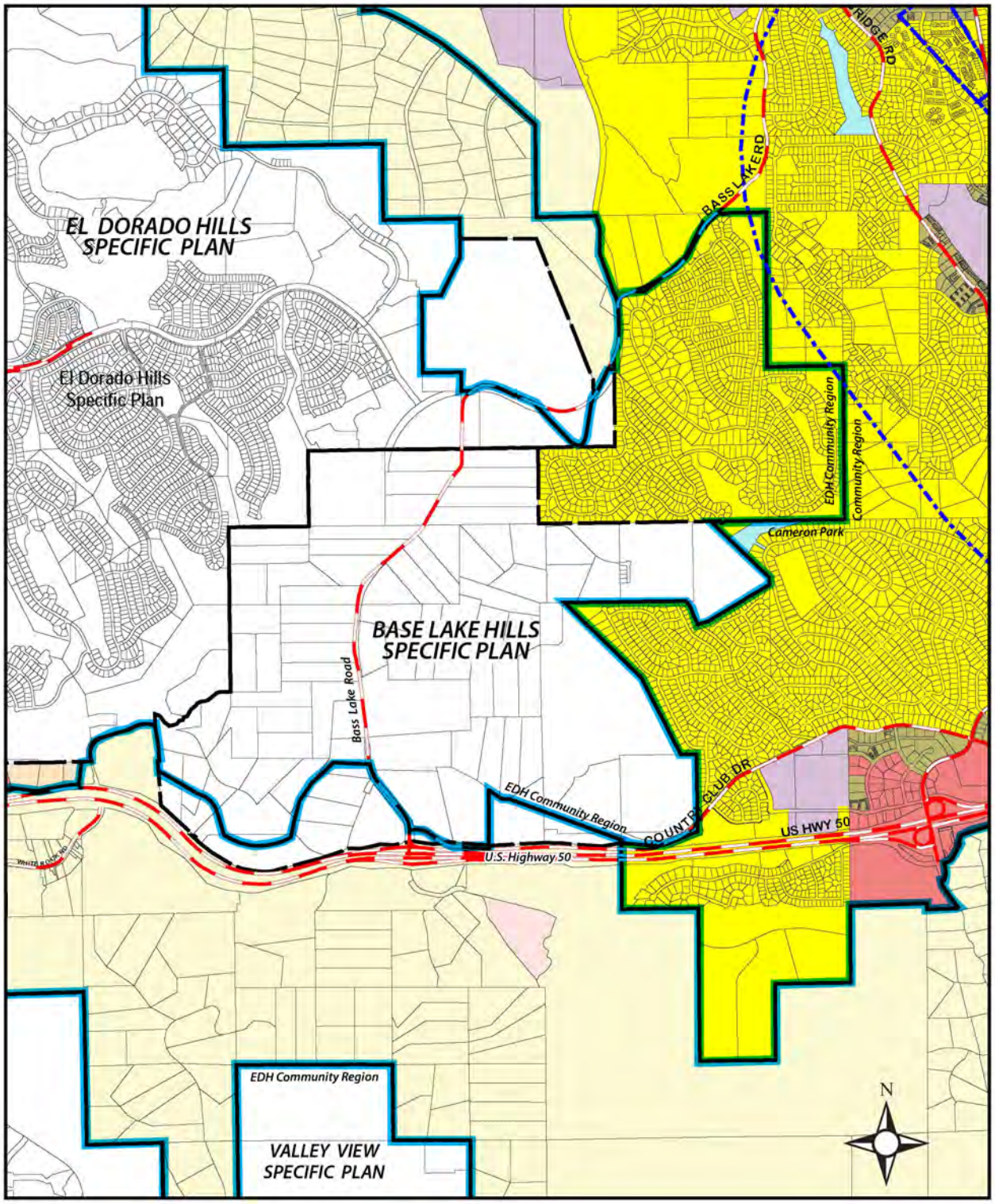
General Plan Land Use Map
(Public Review Draft General Plan)



HDR: High Density Residential (1-5 du/ac)
MDR: Medium Density Residential (1 du/1-5 ac)
LDR: Low Density Residential (1 du/5-20 ac)

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Figure 2-2: 2004 General Plan Land Use Diagram



2.4 RELATIONSHIP TO THE EL DORADO COUNTY GENERAL PLAN

Government Code Section 65450 requires specific plans to include a statement of the relationship of the specific plan to the general plan. This section also states that a specific plan is prepared to implement the general plan. In addition, Section 65454 requires that a specific plan be consistent with the general plan. This section of the Bass Lake Hills Specific Plan describes the consistency of the Plan with the El Dorado County General Plan.

The following lists each of the applicable goals, objectives, and policies of the General Plan and describes how the Plan implements that policy or is otherwise consistent with its intent or requirements. The General Plan goals, objectives, and policies are shown in italics followed by a discussion of the consistency of the Plan with the policy.

LAND USE ELEMENT

GOAL 2.1: LAND USE

Protection and conservation of existing communities and rural centers; creation of new sustainable communities; curtailment of urban/suburban sprawl; location and intensity of future development consistent with the availability of adequate infrastructure; and mixed and balance uses that promote use of alternate transportation systems.

OBJECTIVE 2.1.1: COMMUNITY REGIONS

Provide opportunities that allow for continued population growth and economic expansion while protecting and preserving the character and extent of existing rural centers and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life and economic health of the County.

Policy 2.1.1.2

Establish Community Regions to define those areas which are appropriate for the highest intensity of self-sustaining compact urban-type development within the County, based on the municipal spheres of influence, availability of infrastructure, public services, major transportation corridors and travel patterns, the location of major topographic patterns and features, and the ability to provide and maintain appropriate transitions at Community Region boundaries. These boundaries shall be shown on the General Plan land use map.

Discussion: The Plan area is located within the underdeveloped eastern portion of El Dorado Hills (east of Serrano El Dorado) and adjacent to the west end of Cameron Park. The Plan area is located within the Community Region boundary with the exception of ~~the southern~~ portions of the Plan area within the foreground of the U.S. Highway 50 viewshed which ~~is~~ are located within the Rural Region. The ~~property~~ Plan Area is bounded on the south by U.S. Highway 50 and is bisected by Bass Lake Road which runs north/south through the project site connecting U.S. Highway 50 with Green Valley Road. Public water and sewer service is available to serve the development proposed. (El Dorado County General Plan).

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GOAL 2.6: CORRIDOR VIEWSHEDS

Protection and improvement of scenic values along designated scenic road corridors.

OBJECTIVE 2.6.1: SCENIC CORRIDOR IDENTIFICATION

Identification of scenic and historical roads and corridors.

Policy 2.6.1.1

A Scenic Corridor Ordinance shall be prepared and adopted for the purpose of establishing standards for the protection of identified scenic local roads and State Highways. The ordinance shall incorporate standards that address at a minimum the following:

A. Mapped inventory of sensitive views and viewsheds within the entire County;

B. Criteria for designation of scenic corridors;

C. State Scenic Highway criteria;

D. Design guidelines for project site review, with the exception of single family residential and agricultural uses;

F. Identification of foreground and background;

G. Long distance viewsheds within the built environment;

H. Placement of public utility distribution and transmission facilities and wireless communication structures;

I. A program for visual resource management for various landscape types, including guidelines for and restrictions on ridegeline development;

J. Residential setbacks established at the 60 CNEL noise contour line along State highways, the local County scenic roads, and along the roads within the Gold Rush Parkway and Action Program;

K. Restrict sound walls within the foreground area of a scenic corridor; and

L. Grading and earthmoving standards for the foreground area.

Policy 2.6.1.3

Discretionary projects reviewed prior to the adoption of the Scenic Corridor Ordinance, that would be visible from any of the important public scenic viewpoints identified in Table 5.3-1 and Exhibit 5.3-1 of the El Dorado County General Plan Draft Environmental Impact Report, shall be subject to design review, and Policies 2.6.1.4, 2.6.1.5, and 2.6.1.6 shall be applicable to such projects until scenic corridors have been established.

Policy 2.6.1.4

Commercial designations on U.S. Highway 50 interchanges will be considered for commercial development as part of the General Plan review pursuant to Policy 2.9.1.2.

Discussion: As part of the preparation of the review draft El Dorado County Scenic Highways Ordinance dated June 1992[1], a viewshed study was conducted which identified the foreground and background view sheds along U.S. Highway 50 from the City of Placerville to the El Dorado County/Sacramento border. Foreground viewsheds typically include specific features such as trees, rock outcropping, historic buildings, water features, etc. while background viewsheds include broader views of hills, valleys, ridgelines, etc.

Based on that study, Figure 1-3, shows portions of the Plan Area, south and north of Country Club Drive, as located in the foreground area. In addition to the Plan Area foreground and background viewsheds shown in Figure 1-3, Table 5.3-1 and Exhibit 5.3-1 of the 2004 El Dorado County General Plan draft Environmental Impact Report (2004 EIR) identified important public scenic viewpoints and highways within El Dorado County. Two important public scenic viewpoints in the vicinity of the Plan Area were identified: the first, identified as Location No. 1a, is a view of Marble Valley looking south from U.S. Highway 50 east of Bass Lake Road. The second significant scenic viewpoint, identified as Location 2c, is a view of the Sacramento valley looking west from U.S. Highway 50 approximately 1/4 mile west of the Bass Lake Road/ U.S. Highway 50 interchange. It is important to note that no important public scenic viewpoints looking north from U.S. Highway 50 to the Plan Area were identified in the 2004 EIR.

Land uses for that portion of the Plan Area located within the foreground viewshed of U.S. Highway 50 ~~is located within the and Rural Region and is designated LDR~~, include Commercial (C), Multi-Family Residential (MFR), High Density Residential (H3-PD), Medium Density Residential (M-PD), Low Density Residential (L.2-PD) and Open Space (OS) ~~by the General Plan. The Plan designates this area Low Density Residential Planned Development (L.2-PD), which allows for a maximum density of one dwelling unit per five acres. This is consistent with the General Plan and protects the foreground viewshed from U.S. Highway 50 by maintaining existing zoning and density. (El Dorado County General Plan, Bass Lake Hills Specific Plan Land Use Diagram)~~. With the exception of the low density residential and open space land uses, the allowed density and building intensity of the other land uses may have a visual impact.

To evaluate and lessen potential visual impacts, all proposed development projects in the Plan Area are required to undergo design review through the Planned Development approval process. As required in Section 3.3, visual simulation depictions of any proposed development project are required to assist the County in evaluating potential visual impacts. Mitigation measures may be required as part of the approval process to lessen any significant visual impacts.

Consistent with General Plan Policy 2.6.1.4, the El Dorado County Board of Supervisors approved the commercial land use designation for a 26.2-acres property east of Bass Lake Road, immediately north of old Country Club Drive.

1 An additional draft scenic corridor ordinance was prepared in 2008; however, to date, no scenic corridor ordinance has been approved by the El Dorado County Board of Supervisors.

TRANSPORTATION and CIRCULATION ELEMENT

GOALS AND POLICIES

The following sections set out goals and policies for roads and highways, transit, transportation systems management, non-motorized transportation, rail transportation, and air transportation

LEVELS OF SERVICE AND CONCURRENCY

In 1998, El Dorado County voters adopted an initiative measure known as Measure Y, the "Control Traffic Congestion Initiative." The initiative added several policies to the former General Plan intended to require new development to fully pay its way to prevent traffic congestion from worsening in the County. The initiative provided that the new policies should remain in effect for ten years and that the voters should be given the opportunity to readopt those policies for an additional 10 years. The policies in this section reflect the voters' intent in adopting Measure Y by (1) applying the Measure Y policies through 2008, (2) providing for the possible re-adoption of those policies in 2008, and (3) providing alternative policies that will take effect in 2009 if the Measure Y policies are not extended.

GOAL TC-X: To coordinate planning and implementation of roadway improvements with new development to maintain adequate levels of service on County roads.

Policy TC-Xa Except as otherwise provided, the following TC-Xa policies shall remain in effect indefinitely, unless amended by voters:

1. Traffic from residential development projects of five or more units or parcels of land shall not result in, or worsen, Level of Service F (gridlock, stop-and-go) traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county.
2. The County shall not add any additional segments of U.S. Highway 50, or any other highways and roads, to the County's list of roads from the original Table TC-2 of the 2004 General Plan that are allowed to operate at Level of Service F without first getting the voters' approval.
3. intentionally blank (Resolution 125-2019, August 6, 2019)
4. intentionally blank (Resolution 159-2017, October 24, 2017)
5. The County shall not create an Infrastructure Financing District unless allowed by a 2/3rds majority vote of the people within that district.

6. intentionally blank (Resolution 159-2017, October 24, 2017)

7. Before giving approval of any kind to a residential development project of five or more units or parcels of land, the County shall make a finding that the project complies with the policies above. If this finding cannot be made, then the County shall not approve the project in order to protect the public's health and safety as provided by state law to assure that safe and adequate roads and highways are in place as such development occurs.

Discussion: The Circulation Plan sets forth the location and design of the internal roadway system. Streets and roads will be constructed concurrently with the development of the Plan area. Appropriate road right-of-way will be acquired for Bass Lake Road to permit future expansion to four lanes. (Section 4.0)

~~***OBJECTIVE 3.2.1: CONCURRENCY***~~

~~*Ensure that safe and efficient transportation and circulation facilities are provided for concurrently with new development.*~~

~~***Policy 3.2.1.1***~~

~~*Development proposals shall be reviewed to determine if significant traffic impacts or reductions in Level of Service (LOS) per Policy 3.5.1.5.11 will occur to existing public roads as a result of the proposed project. Project proponents shall be required to make necessary road improvements or to pay a traffic impact mitigation fee (TIM), or some combination of both, to accommodate increases in traffic caused by the proposed project.*~~

~~***Policy 3.2.1.2***~~

~~*Development review shall consider the adequacy of public and private roads for emergency vehicle access and for off-site traffic impacts. Inadequate roads shall be improved through such measures as "area of benefit" districts, fees, project approval conditions, assessment districts, or other means. Where no improvement or other acceptable mitigation measures are proposed to alleviate project induced situations concurrent with development, land development projects shall be denied.*~~

~~***Policy 3.2.1.3***~~

~~*All developments may be required to either improve street frontage, dedicate land for road right-of-way, provide road improvements, enter into a street improvement agreement, pay fees, provide appropriate mitigation for alternative transportation ,modes, or provide a combination of the above as may be appropriate for the project.*~~

GOAL TC-3: To reduce travel demand on the County's road system and maximize the operating efficiency of transportation facilities, thereby reducing the quantity of motor vehicle emissions and the amount of investment required in new or expanded facilities.

Policy TC-3c	The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes.

The type of facilities that may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.

NON-MOTORIZED TRANSPORTATION

The non-motorized transportation system includes bicycle facilities, sidewalks and pathways for pedestrians, and recreational trails for hiking and equestrian use. Policies regarding the latter are set forth in the Parks and Recreation Element.

GOAL TC-4: To provide a safe, continuous, and easily accessible non-motorized transportation system that facilitates the use of the viable alternative transportation modes.

Policy TC-4h Where hiking and equestrian trails abut public roads, they should be separated from the travel lanes whenever possible by curbs and barriers (such as fences or rails), landscape buffering, and spatial distance. Existing public corridors such as power transmission line easements, railroad rights-of-way, irrigation district easements, and roads should be put to multiple use for trails, where possible.

Policy TC-4i Within Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as appropriate.

~~***GOAL 3.10. REDUCE VEHICLE DEMAND***~~

~~*Reduce the level of demand on County roadways through the implementation of policies and programs that minimize congestion and improve level of service.*~~

~~***OBJECTIVE 3.10.1: TRANSPORTATION ALTERNATIVES***~~

~~*Promote the development of strategies that increase the capacity of the highway system, reduce the level of demand placed on the system, or spread the period of peak demand.*~~

~~***Policy 3.10.1.1***~~

~~*Transportation alternatives, which are cost-effective, shall be strongly encouraged. A public transit system linking employment, shopping areas, and schools with residential areas should be developed.*~~

~~***Policy 3.10.1.3***~~

~~*The County shall continue to work with employers, residents, and other agencies to encourage increased car pools, van pools, and park-and-ride lots.*~~

~~***Policy 3.10.1.4***~~

~~*Bus stops and turnouts shall be considered for inclusion into new developments.*~~

~~***Policy 3.10.1.5***~~

~~*Project review shall take into account all forms of transportation and circulation systems, including rail, bicycle trails, pedestrian paths, equestrian easements, off-site and on-site parking where appropriate.*~~

Discussion: The Plan is designed to accommodate a variety of transportation options. A park and-ride lot is provided at the northwest comer of Bass Lake Road and U.S. Highway 50. The Plan area will be provided non-vehicular access facilities, including a bicycle/ pedestrian path along Bass Lake Road, bicycle paths along all local collector streets, and trails within public open space areas and parks. The Plan will also provide for the completion of the section of the Mormon-Carson National Historic Trail via the historic Clarksville Toll Road in conformance with the El Dorado County Hiking & Equestrian Trails Master Plan. (Section 4.0)

HOUSING ELEMENT

SECTION 5: HOUSING GOALS, POLICIES, AND IMPLEMENTATION PROGRAM

GENERAL HOUSING POLICIES

These policies are targeted toward supporting and increasing the supply of housing affordable to lower-income households by providing broad guidance in the development of future plans, procedures, and programs and by removing governmental constraints to housing production. They also attempt to foster increased communication and cooperation among stakeholders.

GOAL HO-1: To **provide for housing that meets the needs of existing and future residents in all income categories.**

Policy HO-1.1 When adopting or updating programs, procedures, or Specific Plans or other planning documents, the County shall ensure that the goals, policies, and implementation programs are developed with the consideration of achieving and maintaining the County's regional housing allocations.

Policy HO-1.5 The County shall direct higher-density residential development to Community Regions and Rural Centers.

Policy HO-18 The County shall encourage mixed-use projects where housing is provided in conjunction with compatible nonresidential uses. Such housing shall be allowed by right, subject to appropriate site development standards.

~~***GOAL 4.1: HOUSING OPPORTUNITIES***~~

~~*A variety of housing opportunities by type, tenure, price, and neighborhood character to ensure the availability of decent housing within a suitable residential environment for all residents, regardless of income, race, gender, age, or any other arbitrary factor.*~~

~~***OBJECTIVE 4.1.1: HOUSING NEEDS***~~

~~*Attainment of the County's projected share of the regional housing needs.*~~

~~***Policy 4.1.1.2***~~

~~*Specific plans need to address and provide for affordable housing*~~

Discussion: The Plan provides for a wide range of single-family and multi-family residential densities which will accommodate a range of income levels from low, moderate, ~~to~~ and above moderate, including worker housing. The Plan anticipates the development of single-family attached units at the northern portion of the Plan area adjacent to the future commercial area. (Section 3.0)

~~***OBJECTIVE 4.2.3: PLANNED DEVELOPMENTS***~~

~~*Use of planned developments to allow design flexibility and creativity to produce affordable housing.*~~

~~***Policy 4.2.3.1***~~

~~*Use of the Planned Development (PD) Combining Zone District shall be promoted to allow greater flexibility in development standards to encourage developers to include low and moderate-income housing within residential developments.*~~

~~**Discussion:** The application of the PD Combining Zone District will be required for the development of the entire Plan area to permit clustering, creation of open space, and allow for innovative design. Permitted flexibility in development standards should help reduce housing prices. (Section 3.3)~~

PUBLIC SERVICES AND UTILITIES ELEMENT

PROVISION OF PUBLIC SERVICES

GOAL 5.1: PROVISION OF PUBLIC SERVICES

Provide and maintain a system of safe, adequate, and cost-effective public utilities and services; maintain an adequate level of service to existing development while allowing for additional growth in an efficient manner; and, ensure a safe and adequate water supply, wastewater disposal, and appropriate public services for rural areas.

OBJECTIVE 5.1.2: CONCURRENCY

~~*Ensure that adequate public services and utilities, including water supply, wastewater treatment and disposal, solid waste disposal capacity, storm drainage, schools, fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided.*~~

Ensure through consultation with responsible service and utility purveyors that adequate public services and utilities, including water supply, wastewater treatment and disposal, solid waste disposal capacity, storm drainage, fire protection, police protection, and ambulance service are provided concurrent with discretionary development or through other mitigation measures provided, and ensure that adequate school facilities are provided concurrent with discretionary development to the maximum extent permitted by State law. It shall be the policy of the County to cooperate with responsible service and utility purveyors in ensuring the adequate provision of service. Absent evidence beyond a reasonable doubt, the County will rely on the information received from such purveyors and shall not substitute its judgment for that of the responsible purveyors on questions of capacity or levels of service.

Policy 5.1.2.1

Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where according to the purveyor responsible for the service or utility as provided in Table 5-1 of the General Plan, demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made that a CIP project is funded and authorized which will increase service capacity.

Policy 5.1.2.2

Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users pursuant to Table 5.1 of the General Plan. The following Levels of Service shall apply to the review of discretionary projects.

Policy 5.1.2.3

New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map and to the extent allowed by State law.

Discussion: The Plan includes a Public Facility Financing Plan (PFFP) to ensure adequate funding of infrastructure needed to support Plan Area development and to ensure that new development pays its share of infrastructure improvements. (Section 9.4)

OBJECTIVE 5.1.3: EFFICIENT DEVELOPMENT PATTERN

Promote a development pattern that permits the efficient delivery of public services in a cost effective manner.

Policy 5.1.3.1

Growth and development and public facility expenditures shall be primarily directed to Community Regions and Rural Centers.

Discussion: The Plan area is located within the Community Region boundary with the exception of ~~the southern~~ portions of the Plan area located within the foreground of the U.S. Highway 50 viewshed which ~~is~~ are located within the Rural Region. The property is bounded on the south by U.S. Highway 50 and is bisected by Bass Lake Road which runs north/south through the project site connecting U.S. Highway 50 with Green Valley Road. Public water and sewer service is available to serve the development proposed. (El Dorado County General Plan)

AGRICULTURAL AND FORESTRY ELEMENT

GOAL 8.1: AGRICULTURE LAND CONSERVATION

Long-term conservation and use of existing and potential agricultural lands within the County, and limiting the intrusion of incompatible uses into agricultural lands.

OBJECTIVE 8.1.3: PROTECTION OF AGRICULTURAL LANDS

Protection of agricultural lands from adjacent incompatible land uses.

Policy 8.1.3.1

Agriculturally-zoned lands, including Williamson Act Contract properties, shall be buffered from increases in density on adjacent lands by requiring a minimum of ten (10) acres for any parcel created adjacent to such lands. ~~Those~~ parcels used to buffer agriculturally-zoned lands shall have the same width to length ratio of other parcels.

Discussion: The Plan provides that development of those lands adjacent to agricultural lands shall maintain 10-acre minimum lot sizes to reduce conflicts with agricultural uses. (Section 7.3)

3.0 LAND USE PLAN

3.1 Specific Plan Land Use Summary

The Plan provides comprehensive policy direction and public facility plans for the development of the 1,196.14-acre Plan Area. Ultimately, the Plan Area will accommodate a maximum of 2,180 ~~1,458~~ dwellings and a population of approximately 5,701 ~~4,811~~ persons (based on the County average of 2.8 ~~3.3~~ persons per single family dwelling unit and 2.3 persons per multi-family dwelling unit)[1] within eighteen separate, inwardly-oriented villages. Additionally, the Plan allows for the development of a maximum of 271,000 square feet of commercial development

The Specific Plan Land Use Diagram is illustrated in Figure 3-1. A tabular summary of Plan land use is provided in Table 3-1 and a summary of village residential densities is shown in Table 3-2.

3.2 Land Use Concept

The Plan provides for distinct residential and commercial villages that provide for a range of housing types and densities and commercial development intensities. The entire Plan Area is divided into ~~a series of~~ eighteen (18) discrete villages defined by major streets and open space areas. Villages are inwardly focused and have limited opportunities for through vehicular traffic. The potential number of dwellings in each village ranges from 10 to 240.

Single family village densities range from 1 du/5 ac to 4 du/ac and vary throughout the Plan Area. Maximum multi-family village densities vary from 5 du/ac to 24 du/ac. Maximum average densities (4 du/ac) are proposed at the north end of the Plan Area, adjacent to ~~a future~~ the Sienna Ridge commercial center ~~site within the EDHSP~~. Medium densities (1 du/ac) occur in a radial pattern away from the ~~EDHSP~~ Sienna Ridge ~~commercial~~ retail center ~~area~~. The LPD designation is introduced to specifically avoid sensitive visual, oak woodland and riparian resources and to provide a means to cluster development to enhance opportunities for more efficient infrastructure service. Portions of the U.S. Highway 50 foreground, 1 du/5 acres. is the maximum allowable density. The multi-family land use sites will provide housing opportunities for El Dorado County senior citizens and lower income workers and families.

Consistent with General Plan Policy 2.6.1.4, the area immediately north of U.S. Highway 50 and east of Bass Lake Road is designated for Commercial Planned Development to accommodate visitor serving uses such as hotels, event centers, retail shops, and restaurants.

~~A Conceptual Site Plan is provided in Figure 3-2 for purposes of illustrating the potential lotting pattern and placement of residential units following the development of the Plan area.~~

1 Refer to Table 2-2 Land Use Densities and Residential Population Ranges in the Amended 2004 General Plan.

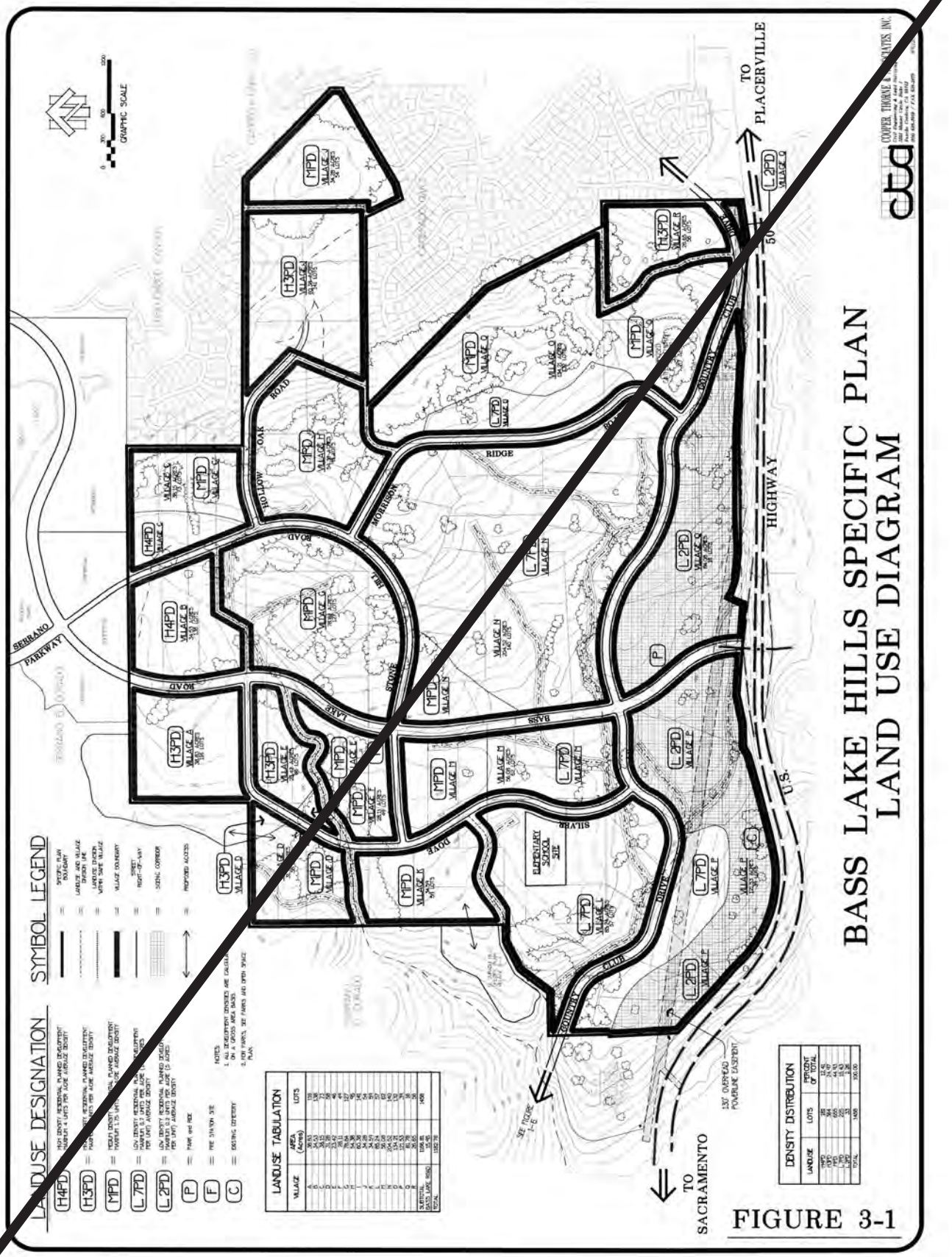

BASS LAKE HILLS SPECIFIC PLAN
LAND USE DIAGRAM
LANDUSE DESIGNATION
SYMBOL LEGEND
LANDUSE TABULATION
DENSITY DISTRIBUTION
GRAPHIC SCALE
TO PLACERVILLE
TO SACRAMENTO
HIGHWAY 50
SERRANO PARKWAY
OAK HOLLOW ROAD
MORRISON RIDGE
BASS LAKE ROAD
SILVER DOVE ROAD
COUNTRY CLUB DRIVE
ELEMENTARY SCHOOL SITE
P
C
U.S.

FIGURE 3-1

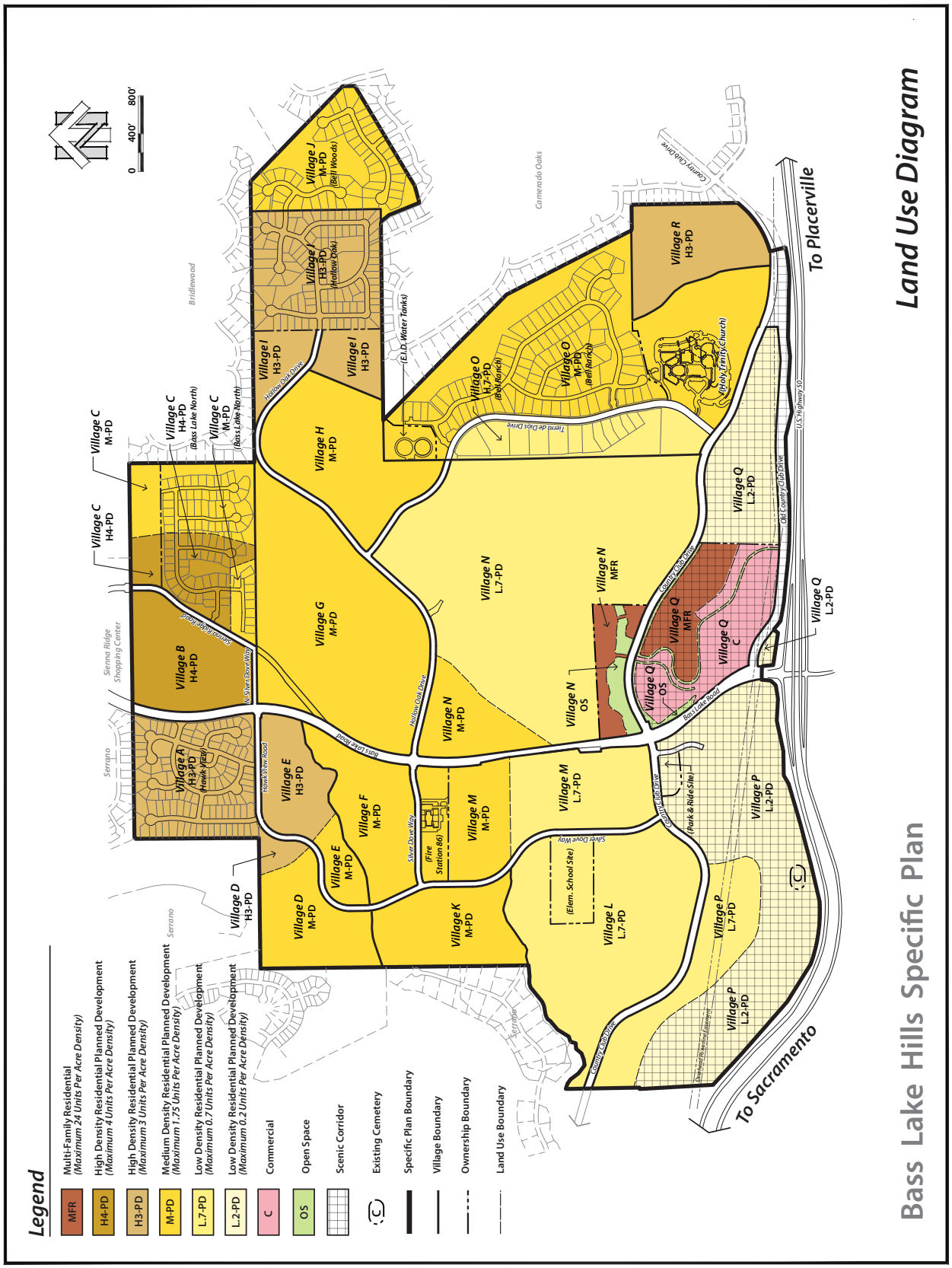


Figure 3-1: Land Use Diagram

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Table 3-1
Bass Lake Hills Specific Plan Land Use Summary Table

Land Use	*Description*	*Net Area (Acres)*	*Density (Du/Ac)*	*Dwelling Units [3]*	*Population [4]*	*Commercial Bldg. Area [5]*
MFR	Multi-Family Residential	23.00	20.17	464	1,067	
H4PD	High Density Residential	~~49.01~~ 46.02	~~3.69~~ 3.69	~~181~~ 160	~~597~~ 448	
H3-PD	High Density Residential	~~148.65~~ 143.65	~~2.45~~ 2.45	~~364~~ 351	~~1,201~~ 984	
MPD-PD	Medium Density Residential	~~437.09~~ 418.66	~~1.50~~ 1.50	~~655~~ 627	~~2,162~~ 1,757	
L.7-PD	Low Density Residential	~~360.92~~ 330.73	~~0.62~~ 0.62	~~225~~ 205	~~743~~ 575	
L.2-PD	Low Density Residential	~~171.14~~ 123.14	~~0.19~~ 0.19	~~33~~ 23	~~109~~ 65	
C	Commercial [5]	26.20		350	805	271,00 SF
OS	Open Space	7.60				
~~Bass Lake Road~~		~~15.95~~				
Major Circulation [2]		77.14				
Totals		1,196.14		~~1458~~ 2,180	~~4812~~ 5,701	271,00 SF

[1] Includd in residential net area (acres) for density calculation purposes.
[2] Bass Lake Road, Country Club Drive, Old Country Club Drive, Silver Dove Way, Hawk View Road, Sienna Ridge Road, Hollow Oak Drive and Tierra de Dios Drive.
[3] Maximum number of dwelling units allowed in the BLHSP.
[4] ~~1995 BLHSP based on 3.3 persons per dwelling unit~~. Amended BLHSP based on 2.8 persons per single family dwelling unit and 2.3 for multi-unit (2004 General Plan Table 2-2).
[5] Mixed Use development is allowed per General Plan Policies 2.1.1.3 and 2.2.2.5. 5.0 acres of commercial land use reserved for a mixed use senior housing development of 150 residential units and 10,000 sq. ft. of commercial development. 6.9 acres of commercial land use reserved for a mixed use development project consisting of 80,000 sq. ft of commercial use and 200 apartment/condominium residential dwelling units.

BLHSP Required Uses Not Shown in Table 3-1 [1]

Required Open Space [1]	~~*151.15*~~ *143.55*
~~School~~ (~~1~~ One Elementary) School) [1]	~~9.20~~ 10.00
~~Bass Lake Road~~	~~15.95~~
~~Local Collectors~~	~~44.75~~
Park & Ride Site [1]	~~1.00~~ 2.23
Fire Station ~~Site~~ [1]	~~1.50~~ 10.00
Parks (Acreage parks based on a standard of 5-acres per 1,000 population). [6]	31.09

[6] Based on 3.3 persons per single family dwelling unit and 2.1 persons per multi-family dwelling unt (El Dorado County Codes Section 120.12.090)

Table 3-2
Summary of Residential Village Densities

Village	*Acres*		*Gross Density (Du/Ac)*		*Dwelling Units*		*Population*	
A	~~38.83~~	37.17	~~2.99~~	3.12	116		~~383~~	325
B	~~34.53~~	33.05	~~4.00~~	4.18	138		~~455~~	386
C	~~38.15~~	36.51	~~1.91~~	2.00	73		~~241~~	204
D	~~31.28~~	29.94	~~1.85~~	1.94	58		~~191~~	162
E	~~23.42~~	22.42	~~1.96~~	2.05	46		~~152~~	129
F	~~28.11~~	26.90	~~1.74~~	1.82	49		~~162~~	137
G	~~78.84~~	75.46	~~1.61~~	1.68	127		~~419~~	356
H	~~54.38~~	52.05	~~1.75~~	1.83	*95*		~~314~~	266
I	~~60.38~~	57.79	~~2.34~~	2.44	141		~~465~~	395
J	~~34.28~~	32.81	~~1.58~~	1.65	54		~~178~~	151
K	~~34.59~~	33.11	~~1.71~~	1.78	59		~~195~~	165
L2	~~85.24~~	81.59	~~0.67~~	0.70	57		~~188~~	160
M	~~56.08~~	53.68	~~1.11~~	1.15	62		~~205~~	174
N	~~204.52~~	195.75	~~0.68~~	0.72	~~140~~	237	~~462~~	530
O	~~134.21~~	128.46	~~0.98~~	1.03	132		~~436~~	370
P	~~121.53~~	116.32	~~0.32~~	0.34	39		~~129~~	109
Q	~~84.08~~	80.48	~~0.19~~	0.20	~~16~~	641	~~53~~	1525
R	~~26.65~~	25.51	~~2.10~~	2.20	56		~~185~~	157
Subtotal	~~1166.81~~	1,119.00	~~1.25~~	1.30	~~1,458~~	2,180	~~4,813~~	5,701
Major Circulation [1]		77.14						
Totals		**1,196.14**			**~~1,458~~**	**2,180**	**~~4,813~~**	**5,701**

[1] Bass Lake Road, Country Club Drive, Old Country Club Drive, Silver Dove Way, Hawk View Road, Sienna Ridge Road, Hollow Oak Drive, & Tierra de Dios Drive.

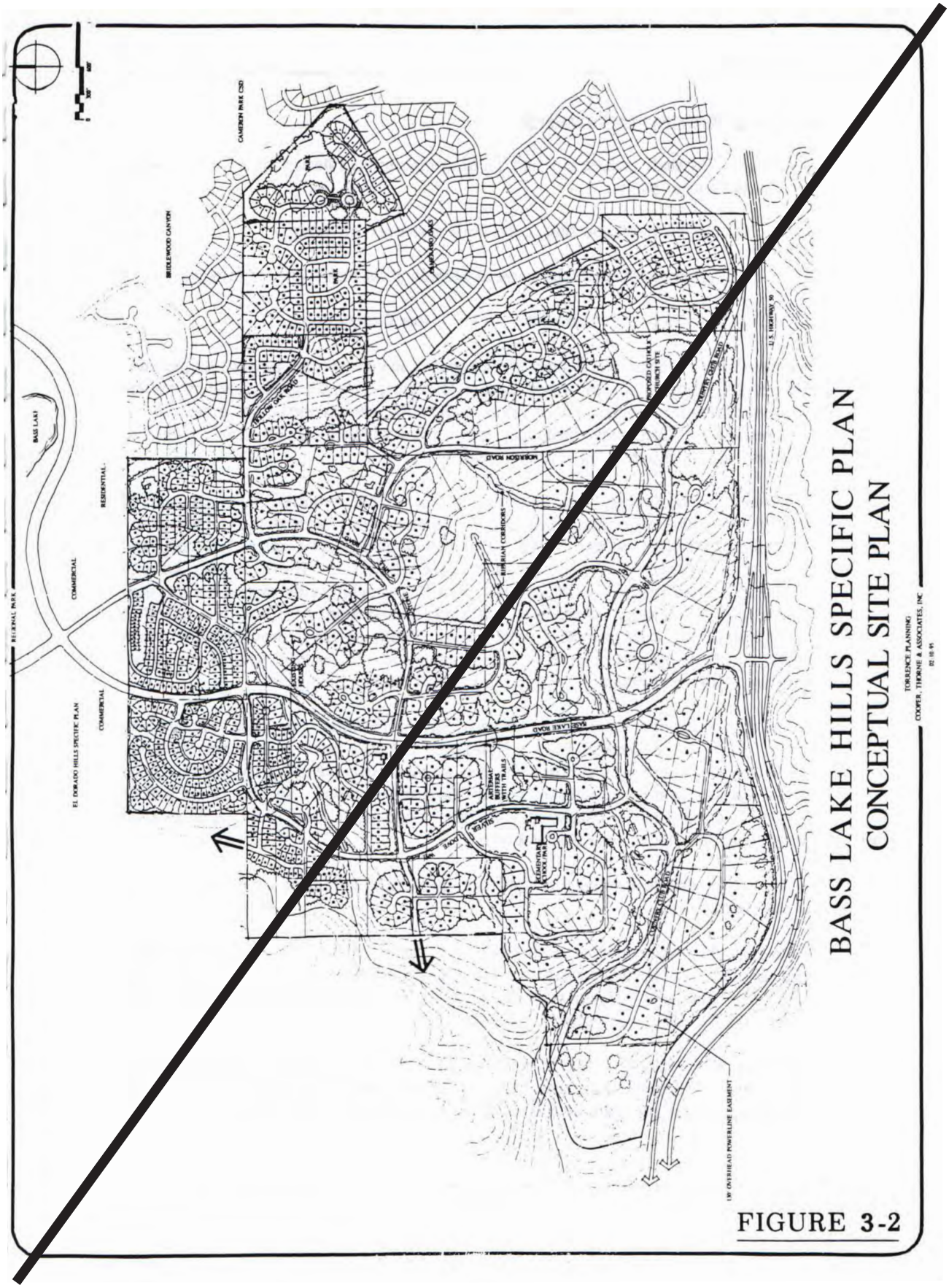

BASS LAKE HILLS SPECIFIC PLAN
CONCEPTUAL SITE PLAN
TORRENCE PLANNING
COOPER, THORNE & ASSOCIATES, INC
BASS LAKE
RESIDENTIAL
COMMERCIAL
EL DORADO HILLS SPECIFIC PLAN
BRIDLEWOOD CANYON
CAMERON PARK CSD
RIPARIAN CORRIDORS
BASS LAKE ROAD
ARTERIAL WITH 12 FOOT SOUND WALLS
RESERVOIR
LOW OVERHEAD POWERLINE EASEMENT
U.S. HIGHWAY 50

FIGURE 3-2

3.3 Residential & Commercial Development Standards

1. All village PDs shall include a visual simulation of project design from the following travel-way vantage points:

   a. U.S. Highway 50 and Bass Lake Road eastbound off-ramp;

   a. U.S. Highway 50 eastbound and El Dorado Hills Boulevard off-ramp; and

   a. U.S. Highway 50 westbound at the former Crazy Horse Campground.

2. "Conservation setbacks" which include open space and conservation easements, recorded non-building setbacks, or any other method to permanently set aside property for the purposes of natural resources conservation shall be the primary method of protection for such resources. Commonly held open space areas within a PD can also be used to establish natural resource conservation areas.

   "Conservation easements," as described in this Plan, require the restriction of development rights within a defined area to a public agency such as the County or the Community Services District (CSD). Commonly owned open space is owned and maintained by the homeowners association of the subdivision. It is a separate lot with a deed restriction restricting improvements to trails, public utilities and recreational facilities. A conservation easement or commonly owned open space does not, in and of itself, provide for access by the general public. Public access is provided only where public access easements are recorded, generally in conjunction with a pedestrian pathway. Also see Section 9 .1. 7 regarding conservation easements.

3. General Plan Implementation Program Measure LU-A requires the County to review the Zoning Ordinance (Title 17 of the El Dorado County Code) to identify revisions that accomplish the following: Provide a Neighborhood Services zone district [refer to General Plan Policy 2.2.5.8]. This policy intentionally left blank in the General Plan. ~~Neighborhood service zones within villages shall be permitted per Land Use Element Policy 2.3.9 of the General Plan~~. Non-residential uses such as daycare facilities, churches and group homes will be permitted within parcels identified for neighborhood service uses in accordance with the Neighborhood Services zone when established by the County. ~~Zoning Ordinance~~. Such facilities will be designed and constructed consistent with Plan Area design guidelines. Said facilities shall locate on comer lots at road intersections.

4. Newly subdivided residential lots shall not have direct access to urban collectors or primary local roads.

5. Villages shall be separated from Bass Lake Road, Country Club Drive, and primary local road pavement by landscape easements and unpaved right-of-way areas or berms which conform to Section 8.6, Design Guidelines, and the El Dorado Hills Community Services

District (EDHCSD) Landscaping Guidelines~~.~~

6. Villages shall be zoned to include the PD Zone District overlay prior to development. Clustering of residential units shall be encouraged in order to maximize land use while conserving natural site features and resources and creation of open space.

7. Parking requirements shall comply with ~~Chapter 17.18~~, Section 130.35.030 Off-Street Parking and Loading Requirements of the El Dorado County Code. The use of common parking areas within villages is encouraged.

8. To preserve the natural appearance of the hillside in 20-30 percent slope areas, solid fences shall not be used, except within recorded building envelopes. Open fencing, such as wire, wrought iron and split rail, is permitted outside the building envelope.

9. ~~As part of any subdivision application, the pre-designating and zoning of lands neighborhood service shall occur at a ratio of 2 acres per 40 units~~.

4.0 CIRCULATION

Provision for safe and efficient movement of vehicles, bicyclists, and pedestrians is essential to development of the Plan Area. This section describes the major vehicular and non-vehicular circulation elements which are common to all Plan area development. The street alignments and designs shown in this section are intended to accommodate the ultimate development of the Plan area at the densities described in the EIR and Section 3.0.

The Plan provides for three levels of roadway, as follows:

1. Urban collectors (Bass Lake Road and Country Club Drive), Figure 4-2;
2. Primary local roads, Figure 4-3; and
3. Secondary local roads, Figure 4-4.

The following non-vehicular access facilities are provided:

1. Class 1 combined bicycle/pedestrian path along Bass Lake Road;
2. Class 2 bicycle lane along all primary local roads;
3. All-weather pedestrian trails within all public open space and intermittent stream and drainage corridors;
4. Class 1 combined bicycle/pedestrian/equestrian trail within a public access easement along the historic Clarksville Toll Road alignment; and
5. Sidewalks or pedestrian paths on both sides of all primary local roads as shown on Figure 4-3.

Additional circulation improvements include a park-and-ride lot adjacent to U.S. Highway 50 and provision for bus stops throughout the Plan Area.

Figure 4-1, Circulation Plan, shows all urban collectors, primary local roads, and all pedestrian facilities.

Policies pertinent to Plan Area circulation are provided in Section 4.0. The cost and possible methods of financing construction of street improvements are described in Section 9.0.

4.1 Bass Lake Road

Bass Lake Road, an all inclusive 100-foot-wide right-of-way, is the principal road in the Plan area. Bass Lake Road will be improved as a two-lane road with appropriate right-of-way acquisition for the future expansion to a four-lane road. Serrano Parkway to Silva Valley Road will serve as arterials to encourage the flow of traffic to the Silva Valley Interchange. This will permit better access and utilization of the proposed Multi-Modal Transit Facility to be located at White Rock Road and Latrobe Road.

Bass Lake Road will continue to serve as the primary means of entry and exit, connecting north of Bass Lake to Green Valley Road and to U.S. Highway 50 on the south.

Right-of-way acquisition and construction will be achieved through the TIM fee program and/or dedications.

~~As shown in Figure 4-1, Circulation Plan, the northern segment of Bass Lake Road within the Plan area will be realigned in a westerly direction.~~

As shown in Figure 4-2, the Bass Lake Road right-of-way and adjoining landscape easement will include the following components:

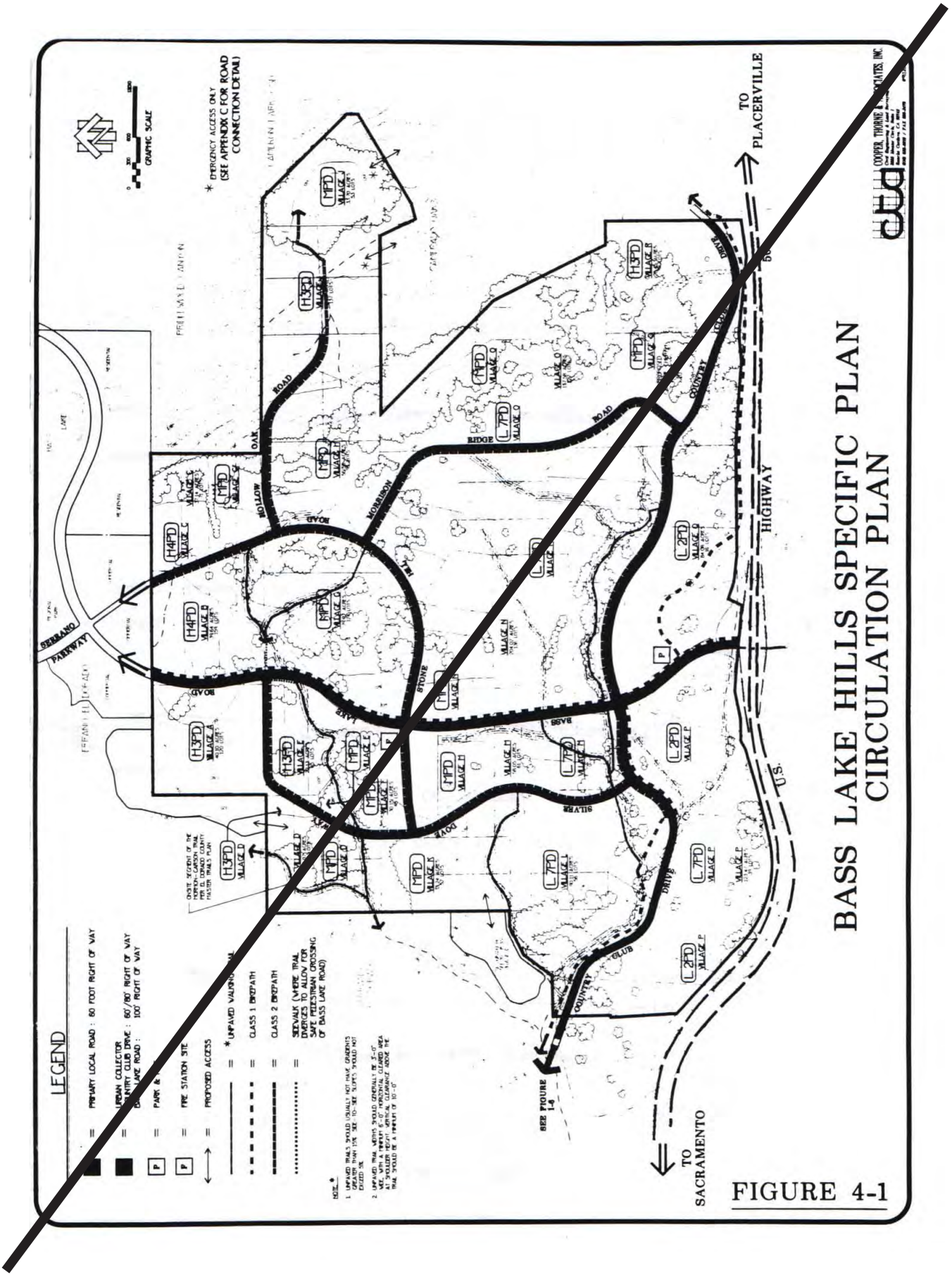
Bass Lake Road (**Urban Collector**)

8-foot Class 1 bicycle path.
6-foot meandering walk.
8-foot minimum landscaped median.
Roadside ditches and/or curb and gutter as shown.

Also as shown in Figure 4-2, the Country Club Drive right-of-way and adjoining landscape easement will include the following components:

Country Club Drive (**Urban Collector}**

6-foot meandering walk.
Adjacent Class I bicycle path where shown.
Roadside ditches and/or curb and gutter as shown.


BASS LAKE HILLS SPECIFIC PLAN
CIRCULATION PLAN
LEGEND
PRIMARY LOCAL ROAD : 60 FOOT RIGHT OF WAY
URBAN COLLECTOR : 60'/80' RIGHT OF WAY
COUNTRY CLUB DRIVE : 100' RIGHT OF WAY
BASS LAKE ROAD :
PARK &
FIRE STATION SITE
PROPOSED ACCESS
UNPAVED WALKING
CLASS 1 BIKEPATH
CLASS 2 BIKEPATH
SIDEWALK (WHERE TRAIL DIVERGES TO ALLOW FOR SAFE PEDESTRIAN CROSSING OF BASS LAKE ROAD)
EMERGENCY ACCESS ONLY (SEE APPENDIX C FOR ROAD CONNECTION DETAIL)
GRAPHIC SCALE
TO PLACERVILLE
TO SACRAMENTO
HIGHWAY
SERRANO PARKWAY
BASS LAKE ROAD
OAK HOLLOW ROAD
MORRISON RIDGE ROAD
STONE LAKE DRIVE
COUNTRY CLUB DRIVE
SEE FIGURE 1-4
FIGURE 4-1

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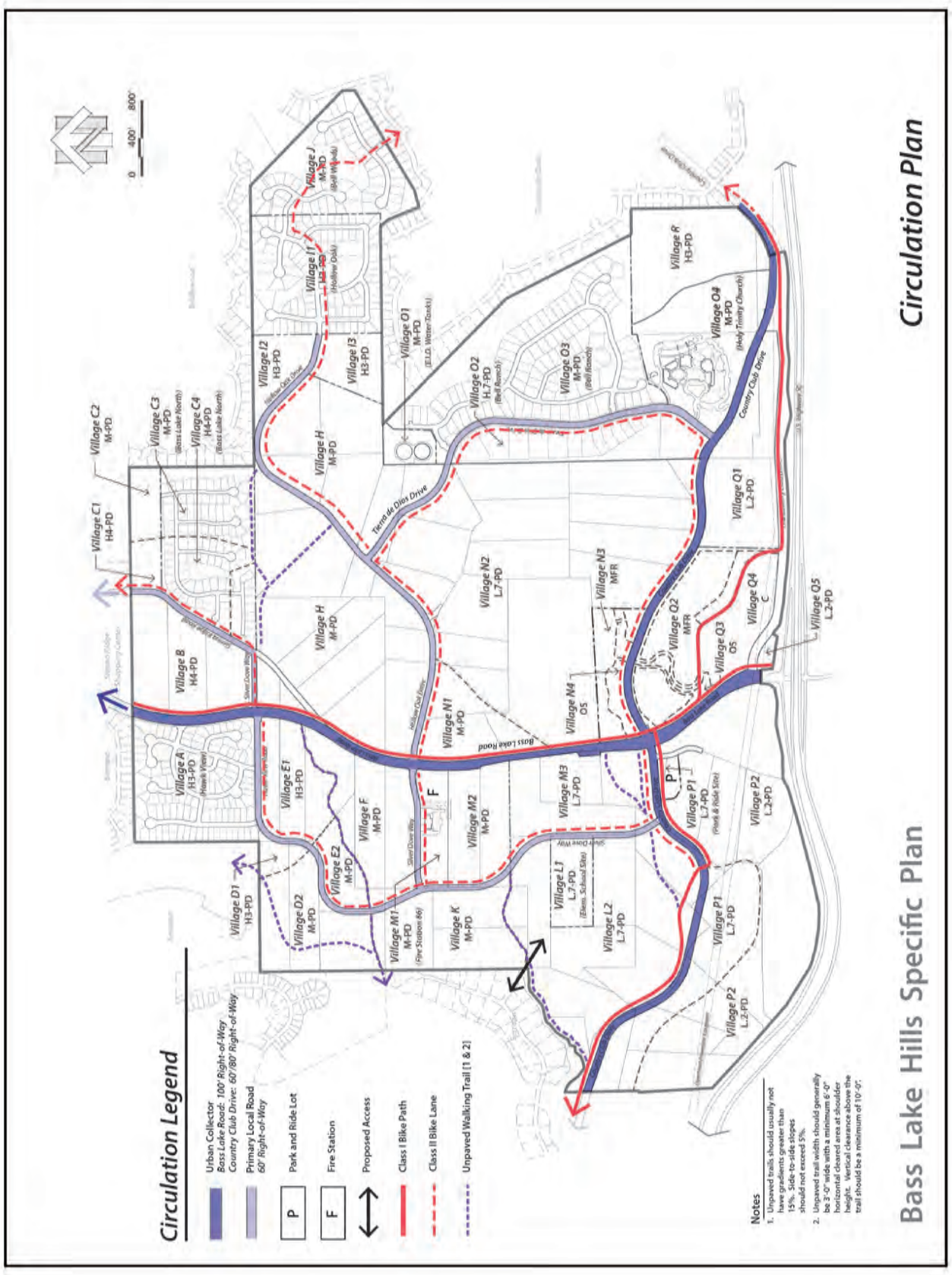
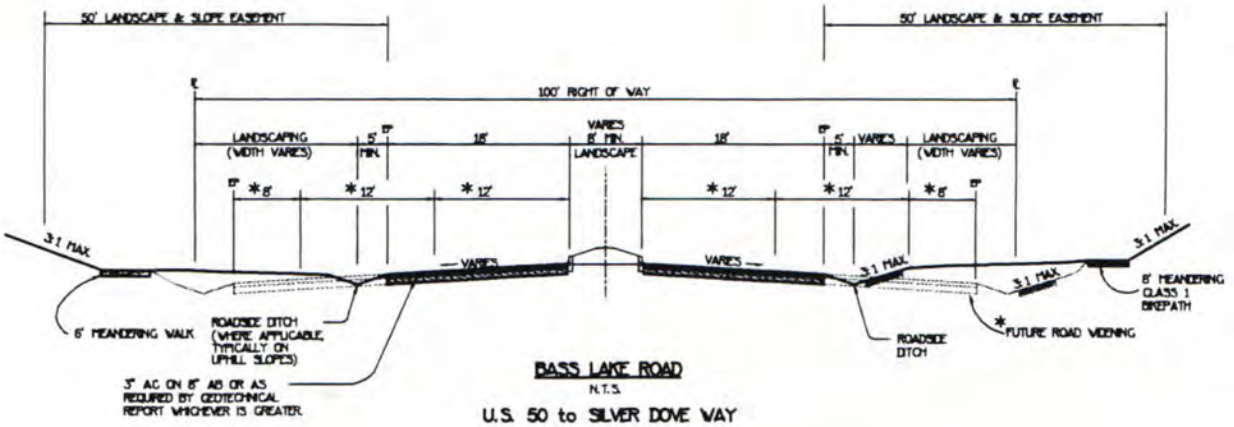
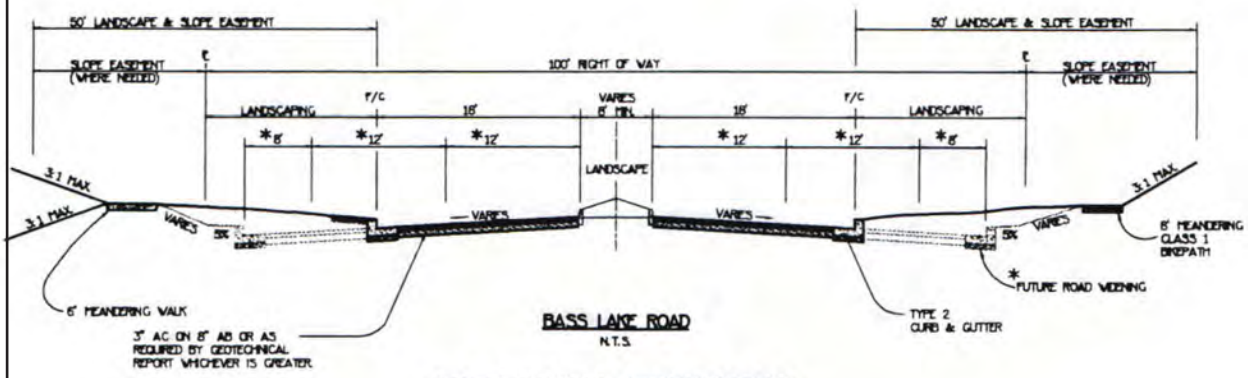
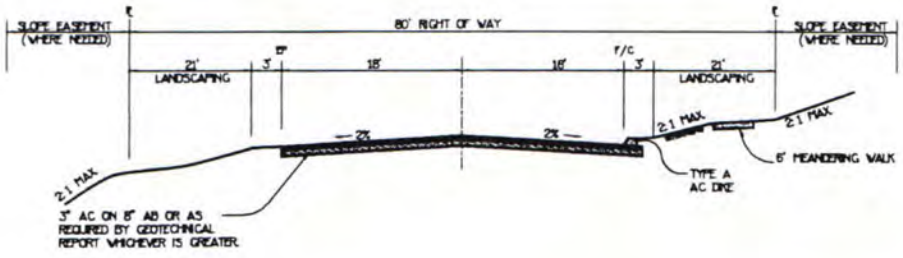


Figure 4-1: Circulation Plan

FIGURE 4–2
URBAN COLLECTOR







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4.2 Primary Local Roads

Primary local roads serve the Plan Area by connecting secondary local roads with the urban collectors (i.e., Bass Lake Road and Country Club Drive). Primary local road rights-of-way and adjoining landscape easements will be designed in accordance with County Standard Plan l01B, as modified below and as shown in Figure 4-3. These roads may be divided.

1. 60-foot right-of-way;
2. Travel lanes with widths as shown on Figure 4-3;
3. 4-foot Class 2 bicycle lane on both sides;
4. Pedestrian pathway/sidewalk as shown on Figure 4-3; and
5. Landscaping where shown on Figure 4-3.

A primary local road loop system is provided which will generally be located in the alignments shown in Figure 4-2, Circulation Plan. However, some flexibility in the siting of these streets is acceptable to accommodate topography, trees, and other natural features. To the extent possible, local collector streets and roads will conform to natural topography and not exceed gradients of 12 percent.

In order to improve circulation efficiency and reduce points of conflict, residential driveway connections with primary local roads will not be permitted. Minimal connectors to primary local roads within the L. 7-PD land use designation may be considered where appropriate and feasible alternatives do not exist

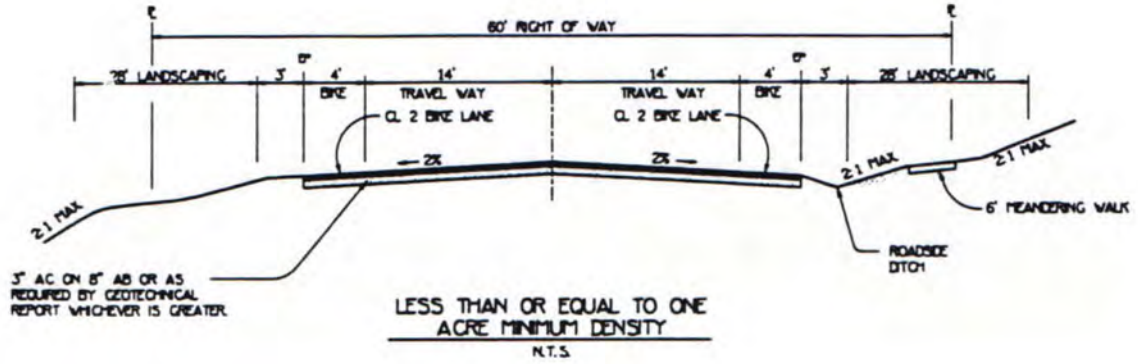
4.3 Secondary Local Roads

Except for urban collectors and primary local roads shown in Figure 4-1, all roads within the Plan Area will be designed as secondary local roads in accordance with County Standard Plan 101B, as illustrated in Figure 4-4:

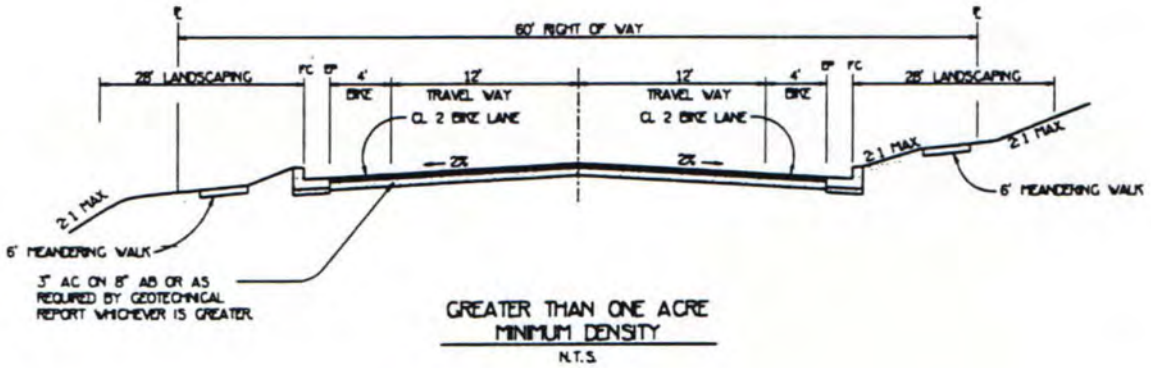
1. 50-foot-wide right-of-way; and
2. 2 undivided travel lanes of width as shown on Figure 4-4.

Secondary local road alignments have not been determined at this time and are not shown in Figure 4-1, Circulation Plan. However, the conceptual site plan (Figure 2-1) does illustrate how secondary local roads could relate to the primary local roads.

FIGURE 4–3
PRIMARY LOCAL ROAD



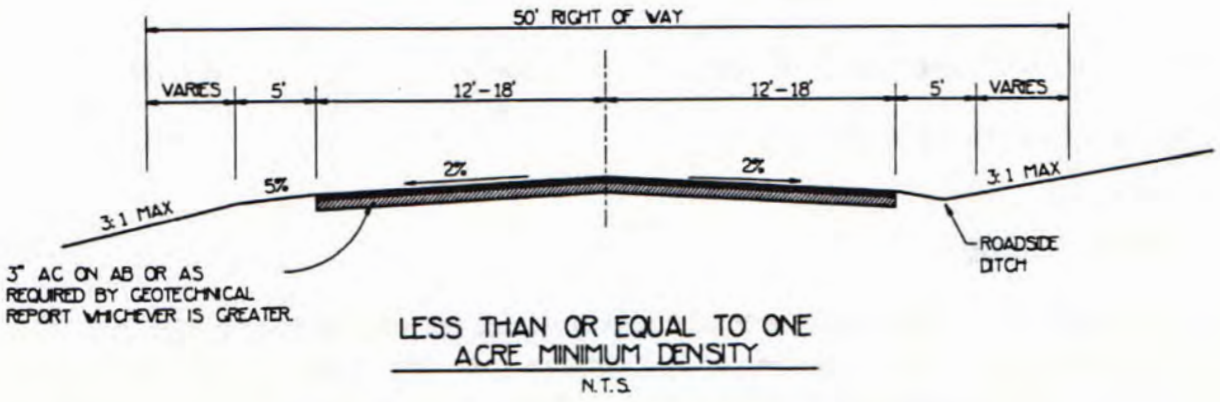
LESS THAN OR EQUAL TO ONE ACRE MINIMUM DENSITY
N.T.S.



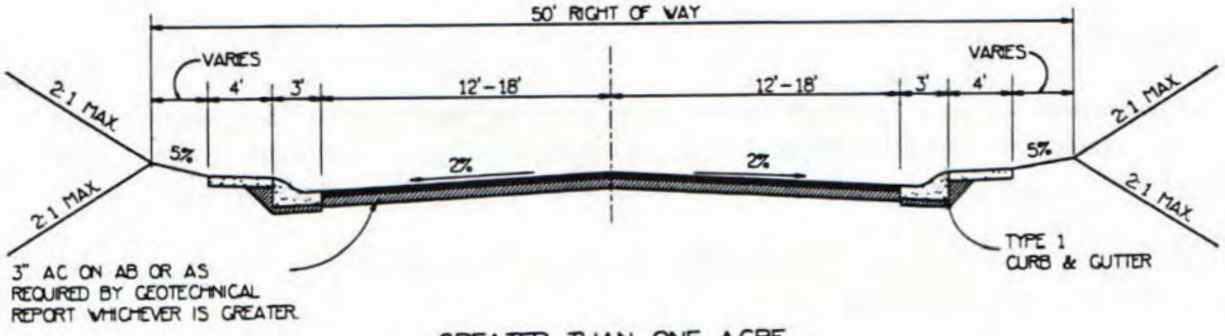
GREATER THAN ONE ACRE MINIMUM DENSITY
N.T.S.

3rd Draft

FIGURE 4–4
SECONDARY LOCAL ROAD



LESS THAN OR EQUAL TO ONE ACRE MINIMUM DENSITY
N.T.S.



GREATER THAN ONE ACRE MINIMUM DENSITY
N.T.S.

4.4 Bass Lake Road/U.S. Highway 50 Interchange

The EIR determined anticipated cumulative traffic volumes resulting from development of the Plan Area, and areas beyond will require improvements to the Bass Lake Road/U.S. Highway 50 interchange and U.S. Highway 50 to increase carrying capacity.

Improvements to the interchange identified by Caltrans include:

1. A westbound two-lane on-ramp;
2. On-ramp traffic metering to maintain acceptable LOS on U.S. Highway 50; and
3. An eastbound two-lane off-ramp.

4.5 Traffic Controls

Project traffic volumes at buildout of the Plan Area may require the installation of traffic controls at certain intersections. Initially, non-signalized controls (i.e., stop signs) will be used until traffic volumes warrant installation of signals. Possible future stop sign/signal locations include:

1. Bass Lake Road/Silver Dove Way;
2. Bass Lake Road/~~Stone Hill Road~~ Hollow Oak Drive;
3. Bass Lake Road/Country Club Drive; and
4. Bass Lake Road/U.S. Highway 50 eastbound and westbound ramps.

4.6 Streetscape

A coordinated streetscape is important to the appearance and function of Plan area circulation components. Bass Lake Road and primary local road rights-of-way and their adjoining landscape easements will include coordinated streetscape consisting of the following components:

1. Drought-tolerant trees and shrubs along Bass Lake Road and local collector streets or roads, utilizing drip irrigation;
2. Walls, fences, and berms, where required, at residential rear and side yards;
3. Underground public utilities; and
4. Pedestrian pathways.

All streetscape fixtures, materials, and design are intended to be consistent with the semi-rural nature of the Plan Area. Accordingly, street lights will be provided along Bass Lake Road, near primary local road intersections at village entrances, and at the park-and-ride lot.

All streetscape is subject to policies set forth in Sections 3.3 and 4.13 herein, and the Design Guidelines in Section 8.0.

A streetscape plan will be submitted and approved prior to commencement of development of subdivisions with frontage on Bass Lake Road or primary local roads

4.7 Pedestrian, Equestrian & Bicyclist Facilities

It is an objective of this Plan to provide non-vehicular forms of transportation. Accordingly, pedestrian and bicycle facilities are provided along streets (rights-of-way or landscape easements) and in open space locations. In addition, equestrian trails can be provided in open space areas of the Carson Trail and/or individual villages.

The proposed trail system is shown on Figure 4-5~~1~~1.

4.8 Pedestrian & Bicyclist Facilities - Streetscape

The pedestrian/bicycle system along streets or roads includes the following components:

1. Portland cement concrete sidewalk within the public right-of-way on one side of primary local roads, a decomposed granite path will be placed in the L. 7PD and L.2PD land use designated areas;
2. 4-foot-wide Class 2 bicycle lane on both sides of all primary local roads which will accommodate bicyclists; and
3. 8-foot-wide asphalt concrete Class 1 bicycle/pedestrian path within the landscape easement on one side of Bass Lake Road. The relationship of this pathway to the pavement and right-of-way edge will vary in order to create an informal appearance.

4.9 Pedestrian, Equestrian, and Bicyclist Facilities - Open Space

The non-vehicular circulation system within public open space areas is intended to allow for extensive travel within and through the Plan area with only minimal contact with streets. Following is a description of pathway components:

1. 8-foot-wide paved Class 1 bicycle/pedestrian path within a 25-foot-wide public access easement generally along the alignment of the historic Clarksville Toll Road.
2. 3-foot-wide decomposed granite all-weather pedestrian pathways in 15-foot access easements within intermittent stream and other open space corridor areas where shown on Figure 4-5.

   Note: An all-weather pedestrian pathway is a bladed trail covered with a surface, such as crushed rock or decomposed granite. All-weather surfaces are intended to provide a travel surface which supports pedestrians, equestrians, and bicyclists in wet and dry weather, while maintaining an informal appearance and minimizing erosion.

Placement of pedestrian pathways within and adjacent to intermittent stream and drainage corridors and other open space areas will allow pedestrian travel between streets, with minimal street contact. Drainages will accommodate pedestrian pathways only where public access easements have been recorded.

A key feature of the proposed pedestrian path system is the use of the historic Clarksville Toll Road alignment, which extends across the Plan Area in an east-west alignment, connecting the EDHSP area with Cameron Park. This alignment, particularly west of Bass Lake Road along Carson Creek, provides a sheltered, natural environment conducive to nature studies and passive recreational use. An extension of this trail within the EDHSP should be promoted by the County.

4.10 Public Transit

Use of various modes of public transit, including buses and car-pooling, is encouraged as an effective means of reducing commute or peak-hour traffic volumes. It is anticipated that wide use of alternatives to single-occupancy vehicles for commute purposes will aid in maintaining roadway services levels (LOS) related to Plan area development.

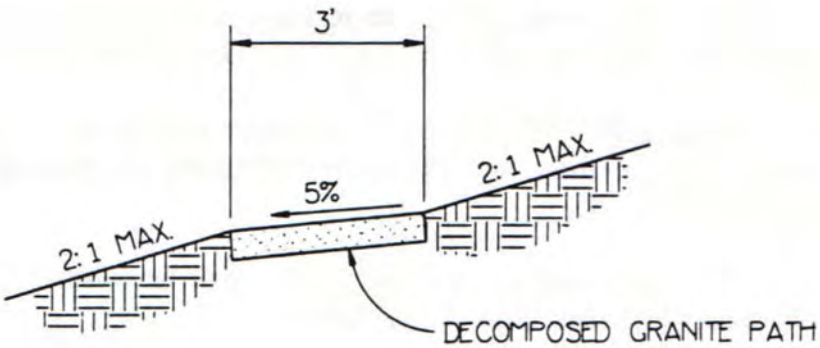
4.11 Park-and-Ride Lot

A site for a park-and-ride parking lot capable of accommodating 100 vehicles with expansion to 200 vehicles (approximately 2 acres) has been ~~designated~~ constructed on the ~~east~~ west side of Bass Lake Road adjacent to the historic Clarksville Toll Road near U.S. Highway 50. This lot will allow Plan Area residents alternatives to single-occupancy vehicle commuting. Transit and ridesharing programs will increase use of this facility resulting in vehicle trip reduction. This lot will also double as a parking area for the east-west trail.

4.12 Bus Stops

In anticipation that a bus system for the general public and school children will be extended into the Plan area, bus stops will be provided at intersections of primary local roads with Bass Lake Road in accordance with standards and criteria of El Dorado County Transit and the local school districts.

FIGURE 4–5
TRAIL CROSS SECTION



TYPICAL TRAIL SECTION
N.T.S.

3rd Draft

4.13 General Circulation and Trail Standards

1. The northern alignment of Bass Lake Road was adopted by the Board of Supervisors, and analyzed in the Bass Lake Road Realignment EIR.

2. Bass Lake Road and primary local roads shown on Figure 4-1, Circulation Plan, are approximate locations. Adjustments may occur in conjunction with review and approval of tentative subdivision maps where necessary to avoid natural features and improve project design.

3. Pathways shall be constructed at locations convenient to residential lots to facilitate pedestrian travel to open space trails, secondary local roads, primary local roads, and Bass Lake Road. Such pedestrian and bike lane connections shall be located and protected to restrict access to adjoining private property.

4. A streetscape plan shall be submitted with tentative map applications and approved by the El Dorado Hills CSD and the County as a component of tentative map approval.

5. The Class 1 bicycle/pedestrian path along Bass Lake Road shall be separated from the street pavement to the maximum extent possible while maintaining the privacy of adjoining private property.

6. Where practical and compatible, pedestrian paths shall be constructed in public open space to separate pedestrians from motor vehicles.

7. The Clarksville Toll Road Trail, an off-road pedestrian/equestrian/bicycle trail connecting the eastern and western boundaries of the Plan area shall be created within the approximate alignment of the historic Clarksville Toll Road. (In certain instances, this alignment may coincide with the current alignment of old Country Club Drive.) To facilitate access to the trail, a parking lot capable of containing approximately 10 vehicles shall be created at the eastern end of old Country Club Drive at the Plan Area boundary. The trail and the park-and-ride lot shall be constructed to allow joint use of the parking facilities. These improvements shall be funded by the area-wide assessment district and built during the improvements to Country Club Drive.

8. Secondary local roads within villages shall be designed to facilitate internal circulation and discourage through traffic.

9. Secondary local road connections with primary local roads shall be spaced a minimum of 600 feet apart, except where such secondary local roads contain 12 or fewer lots.

10. Parking on Bass Lake Road and primary local roads shall be prohibited.

11. Parks and open space shown on the Specific Plan Land Use Diagram and Parks and Open Space Plan shall be linked by a pedestrian and bicycle circulation system.

12. Secondary local roads shall be constructed on a subdivision-by-subdivision basis within individual villages. Primary local roads, as shown on Figure 4-1, Circulation Plan, may be constructed in advance of village development, as needed for access and public safety.

13. In accordance with Caltrans requirements, a park-and-ride lot capable of accommodating 100 vehicles, expandable to 200 (approximately 2.0 acres) shall be provided in the approximate location shown on Figure 3-1, Specific Plan Land Use Diagram, and Figure 4-1, Circulation Plan, beyond the ultimate right-of-way of the Bass Lake Road/Highway 50 interchange. (See Section 8.0 of the Design Guidelines)

14. The non-vehicular right-of-way of Bass Lake Road and primary local roads not devoted to non-vehicular paving shall be granted to the CSD and be subject to a common design theme.

15. Plan Area streets shall be curvilinear in both vertical and horizontal design in order to conform to topography and avoid tree removal.

16. Residential driveways connecting to Bass Lake Road and primary local roads are prohibited unless otherwise permitted pursuant to Section 4.2.

17. Prior to final map approval, a streetscape plan for projects which front Bass Lake Road and all primary local roads shall be submitted for review and approval by the El Dorado Hills CSD. Streetscape improvements include all features within the public right-of-way and landscape easement areas. (See also Section 8.0 of the Design Guidelines)

18. All street and landscaping improvements described in this Plan shall be funded and maintained in accordance with the PFFP described in Section 9.0.

19. Subdivisions proposed between Bass Lake Road and designated primary local shall be required to provide secondary local road stub connections to properties which might otherwise be landlocked by development of that property.

20. Where appropriate, such as on slopes over 15 percent, Bass Lake Road, primary local roads, and secondary local roads should be designed with grade separations as a means of reducing cut and fill which would otherwise be necessary (see Figure 4-6). (See Section 6.0, Grading Plan)

21. Street lights shall be installed only on Bass Lake Road at primary local road intersections and at the park-and-ride lot. All lighting shall adhere to the Design Guidelines. (See Section 8. 7)

22. Roads shall not be permitted within, and allowed to cross, open space areas that define village boundaries, except as shown on the Specific Plan Land Use Diagram, or if it can be shown that such a crossing is necessary for circulation or to protect the public health and safety.

23. Subdivision designs shall minimize through traffic in villages to the maximum extent possible.

Figure 4-6

Split Street Section Concept



3rd Draft

5.0 PUBLIC FACILITIES & SERVICES

Development of the Plan Area requires numerous public facilities and services which must be carefully coordinated. The Plan describes all on-site public facilities and services necessary to support the land uses envisioned in the ultimate development of the Plan Area. Certain off-site facilities are also described.

This section describes existing facilities, the projected demand for new or expanded facilities resulting from Plan Area development, and the nature and location of all proposed facilities, including the following:

- Water
- Wastewater
- Stormwater Drainage
- Schools
- Parks and Open Space
- Fire Protection
- Police
- Public Utilities

Separate plans for water, sewer, and storm drainage systems are included. All other public facility locations are illustrated in Figure 3-1, Specific Plan Land Use Map. Streets are addressed separately in Section 4.0, and public parks are described in Section 5.0.

The public facilities described are based on projected demand created by ultimate residential development of the Plan area in accordance with residential densities and commercial intensities described in Figure 3-1, Land Use Diagram, and described in Section 3.2. Adjustments in design, sizing and location can be expected in conjunction with improvement plans as a result of detailed project design.

Policies pertinent to the siting and design and financing of the public facilities are provided in Sections 8.0 and 9.0 of this Plan. Information relative to cost, financing, maintenance, and phasing of public facilities and services is contained in Section 9.0.

5.1 General Public Services and Facility Standards

1. Public facilities, such as fire stations and utility substations, shall be located, designed and oriented in a manner which is harmonious with adjoining residential development and reduce impacts associated with noise, nighttime illumination, and odors. (See Section 8.9 of the Design Guidelines).

2. With the exception of existing high voltage transmission lines, all new electrical and communication facilities shall be installed underground; however, pad-mounted transformers and electrical substations are permitted. This policy shall not apply to 5-acre parcels or larger.

3. To minimize visual impacts, the architectural and site design for all public facilities including fire station, pump stations, and electrical substations, shall conform with Section 8.9 of the Design Guidelines.

4. Public facilities and services shown in this Plan, including parks, roads, and infrastructure, shall be offered for dedication in conjunction with the residential subdivision process. Bass Lake Road, primary local roads, and infrastructure trunklines may be constructed in advance of village development, as needed.

5.2 Water Facilities

5.2.1 Existing Water System

The 12-inch Bass Lake Conduit and the 18-inch Gold Hill Intertie are adjacent to the western and northwestern project boundary. There are 8-inch waterlines in Covello Circle, Castana Drive and Country Club Drive, a 6-inch waterline in Knollwood Drive and a 12-inch waterline adjacent to the eastern property boundary. An 8-inch waterline is also located in Merrychase Drive adjacent to the southeastern boundary.

The adequacy of these water facilities is the subject of an ongoing study to determine the remaining capacity in the Cameron Park area and the project(s) required to increase capacity for the proposed project; however, the remaining capacity will be on a first come-first served basis.

5.2.2 Proposed Water System

According to EIR use figures adjusted to reflect a total of 1,458 units, Plan Area buildout will result in an average daily demand for 892,000 gallons of water. Water for all Plan Area development will be provided by El Dorado Irrigation District (EID) through the Gold Hill lntertie system and/or the proposed Placerville Ridge Conduit via connections to the north of the Plan area.

Figure 5-1, Water Plan, illustrates the approximate locations of water trunklines and reservoirs needed to serve ultimate Plan Area development. Major water distribution lines will be located within major street rights-of-way. Service to areas above elevation 1,280 feet will require the use of a hydro-pneumatic booster pump station during high demand periods to sustain adequate pressure. During lower demand periods, this area can be served through a pressure reducing station off of the 18-inch Gold Hill lntertie. Service to the remainder will come from the Gold Hill Intertie in conjunction with a new EID water storage facility.

In order to receive water service, buy-ins to Assessment District #3 (AD#3) or participation in the construction of facilities paid for by the El Dorado Hills supplemental connection fee will be necessary. The cost and potential methods of financing construction of the water system are described in Section 9.4.

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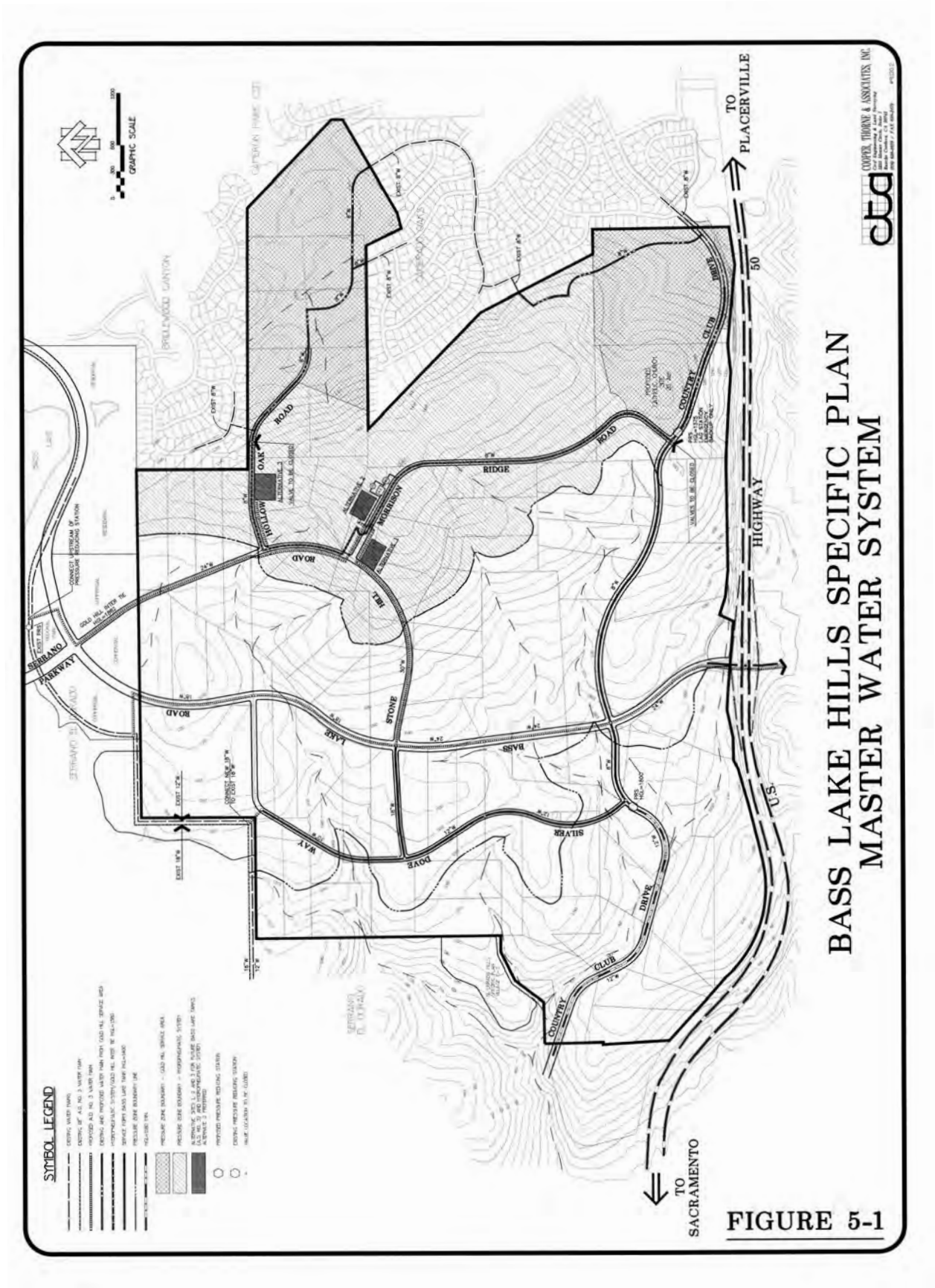


FIGURE 5-1

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The siting and design of above-ground water reservoirs shall conform to Section 8.0, Design Guidelines, in order to minimize visual impact.

5.2.3 Water Conservation Standards

1. Landscaping, excluding lawn areas in all public parks and street rights-of-way, shall be achieved with low water-using native plants and trees and irrigation systems which utilize the best available technology for water conservation and comply with State and local regulations.

2. Construction of residential projects shall be encouraged to utilize low water-using plants and irrigation and plumbing systems which utilize the best available technology for water conservation and comply with State or local regulations.

3. Established indigenous plants, trees, and shrubs shall be protected as much as possible.

4. Efficient irrigation systems which minimize runoff and evaporation and maximize the water that will reach plant roots shall be utilized; i.e., drip irrigation, soil moisture sensors, and automatic irrigation systems, should be used to the maximum extent possible.

5.3 Wastewater System

5.3.1 Existing Wastewater System

A 6-inch force main is in Country Club Drive adjacent to the southeastern comer of the project boundary. An 8-inch sewer main is at the end of Covello Circle which abuts the Plan Area. There is a 12-inch sewer main in Thornhill Drive adjacent to the northeastern property boundary and an 18-inch sewer main crosses the eastern portion of the property.

The EID Deer Creek and El Dorado Hills wastewater treatment facilities are presently at capacity.

5.3.2 Proposed Wastewater System

According to EIR use figures adjusted to reflect a total of 1,458 dwelling units, Plan Area buildout will generate approximately 1,749,600 gallons of sewage per day on a peak demand basis. Sewer service will be provided by EID as part of a larger system which serves surrounding development.

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As shown in Figure 5-2, Sewer Plan, the Plan Area is within two sewer service areas. The majority of the western portion is within the El Dorado Hills service area. The eastern portion of the Plan Area is within the Deer Creek service area. Sewage collected within the Plan Area will be transported beyond the Plan Area using existing, off-site trunklines which will be extended to the east and west, to either the El Dorado Hills treatment plant located south of U.S. Highway 50 off Fee Road, or the Deer Creek treatment plant.

Most sewer lines will be located in the right-of-way of primary local roads; although in limited instances, sewer lines may be installed within public utility easements located in open space areas or on residential parcels. As shown in the sewer plan, sewage from development on the east side of Bass Lake Road (within the El Dorado Hills service area) will be conveyed by gravity in 8 inch lines. Sewage collected from the El Dorado Hills Service area portion of the Plan will be conveyed to the proposed AD#3 sewer facility as shown on Figure 5-2.

In order to receive sewer service from the El Dorado Hills sewer system, a buy-in to AD#3 will be necessary. The cost and potential methods of financing construction of the sewage disposal system are described in Section 9.0.

5.3.3 Wastewater Standards

To the extent possible, reclaimed water shall be made available for use in irrigation within the Plan area or at off-site locations, such as the El Dorado Hills Golf Course.

5.4 Stormwater Drainage

The Plan Area contains a number of naturally occurring intermittent streams and drainage courses. Approximately 90 percent of the Plan Area drains westerly into Carson Creek. The remainder drains easterly into Deer Creek. (See Figure 1-5, Wetlands and Hydrology Map, which illustrates these features)

To the maximum extent practicable, the development proposal will plan to convey stormwater drainage via the existing drainage courses. Plan policies provide for the use of natural channels for the collection and conveyance of stormwater runoff and do not propose substantial alteration of existing drainage catchments. The Plan will comply with the provisions in the appropriate sections of the County of El Dorado Drainage Manual.

Intermittent streams within the Plan Area will be preserved in essentially a natural state. These areas will be utilized as receiving areas for compensation tree planting, open space, wildlife habitat, and recreation facilities (trails and bike paths).

Closed conduit storm drainage will be limited to locations primarily at street crossings and where surface conveyance is not feasible due to mass pad grading and high density development. Design of all storm drainage facilities and conveyance systems will comply with the provisions in the appropriate sections of the County of El Dorado Drainage Manual.

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Figure 5-3, Storm Drainage Plan, identifies the major drainage patterns and catchment boundaries within the Plan Area. Preliminary estimates of future flow rates from each catchment and the size and location of proposed culvert crossings of major roadways are provided .

Each tentative map application within the Plan Area shall include a storm drainage plan consistent with Figure 5-3 and provisions of the County of El Dorado Drainage Manual. The planning and design of drainage systems will take into consideration any potential downstream impacts, including those to existing drainage facilities, property, flow regimes, water quality, or riparian and wetlands areas. A drainage study which identifies and analyzes drainage-related impacts as a result of development of the map area will be submitted. Provisions mitigating potential impacts shall be included as a part of the drainage analysis. Submittal and approval of the drainage analysis will be required prior to recordation of any final map.

Increases in storm water runoff resulting from development is discouraged in El Dorado County. Improvements which propose to increase stormwater runoff will be evaluated to determine if downstream conveyance facilities can accept and convey the runoff increases. When downstream facilities are unable to adequately accommodate increases in stormwater runoff, detention basins may be used for the reduction of increases in peak runoff. If utilized, these facilities will be incorporated into public parks and open space whenever possible. Detention facilities may be constructed as necessary within each individual village; however, a coordinated effort between villages within a common watershed toward the development of a regional detention facility is an acceptable alternative and encouraged. Regional facilities are encouraged because these types of facilities could potentially lead to a more efficient storm drainage system and provide reductions in construction and maintenance costs. The County of El Dorado may require reservation of capacity of these facilities as necessary for the mitigation of regional flooding problems. Design of these facilities will comply with the provisions in the appropriate sections of the County of El Dorado Drainage Manual.

5.4.1 General Stormwater Facility Policies

1. Storm drainage detention basins shall be designed and constructed to comply with the provisions in the County of El Dorado Drainage Manual.

2. Storm drainage detention basins may be located in open space areas and parks and may be accessible to the public in order to serve a dual impact mitigation/recreation function. Detention basins shall be designed to ensure public safety, to be visually unobtrusive, and to provide wildlife habitat. Landscaping around the perimeter of the basin shall be encouraged. (See Section 8.3 of the Design Guidelines)

3. To protect water quality, catch basins which incorporate oil, grease, and sediment traps will be installed along urban streets in order to intercept storm runoff prior to release into intermittent streams. A conceptual illustration of a silt/grease trap is provided in Figure 5-4. Other suitable best management practices may be employed to reduce point sources of pollutants. Maintenance of these facilities shall be through a Country Service Area (CSA) or Zone of Benefit (ZOB).

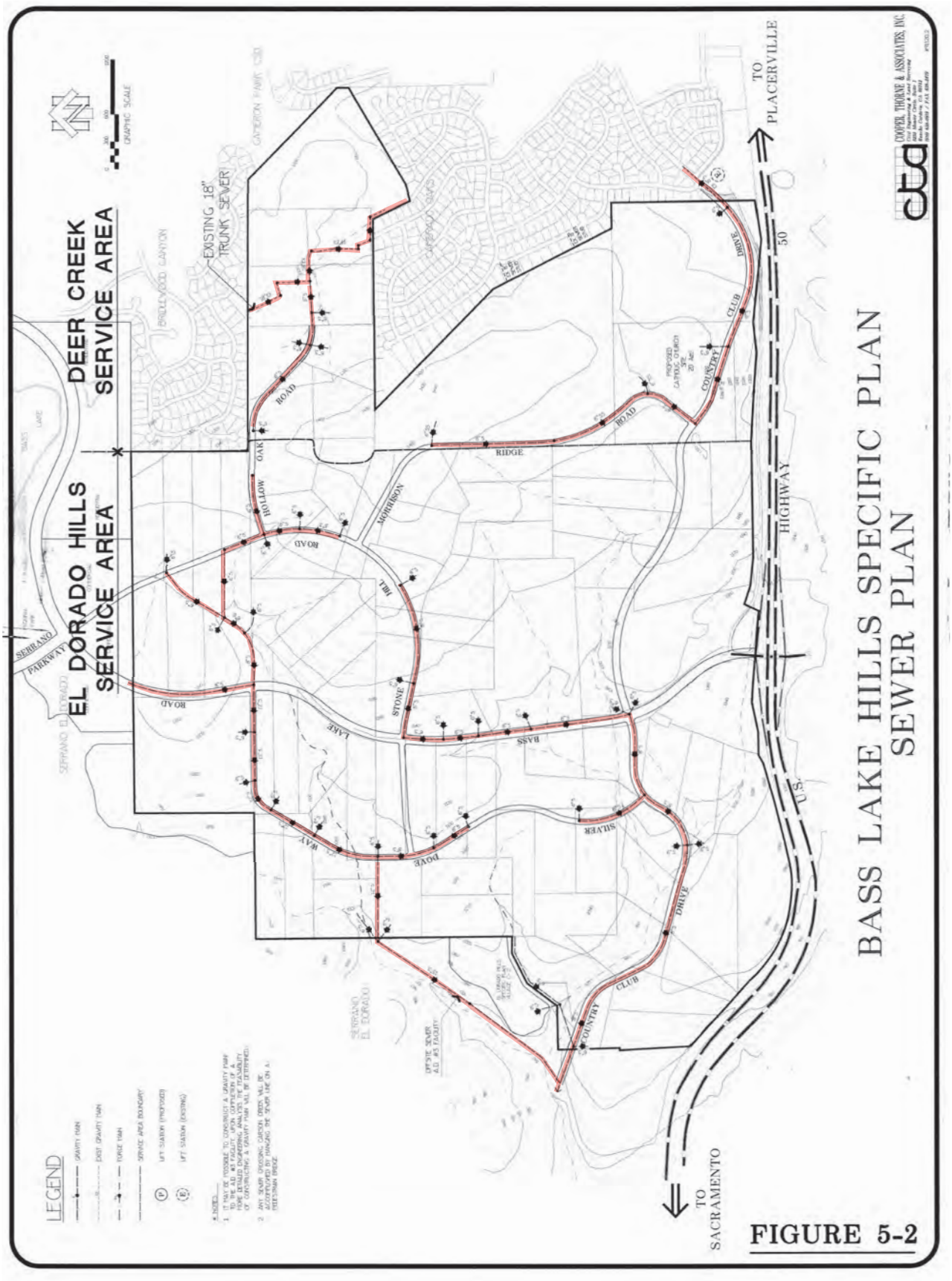


FIGURE 5-2

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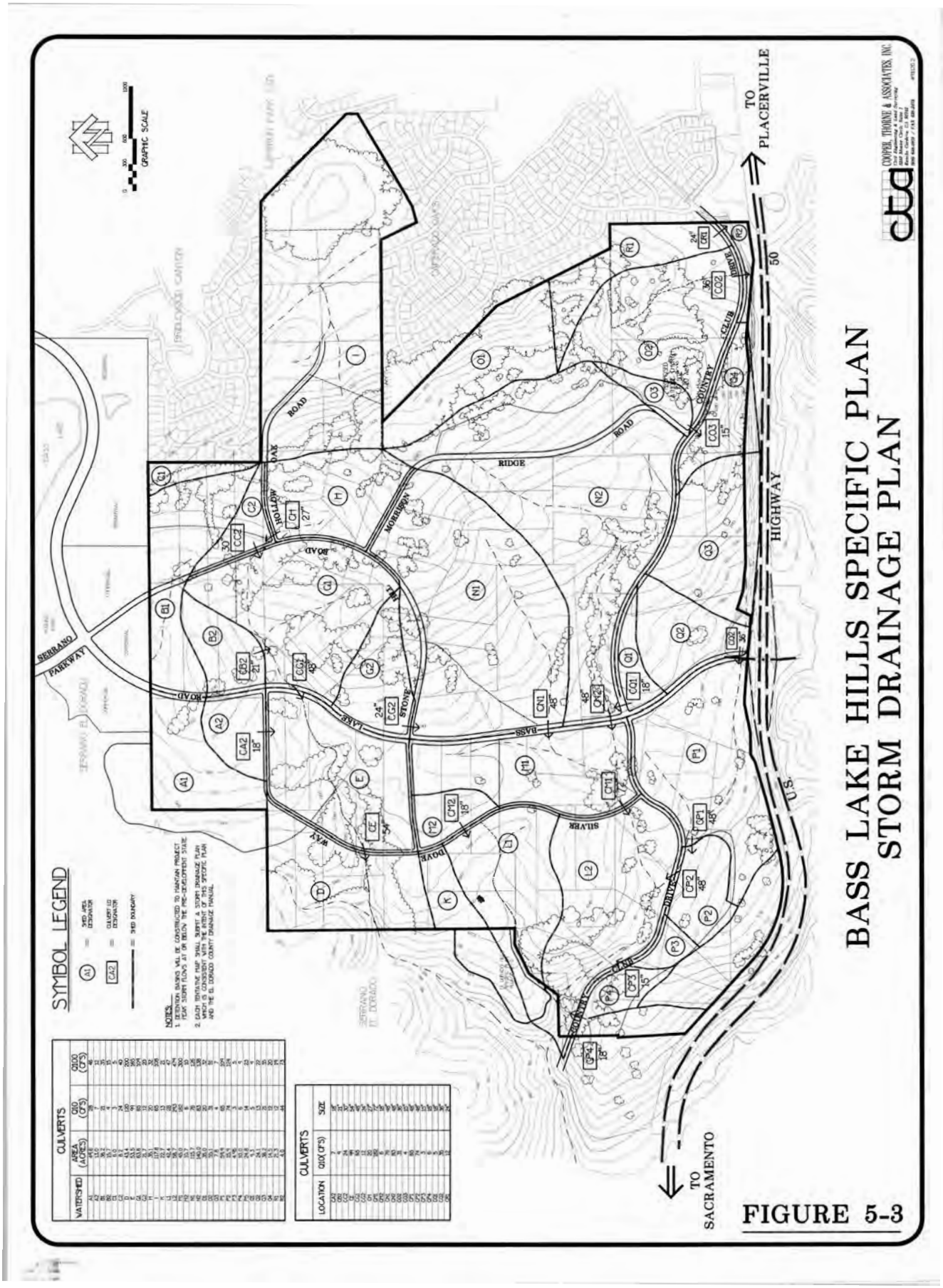
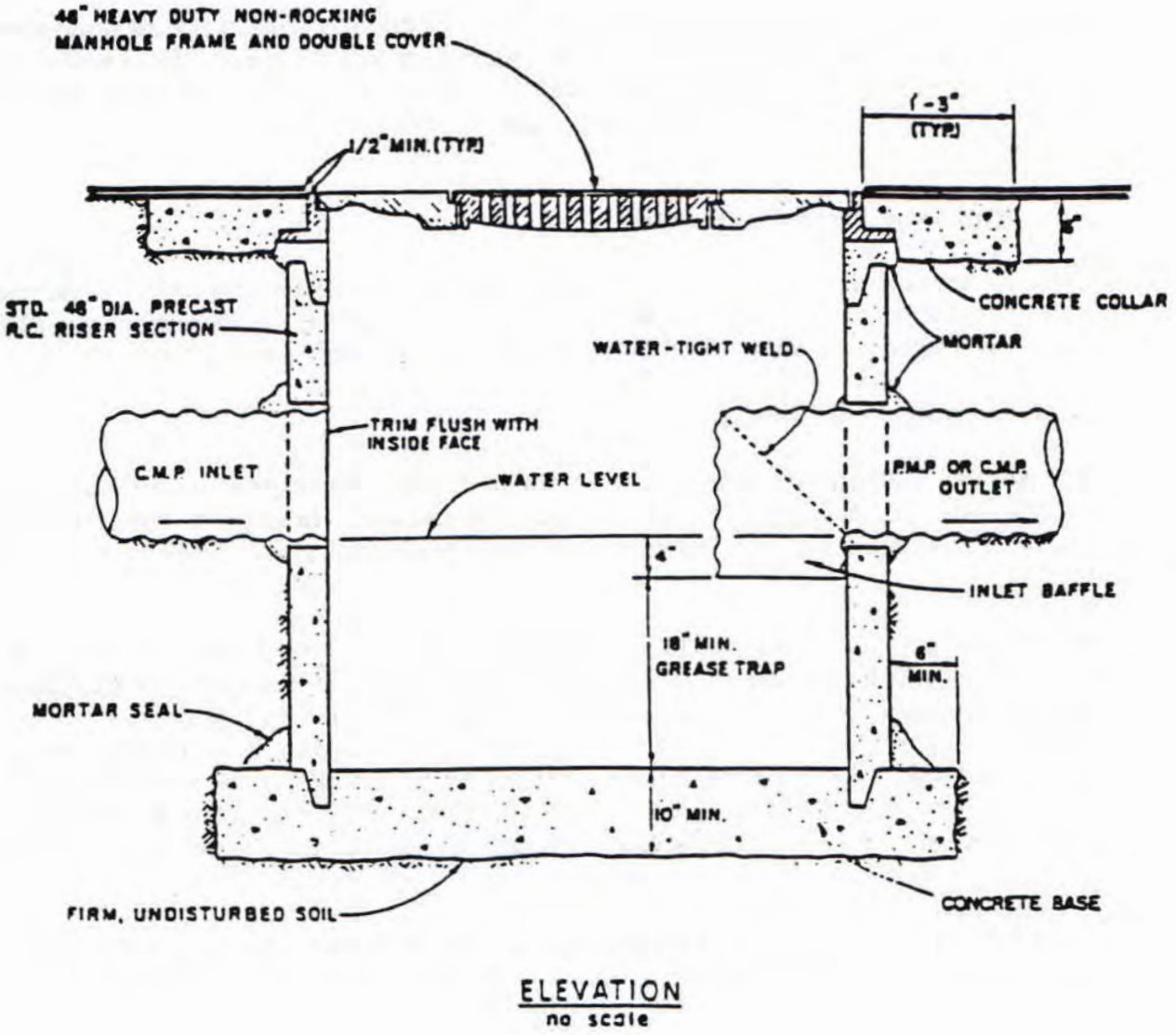


FIGURE 5-3

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Figure 5-4

Silt/Grease Trap



ELEVATION
no scale

5.5 Schools

Property within the Plan Area is located within the Buckeye Union School District, Rescue Union School District, and the El Dorado ~~Unified~~ Union High School District. According to ~~the EIR~~ school district demographic and enrollment projection figures, ultimate Plan Area development is expected to generate ~~580~~ 614 elementary school students, ~~178~~180 middle school students, and ~~342~~ 292 high school students, for a total of ~~1,100~~ 1,086 students.

As shown in Figure 3-1, Specific Plan Land Use Map, the Plan has designated a site reservation for an elementary school in accordance with the needs identified in the EIR. Final school site selection is the responsibility of the school districts. School site selection and design shall be encouraged to adhere to policies set forth in Section 9 .1. 7 and Section 8. 9.

5.6 Parks & Recreation Facilities

Through the provision of parks and open space, the Plan provides for a variety of active and passive recreation needs. This section describes parks and open space amenities in the Plan Area. Open space areas are depicted in Figure 5-5, Parks and Open Space Plan.

5.6.1 Recreation Facilities

The potential Plan Area development will generate the need for approximately ~~24~~ 31.1 acres of parkland including both area-wide and neighborhood facilities. In addition, the 2012 El Dorado County ~~Hiking and Equestrian~~ Parks and Trails Master Plan and the 2010 El Dorado County Bicycle Transportation Plan designates hiking and bicycle routes in the Plan Area.

Parks in the Plan Area are intended to serve both active and passive recreation needs. Park land and facilities will be provided in accordance with requirements of the EDHCSD Park & Recreation Facilities Master Plan (PRFMP). It is anticipated that all park sites will be dedicated to and maintained by the EDHCSD. Ultimate site selection and development is the responsibility of that body. The EDHCSD PRFMP requires that one or more park sites be provided in each village that contains 50 or more units. These park site locations will be determined in conjunction with the review of subdivision applications submitted for projects within the Plan Area.

All park site reservations and design shall adhere to the policies set forth in Section 120.12.090 - Park & Recreation Uses ~~4.2.8~~ of the El Dorado County Ordinance Code ~~Parkland Dedication Ordinance~~ and the requirements of the CSD.

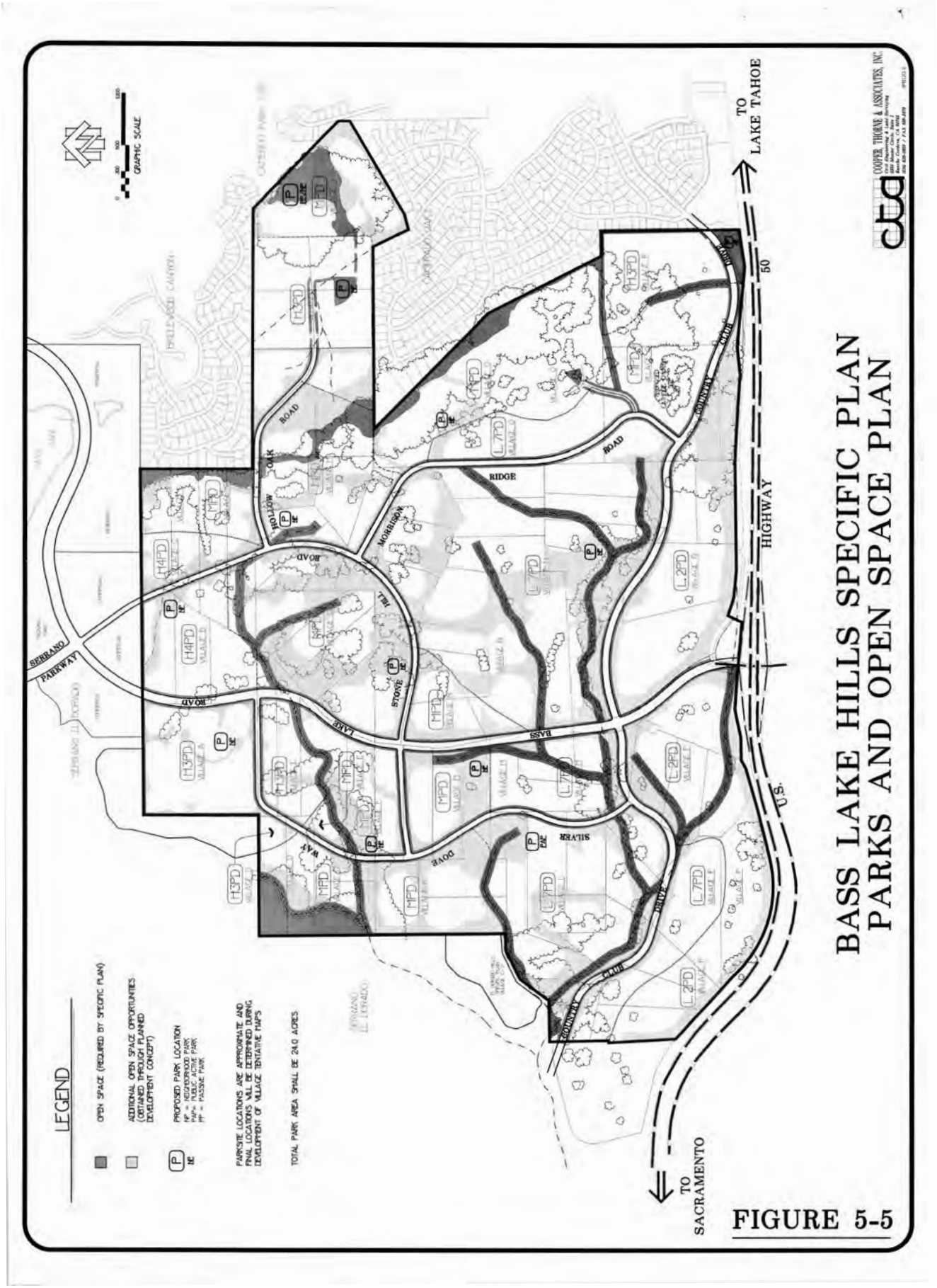


FIGURE 5-5

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5.6.2 Recreation Facility Standards

1. Parks shall be sized and contain the recreation amenities and facilities consistent with the requirements of EDHCSD RFMP to serve the needs of nearby residents.
2. Wherever possible, school sites should be located adjacent to park sites. Joint-use agreements between the EDHCSD and the school districts are encouraged in order to allow the sharing of costs and operational responsibilities. In such instances, recreation amenities, including play equipment, should be coordinated to minimize duplication. Such facilities would be subject to Table 1 of Appendix 1 of the EDHCSD RFMP.
3. Parks shall be landscaped with drought-tolerant and fire resistant plant species, excluding lawn areas, to the maximum extent possible to reduce irrigation and maintenance requirements.
4. Parks shall comply with El Dorado County Water Conserving Landscape Standards (Resolution 69-93).
5. Parks will be subject to oak tree mitigation measures stated herein and will serve as receiving areas for mitigation tree plantings.
6. Parks shall be designed to front along at least two roads to facilitate security surveillance and public access.
7. All parks within the Plan Area shall be offered for public dedication in accordance with the EDHCSD RFMP Facility Standards. Parks shall be developed concurrently with residential development.
8. Park locations shall be determined through the approval of PDs and installed at the time of final map approval.
9. Important natural features within park sites, such as oak trees, and stream and drainage corridors, should be preserved and incorporated into the park development.

5.7 Open Space

The Plan provides a variety of options to create open space amenities both for the benefit of Plan residents and as a means of conserving natural features and wildlife habitat. Open space designated in Figure 5-5, Parks and Open Space Plan, totals approximately 144 acres and includes the following types:

- Open space along intermittent streams.
- Open space as community buffers.
- Open space in tree grove areas and along Carson Creek.

Additional open space is provided by the landscape easements and/or rights-of-ways required along Bass Lake Road and all primary local roads. These 15-and 25-foot-wide areas will provide nearly 30 acres of linear open space for pedestrian facilities and landscape amenities. The historic Clarksville Toll Road will create a trail (linear open space) nearly a mile and one-half in length and 25 feet in width through the Plan Area, from the Bar J Ranch subdivision on the east to the EDHSP on the west.

The linear open space included in the Parks and Open Space Plan and the Land Use Diagram will serve to provide separation between villages in the Plan area and separate the Plan area from adjacent communities, while providing circulation routes for Plan area residents and wildlife. At the same time, open space areas will preserve remaining biotic and scenic resources and provide receiving areas for compensation trees.

In addition to open space shown on the Land Use Diagram, Plan policies relative to oak tree preservation may result in additional open space; however, such open space would not be available for public access unless dedicated for such use by the property owner and accepted by the CSD.

5.7.1 Open Space Policies

1. Open space areas which remain in private ownership shall be encumbered by a conservation setback not open to public access, except where public access easements have been recorded. (See Section 9 .1. 7)

2. Except for the limited installation of underground public utilities, water and sewer lines, and construction of maintenance roads and pedestrian paths, grading and construction shall be prohibited within open space areas. Mitigation tree planting is encouraged, as defined in this Plan. Where utilities are installed, grading and vegetation removal shall be the minimum necessary, and shall conform to all policies set forth herein.

3. Construction of all-weather pedestrian paths within public access easements are required within public open space areas where shown.

4. All pedestrian paths and trails shall be designed in accordance with standards contained in the 2012 El Dorado County ~~Hiking and Equestrian~~ Parks and Trails Master Plan.

5. Public open space areas shall be accessible to fire suppression equipment to the satisfaction of the fire protection district.

6. Establish an open space (OS) land use designation for the BLHSP.

5.8 Fire Protection Facilities

Development of the Plan Area ~~may~~ required the construction of one fire station within the Plan Area. In 1999 Fire Station 86 was constructed on a ~~The Plan designates a site approximately 1.5~~ 10-acre~~s~~ site at the intersection of Bass Lake Road and Silver Dove Way ~~in size to accommodate future construction. Site selection shall commence when the first subdivision map application is filed. Construction shall commence when the first final map west of Morrison Ridge Road is files.~~

5.8.1 Fire Protection Policies

Tentative maps may be approved only after the fire department determines that adequate fire protection services will be provided.

5.9 Police

Law enforcement will be provided by the El Dorado County Sheriffs Department. Service will be provided from the Sheriff's Headquarters located in Placerville.

5.10 Public Utilities

According to the service providers, public utilities, including electrical, and telephone services, are currently available in the area and will be provided to Plan Area development. The closest natural gas services are within the EDHSP, and may also be extended into the area if desired by Plan Area developers.

All existing and new electrical and telephone transmission lines will be installed underground in conjunction with development of individual properties. As indicated in Section 8.0, Design Guidelines, particular attention will be given to the siting and design of all above-ground facilities, such as transformers and electrical substations.

6.0 GRADING PLAN

6.1 Grading Standards

1. Regardless of the specific grading limitations set forth herein, development should conform to natural slopes to the maximum extent possible, rather than changing topography to fit development.

2. Creation of large graded pads which extend beyond the boundaries of one lot (i.e., mass pad grading) shall be prohibited, except as noted herein. Some deviation may be allowed for clustered development, affordable housing, and avoidance of other resources.

3. Development limitations shall be in accordance with steepness of existing slopes as shown in Figure 6-1, Grading Constraints Map. Required grading plans shall include a site specific slope map at least 1" = 50' and 5-foot contours showing the following classes of slope:

   30 Percent and Over Slopes (Restricted Grading Area)

   a. Setbacks shall be provided and encumbered by a conservation easement (See Section 3.3.2) held as common open space or zoned open space.

   b. No grading or construction is allowed, except the minimum required for trail access.

   15 to 30 Percent Slopes (Limited Grading Area)

   a. Primary local roads may include separated grade where necessary to minimize cuts and fills.

   b. Dwellings constructed to natural grade utilizing foundation designs which conform to topography is encouraged.

   c. All grading activities will incorporate the erosion control measures as provided in Chapter 110.14 - Grading, Erosion and Sediment Control of the El Dorado County Design and Improvements Standards Manual, Volume III. ~~Grading Ordinance~~. Areas subjected to grading shall not slope in excess of 2:1 unless otherwise approved by the County.

   10 to 15 Percent Slopes (Lot Pad Grading Area)

   a. Grading cuts or fills may occur to the lot boundary (property line) in order to provide a relatively level site or pad for construction of a dwelling and creation of usable yard areas. A landscaping plan shall be required for cut and fill slopes.

   b. Property lines should occur at the top of slope banks.

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0 to 10 Percent Slopes (Whole Site/Mass Pad Grading area)

a. This category allows most forms of grading including mass-pad grading, subject to adherence to the grading policies contained herein and County ordinance.

4. Where grading is necessary, contouring techniques shall be employed to avoid angular flat slopes and distinct edges. The top and toe of slopes and the slope itself shall be rounded and feathered in a natural-appearing manner.

5. Streets shall be sited in accordance with hillside contours so that the shape and character of the natural land form are retained.

6. Grading and land form alteration of prominent ridgelines whose silhouettes are visible from U.S. Highway 50 and Bass Lake Road is prohibited regardless of slope. This shall be gauged through the use of visual simulation of proposals. (See Section 3. 3 .1)

7. In order to minimize erosion and siltation, grading shall only be allowed on approved projects that are subject to immediate development. Issuance of a grading permit shall not occur prior to approval of a development application.

8. Use of retaining structures (retaining walls, crib walls, and gabions) are encouraged in instances where such a design will reduce grading quantities and visual impact. All such structures shall be landscaped.

9. Grading shall be prohibited in all open space areas, except as specifically set forth in Section 7.4.1.10 herein.

10. All grading shall conform to the County Grading Ordinance, Subdivision Design and Improvement Manual (Hillside Regulations), and the Hillside and Ridgeline Development Guidelines for Bass Lake Hills Specific Plan (Appendix B).

11. Architectural style of buildings should be adapted to hillside slopes rather than adapting land forms to buildings designed for flat land topography.

12. Development on slopes of 40 percent or greater is prohibited.

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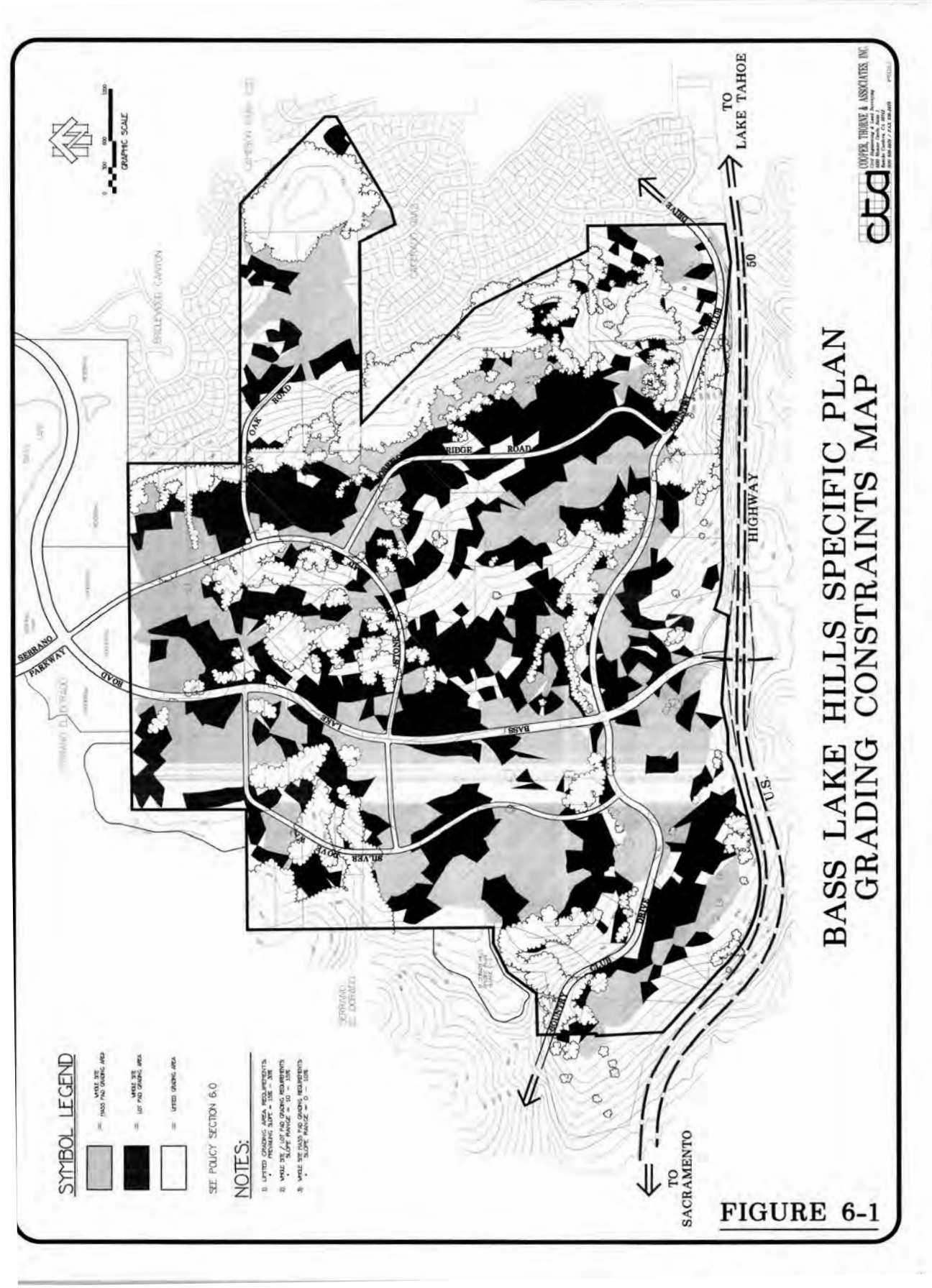


FIGURE 6-1

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7.0 ENVIRONMENTAL MANAGEMENT

7.1 Noise Standards

1. Interior and exterior noise levels for transportation sources shall not exceed levels contained in the Noise Element of the General Plan.

2. Tentative subdivisions which propose lots within the identified 65 dB Ldn contour lines shown along U.S. Highway 50 and Bass Lake Road in Figure 7-1, Noise Contour Map, shall submit acoustical analyses consistent with General Plan Noise Element policies and procedures.

3. Setbacks, berms, and/or other noise attenuation measures capable of reducing street and highway noise levels to standards contained in the Noise Element of the General Plan shall be provided where required in all residential areas and schools. Prohibiting the creation of additional housing units within the 65 dB/CNEL noise contour shall occur as an alternative to using sound walls to mitigate noise related impacts. A setback of at least 50 feet for residential units from Bass Lake Road shall be provided.

4. All noise attenuation structures and landscaping shall adhere to a common design theme outlined in Section 8.6.1 of the Design Guidelines.

7.2 Cultural Resource Protection Standards

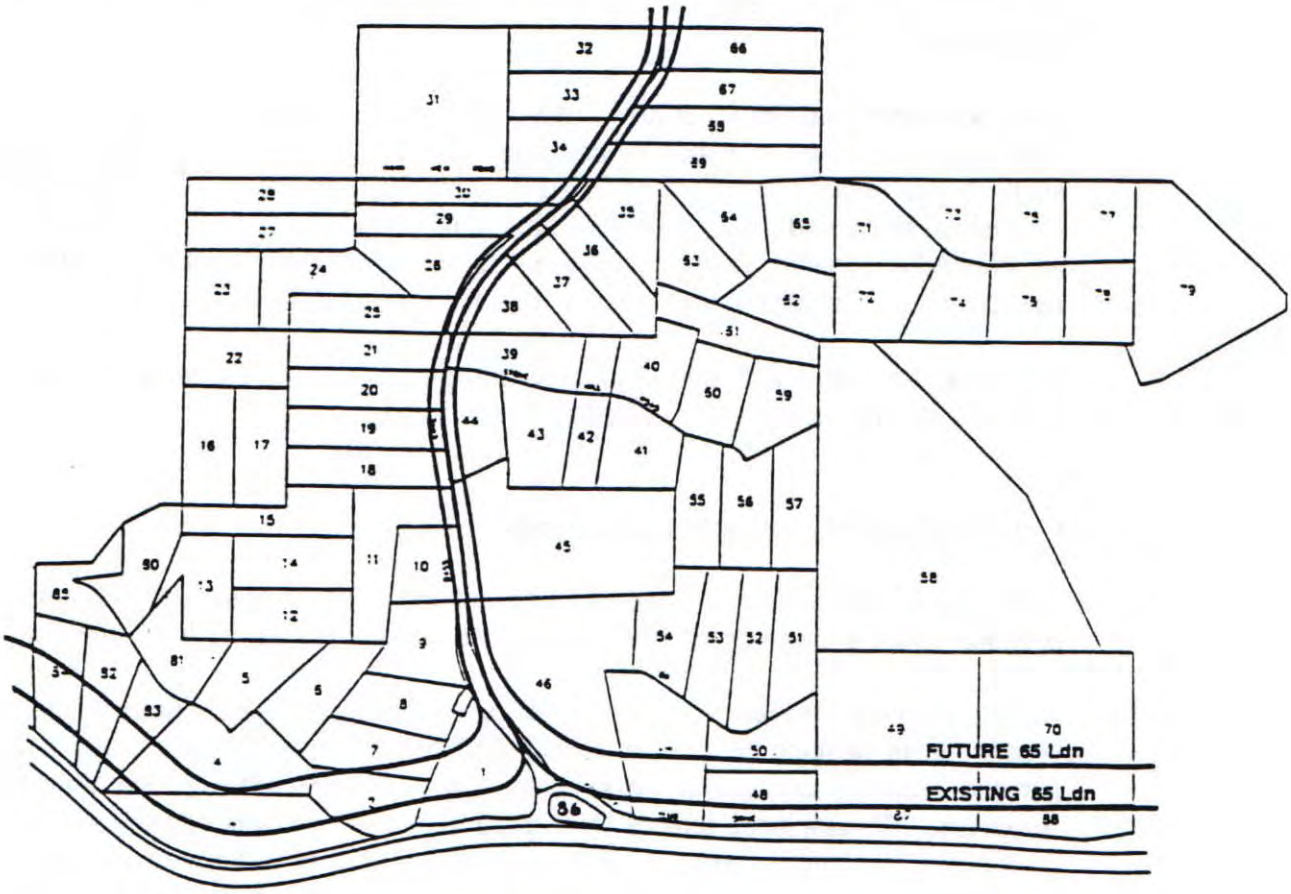
1. The County shall require site-specific archaeological investigations for all development proposals which may impact sensitive archaeological sites described in the EIR.

2. Mitigation measures to protect archaeological sites shall be implemented through conditions in development permits and shall require on-site monitoring by qualified personnel during excavation work in areas identified as sensitive for archaeological resources. Development activity shall cease whenever artifacts or skeletal remains are discovered until arrangements can be made to avoid or otherwise protect the site. Identified archaeological sites shall be protected through non-building setbacks to be recorded on the subdivision map.

3. The local ~~Indian~~ Tribal Council shall be notified of all discretionary development application for review and comment.

Figure 7-1

Noise Contour Map



LOCATION OF 65 dB Ldn CONTOURS

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7.3 Agricultural Land Protection Standards

The following policies apply to all lands adjacent to agricultural lands located outside of the Plan Area.

1. Residential lands adjacent to agricultural lands shall be fenced in accordance with County Ordinance 4111 and Resolution 98A-90.
2. New residential lots within the Plan Area located adjacent to agriculturally zoned land outside of the Plan Area shall maintain 10-acre minimum lot size. Such parcels shall not exceed a 3: 1 length to width ratio.
3. No use or activity shall be permitted on property adjoining agriculturally zoned land which conflicts with the agricultural uses.
4. New lots within the Plan Area adjacent to agriculturally zoned lands located outside of the Plan area shall maintain a 200-foot setback for incompatible land uses (schools, dwelling, etc.).

7.4 Wetlands & Intermittent Streams & Drainages

It is the intent of this Plan to retain and protect as much of the existing wetlands and intermittent stream and drainage resources as possible. The primary method of preservation will be avoidance by means of conservation setbacks. As defined in Section 3.3, the principal means of stormwater conveyance will be by means of intermittent stream and drainage channels. Aside from street crossings, pedestrian paths, and other features described in this Plan, improvements to land within intermittent stream and drainage setback areas will be precluded.

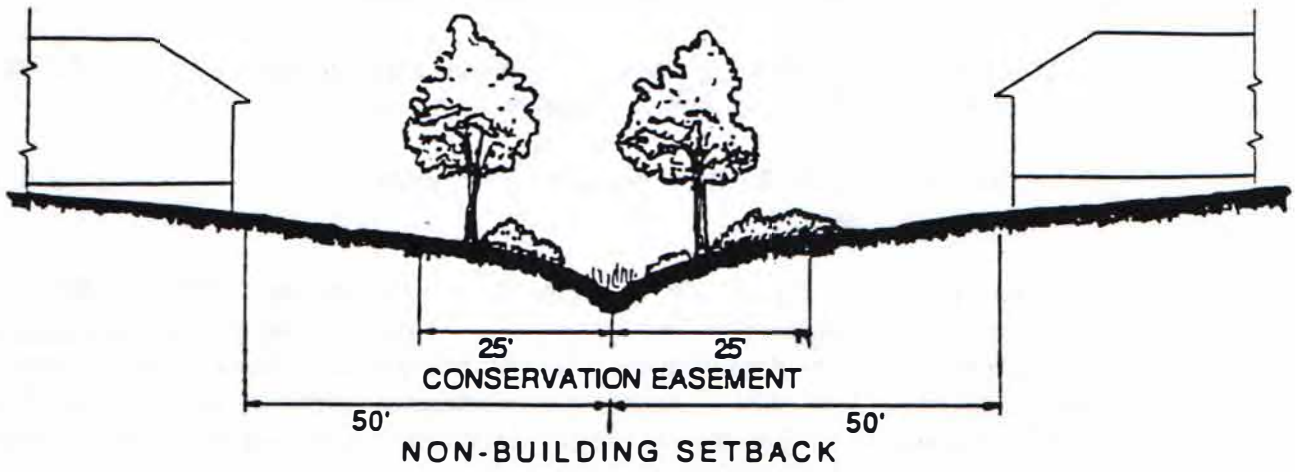
7.4.1 Wetlands & Intermittent Streams & Drainages Protection Standards

1. Wetlands, as identified on Figure 1-5, Wetlands and Surface Hydrology Map, shall be protected by the creation of a conservation easement extending 50 25 feet from the boundary of the identified wetland or from the edge of the riparian zone, whichever is greater.
2. Intermittent streams and drainages, as identified in Figure 1-5, Wetlands and Surface Hydrology Map, shall be protected by a 25-foot-wide conservation easement measured from the center ~~each side~~ of the intermittent stream channel ~~bank~~ or from the outside edge of any preserved wetland ~~riparian zone,~~ whichever is greater. This non-building conservation ~~area~~ easement shall be shown on all subdivision maps and building site plans and shall be recorded with every parcel so effected. Additionally, a 50 foot non-building setback measured from the center of the intermittent stream channel shall be shown on all subdivision maps and building site plans and shall be recorded with every parcel so effected. All grading and construction other than fences, as defined herein, shall be prohibited in the conservation easement. Grading, benches, decks, trails, lighting, signs, detention basins and landscaping are allowed in the non-building setback area (See Figure 7-2, Intermittent Stream Setback Concept).

3. Any project proposing septic systems shall provide a minimum 50-foot setback from intermittent stream centerline ~~bank~~ to any component of the septic system if a septic capability study determines septic is appropriate for the site.
4. Where applicable, 15-foot public access easements shall be recorded within ~~the riparian~~ open space corridors and shall be located at least 25 feet from the ~~banks~~ centerline of intermittent streams. Pedestrian and bike trails and utilities may be installed within these easements. Pedestrian and bicycle trails shall be construct ed only within designated open space areas located at least 25 feet from stream ~~banks~~ centerlines and outside of the riparian vegetation areas. Such pathways shall be designed to avoid impacts to wetlands and intermittent streams.
5. All easements shall be dedicated to the EDHCSD and/or the Landscape and Lighting Assessment District (LLAD) formed for maintenance of the trails, drainage and conservation setbacks. (See Section 9 .1. 7)
6. Fences shall not be permitted within any conservation easement ~~or designated open space areas.~~
7. Ponds or detention basins shall be protected by a conservation easement, excluding those located within parks, which extends ~~100~~ 25-feet from the high water line.
8. Livestock grazing or the keeping of animals is not consistent with the conservation easements defined herein and is not permitted.
9. Temporary fencing (chain link, ski fencing, or other suitable high visibility material intended to alert construction workers to the presence of protected wetlands) shall be installed at least 10 feet from the outside boundary of retained wetland areas along the length of the construction site prior to construction, grading, or movement of material or machinery onto the site. The fencing shall not be removed until construction activity is completed and finaled by the appropriate inspection authority.
10. Intermittent stream and drainage channels, as identified in Figure 1-5, shall be left in a natural condition, except where minor grading and vegetation cutting is required to maintain drainage flows within the channel to minimize erosion. Energy dissipators shall utilize natural materials which do not adversely effect water quality.
11. Within jurisdictional wetlands, all grading and construction shall be in accordance with a Section 404 permit.
12. Stormwater detention basins shall be designed to ensure public safety, be visually unobtrusive, and provide wildlife habitat. The design shall be reviewed and approved by the Department of Transportation (DOT) and the CDFG.
13. To ensure that storm drainage flows are not impeded to the degree that flooding occurs, tree planting within stream corridors shall be reviewed and approved by the County DOT.
14. Street crossings of intermittent streams shall be by bridges or half-round culverts to facilitate the passage of terrestrial and aquatic organisms.

Figure 7-2

Intermittent Stream Setback Concept



7.5 Woodland Habitat & Oak Trees

It is an objective of this Plan to conserve and enhance existing oak woodland habitat and native oak trees to the maximum extent possible. It is also the objective of this Plan to maintain existing native plant species within natural habitat areas and to introduce only native plant species to these areas. Compensation trees, as described herein, are encouraged in habitat establishment areas to the extent that such trees are native oak or riparian species.

The following policies are intended to minimize tree loss and provide for the planting of new trees as compensation for oak trees 6 inches dbh or larger which are impacted by development of the Plan Area. The requirement for tree replacement or compensation is triggered as a result of any disturbance to an oak tree or the soil within its dripline or canopy (i.e., cutting roots, removal, trenching, grading, etc.). The compensation policy is predicated upon the anticipation that impacted trees have a higher probability of mortality than non-impacted trees.

In addition to the policies outlined in this section of the Specific Plan, General Plan Policy 7.4.4, the County's Oak Resources Managment Plan (ORMP) and Oak Resources Conservation Ordinance (ORCO) shall apply. In any instance where the BLHSP provisions conflict with the standards or requirments of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.

Dripline or canopy is defined as the aerial extent of branches and foliage of one or several adjoining trees projected to ground level.

1. At the time of subdivision application, a certified arborist's report shall be submitted and include the following with respect to oak and other native trees:
    a. Based upon air photos and a ground survey on a base map of I" = 50' scale or larger;
    b. Location of dripline for all trees 6 inches dbh, or greater, and groves of trees;
    c. Size (dbh) and species determination list of all trees 6 inches dbh or greater within the project area;
    d. Trees impacted by the proposed project;
    e. Location of planting areas for compensation trees;
    f. Health of trees and any recommendations for trimming and/or removal for health and safety purposes requires no compensation; and
    g. Management plan for the long-term conservation of oak woodland habitat in the subdivision area.
2. Oak tree groves and oak woodland habitat shall be conserved within the Plan Area principally by avoidance. PD Combining Zone District shall be employed as a means of clustering residential density away from oak tree groves. Groves may be included within residential lots only if homes are constructed within a designated building envelope that avoids the grove(s), or the grove is contained within a conservation setback as previously described. Any tree in a grove impacted by construction activity shall be subject to a 1: 1 compensation ratio, with a minimum 5-gallon tree of like species.
3. A grove shall be defined as any group of oak trees, regardless of maturity, with a continuous canopy of 5,000 square feet or greater measured at the dripline (See Figure 7-3).
4. Impacted trees (non-grove) shall be replaced by like oak species and a minimum 5-gallon tree at a ratio of 2: 1.
5. An impacted tree is defined as any oak tree which has (1) had live branches or roots cut or otherwise removed; or (2) has had soil within the dripline disturbed by grading, trenching, or tunneling. Diversion of storm drainage into, and irrigation within the dripline area constitutes impact under this definition(s). Those trees removed for health and safety purposes are not considered impacted trees.
6. All compensation trees shall be planted within the public street right-of-way landscape easements, open space areas, parks, park-and-ride lot areas, and other lands owned by the public, homeowners associations or encumbered by conservation easements.
7. Compensation trees shall be planted in a manner and location prescribed in the arborist' s report.
8. Where tree protection is required, the property owner shall be required to provide financial security in an amount identified by an arborist. The security shall be forfeited and utilized for ongoing tree maintenance programs if the tree is impacted as defined herein

9. Fencing (chain link, ski fencing, or other suitable material) shall be provided as a physical barrier to alert construction workers and property owners of the protection. The fencing shall be installed one foot outside the dripline of any single tree or grove which is in close proximity to, and potentially affected by construction activity. A sign shall be posted which describes the trees as protected and subject to forfeiture of a security deposit.

10. The survival rate of compensation trees shall be 90 percent for a period of 5 years from the date of planting. To ensure this survival goal, the following measures shall be provided:

    a. To guarantee survival through the first 3 years following planting, a maintenance bond, cash, or other financial encumbrance acceptable to the County and the EDHCSD shall be provided based on a cost estimate provided by the arborist's report.

    b. The tree survival program shall be administered by the EDHCSD and be funded through the LLAD.

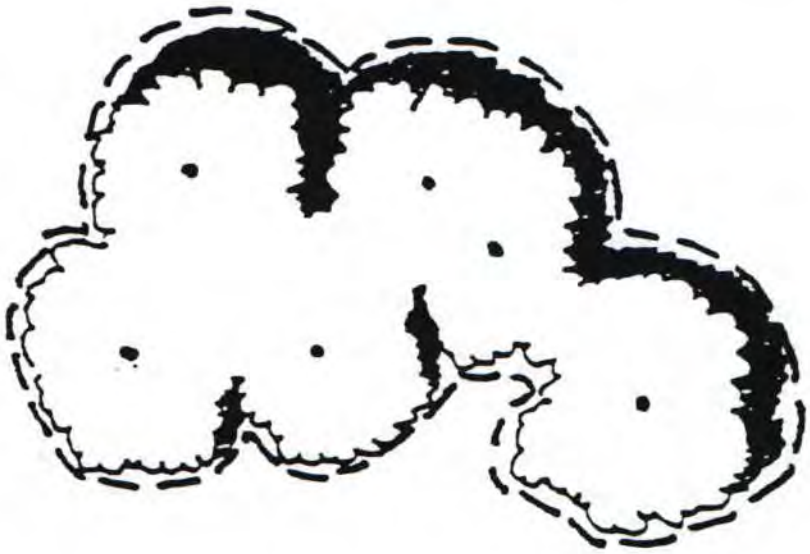
    c. The LLAD shall fund, and the CSD shall administer the ongoing planting program defined in the arborist' s report.

    d. Survival for years 3 through 5 following planting shall be ensured by a LLAD administered by the EDHCSD. Tree impact forfeiture money will be diverted to this district per the above policy.

11. In addition to the oak tree compensation program, a minimum of four (4) trees of any native species shall be planted on each lot within the Plan area in conjunction with construction and prior to occupancy of each dwelling. Trees shall be a minimum container size of 5 gallons.

12. Irrigation within the driplines of existing oak trees is prohibited, except by means of drip irrigation systems which focus upon the target vegetation.

Figure 7-3
Oak Tree Grove Definition



5,000 SQUARE FEET OF CONTINUOUS CANOPY

- - - - - - - = Area Measured by Planimeter

8.0 DESIGN GUIDELINES

The following guidelines apply to all public land within the Plan Area and are intended to promote a sense of community identity through common design themes and enhance the quality of life of Plan Area residents.

8.1 Streetscape

The following describes streetscape (i.e., plant materials and other landscape features) installed within public rights-of-way and landscape easements of Bass Lake Road and all primary local roads. All plant materials shall be consistent with the EDHCSD Landscaping Guidelines for landscape easements along roadways.

Compensation trees may be planted in any publicly-maintained area and planted in a way to not pose a safety hazard.

8.1.1 Bass Lake Road

Landscape Easement

Landscape easements shall be created on each side of the 100-foot-wide Bass Lake Road right of-way. The landscape easement will accommodate the following streetscape features:

1. 8-foot-wide asphalt concrete Class 1 bicycle/pedestrian path and 6-foot-wide pedestrian pathway as described in Section 4.1 of the Plan. The path shall meander and avoid maintaining a parallel relationship with the street unless infeasible to do so;
2. Wall, fences, and berms (as further described in Section 8.6, herein); and
3. Plants, including trees, shrubs, and ground cover. Plant materials shall be selected from the list contained in the EDHCSD Landscaping Guidelines. Native, drought-tolerant plants and trees shall be used as prescribed by State and local regulations. A primary objective of the planting shall be to obscure the visibility of any solid wall or fence as depicted in Figure 8-1.

Median

Planting within the 16-foot-wide median shall include trees with a drought-tolerant shrub and ground cover understory.

Right-of-Way

1. Any portion of the public right-of-way not devoted to street or pedestrian path paving shall be planted with a low ground cover.

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2. Where bus shelters are installed, a consistent architectural design theme shall be followed for all shelters in the Plan Area.
3. All new electrical and communication transmission facilities shall be installed underground; however, above-ground transformers and substations are permitted where appropriately screened and designed as specified herein

Figure 8-1

Wall/Fence Planting Detail



8.1.2 Primary Local Roads

Landscape Easement

1. Landscape easements shall be created on each side of each 60-foot-wide primary local road right-of-way. The landscape easement will accommodate the following streetscape features:

    a. Wall, fences, and berms (as further described in Section 8.6); and

    b. Plants, including trees, shrubs, and ground cover. Plant materials shall be selected from the list contained in the EDHCSD Landscaping Guidelines. Native drought tolerant plants and trees shall be used to the maximum extent possible. A primary objective of the planting shall be to obscure the visibility of any solid wall or fence, as depicted in the sketch provided in Figure 8-1.

3. Prominent entry landscape treatments may be employed at village entry points in order to foster a sense of community identity. (See Section 8.8 relative to signs)

Right-of-Way

1. Any portion of the public right-of-way not devoted to street or pedestrian path paving may be planted with a low ground cover

2. All new electrical and communication facilities shall be installed underground; however above-ground transformers and substations are permitted where appropriately screened or landscaped. (See Section 8.3 herein)

8.2 Park-and-Ride Lot

It is an objective of the Plan to screen the park-and-ride lot from off-site view. To that end the following guidelines shall be employed:

1. All sides of the park-and-ride lot shall contain a planter area no less than ten (10) feet in width. Within the planter area a variety of shrubs and ground cover shall be planted which, within a period of five (5) years, shall obscure the view of vehicles within the lot to a height of three (3) feet above the parking lot surface.
2. Native trees shall be installed within the planter area to provide visual screening from higher vantage points and within the parking area in order to provide shade for parked vehicles.
3. Native drought-tolerant plant species shall be used to the extent possible.
4. Where bus shelters are installed, a consistent architectural design theme shall be followed for all shelters in the Plan Area.
5. Park-and-ride lots shall be provided interior trees planted at a minimum ratio of 2 trees per 5 parking spaces.
6. The area shall be one of the receiving areas for compensation trees.

8.3 Water Storage Tanks, Electrical Substations, and Sewage Lift Stations

It is an objective of the Plan to screen public facilities such as water storage tanks, electrical substations, and sewage lift stations and similar features from view. The following guidelines shall apply:

1. Water storage tanks, electrical substations, and sewage lift stations shall be screened or landscaped from view through the use of fast-growing evergreen trees inter-planted with native evergreens. Where possible, earthen berms shall be used in combination with planting to achieve the desired screening more quickly.
2. Where water tanks are visible and not immediately screened by plant materials and/or berms, the tank shall be painted a neutral, earth-tone color as a means of making the tank less noticeable.

3. A planter at least five (5) feet in width shall be provided on all sides of electrical substations and sewage stations, regardless of the type and quality of fencing or wall materials used. Trees and shrubs shall be planted which provide total screening of the facility within a period of ten (10) years.

8.4 Stormwater Detention Basins

As part of the stormwater drainage system, the Plan employs detention basins and are intended to be functional in design. It is the intent of this Plan that detention basins appear as natural as possible. Essentially, during dry weather these basins will appear as shallow depressions in which native plants grow, while during periods of heavy rain the basins will appear as natural ponds.

Detention basins are not intended as long-term seasonal water features; basins will be filled with water only during peak storm flows, after which time water levels will diminish. The following guidelines shall govern the design of detention basins:

1. The sides of detention basins shall be gently-sloping. The maximum slope ratio shall not exceed 4:1.
2. Basins shall be constructed of earth and stone. No concrete or other man-made materials shall be employed, except at spillways, inlets, and other such control structures.
3. Planting of riparian trees and shrubs is encouraged around the perimeter of the basin.

8.5 Open Space Areas

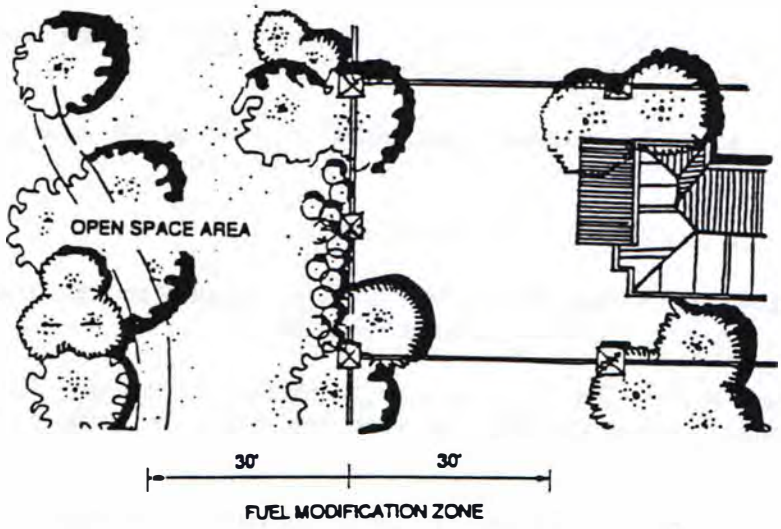
8.5.1 Fuel Modification Zones

Fuel modification zones represent a physical separation between non-irrigated natural open spaces and the built environment created by the installation of plant materials which are fire resistant. The purpose of such zones is to reduce the hazard of wildfires and to allow for a naturalized, visual transition between developed areas and natural open space. Specific guidelines for fuel modification zones are as follows:

1. A fuel modification zone shall be established in all instances where residential development abuts an open space area, other than stream zones subject to fire district approval. The zone shall extend into the open space area a distance of thirty (30) feet and into the private residential lot a distance of thirty (30) feet consistent with fire safe requirements. This concept of a shared fuel modification zone is illustrated in Figure 8-2. Stream-zone buffers shall be as follows: Stream-zone, fifteen (15) feet; residential lot, thirty (30) feet.

Figure 8-2

Fuel Modification Zone



2. Dead wood, dried leaves, and other combustible materials shall be routinely removed from both public (through LLAD) and private (by owner) within the fuel modification zone.

3. Low fuel volume plants to be installed in Fuel Modification Zones shall include the following:

Native:

Eriophyllum spp/Yarrow
Eschscholzia califomica/Califomia Poppy
Lupinus spp/ Annual Lupines
Mimulus spp/Monkey Flower
Penstemon spp/Penstemon
Trichostoma lanatum/Woolly Blue Curls
Zauscheneria spp/Califomia Fuschia

Introduced:

Artemesia caucasica/Silverberry
Atriplex glauca/Saltbush
Atriplex semibaccata/Creeping Saltbush
Cistus crispus/Rockrose
Santolina chamaecyparissus/Lavender Cotton
Santolina virens/Green Santolina

(From Trees &: Shrubs for Dry California Landscapes, by Bob Perry)

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8.5.2 Pedestrian Paths

Pedestrian pathways and trails within all open space areas, including intermittent stream and drainage corridors, shall comply with the following guidelines:

1. Trails and pathways shall be installed within a 25-foot-wide public access easement a minimum of 15 feet from streambanks.
2. Trail grades to the maximum extent possible shall maintain a preferred range of O to 15 percent.
3. The surface shall be three (3) feet in width.
4. An all-weather surface shall be used, consisting of asphalt concrete pavement, crushed rock, decomposed granite, or other suitable material.
5. Pathway locations shall avoid intrusion upon privacy of adjoining private property. The maximum possible separation shall be provided between the pathway and the property line.
6. Pathways shall be curvilinear in horizontal and vertical alignment and should conform to natural topography to the maximum extent possible.
7. Except as otherwise described herein, pedestrian paths and trails shall meet or exceed the standards contained in the El Dorado County Hiking and Equestrian Trails Master Plan. Erosion control measures shall be included in the design and maintenance of all trails.

8.6 Walls, Fences, and Berms

8.6.1 Streetscape

It is the intent of this Plan for walls and fences installed along streets for purposes of privacy and/or noise attenuation to be as visibly unobtrusive as possible. To this end, walls and fences shall adhere to the construction guidelines set forth herein and shall be screened with trees and shrubs in accordance with the planting guidelines set forth in Section 8.1.2. All improvements and construction materials and colors shall be consistent with EDHCSD Landscaping Guidelines.

These guidelines apply to walls and fences installed within all public street rights-of-way and landscape easements along Bass Lake Road and all primary local roads.

1. Fences and walls shall be constructed of weather and rot resistant materials. Where wood is used, appropriate treatment shall be applied to enhance longevity based on best construction practices

2. Walls and fences (and walls and fences installed on graded berms) shall not extend higher than six (6) feet above finished grade.

3. In all cases where fences and walls are installed along streets, plant materials shall be installed which provide screening of at least 60 percent of the wall/fence when viewed from the nearest point on the street within a period of five years.

4. Where possible, earthen berms shall be employed in lieu of fences and walls in order to provide both noise attenuation and privacy. Where berms are used, particular attention shall be given to ensuring that storm drainage is not impaired.

8.6.2 Open Space Areas

Fences bordering dedicated open space areas, including habitat establishment areas along intermittent streams and other open space areas, shall utilize an open design which provides views through the fence and which provides for passage of wildlife. Solid fencing shall be prohibited in such instances. Open fencing types described in EDHCSD Landscaping Guidelines shall be used.

Agricultural areas identified on the Specific Plan Land Use Diagram as Williamson Act lands shall be fenced according to County Ordinance 4111 and Resolution 98A-90.

8.7 Lighting

The following guidelines address nighttime illumination in all public areas, including streets, park-and-ride lots, and parks. These guidelines are intended to ensure that nighttime illumination enhances safety and convenience in an aesthetically pleasing, unobtrusive manner. Illumination of private property is not addressed by these guidelines.

1. In all instances, lighting shall be the minimum intensity necessary to achieve its intended purpose.

2. Downward-oriented cut-off type fixtures and shielding shall be used in order to prevent light spillage and glare impacts beyond the target of illumination.

3. Lighting for pedestrian pathways and parking areas shall illuminate only the pavement. Use of low bollard-type fixtures is encouraged. Tall (16 feet or higher) pole-mounted fixtures are discouraged.

4. Energy conservation shall be a prime consideration when designing any lighting system. Photocell operation is mandatory to ensure efficient use of energy and minimize unnecessary II on time 11.

5. Open space areas shall not be illuminated either directly or indirectly by light spillage from outside light sources.

6. Subdivision and village identification signs within the Plan Area shall not be internally illuminated. (See Section 8.8 relative to signs)

8.8 Signs

It is the intent of the Plan to prevent the use of signs which are inconsistent with the community character. All signs shall adhere to the sign requirements of the zone, the El Dorado County Sign Ordinance and to the following guidelines:

1. One permanent sign that identifies a village is permitted at each village entry point on primary local roads. Such signs are prohibited on Bass Lake Road. Each subdivision may include an identification sign, at each entry point.
2. Permanent village signs shall be restricted to 36 square feet of area, and subdivision signs shall be restricted to 24 square feet of area.
3. Signs shall employ natural materials such as stone and wood to the maximum extent possible. Plastic and metal signs are prohibited, except that metal may be used for lettering. Materials should complement those used in walls and other streetscape enhancements and shall be of high quality and high durability. The use of identification signs incorporated into walls is encouraged.
4. Natural earth-tone colors and materials shall be used.
5. No internally illuminated signs shall be permitted.
6. All signs shall be low monument-type signs no higher than six (6) feet above finished grade. Pole-mounted signs are prohibited.
7. All temporary subdivision marketing signs and permanent village entry signs shall be incorporated into the design of a landscape planter.
8. Signs shall be no closer than fifteen (15) feet to any public street right-of-way. Monument signs shall be located to preserve sight distance at intersections.
9. Signs shall always be maintained in good condition, clean and free of graffiti or other disfigurations. Planting at all signs shall be maintained to allow for easy and safe visibility and to enhance the sign face and structure.
10. Prohibited signs include, but are not necessarily limited to the following:
    a. Billboards or any signs which will change on a regular basis;
    b. Signs which promote any other project or site other than those in the Plan Area, except those which may be permitted at the Bass Lake Road and Country Club Drive intersection;
    c. Inflatable signs;
    d. Animated or moving signs; and
    e. Signs closer than fifteen (15) feet to any public street or open space area.

11. Temporary signs: Temporary sales signs for subdivision homes or lots shall not be located within rights-of-way, landscape easements, or open space areas.

12. One monument sign that defines the area as "Bass Lake Hills" may be installed at the Bass Lake Road and Country Club Drive intersection. Such sign shall be subject to review by the El Dorado Hills Design Review Committee.

8.9 Architectural Design

The Plan provides for the construction of a variety of above-ground public facility structures, including one public school and a fire station. In addition, electrical substations and sewage lift stations required for Plan Area infrastructure may require above-ground structures.

It is the intent of this Plan that all above-ground structures and architecture be designed to be consistent with the architectural design, including form, colors, and materials of the adjoining residences.

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9.0 IMPLEMENTATION AND ADMINISTRATION

This section describes the mechanisms by which the land uses and policies contained in this Plan are implemented. Included are the following topics:

- Land use regulation
- Specific Plan adoption and amendment procedures
- Specific Plan preparation and engineering reimbursement
- Public facility financing
- Public facility maintenance responsibilities
- Phasing

9.1 Land Use Regulation

9.1.1 Existing Zoning

The Plan Area presently contains ~~four different~~ seven zoning classifications, as follows:

Residential Estate Ten-Acre (RE-10)

Residential Estate Five-Acre (RE-5)

Agriculture (A)

Transportation Corridor (TC)

Zone districts RE-10 and A require a minimum of 10 acres per parcel. RE-5 zoning requires a minimum of 5 acres per parcel. TC zoning permits a minimum of 5 acres per parcel and only permits the development of transportation facilities as a matter of right with other non-transportation uses permitted by special use permit.

9.1.2 Proposed Zoning

The Plan is a policy document which provides a refinement of the broad goals and policies set forth in the General Plan. The Plan also augments and implements the mitigation measures contained in the EIR and Addendum. The Plan is to be implemented by provisions of the El Dorado County Zoning Ordinance and as modified to implement the General Plan. The Plan does not create new zoning districts but does prescribe new development standards.

Where policies contained in this Plan conflict with other existing policies or ordinances, the policies of this Plan shall provide a basis for ordinance amendment or creation of ordinances applicable to this area. As required by State law, all land uses proposed in the Plan are consistent with the General Plan.

As a component of Plan implementation, the County will adopt an area-wide ordinance applying zoning to the Plan area. The primary zoning will be a PD overlay with maximum densities applied per Plan land use policies and designations. Bonuses will provide additional density per General Plan and Specific Plan policies.

One Family Residential Single Unit Residential (R1)

The northern portion of the Plan Area will be zoned Single-Family Residential (Rl) with a minimum lot size of 6,000 sq.ft.; however, other zoning districts could also be applied which are consistent with the area plan designations and density bonus opportunities.

Multi-Unit Residential (RM)

Approximately 23.9 acres north and south of Country Club Drive will be zoned Multi-Unit Residential (RM). The intent of this zoning is to provide employee housing, guest rental housing and senior housing units. This zone is applicable to lands designated as Multi-Family Residential (MFR) on Figure 3.1, Land Use Diagram.

Community Commercial (CC)

Approximately 26.2 acres of Community Commercial zoning is located in the south portion of the SPA area situated between Country Club Drive and U.S. Highway 50 immediately east of Bass Lake Road. The intent of this zoning is to allow visitor serving uses and mixed-use development consistent with General Plan Policy 2.1.6.4. This zoning is applicable to lands designated as Commercial (C) on Figure 3.1 Land Use Diagram.

Open Space (OS)

Approximately 7.9 acres of the SPA area north and south of Country Club Drive is zoned Open Space (OS). This zoning may be applied to other portions of Plan Area properties as future tentative subdivision maps are submitted for approval to the county. The intent this zoning is to preserve and protect natural feature such as oak woodlands and intermittent streams and is viewed as an alternative to conservation easement described in Section 3.3 of the BLHSP. This zoning is applicable to lands designated as Open Space (OS) on Figure 3-1 Land Use Diagram.

Planned Development (PD) Combining Zone District

The PD Combining Zone District, as presently described in Chapter ~~17. 02 and 17. 04~~ 130.28 of the Zoning Ordinance, will be used throughout the Plan area as a means of transferring density within individual subdivision proposals in order to provide sites for various public facilities, and open space, to preserve natural features, etc.

9.1.3 Density Transfer

Following is a description of special zoning mechanisms to provide density transfer both within and beyond individual subdivisions.

Planned Development (PD) Combining Zone District.

As provided in Chapter ~~17.02 and 17.04~~ 130.28 of the Zoning Ordinance, the PD Combining Zone District shall be applied to certain lands in the Plan Area in order to encourage and provide for creative and flexible approaches to the use of land through the redistribution of residential densities to protect natural resources, provide addition recreational facilities, and provide open space. Application of the PD Combining Zone District allows flexibility in the establishment of all development standards, including required yard areas (setbacks), lot area and width, lot coverage and other provisions. Furthermore, in order to maximize land use and preserve natural features, the PD Combining Zone District allows for transfer of residential density within individual tentative map and village boundaries within commonly owned or planned contiguous lands.

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9.1.4 Subdivisions

The County Subdivision Ordinance and the State Subdivision Map Act proscribe the process for review of subdivision requests. Under State law, the County must make findings justifying the approval or denial of subdivision requests, including consistency of the proposed subdivision with the General Plan and this Plan. Moreover, all development proposals must be consistent with the EIR and include applicable mitigation measures.

Development of the Plan Area will occur through a series of PD plans and subdivision maps. Each map will be reviewed for consistency with this Plan and other applicable County policy documents, ordinances, and the EIRs. In addition, final subdivision maps must be m compliance with conditions of approval, and where applicable, with any development agreements approved in conjunction with this Plan and/or individual tentative maps.

9.1.5 Development Agreements

Section 65864 et seq. of the Government Code authorizes the County of El Dorado and developers to enter into agreements that are effective regardless of subsequent changes in the General Plan, this Plan, zoning, subdivision, and building regulations. The development agreement specifies the permitted use, density, dedication provisions, and a number of other matters. Such agreements may also set forth obligations of Plan Area developers regarding the nature, timing, and financing of infrastructure improvements, right-of-way improvements, and public dedications.

A development agreement is a contract constituting a promise by the County that planning policies and regulations will not be changed for a specified period of time with respect to a particular project. In return, the developer agrees to construct certain improvements according to a specific time schedule.

Policies relative to use of development agreements are contained in Section 3.3.

9.1.6 Covenants, Conditions, & Restrictions (CC&Rs)

Individual developers shall prepare and record CC&Rs for projects in the Plan Area. Also known as a deed restriction, such an instrument, when recorded, runs with the land and obligates the property owner and a homeowners association to requirements contained in the CC&Rs. The CC&Rs should be developed and adopted to provide consistency throughout the Plan Area. The County will not be involved in the enforcement of these restrictions. Generally, enforcement will be the responsibility of the El Dorado Hills Design Review Committee.

CC&Rs must be reviewed for consistency with adopted mitigation measures. If not consistent, they must be modified. However, it must be noted that CC&Rs are not acceptable as mitigation measures with respect to CEQA, but they can be more restrictive.

9.1.7 Land Dedications & Encumbrances

This section describes various mechanisms employed by the Plan to acquire land (in fee) for public use and to control land which is retained in private ownership. All land dedicated to a public entity, either in fee or through an easement, will be maintained by that entity.

Street rights-of-way as depicted within this Plan, will be shown on tentative subdivision maps and dedicated to the County of El Dorado in conjunction with the subdivision approval process, as provided for in the Subdivision Map Act.

The school site reservation, as depicted in this Plan and tentatively approved by the State ~~OLA~~ Department of Education, School Facilities & Transportation Services Division will be shown on the affected tentative subdivision maps and will be reserved for the applicable school district in conjunction with the subdivision approval process. The site will be purchased by the area-wide community facilities financing district, or other public financing district and held in reserve for the school district by the financing district. The purchase of the site by the financing district shall comply with all State rules and regulations for the acquisition of school sites, including regulations pertaining to site inspection and procedures for establishing the purchase price.

Local park sites will be dedicated to the CSD during the subdivision process.

Public utility easements will be included within street rights-of-way and elsewhere, as needed, and offered for dedication in conjunction with the subdivision process. In certain instances, land within parcels not proposing development may be required for public facilities. In such instances, the County will take responsibility for acquisition, using means available to it. Acquisition costs will be paid by Plan Area project proponents on a proportionate-share basis through the assessment district.

The Plan suggests various methods to benefit the public by protecting identified natural resources through restrictions upon use, by providing public access, or by providing for long-term maintenance of an installed amenity, such as landscaping or a trail. In some instances, more than one form of encumbrance may be used in an overlapping manner. The principal methods, collectively defined as "conservation setbacks" are as follows:

Non-building Setback.

An area shown on tentative maps and recorded maps and filed as a notice of restriction on the deed as being restricted from all grading and construction activity other than fences. There is no easement involved and there are no public rights or responsibilities, except where a conservation easement or a public access easement may also exist, as described herein.

Conservation Easement.

The conservation easement constitutes a notice of restriction on development rights and does not, in and of itself, provide for access by the general public. Public access is provided only when a public access easement is granted, generally in conjunction with a pedestrian pathway, as described below.

Except as required for maintenance and access by public agencies, all construction, grading, and tree removal is prohibited in conservation easements. Where grading and vegetation removal is necessary for access or safety, it shall be minimized to the extent possible and be part of the open space management plan.

Conservation easements shall be dedicated to and maintained by the EDHCSD via a LLAD and/or home owners association. Maintenance will consist primarily of periodic vegetation and grass removal as may be required to reduce fire hazard per the fuel management plan. Maintenance access for vehicles shall be within a recorded public access easement.

Community Held Open Space.

Another option exists to accomplish a variety of goals through common ownership of open space. Such ownership can be for a variety of reasons, including riparian/wetland setback areas, noise setbacks, woodland conservation, and private recreation facilities such as a golf course or equestrian area.

Community held lots may be created during the subdivision map process and may use a variety of mechanisms to prevent future development. Public access may be restricted or allowed through granting access easements. The homeowners association of the subdivision can be responsible for maintenance of any facilities and/or fuel management activities, or the property can be dedicated to the CSD and maintained by a LLAD.

An open space management plan, subject to the approval of the Planning Commission, shall be prepared prior to the submittal of tentative map applications within the Plan Area.

Public Access Easement.

Public access easements serve the dual purpose of providing vehicular access for maintenance, fire suppression, and other emergency response and non-vehicular access by the general public for recreation purposes. Public access easements described in this Plan are a minimum of 10 feet in width and contain an asphalt concrete or all-weather (crushed rock or decomposed granite, etc.) pathway 8 feet in width which may be used jointly by maintenance and emergency vehicles, pedestrians, equestrians, and bicyclists.

Public access easements are dedicated to and maintained via a LLAD by the CSDs. Public access easements are provided where pedestrian facilities occur within landscape easements.

Landscape Easement.

Landscape easements are required along major streets to provide an area for noise setbacks, installation of landscaping, and pedestrian facilities.

As shown on Figure 4-1, landscape easements shall be provided outside and immediately adjacent to both sides of the public street right-of-way along Bass Lake Road and local collectors. Landscape easements shall be dedicated to and maintained via a LLAD by the CSD.

Public Utility Easement.

Public utility easements are acquired by utilities in the subdivision process to accommodate and provide access to public infrastructure and utilities, such as water and sewer, electrical, and communication lines. Access by the general public is not provided.

9.2 Specific Plan Adoption and Amendments

The Plan shall be adopted and amended in accordance with California Government Code Section 65453. Adoption and amendment of this Plan shall be by resolution of the County Board of Supervisors following consideration by the Planning Commission and appropriate environmental determinations. Appropriate implementing ordinances and revisions will accompany the Plan approval and amendment as necessary.

As stated in the Government Code, the Plan "may be amended as often as deemed necessary by the legislative body". Amendments to this Plan may be initiated by property owners, or the County in accordance with any terms or conditions imposed during original Plan approval, or in accordance with any terms and conditions contained within any development agreement which accompanies this Plan.

The Planning Director shall have the responsibility of distinguishing which amendment requests are significant and require legislative action, and which requests are insignificant and may be addressed administratively through a written finding of substantial compliance with the Plan. Examples of significant amendment requests requiring review and approval by the Planning Commission and Board of Supervisors include the following:

1. The introduction to the Plan area of a new land use designation not contemplated in this Plan, or in subsequent amendments;
2. Changes or additions which materially alter the stated intent and goals of this Plan, or its subsequent amendments;
3. Any change which would result in a significant adverse environmental impact not addressed in the EIR, the Addendum, or any subsequent project environmental document; and
4. Any proposal to increase residential density above the limitations set forth in this Plan or allowed by the General Plan.

If the amendment request is deemed to be insignificant, the Planning Director may approve or deny the request. Actions of the Director may be appealed in the manner prescribed in the El Dorado County Zoning Ordinance.

The following findings shall be made in the consideration of amendment requests by either the Planning Director or the Planning Commission:

1. That the proposed amendment will result in a benefit to the area within the Plan;
2. That the proposed amendment is consistent with the El Dorado County General Plan;
3. That the proposed amendment will not result in any adverse effect on adjacent properties;
4. That the proposed amendment will not affect the provision of public facilities and services to residents within the Plan area;
5. That the physical characteristics of the property affected by the amendment are such that the proposed amendment will not have an adverse impact on the property; and
6. That existing environmental documentation and adopted mitigation measures identifying potential impacts and provide mitigation to insignificance or that findings of overriding considerations have been made.

9.3 Specific Plan Preparation Reimbursement

9.3.1 Reimbursement of County Costs

Section 65456(a) through (d) of the Government Code allows the imposition of a specific plan fee upon persons seeking governmental approvals which are required to be consistent with the specific plan. These fees are to reimburse County costs for preparation, adoption, administration and CEQA mitigation monitoring of the Plan. Fees will be assessed prior to recordation of the final map. Plan preparation and adoption costs are not fully known at this time, but will be calculated at the time of adoption and will be included as an appendix to the Plan.

Administration of the Plan will involve an ongoing mitigation monitoring program and review of the public facilities financing plan. A function of the LLAD formed for ongoing administration and maintenance in the Plan Area could include an assessment for ongoing administration by the County of El Dorado as described above. The mitigation monitoring program contained in the Addendum outlines the tasks.

9.4 Public Facility Financing Plan

The financing of all common public facilities described in this Plan will be accomplished by the Public Facility Financing Plan (PFFP) described in this Section. Public facilities specifically addressed by the PFFP include the following:

- Bass Lake Road/U.S. Highway 50 Interchange and Project Study Report (PSR)
- Bass Lake Road Right-of-Way and Landscape Corridors
- Country Club Drive

- Primary Local Roads and Landscape Corridors
- Parks
- Open Space Acquisition
- Trails
- Fire Station Site Acquisition, Building, and Apparatus
- School Site Acquisition and Facilities
- Major Water System
- Major Sewer System
- Major Stormwater Drainage System

Based on estimates, the cost of installing the majority of public infrastructure required for the Plan Area will be $14.7 million dollars (1995 dollars) (See Table 9-1).

The PFFP involves two distinct steps, the first of which is included herein and is called public facility financing concept. The second step, referred to as public facility financing details as outlined in Section 9.4.2 will be provided following adoption of the Plan.

9.4.1 Public Facility Financing Concept

The public facility financing concept contains the following information which is illustrated in Table 9-1.

1. The nature and extent of all facilities necessary to serve the Plan area are described in water, sewer, and stormwater drainage plans provided in Section 5.0, public facilities plans provided in Section 5.0, and Circulation Plan provided in Section 4.0;
2. The cost of providing each facility in 1995 dollars;
3. Description of methods of available construction financing, including engineering, administration, right-of-way acquisition, etc. (Different property owners and developers may elect to pursue different financing methods.) This provides for equitable apportionment and distribution of cost among benefiting properties and includes a methodology for reimbursement to property owners who provide facilities in excess of their benefit; and
4. The intended method of financing long-term maintenance, including monitoring.

Additional Fees

Additional fees may be established by the County and other agencies over time in addition to those set forth in the PFFP. Financial obligations outlined in this Plan will not reduce or negate any other standard fees applicable to assessment districts within the Plan Area.

It is important to note that the PFFP is based on conceptual plans for the major components of infrastructure and not on detailed construction drawings. As a result, the PFFP will necessarily be subject to adjustments as more detailed engineering information becomes available following tentative map approval.

The costs and financing methods set forth in the PFFP are based on land use types and maximum allowable densities as currently shown in Figure 3-1, Specific Plan Land Use Diagram. Accordingly, the PFFP will be subject to adjustment as changes in land use intensity or residential density reductions occur through the specific plan amendment process described in Section 9.2. A final factor which may affect the PFFP is the viability of various financing methods given the local or regional economic conditions

Outside Areas and Non-Participants

Land outside the Plan Area which develops with reliance upon Plan Area public facilities will be required to participate in the construction funding and maintenance of such facilities. This is potentially applicable to those portions of the EDHSP adjacent to the western boundary of the Plan area (See Figure 1-6).

Conversely, land within the Plan Area which is able to develop without reliance upon Plan Area public facilities will be exempted from certain aspects of the PFFP. Villages which adjoin Cameron Park may meet this criterion.

9.4.2 Public Facility Financing Details

The following information will be provided for final map approval within the Plan Area:

1. Detailed public facility improvement plans (i.e., construction plans) for improvement deemed necessary by discretionary approval of any tentative map;
2. Detailed cost breakdown for all public facilities required for development of the subdivision;
3. Detailed description of construction and maintenance financing mechanism selected from the options described in the public facility financing concept; and
4. Commitment to funding and adherence to the PFFP will be guaranteed by development agreements and security bonds.

9.4.3 Implementation

1. Funding mechanisms for acquisition, construction, and maintenance of all public facilities shall be detailed in the public facilities financing plan, which must be submitted for approval prior to or concurrent with the submittal of the first tentative map application.
2. School site reservations acceptable to the school districts and tentatively approved by the State OLA and as shown on Figure 3-1, Specific Plan Land Use Diagram, shall be reserved in accordance with requirements of the school district. The school site shall be initially acquired through a Community Facilities District (CFO) and held in reserve for the school district.
3. The development agreement process may be utilized as a method to implement Plan policies pursuant to Section 65864 et seq. of the Government Code.

4. The financing plan for the common improvements necessary to serve the individual development projects within the plan shall be approved concurrent with the tentative map.
5. All land acquisitions and easements shall adhere to the descriptions contained in Section 9.1.7.
6. If an assessment district is not formed after Plan adoption, an alternate public facility funding plan must be submitted for review and approval prior to the approval of discretionary development within the Plan boundaries.

9.4 Public Facility Phasing

The phasing, including rate, of construction within the Plan is dependent upon a number of factors, including local and regional market demand and the availability of public facilities beyond the Plan Area.

It is anticipated that Plan Area development will occur as a series of individual tentative maps. Each village must be comprehensively planned through the PD process. Each village PD must address its fair share of public facilities and costs unique to each village. Development does not necessarily have to occur in a contiguous manner as long as necessary public facilities and services are available. In each instance, on- and off-site public facilities as described in this Plan will be provided as necessary to serve development.

It is recognized that right-of-way acquisition and sites for public facilities (i.e., streets, fire station, water tanks, sewer trunklines, etc.) may be required on properties not proposing development in order to provide necessary connections or achieve certain service standards. In such instances, the cost of right-of-way acquisition shall be borne by the project proponent for which the connection is deemed necessary. Provision shall be made for reimbursement by other developers through provisions in the Subdivision Map Act.

The phased construction of the primary local roads described in this Plan will include all street and pedestrian/bicycle paving, street lighting (as needed) and traffic signals, and landscaping. Streetscape improvements along Bass Lake Road and primary local roads will be provided in conjunction with residential development of adjacent properties.

Table 9-1

Public Facility Financing Plan Concept
(Part 1 of 2)

PUBLIC FACILITY DESCRIPTION	CAPITAL COST X 1,000	ACQUISITION COST X 1,000	CONSTRUCTION FINANCING METHOD	ACQUISITION FINANCING METHOD	MAINTENANCE FINANCING	INSTALLATION TIME FRAME
Bass Lake Road (BLR) U.S. Highway 50 Interchange + PSR/3	350	N/A	U.S. Hwy 50 Impact Fee CFD/SPF	N/A	State Funds	See Note 1
BLR Improvements and Right-of Way/4	1,700	160	CFD/Developer Fees	CFD/Developer Fees	County Funds	See Note 1
BLR Sidewalk Bike Lanes/4	200	Include BLR	CFD/SPF	CFD/SPF	County Funds	See Note 1
BLR Landscaping/4	1,500	N/A	Developer Funds	Land Dedication	County Funds	See Note 1
Primary Local Roads/5 & /8	4,500	N/A	Developer Funds	Land Dedication	County Funds	See Note 1
Primary Local Road Landscaping	2,200	N/A	Developer Funds	Land Dedication	LLAD	See Note 1
Major Sewer/2	1,300	N/A	CFD/SPF	Land Dedication	EID	See Notes 1 & 2
Major Water/2	1,500	N/A	CFD/SPF	Land Dedication	EID	See Notes 1 & 2
Parks	TBD	432	Quimby Fees	CFD/SPF	Property Tax	See Note 1
Schools	TBD	300	Mitigation Fees	CFD/SPF/ Mitigation Fee	Master HOA	See Note 1
Required Open Space	525		N/A	Specific Plan Fee	LLAD	Recordation of Final Map of Village
TOTAL ESTIMATED COST	13,775	892				

ONGOING MAINTENANCE MONITORING						
Drainage Facilities					ZOB	
Mitigation Monitoring					ZOB	

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Table 9-1
Public Facility Financing Plan Concept
(Part 2 of 2)

1. Because of the fractured land ownership, the timing of improvements is difficult to predict and is a function of a number of factors, namely how many individual properties anticipate early development, the property's geographic location in the Plan, and how many property owners who will participate in a Community Facilities District (CFD) to fund needed common improvements. The method of choice used to fund common improvements is a CPD because of the flexibility it can offer.

   The total estimated capital cost of all common capital improvements and required land acquisitions is $14. 7 million dollars. This breaks down to a cost per equivalent dwelling unit (EDU) of $10,000. It is the intent of this Plan, subject to adoption, to determine all interested property owners who desire to participate in the development of a CFD to fund common improvements and acquisitions. It is anticipated that this process will take about one year to complete. After determining the number of participants, common improvements needed to serve said parcels will be defined and upgraded as required to serve the balance of the Plan area so as to allow future development to occur. Improvements which will .benefit other non-participating parcels will be defined and a participation fee established which would have to be paid before service could be obtained. Participating parcels will be taxed at a minimum tax rate related to benefits received and EDUs desired. Non-participating parcels will be assigned a quantity of EDUs commensurate with the land use plan.

   Timing and extent of common improvements will be directly related to the number of parcels which participate initially. As stated above, it is anticipated that the process of determining the scope of initial common improvements will take about one year from the date of Plan adoption.

   If no parcels elect to participate in a CFO to fund common improvements, individual tentative maps will be subject to the provisions, policies, and elements of this Plan and be conditioned according to their Plan impacts. The Catholic Church site will not be required to participate in the PFFP. Improvements which are installed in advance by the Catholic Diocese are reimbursable over and above their fair share. Moreover, other parcels designated for public facilities would not be required to participate in the PFFP.

   As an alternative to the CFO, it may be possible to develop a specific plan developer fee. Said fee would fund, at a minimum, all required common capital improvements and land acquisitions. Said fee would be approximately $10,000 per EDU and would be tied to the acquisition of a building permit. This fee would be in addition to other required fees currently charged. Any common improvements installed by the developer would be credited directly to the Plan development fee. The fee would escalate annually in accordance with a recognized and commonly used index. The fee would be limited to construction of single-family units only, except that single-family attached units would be subject to a fee equal to 75 percent of the base fee. Properties on the east side of the hill which do not need EID facilities common to the west side would be subject to a slightly lower fee.

   The school site shall be acquired within one year of the approval of the first tentative map and dedicated to the Buckeye Union School District upon acquisition. The Buckeye Union School District shall provide the owner or owners dedicating the site to the District with credits toward their portion of the school mitigation building permit fee. The amount of the credits provided by the Buckeye Union School District shall not exceed $300,000. The improvements to serve the school site (roads, water, and sewer service) shall be constructed no later than the issuance of the 300th building permit.

   Parkland acquisition will be obtained through Quimby requirements.

Required open space will be paid for through the use of the Plan fee. Property owners who have required open space on their property will be eligible to be compensated for said dedications as funds in the fee account are available. Required open space was given a value of $5,000 dollars per acre in this note. This amount is for estimating purposes only and in no way attempting to influence its actual or perceived value.

Improvements to Bass Lake Road other than landscaping will be reimbursed directly from the County TIM fee program as funds are available.

2. Funds required for the expansion of AD#3 facilities will be financed via a method to be determined after studies involving expansion are complete. Most likely, financing of improvements will be included in the EID Facility Capacity Charge.

3. Traffic volumes on Bass Lake Road in the vicinity of the interchange will be monitored annually by the County to ensure that the interchange operates at Level of Service (LOS) ·E· or better. Subsequent improvements will be funded as described herein.

   The County will work with Caltrans to prepare a Project Study Report (PSR), funded by developers, for future interchange improvements. The PSR will describe the scope, schedule, and estimated cost of the project so that the appropriate funding mechanism can be formulated. The traffic study for the PSR will need to quantify traffic operations and improvement needs to approximately the year 2015 between the proposed Silva Valley Parkway/ Highway 50 and Cambridge Road/Highway 50 interchanges.

4. Improvements to Bass Lake Road between U.S. Highway 50 and Serrano Parkway will be financed by Plan area developers. Completion of these improvements shall be credited against traffic mitigation fees for those participating. Improvements to Bass Lake Road north of Serrano Parkway to Green Valley Road, will be funded by traffic impact fees and local development. Subsequent developers will be required to pay traffic impact fees which are in effect at the time of building permit issuance. Includes all streetscape in the public right-of-way and landscape easement.

5. Need and installation time frame is dependent upon subdivision processing and approval. Where the completion of a primary local road requires links beyond an individual subdivision for safety or other reasons, the developers will enter into a reimbursement agreement with the County in order to provide a pro-rata sharing of costs incurred by the first developer for land acquisition, engineering, construction, and other costs as may be reasonable.

6. Fire station costs based on estimates contained in the Program EIR for structure and apparatus.

7. ZOB= Zone of Benefit. (County mechanism.) LLAD= Lighting and Landscape Assessment District. (CSD mechanism.) TBD= To Be Determined. ROW= Right-of-Way.

8. Includes Country Club Drive.

9. Unless otherwise noted, all costs are estimates based on facilities depicted in this Plan using 1995 dollars. (Source: Cooper, Thorne & Associates) Commitment to financial participation by landowners must occur no later than twenty-four (24) months following Plan approval.

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EXHIBIT A

BASS LAKE HILLS SPECIFIC PLAN PARCEL LIST
(Revised October 24, 1996)

APN	Fig. Ref.#	Acres				
108-130-21	1	17.03	108-110-03	46	41.76	
108-130-19	2	10.35	108-110-12	47	20.32	
108-070-31	3	20.76	108-110-14	48	10.0	
108-070-30	4	20.76	108-010-26	49	20.0	
108-070-15	5	10.1	108-110-13	50	10.0	
108-130-16	6	10.0	108-110-11	51	10.008	
108-130-18	7	10.33	108-110-10	52	10.158	
108-130-17	8	9.988	108-110-09	53	10.226	
108-130-15	9	10.28	108-110-08	54	10.898	
108-130-14	10	8.67	108-120-32	55	10.0	
108-130-13	11	14.0	108-120-30	56	10.0	
108-130-12	12	10.0	108-120-29	57	10.0	
108-070-08	13	10.21	108-010-24	58	116.93	
108-130-11	14	10.0	108-120-21	59	10.006	
108-130-10	15	9.54	108-120-19	60	10.005	
108-130-04	16	10.0	108-120-20	61	10.0	
108-130-05	17	10.0	108-120-08	62	10.0	
108-130-09	18	10.0	108-120-05	63	10.0	
108-130-08	19	10.0	108-120-06	64	10.01	
108-130-07	20	10.0	108-120-07	65	10.0	
108-130-06	21	10.0	103-010-16	66	11.57	
108-130-03	22	10.0	103-010-17	67	11.309	
108-130-28	23	10.013	103-010-18	68	13.22	
108-130-29	24	10.843	103-010-19	69	14.21	
108-130-02	25	10.07	108-010-17	70	40.005	Admin.
108-130-25	26	11.543	108-120-24	71	10.003	
108-130-27	27	10.014	108-120-23	72	10.0	
108-130-26	28	10.001	108-120-25	73	10.001	
108-130-24	29	10.014	108-120-26	74	10.005	
108-130-23	30	10.066	108-120-10	75	10.0	
103-060-01	31	40.099	108-120-12	76	10.008	
103-060-02	32	11.61	108-120-11	77	10.0	
103-060-03	33	10.19	108-120-13	78	10.0	
103-060-04	34	10.071	108-010-07	79	33.687	
108-120-04	35	10.0	108-070-07	80	10.0	
108-120-03	36	10.0	108-070-12	81	10.2	
108-120-02	37	10.0	108-070-23	82	8.496	
108-120-01	38	10.0	108-070-26	83	11.566	
108-120-14	39	10.002	108-070-22	84	10.18	
108-120-18	40	10.0	108-070-16	85	10.006	
108-120-31	41	10.001	108-110-05	86	1.13	
108-120-17	42	10.0	108-010-22	87	5.996	
108-120-16	43	10.01	108-010-16	88	2.644	Admin.
108-120-15	44	10.013				
108-110-01	45	41.0	Total Acres		1181.535	

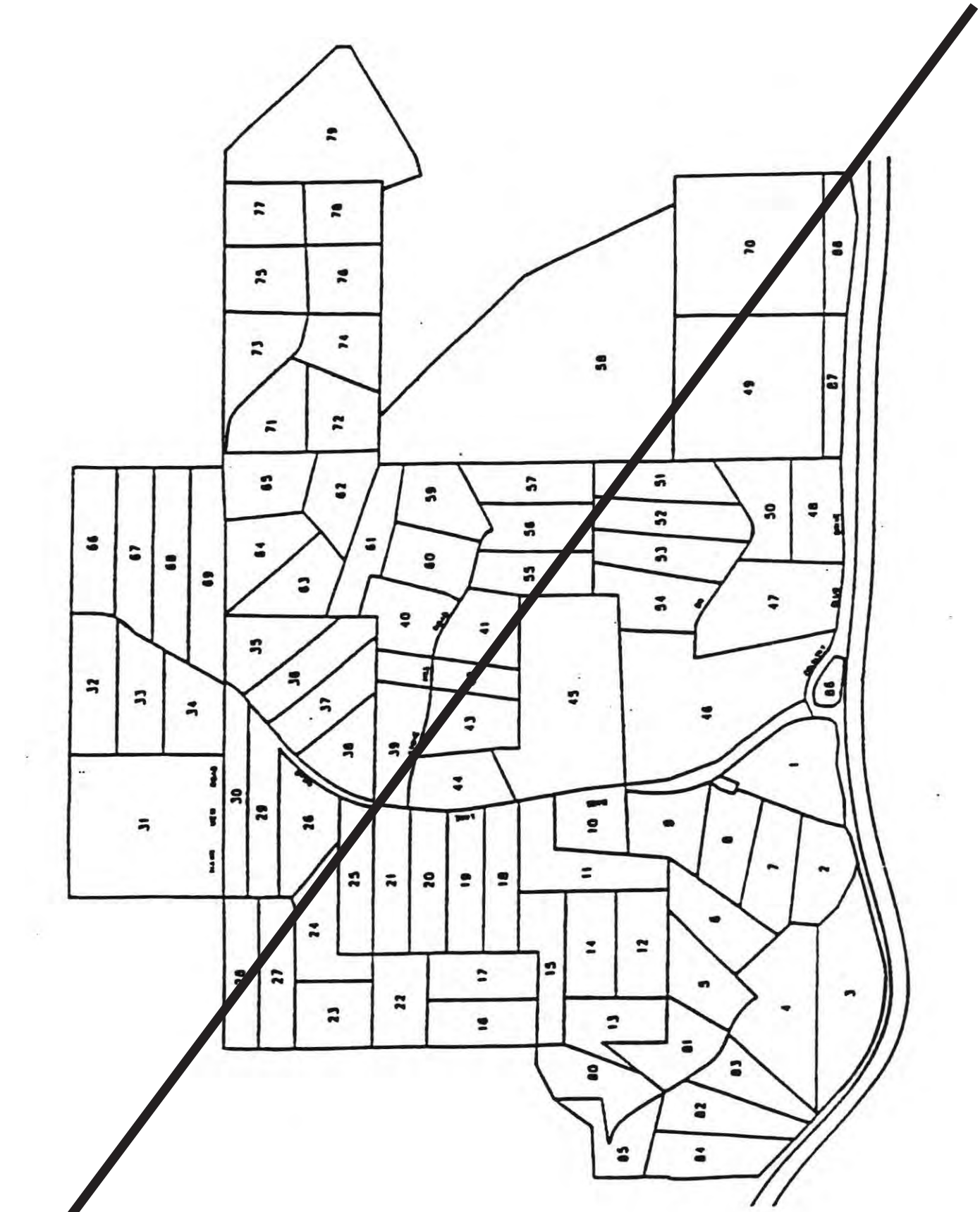
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Exhibit A - Bass Lake Hills Specific Plan Parcel List

Fig. Ref. No.	A.P.N.	Area (Ac.)	Fig Ref. No	A.P.N.	Area (Ac)
1	119-100-067	16.34	41	119-090-031	10.00
1A	119-100-067	3.33	42	119-090-074	9.99
2	119-100-019	10.35	43	119-090-065	9.59
3	119-040-010	20.76	44	119-090-071	9.21
4	119-040-009	20.76	45	119-080-019	40.24
5	119-040-005	10.00	46	119-080-021	20.61
6	119-100-016	9.77	46A	119-080-023	19.85
7	119-100-018	10.39	47	119-080-012	20.03
8	119-100-066	8.16	48-50	119-080-017	20.00
8A	119-100-059	1.62	49	119-020-026	20.00
9	119-100-064	8.86	51	119-080-011	10.01
9A	119-100-061	0.61	52	119-080-010	10.16
10	119-100-047	7.96	53	119-080-009	10.23
11	119-100-045	13.53	54	119-080-008	10.90
12	119-100-012	10.00	55	119-090-032	10.00
13	119-040-003	10.21	56	119-090-030	10.00
14	119-100-011	10.00	57	119-090-029	10.00
15	119-100-010	9.54	58	Bell Ranch [4]	112.14
16	119-100-004	10.00	58A	119-020-046	4.83
17	119-100-005	10.00	59	119-090-021	10.01
18	119-100-051	9.92	60	119-090-019	10.01
19	119-100-053	9.79	61	119-090-059	9.58
19A	119-100-052	0.14	62	119-090-057	9.58
20	119-100-007	10.00	63	119-090-053	9.74
21	119-100-035	9.42	64	119-090-055	9.99
22	119-100-03	10.00	65	119-090-069	8.82
23	119-100-28	10.01	66	115-400-009	11.57
24	119-100-29	10.84	67/68/69	Bass Lake North [5]	38.74
25	119-100-039	10.18	70	119-020-017	40.01
26	119-100-037	11.26	71	119-090-047	9.19
27	119-100-027	10.01	72	119-090-023	10.00
28	119-100-026	10.00	73	119-090-045	9.10
29	119-100-041	9.37	74	119-090-061	9.65
30	119-100-055	9.36	75/76/77/78	Hollow Oak [2]	40.01
31	Hawk View [1]	40.10	79	Bell Woods [3]	33.69
32	115-040-006	11.06	80	119-040-001	10.00
33	115-040-008	10.03	81	119-040-004	10.20
34	115-040-010	9.24	82	119-040-007	8.50
35	119-090-004	10.00	83	119-040-008	11.57
36	119-090-003	10.00	84	119-040-006	10.18
37	119-090-002	10.00	85	119-040-002	10.01
38	119-090-037	8.64	86	119-080-005	1.13
39	119-090-067	9.01	87	108-010-022	6.00
40	119-090-051	8.54	88	119-020-016	2.64
Subtotal					1,166.81
Public Roads (Bass Lake Road, Old Country Club Drive, Hollow Oak Drive)					29.33
Total Plan Area					**1,196.14**

[1] Hawk View Subdivided into 114 SF Lots (A.P.N. Not Shown).
[2] Hollow Oak Subdivided into 99 SF Lots (A.P.N. Not Shown).
[3] Bell Woods Subdivided into 54 SF Lots (A.P.N. Not Shown).
[4] Bell Ranch Subdivided into 113 SF Lots (A.P.N. Not Shown).
[5] Bass Lake North Subdivided into 90 SF Lots (A.P.N. Not Shown).

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- 2 -

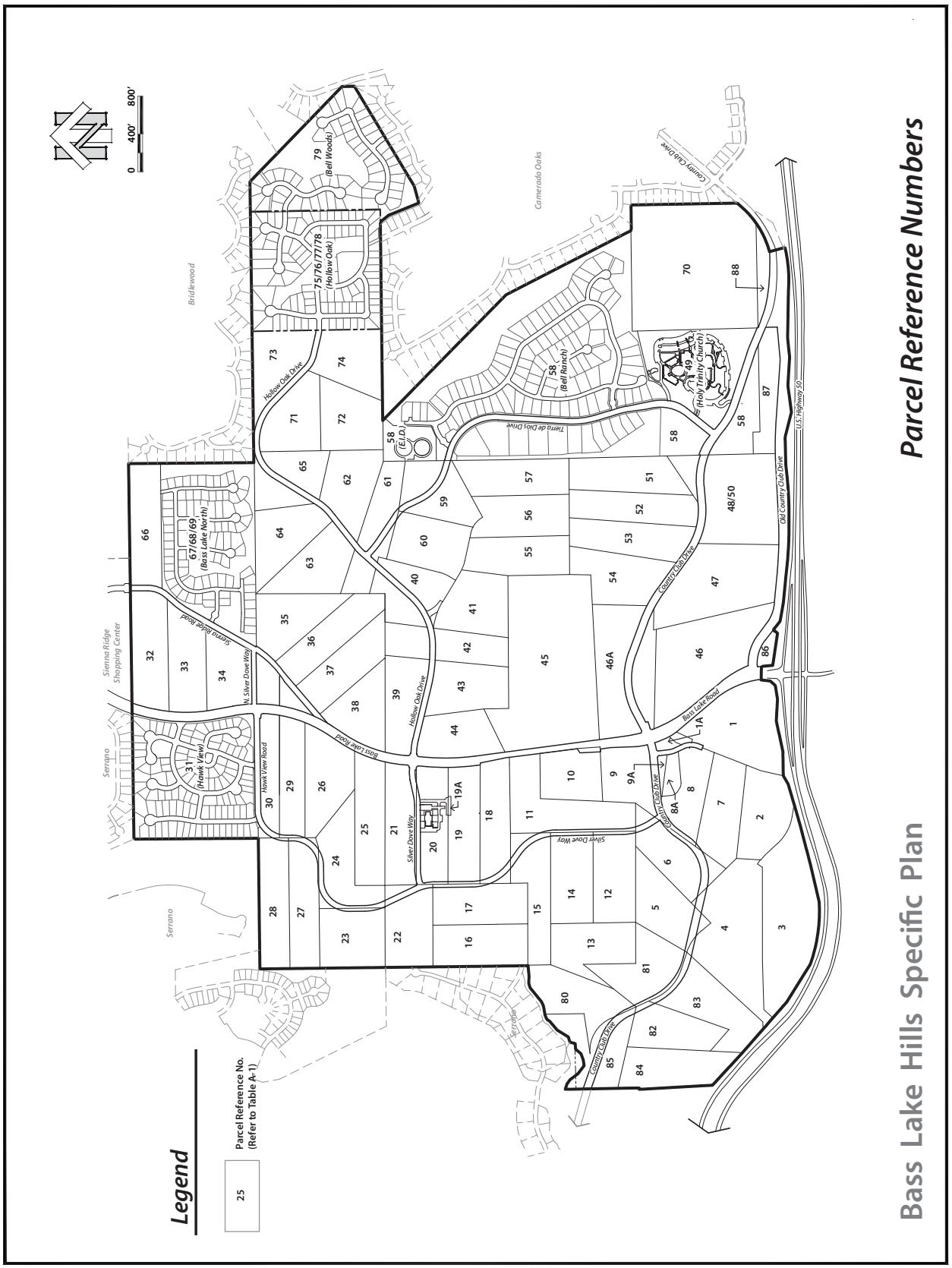


Figure A-1: Parcel Reference Numbers

APPENDIX B

HILLSIDE AND RIDGELINE DEVELOPMENT GUIDELINES FOR BASS LAKE HILLS SPECIFIC PLAN

Modified from
City of Danville's
Hillside/Ridgeline Danville Guidelines
prepared by David L. Gates & Associates

August 29, 1995

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INTRODUCTION

DEFINITIONS

SITE PLANNING

SITE DEVELOPMENT

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- **Suggested Compatible Trees**
- **Native Shrubs**
- **Suggested Compatible Shrubs**

ARCHITECTURE

INTRODUCTION

El Dorado County contains many significant topographic features and ridgelines that contribu to its rural character and sense of place. Historically, development has occurred on lower lyi lands and in valleys which are more easily developed; however, pressure is increasing to devel the surrounding hillsides.

The ridgelines form important visual and physical breaks between communities providing f separation of communities and adding to the visual character of the County. It is the intent the County to allow development to occur on hillsides consistent with the El Dorado Cour General Plan and in a manner which maintains the visual quality.

The purpose of this document is to serve as a design policy guide for future development with the Bass Lake Hills Specific Plan area. Design plans for development should be prepared conform with these guidelines.

DEFINITIONS (Figure 1)

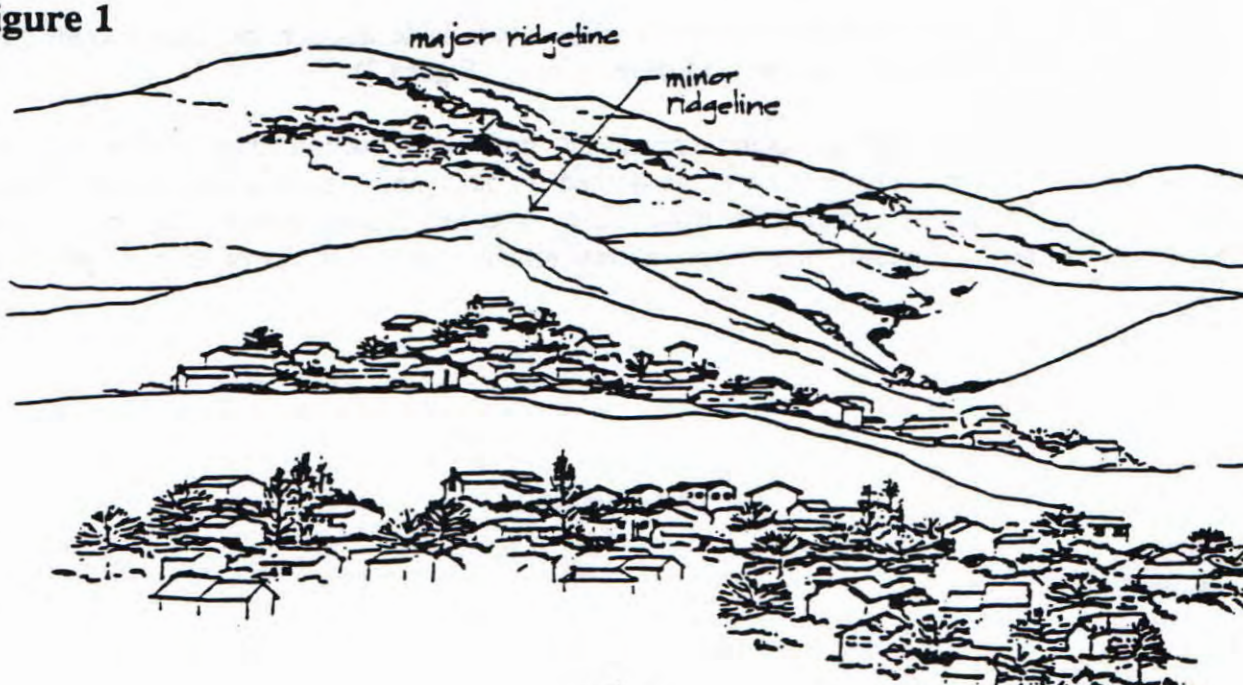
Scenic Hillsides: Elevated land formations with unique visual character, especially those whi fall within the identified foreground of the Highway 50 corridor.

Ridgelines: The top of a range of hills or mountains.

Major Ridgelines: A ridgeline which is prominently visible from a substantial land area, in around a community area, or from a major transportation corridor.

Minor Ridgelines: A ridgeline which is not prominently visible to a large area. Min ridgelines are typically lower, compared with surrounding terrain, and may be visible only one limited area, or have a backdrop of a nearby higher terrain.

Figure 1



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SITE PLANNING

It is recommended that grading plans for development in the Bass Lake Hills area in the hillsides be prepared by licensed civil engineers, and architectural design plans be prepared by licensed architects.

Preliminary plans for difficult to develop sites in major ridgeline areas may be referred to the Planning Commission for comments. A preliminary plan may be approved by the Planning Commission subject to final review by the Planning Department.

A portion of hillside developments should be set aside for open space. These open space areas should be positive, useable spaces, not narrow strips of leftover land.

Adequate fire safety should be insured by providing fire protection measures (i.e., sufficient water supply and pressure, fir truck access, fire retardant exterior building materials, weed control, surrounding buildings, etc.).

Buildings should be clustered in areas which are accessible to emergency vehicles and which are the least visually prominent from the outlying valleys.

Building siting should be responsive to existing features of the terrain (i.e., drainage patterns, geologic stability, rock outcroppings, and views from outlying areas).

On-site natural systems (hydrologic systems, existing vegetation cover, wildlife, and existing topography) should be minimally disturbed.

Downstream natural environments should be preserved through the use of water retention ponds, and the elimination of sheet flows.

SITE DEVELOPMENT

The architectural style of buildings should be adapted to hillside slopes rather than adopting land forms to buildings designed for flat land development. (Figure 2)

Natural slopes and topography should be reasonably retained so that the visual impact of grading is kept to a minimum. This can be accomplished by maintaining a transition between graded and natural areas, and by avoiding flat planes or sharp angles of intersection. This may require more cutting, but will result in a more rational hillside form with fewer erosion problems. (Figure 3)

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Figure 2



Inappropriate hillside development.



Appropriate hillside development.

Figure 3

Appropriate hillside development.



natural hill | not advised - severe cut | more gradual transition

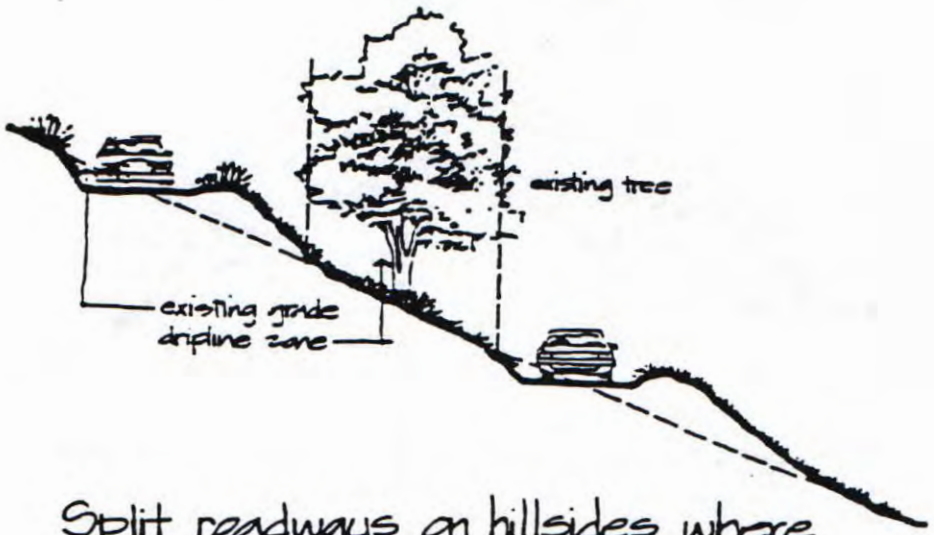
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Cut slopes should be screened by the building, and should optimally occur behind the building.

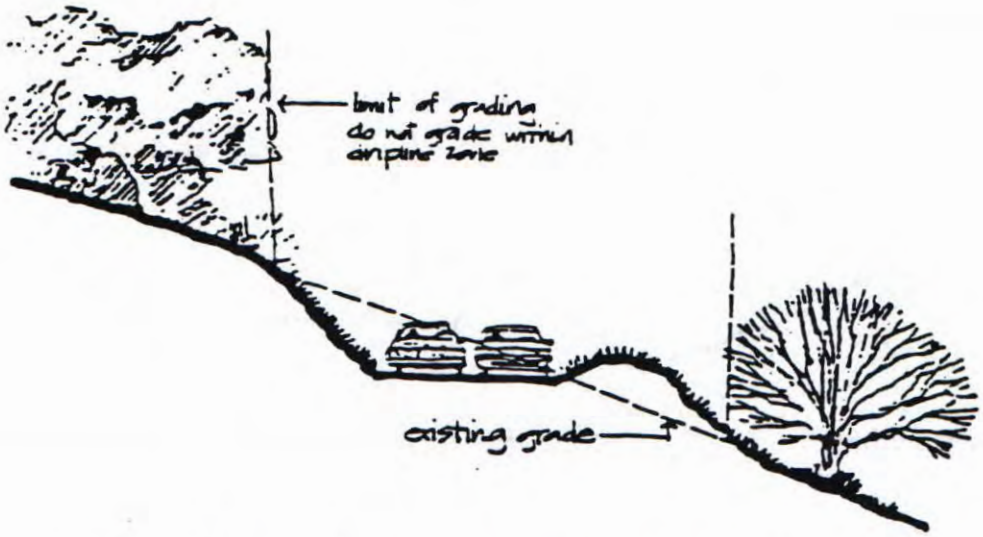
Where hilltop development cannot be avoided, mounding/berming around developed areas is encouraged to provide natural screening.

New roads and driveways should be developed in such a way as to be minimally visible, environmentally sound, and compatible with the existing contours of the hillside. Minimal roadway dimensions are recommended where possible to reduce grading, decrease visibility and decrease the area of impervious surfaces. Roadways may be split in order to reduce the area of cut in a hillside, or to save a special tree or knoll. (Figure 4)

Figure 4



Split roadways on hillsides where appropriate.



Roadway development on hillsides.

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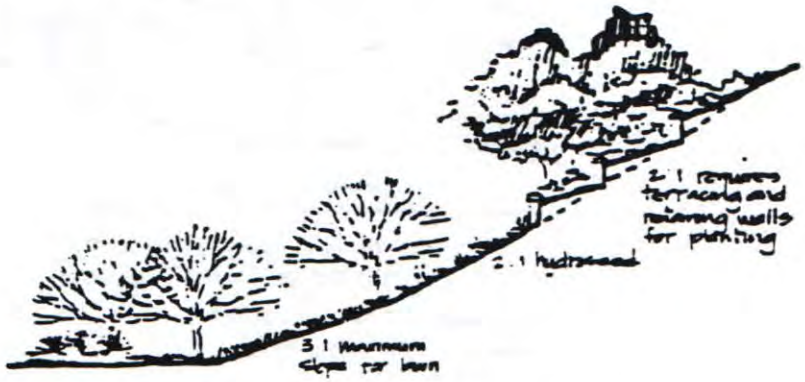
Drainage resulting from grading new developments should be directed into the natural watershed and concentrated water should be removed in a non-erosive way. Impervious surfaces should be kept to a minimum.

Steep slopes should be landscaped with appropriate erosion control, planting, and stabilization techniques, i.e., hydroseed.

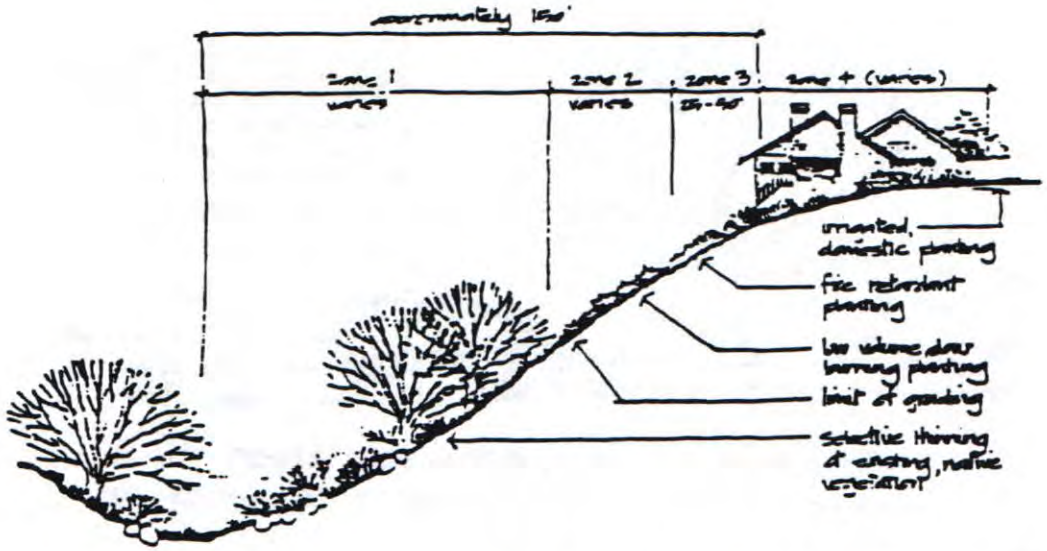
Appropriate hydroseed mixes should be determined by the soil type and slope orientation.

Native vegetation should be preserved (including grassy open spaces), and native plantings are recommended so that the presence of hillside vegetation and forms will be maintained. Non-native plant materials should be compatible with the natural setting and require minimal watering. (Figure 5)

Figure 5



Typical hillside planting.

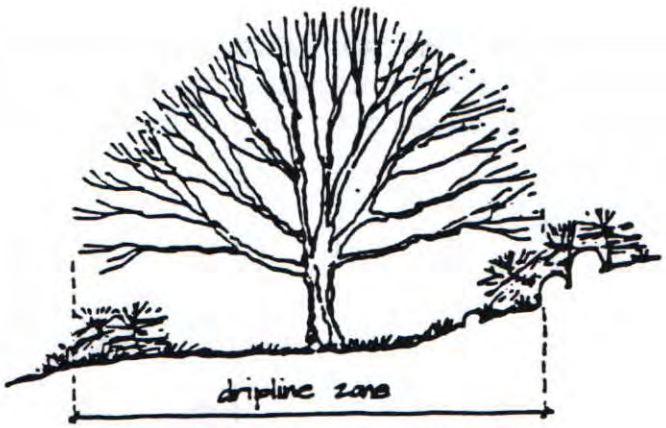


Appropriate planting around development on hillside slopes.

3rdDraft

Existing trees with truck diameters exceeding six inches should be preserved where appropriate. Existing grade and drainage patterns surrounding existing trees should be maintained for adequate tree protection. (Figure 6)

Figure 6



Typical oak tree preservation.



An appropriate response when fill is necessary in the dripline zone of an oak.

3rdDraft

Native Trees

Valley Oak (Quercus lobata)
Blue Oak (Quercus douglasii)
California Buckeye (Aesculus californica)
Big Leaf Maple (Acer macrophylla)
Western Redbud (Cercis occidentalis)

Suggested Compatible Trees

Oak species (Quercus species)
Evergreen Pear (Pyrus kawakamii)
White Alder (Alnus rhombifolia)
Crape Myrtle (Laqerstroemia indica)
Deodar Cedar (Cedrus deodora)

Native Shrubs

Coyote Brush (Baccharis pilularis)
Manzanita species (Arctostaphylos species)
Wild Lilac (Ceanothus species)
Coffeeberry (Rhamnus californica)
Toyon (Heteromeles arbutifolia)

Suggested Compatible Shrubs

Heather (Erica species)
Oleander (Nerium oleander)
Sage (Salvia species and Artemesia species)
Euryops (Europs pectinatus)
Mock Orange (Pittosporum species)
Lantana (Lantana species)

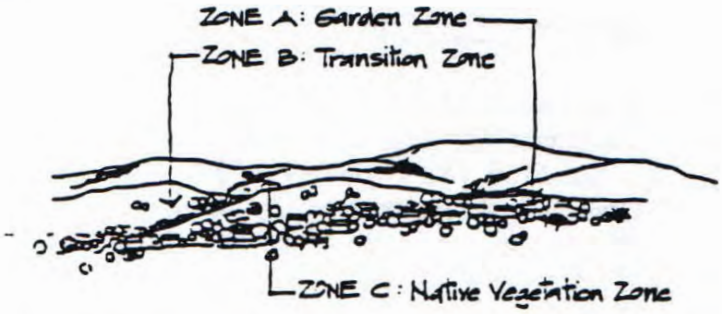
Landscaping should be used to appropriately screen hillside development. Landscaping should be clustered around the immediate vicinity of the buildings, not in rows along property lines or driveways. (Figure 7)

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Figure 7



Boundary and road edge tree planting conflicts with topography and native vegetation.



Random planting or rounded tree forms arranged in groupings reflect topography and native tree patterns.

ARCHITECTURE (Figure 8)

Architectural systems should respect the existing on-site natural systems; hydrologic patterns should not be disturbed if possible, and native vegetation should be preserved where practical.

Building height and scale should respond to the existing terrain. One-story and split level buildings are considered most appropriate in ridgeline areas.

Visible roof materials (flat tile, fire retardant wood shakes and shingles) and color (earth tone) should be used to blend into the environment and should be coordinated with building design.

Roof forms should be stepped or pitched to reiterate the contoured form of the hills, with the most dominate roof form over the most significant part of the building.

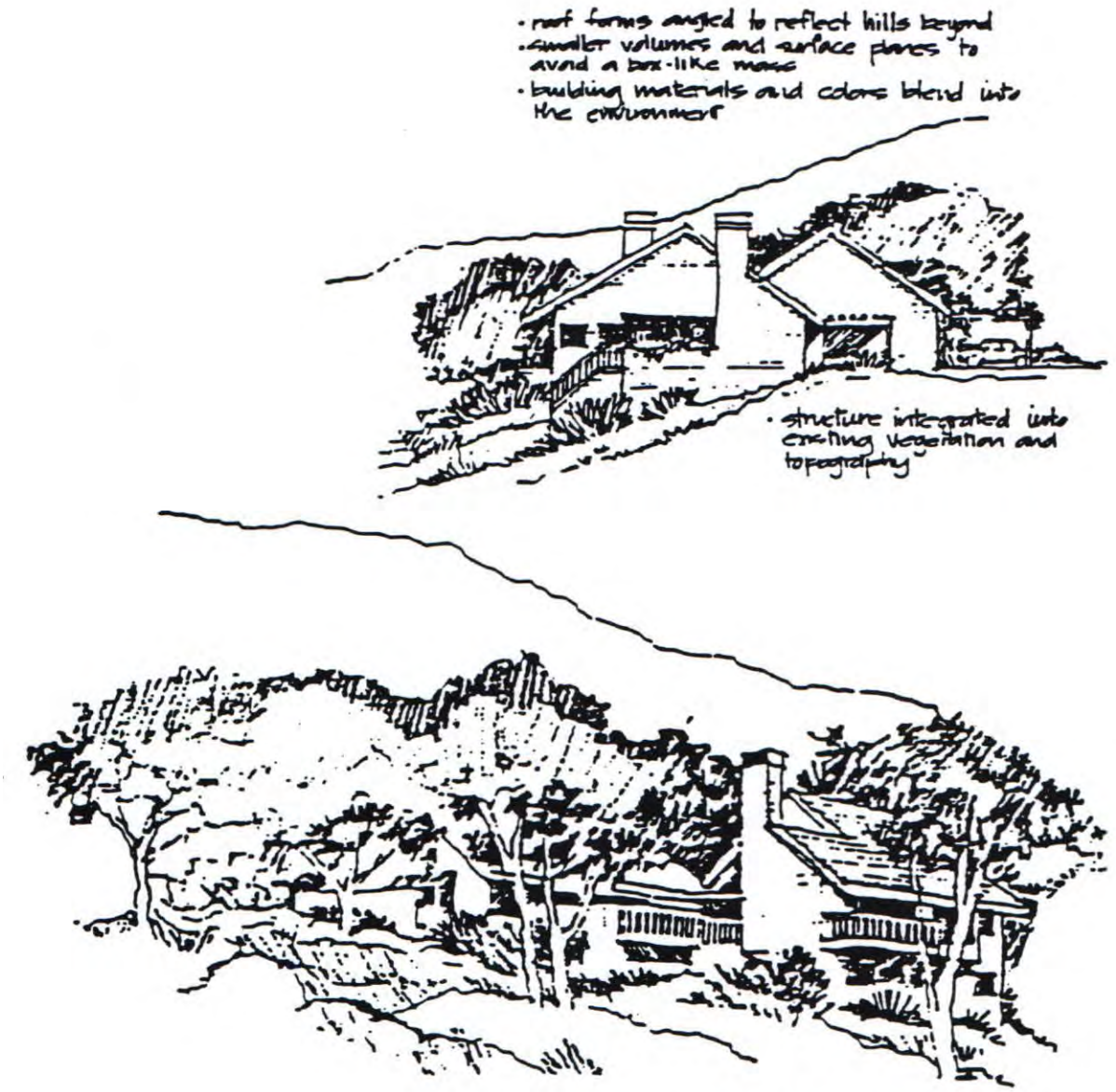
Building materials and colors should minimize contrast with hillsides by the use of natural materials. Subdued colors should be encouraged in order to compliment the hillside environment. Reflective windows and materials are not appropriate.

Buildings should be designed to minimize balkiness on hillside terrain. Recesses, overhangs, and play of light and shadow can further reduce mass and add interest, variety, and human scale to the building facade.

The need for building skirting should be kept to a minimum by stepping the foundation and using appropriate hillside architectural designs.

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Figure 8

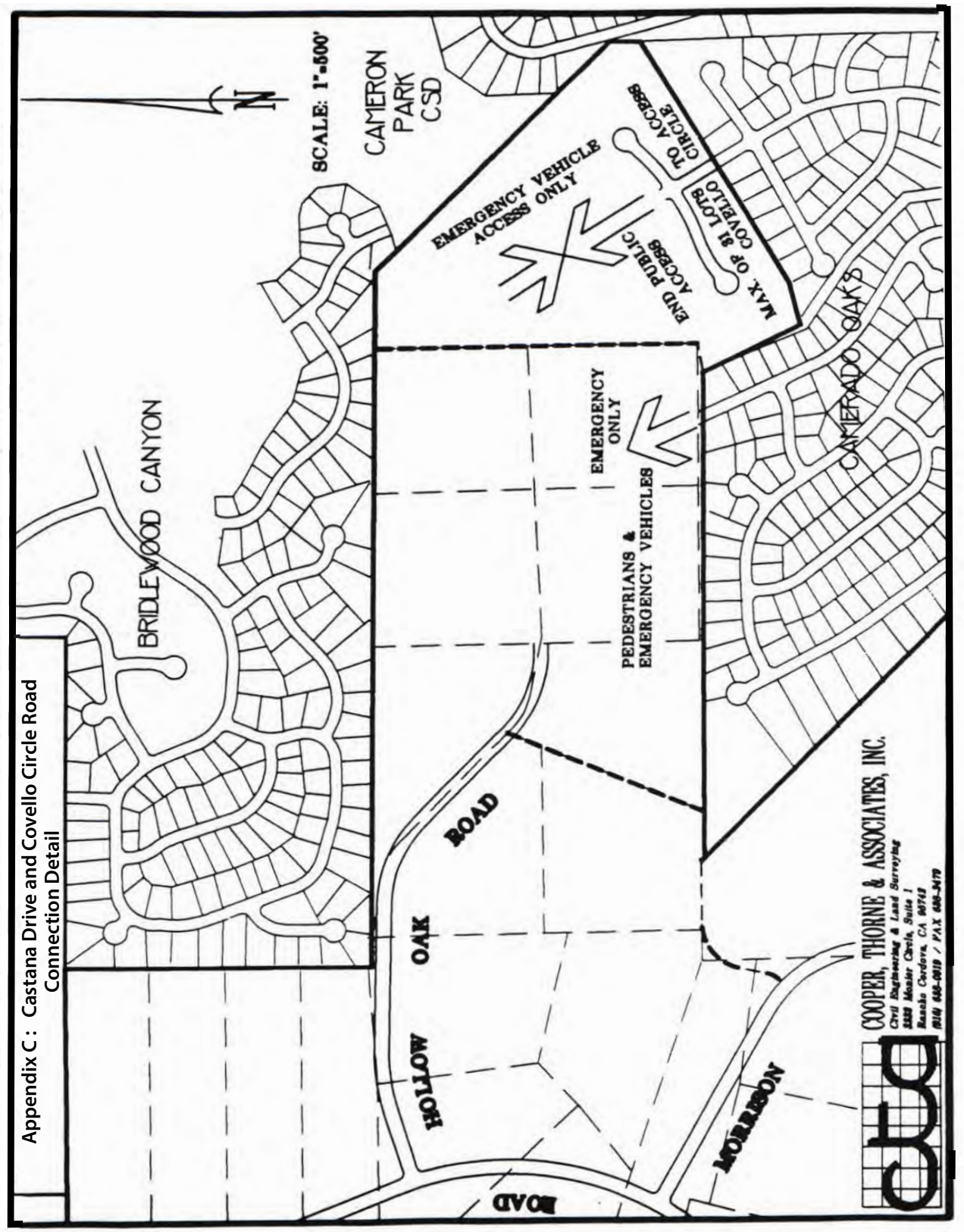


Architecture well integrated into its hillside environment.

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Appendix C - Castana Drive & Covello Circle Road Connection Detail

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APPENDIX B

NOTICE OF PREPARATION
OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Date: July 17, 2023

To: Agencies and Interested Parties

From: Corinne Resha, Senior Planner, El Dorado County Planning and Building Department

Subject: **Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting for the Town & Country Village El Dorado Project [Application Nos. General Plan Amendment (GPA22-0003), Specific Plan Revision (SP-R21-0002), Planned Development Permit (PD21-0005), Rezone (Z21-0013), and Tentative Map (TM22-0005), and Conditional Use Permit (CUP23-0008)]**

Review Period: July 18, 2023 to August 17, 2023

El Dorado County will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Town & Country Village El Dorado Project (project or proposed project) in El Dorado County. This Notice of Preparation (NOP) initiates the environmental scoping process in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21080.4) and CEQA Guidelines (14 California Code of Regulations [CCR] Section 15082). The purpose of an NOP is to provide sufficient information about the proposed project and its potential environmental impacts to allow agencies and interested parties the opportunity to provide a meaningful response related to the scope and content of the EIR, including mitigation measures and alternatives that should be considered in the EIR (CEQA Guidelines 14 CCR Section 15082[b]). The project description and location are described below.

Public Scoping Meetings and Comment Submittal

Two scoping meetings – both open to agencies, organizations, and individuals – will be held to receive public comments and suggestions on the scope of environmental issues to be studied in the EIR. The scoping meetings will be held as follows:

An in-person scoping meeting will be held:

Date: Tuesday, August 8, 2023
Time: 6:00 PM
Location: El Dorado Hills Fire Department Community Room
1050 Wilson Boulevard
El Dorado Hills, CA 95762

A virtual scoping meeting will be held:

Date: Wednesday, August 9, 2023
Time: 11:00 AM
Link: https://us06web.zoom.us/j/86521211649
Call In Phone #'s: 530-621-7603 or 530-621-7610
Webinar ID: 865 2121 1649

El Dorado County is also soliciting written comments from public agencies, organizations, and individuals regarding the scope and content of the environmental documentation. Because of time limits mandated by state law, **comments should be provided no later than 5:00 PM on August 17, 2023**. Please send all written comments to:

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
Or via email: TownAndCountryElDorado edcgov.us

Comments provided by email should include "Town & Country Village Project NOP Comment" in the subject line, and the name and physical address of the commenter in the body of the email. Agencies that will need to use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person, phone number, and email address in their comment.

Project Location

The project site is located in El Dorado County, California, approximately 500 feet north of U.S. Highway 50 (US 50), east of Bass Lake Road in the El Dorado Hills area (see Figure 1). The approximately 60.5-acre site is identified by Assessor's Parcel Numbers (APNs) 119-080-012, -021 and -023.

The project site is located in the southern central portion of the Bass Lake Hills Specific Plan (BLHSP). The northern portion of the project site is located within the El Dorado Hills Community Region of the El Dorado County General Plan, and the southern portion of the site is located within the Rural Region.

The General Plan Land Use Designation for the project site is Adopted Plan (AP). The BLHSP designates the project site as Low Density Residential Planned Development and the project site is zoned Residential Estate-10 acres (RE-10).

Site Characteristics

The project site is currently undeveloped and consists of seasonal grasses and scattered oak trees; there is an intermittent drainage on the site, north of Country Club Drive. Two wells are located near the center of the property. Country Club Drive bisects the northern parcel, and an unimproved dirt road bisects the southern parcels from west to east.

Surrounding Land Uses

Surrounding land uses include undeveloped land and rural residences within the BLHSP to the north; rural residences to the west; the El Dorado Hills Fire Department Station 86 to the northwest; undeveloped land and rural residences to the south, across US 50; and undeveloped land to the east, with the Holy Trinity Parish and School located farther east (see Figure 1). It should be noted that in recent years, multiple Tentative Subdivision Maps have been approved for properties within the BLHSP, north of the project site, some of which are currently undergoing development.

Project Description

The project site would consist of two areas: the Project Development Area and the Program Study Area (see Figure 2). The Project Development Area consists of the northernmost and southernmost 30.3 acres of the project site, and would be developed with two hotels, retail services, two restaurants, a museum, an event center, associated parking, 56 residential cottages for employee housing, and an additional 56 residential cottages that may be rented on a daily or extended stay basis, which may require a conditional use permit. The Program Study Area consists of the central and easternmost 30.2 acres of the project site, and may include further development in the future such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the proposed zoning districts.

For environmental analysis purposes, the buildout of the Project Development Area of the project site will be evaluated at a project level. Buildout of the Program Study Area will be evaluated at a program level based on the potential allowable uses, building areas, and required parking described in the BLHSP Amendment document. The proposed project would require approval of a General Plan Amendment, BLHSP Amendment (Specific Plan Revision), Rezone, Planned Development Permit, Tentative Subdivision Map, and Conditional Use Permit, as well as other responsible agency approvals. In addition, depending upon the type and extent of signage proposed, the project may require entitlement(s) related to signage. The majority of aforementioned project components are discussed in further detail below.

General Plan Amendment

The General Plan Land Use Designation for the project site is Adopted Plan (AP). The General Plan designates the portion of the project site north of Country Club Drive as within the El Dorado Hills Community Region, and the area south of Country Club Drive as within the Rural Region. The proposed General Plan Amendment would modify the Community Region boundary to include the entire project site within the El Dorado Hills Community Region.

BLHSP Amendment

The existing BLHSP land use designations for the project site are L.7-PD and L.2-PD. The BLHSP designates the portion of the project site north of Country Club Drive as L.7-PD [maximum allowable density of 0.7 dwelling units per acre (du/ac)], and the portion south of Country Club Drive is designated L.2-PD (maximum allowable density of 0.2 du/ac). The requested BLHSP Amendment would establish three new land use designations for the specific plan: Commercial (C), Multi-Family Residential (MFR), and Open Space (OS). Application of these proposed new land use designations would be limited the project site. These land use designations would be allocated to the project site as follows: 26.2 acres of C, 23.0 acres of MFR, and 7.6 acres of OS. In addition to changing the land use designations of the project site, the BLHSP Amendment would include content revisions to the BLHSP itself to accommodate the proposed project.

As part of the BLHSP Amendment, a Fiscal Impact Analysis and update to the Bass Lake Hills Specific Plan Public Facilities Financing Plan (PFFP) would be completed. The PFFP sets forth a strategy to finance the backbone infrastructure and other public facilities required to serve the proposed land uses in the BLHSP.

Rezone

The current zoning designation for the entire project site is RE-10. The proposed project would require the approval of a Rezone from RE-10 to the following El Dorado County zoning districts: Community Commercial (CC), Multi-Unit Residential (RM), and Open Space (OS). Additionally, as required by the BLHSP, the Planned Development Combining District (-PD) suffix would be added to all the zoning district designations listed above.

Site Plan

Buildout of the Project Development Area of the project site would include two 150-room hotels, 112 residential cottages, retail uses, restaurants, an event center/museum, recreational amenities, and parking lots (see Figure 3). A summary of the proposed land uses is included below in Table 1. Additionally, the Project Development Area would be developed with internal roadways and a new Class I Bicycle Path. The proposed development is discussed in further detail below. As previously discussed, development within the Program Study Area of the project site is not currently proposed to occur concurrently with development of the Project Development Area; however, a maximum buildout scenario is included for program level analysis in the EIR.

Table 1
Proposed Land Use Summary

Land Use Designation	Gross Area (acres)	Hotel Units	Building Area (square feet)	Residential Dwelling Units	Density Range (du/ac)	Floor-to-Area Ratio[3]
Project Development Area						
Multi-Family Residential	7.9	-	-	112	12-24	-
Commercial[3]	14.3	300	181,000	-	-	0.38
Open Space[2]	4.4	-	-	-	-	-
Major Circulation[1]	3.7	-	-	-	-	-
Subtotal	***30.3***	***300***	***181,000***	***112***	**-**	**-**
Program Study Area						
Multi-Family Residential	15.1	-	-	352	12-24	-
Commercial[3,4]	11.9	-	90,000	350	22-30	0.04 and 0.28
Open Space	3.2	-	-	-	-	-
Subtotal	***30.2***	**-**	***90,000***	***702***	**-**	**-**
Total	**60.5**	**300**	**271,000**	**814**	**-**	**-**

Notes:
1. New Country Club Drive I.O.D. right-of-way area included in total project area.
2. Consisting of 38 percent of the Project Development Area north of Country Club Drive.
3. Refer to Table 130.22.030 – Commercial Zones Development Standards of the El Dorado County Code.
4. Six acres of commercial land use reserved for a senior housing development of 150 units and 10,000 sf of commercial development. 9.3 acres of commercial land use reserved for a development project consisting of 80,000 sf of commercial use and 200 apartment/condominium residential dwelling units.

Hotels

The hotel component of the proposed project would consist of two, five-story structures totaling 160,000 square feet (sf). Both hotels would share centralized facilities in the Event Center, including two restaurants; however, each hotel would be owned and operated separately. The building height of the proposed hotels may exceed up to 10 feet of the maximum allowable height set by El Dorado County Code for the Community Commercial zone.

The ground floor of each hotel would include retail uses and personal services that would operate seven days a week from 8:00 AM to 8:00 PM. The second floor of each hotel would include guest rooms, as well as large outdoor balconies with space for tables and seating, and access to a shared swimming pool. The remaining floors of each hotel would be comprised of guest rooms. Each hotel would contain 150 guest rooms, for a total of 300 guest rooms.

Event Center/Museum

The Event Center/Museum would be a three-story structure consisting of 21,000 sf. The building height of the Event Center/Museum may exceed up to 10 feet of the maximum allowable height set by El Dorado County Code for the Community Commercial zone. The first floor of the Event Center/Museum would consist of two restaurants. The restaurants would operate from 7:00 AM to 10:00 PM, with a maximum capacity of 120 patrons at each restaurant. The second floor would be a venue for weddings, receptions, conferences, and family gatherings. The event center would operate between one and two days per week from 8:00 AM to midnight with a variable capacity of between 50 and 300 persons. The third floor would include a museum focusing on the gold rush era, with an emphasis on the culture and history of the early settlers. The museum would be open for visitors one to two days per week from 10:00 AM to 5:00 PM, with 50 to 100 anticipated visitors per day.

Residential Cottages

The northernmost 7.9-acre portion of the project site, located north of Country Club Drive, would be developed with a total of 112 residential cottage units; 56 units would be deed restricted for hotel employee housing, and the remaining 56 units would be available for rent on a daily or extended stay basis, which would require a would require a Conditional Use Permit (CUP23-0008). Each cottage unit would be comprised of two stories, including a separate bedroom, bathroom, full kitchen facilities, and an outdoor deck.

Circulation and Parking

The proposed project would include three access points. Primary access to the proposed cottages would be provided from Country Club Drive, with an emergency vehicle access (EVA) connection to Bass Lake Road. As proposed, Country Club Drive would also provide a secondary hotel entry to the southerly Project Development Area. Bass Lake Road would provide primary access to the Project Development Area south of Country Club Drive, containing the proposed hotels, Event Center/Museum, and restaurants. The project proposes to take secondary access from Old Country Club Drive.

As part of the proposed project, the existing Class 1 bike path located on Old Country Club Road south of the project site, is proposed to be abandoned and moved to the historic Clarksville Toll Road alignment that crosses the project site (see Figure 4). A future Class 1 bike path bridge crossing of Bass Lake Road is proposed by the project at the primary access and would connect to the Park-and-Ride facility west of Bass Lake Road. The proposed bike bridge support structure and extension of the Class I bike path to the Park-and-Ride facility are proposed to be constructed on the west side of Bass Lake Road in existing right-of-way and/or in existing landscaping and slope easement areas. The bike path bridge has not yet been designed, and, thus, will be evaluated at a program-level in the EIR. Further, development of the bridge is dependent on Federal, State and local funding assistance.

An estimated 466 off-street parking spaces would be included for the hotel/event center portion of the proposed project, and 121 off-street parking spaces would be included for the residential cottages. When special events create additional parking demand, the hotels would provide low emission vehicles, such as shuttle vans and buses, to transport guests to weddings and other events to and/or from parking facilities at local schools and churches.

Utilities

The project would include necessary water, sewer, and drainage infrastructure to serve the proposed project.

Water

The proposed project would require annexation into the El Dorado Irrigation District (EID) service area, which is subject to El Dorado Local Agency Formation Commission (LAFCo) approval. El Dorado LAFCo will serve as a responsible agency for the project, and the EIR will include the information and analysis needed for El Dorado LAFCo to rely upon in order to make their approvals regarding the proposed project. Because EID draws water from Folsom Lake, the annexation of the project site into the EID service area would also require approval from the U.S. Department of the Interior, Bureau of Reclamation.

The nearest existing water line is a 24-inch water main located in Bass Lake Road, approximately 2,000 feet north of the project site (see Figure 5). Approximately 3,900 linear feet of new 12-inch water line is proposed to connect to the existing 24-inch line and extend south along the east side of Bass Lake Road to the project site.

Sewer

Both a public and private sewer system are being considered for providing wastewater service to the project site. The public system would require the construction of an approximately 10,510-foot gravity trunk sewer main connecting the project site to the existing 18-inch South Uplands Trunk Sewer-Gravity Main located in Russi Ranch Drive, approximately 1.6 miles to the west (see Figure 6). Two alignment options for this public sewer connection will be evaluated in the EIR, as shown in Figure 6, and generally described below:

Option 1 (Preferred): This off-site public sewer option would begin at the intersection of Bass Lake Road and Country Club Drive, where the pipe alignment would extend south, along the west side of Bass Lake Road, to the U.S. Highway 50/Bass Lake Road interchange, where the alignment would run west within a new easement parallel to U.S. Highway 50 along the southern boundary of APN 119-100-67. As the alignment continues west it would merge with Old Lincoln Highway and follow the route identified in Figure 5-2 of the adopted 1995 BLHSP.

Option 2: This off-site public sewer option consists of the sewer alignment shown in Figure 5-2 of the adopted BLHSP. Generally, this alignment heads west along future Country Club Drive, west of the intersection of Bass Lake Road and Country Club Drive, to a point of connection with Old Lincoln Highway. From there, the alignment continues across a creek, into the Serrano community, to connect to the existing sewer pipe in Russi Ranch Drive.

In order to receive public sewer service from EID, the project site would need to be annexed into the EID service area, subject to El Dorado LAFCo approval.

The private system would include a septic sewer system as an interim solution to serve the Project Development Area of the project site. The Program Study Area of the project site is the most likely suitable area for construction of a septic system leach field.

The EIR will evaluate the impacts of both the public and private sewer system. If the interim septic sewer system is constructed, development would not be allowed to occur in the Program Study Area until the new gravity trunk sewer main is constructed.

Drainage

A Stormwater Drainage Master Plan (SDMP) will be prepared for the proposed project and approved by the County. The SDMP will comply with the requirements of the County's Phase II National Pollutant Discharge Elimination System (NPDES) permit and hydromodification standards in place at the time grading and/ or building permits are sought for construction of the project site. To avoid downslope impacts, runoff controls would be designed so that post-development runoff does not exceed pre-development runoff rates, durations, and volumes.

Program Study Area

Development of the Program Study Area consists of 30.3 acres, and may consist of uses such as hotels, senior housing units, medical facilities, townhomes, retail shops, cottages, and other uses allowed by the zoning district. As discussed previously, the proposed BLHSP Amendment would change the current Program Study Area land uses from L.2-PD to 15.1 acres of Multi-Family Residential, 11.9 acres of Commercial, and 3.2 acres of Open Space.

Six acres of the Commercial land use would be reserved for a senior housing development of 150 units and 10,000 sf of commercial development.

A total of 9.3 acres of the Commercial land use would be reserved for a development project consisting of 80,000 sf of commercial use and 200 apartment/condominium residential dwelling units. In addition, the proposed Rezone would change the Program Study Area's existing RE-10 zoning designation to CC-PD, RM-PD, and OS-PD.

Requested Entitlements

As the lead agency under CEQA, the County is responsible for considering and determining the adequacy of the EIR and determining if the proposed project should be approved. The El Dorado County Board of Supervisors is responsible for certifying the CEQA document and approving the following discretionary actions:

- General Plan Amendment to modify the existing Community Region Boundary (GPA22-0003);
- Amendment to the BLHSP including new land use designations for Commercial, Multi-Family Residential, and Open Space (SP-R21-0002);
- Amendment to the BLHSP Public Facilities Financing Plan;
- Rezone from RE-10 to CC-PD, RM-PD, and OS-PD (Z21-0013);
- A Planned Development Permit (PD21-0005);
- Tentative Subdivision Map to subdivide the project site into 16 lots (TM22-0005); and
- Conditional Use Permit for 56 residential units to be used as lodging facilities (i.e., available for short-term rent on a daily or extended stay basis) (CUP23-0008).

In addition, the following responsible agency approval would be required in order to implement the proposed project:

- El Dorado LAFCo and United States Department of the Interior Bureau of Reclamation: Annexation into EID's service area.

Environmental Effects and Scope of the EIR

The EIR will evaluate the direct and indirect significant environmental impacts of the proposed project. The EIR will also evaluate the project's incremental contribution to cumulative impacts when considered in conjunction with other related reasonably foreseeable future projects. The County has determined that the EIR shall evaluate the following CEQA topic areas in accordance with Appendix G of the CEQA Guidelines:

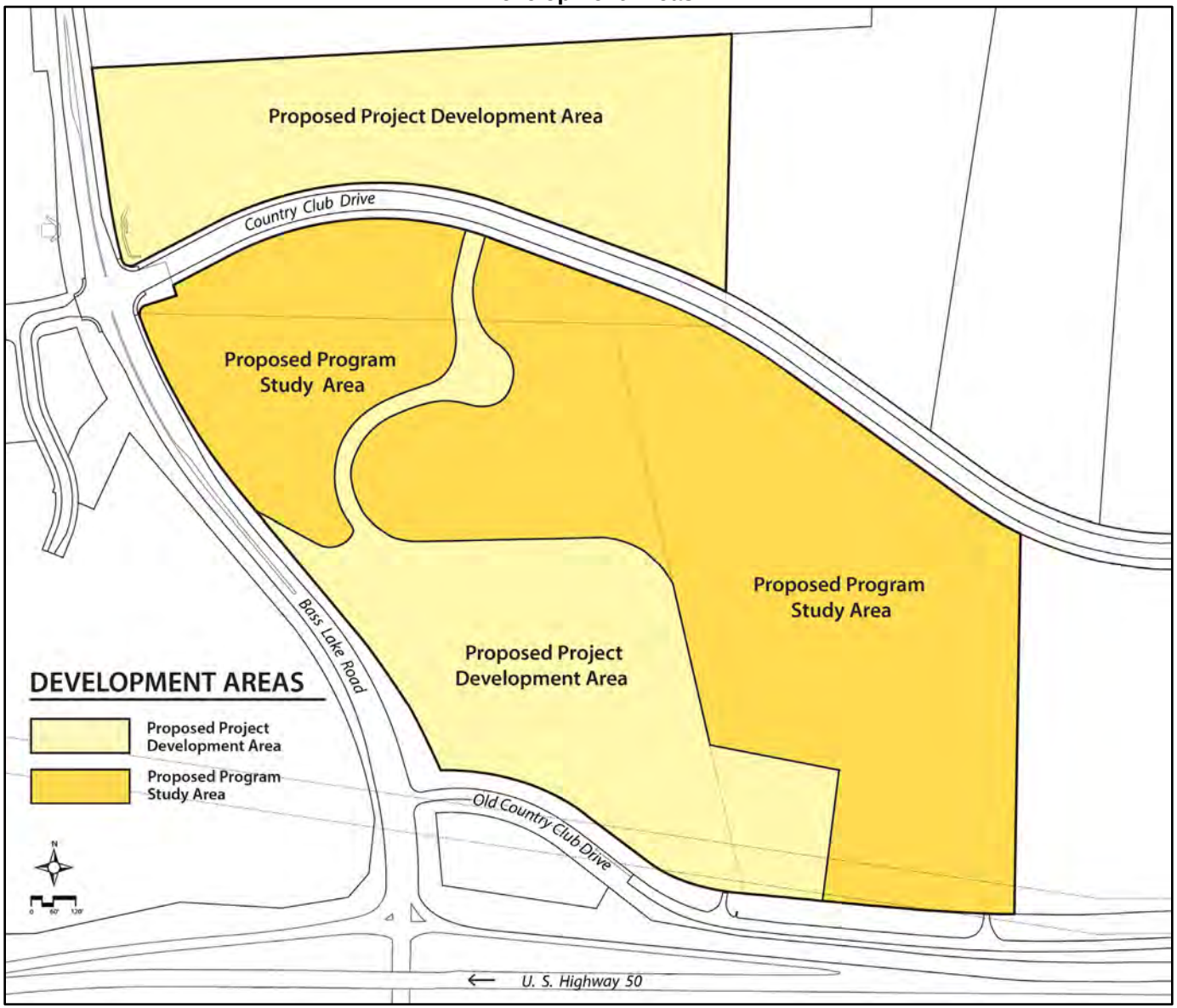
- Aesthetics;
- Air Quality and Greenhouse Gas Emissions (including Energy);
- Biological Resources;
- Cultural and Tribal Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning/Population and Housing;
- Noise;
- Public Services and Recreation;
- Transportation;
- Utilities and Service Systems; and
- Wildfire.

In addition, project alternatives, cumulative impacts, and other statutorily required sections identified in CEQA Guidelines Section 15126 will be analyzed in the EIR. It is anticipated that all other CEQA topics (e.g., Agriculture and Forest Resources, Mineral Resources) can be addressed within the Effects Not Found to be Significant chapter of the EIR.

Figure 1
Project Vicinity



Figure 2
Development Areas



TOWN & COUNTRY VILLAGE EL DORADO

OVERALL SITE PLAN

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=100' MAY, 2023

APPLICANT

JOSH PANE
1123 J STREET, 3RD FLOOR
SACRAMENTO, CA 95814

OWNER

MOHAMMAD MOHANNA
CAP FUNDING
1025 9th STREET, SUITE 205
SACRAMENTO, CA 95814

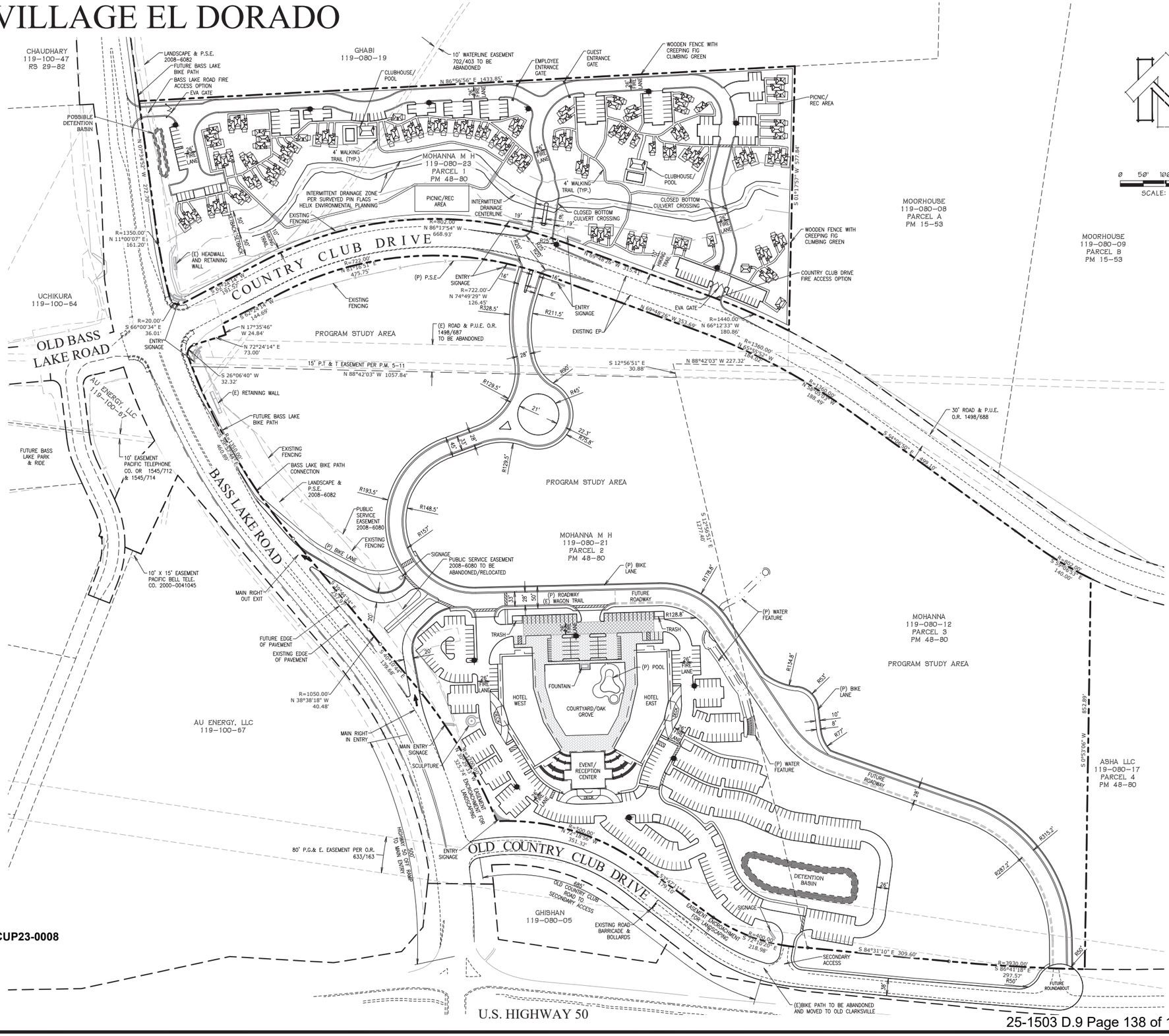
ENGINEER

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PROPOSED BUILDINGS	GROSS SQUARE FOOTAGE (FOOTPRINT)
HOTELS	16,000
EVENT CENTER	7,000
COTTAGES	280
CLUBHOUSES	600

LEGEND

- PROJECT BOUNDARY
- (E) LOT BOUNDARY
- (E) RIGHT OF WAY
- (E) EASEMENT
- (E) EDGE OF PAVEMENT
- (E) FENCE
- GRASS PAVERS
- LANDSCAPE PAVERS
- FIRE DEPARTMENT PATH OF TRAVEL TURNING RADII INSIDE RADIUS=35' OUTSIDE RADIUS=55'
- FIRE HYDRANT

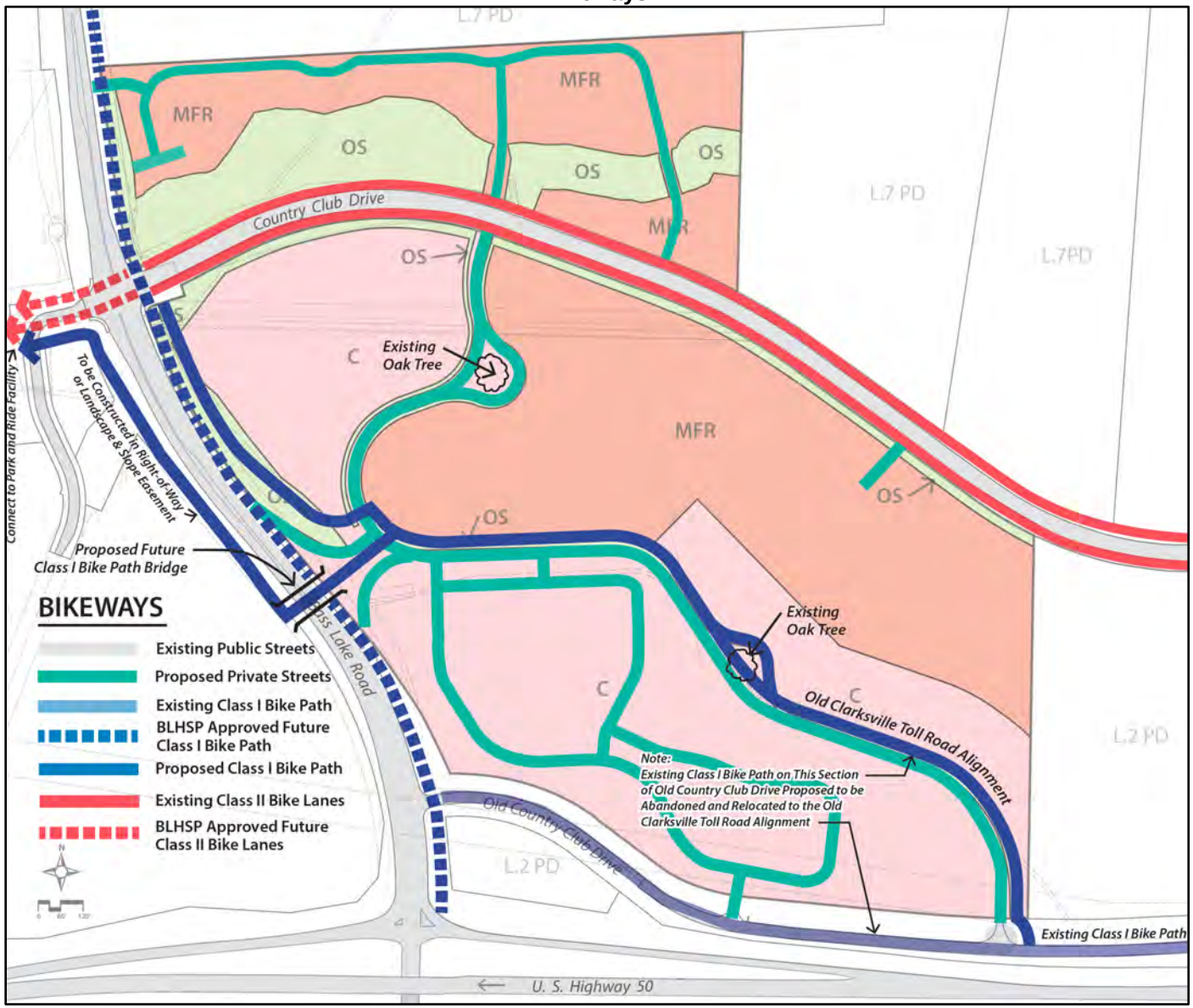


GPA22-0003 / SP-R21-0002 / PD21-0005 / Z21-0013 / TM22-0005 / CUP23-0008
Town and Country El Dorado Hills
Exhibit N - Draft Environmental Impact Report Appendices

Figure 3

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Figure 4
Bikeways



TOWN & COUNTRY VILLAGE EL DORADO

BLHSP WATER PLAN

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=200' MAY, 2023

0 100' 200' 400'
SCALE: 1" = 200'

LEGEND

PROPOSED WATER MAIN - 6,645 LF	W	TOWN & COUNTRY VILLAGE EL DORADO BOUNDARY	
EXISTING WATER MAIN	(E) 30"W	EXISTING LOT LINES	
EXISTING EASEMENT		EXISTING RIGHT OF WAY	
BLHSP BOUNDARY			

RODRIGUEZ 119-100-39
VINNAKOTA 119-090-37
MCINTOSH 119-090-02
WILLIAMS 119-090-03
GASSAWAY 119-090-57
WOODALL 119-090-23
WELSH 119-090-59
EID 119-090-46
BLHSP BOUNDARY
BARAJAS 119-100-35
ROY TR 119-090-67
GILMAN 119-090-51
(E) 24"W
(E) 30"W
(E) 36"W
HOLLOW OAK DRIVE
MORRISON ROAD
BASS LAKE TANKS
POINT OF CONNECTION TO (E) WATER
EDH COUNTY WATER DISTRICT 119-100-07
(E) LANDSCAPE & PUBLIC SERVICE EASEMENT
GRIGGS 119-090-19
CHEPLICK 119-090-21
(E) 12"W
(E) PUBLIC SERVICE EASEMENT
EL DORADO CO. 119-100-52
AGHELI 119-090-71
EL DORADO HILLS C.S.D. 119-100-53
FALLAH 119-090-65
WILLIAMS 119-090-74
YOWELL 119-090-31
CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS 119-100-51
BELL RANCH
CHAUDHARY 119-100-45
YOWELL 119-090-32
YOWELL 119-090-30
YOWELL 119-090-29
BASS LAKE ROAD
GHABI 119-080-19
CHAUDHARY 119-100-47
(E) 10' WATERLINE EASEMENT 702/403
COTTAGES & EMPLOYEE HOUSING
MOHANNA M H 119-080-23
NKADI 119-080-11
WYCKOFF 119-080-10
UCHIKURA 119-100-64
MOORHOUSE 119-080-08
MOORHOUSE 119-080-09
BELL RANCH PROPERTIES, LTD
PROGRAM STUDY AREA
(E) ROAD & P.U.E. O.R. 1498/687
(E) EP
COUNTRY CLUB DRIVE
(E) 15' P.T & T EASEMENT PER P.M. 5-11
EL DORADO COUNTY TRANSIT AUTHORITY 119-100-59 2018-0012749
SALUD 119-100-66
MOHANNA M H 119-080-21
MOHANNA 119-080-12
TIERRA DE DIOS DRIVE
(E) 8"W
FUTURE POTENTIAL BRIDGE CROSSING (PENDING FUNDING)
HOTEL & EVENT CENTER
ANDERSON 119-100-18
AU ENERGY, LLC 119-100-67
OLD BASS LAKE ROAD
ASHA LLC 119-080-17
BELL RANCH PROPERTIES, LTD
(E) 80' P.G.& E. EASEMENT PER O.R. 633/163
FORST 119-100-19
GHISHAN 119-080-05
SHAW 119-020-22
PROPOSED FUTURE WATERLINE EXTENSION TO SERVICE THE DIABLO TRAIL WATER SERVICE AREA
OLD COUNTRY CLUB DRIVE
U.S. HWY 50
U.S. HWY 50

Figure 5

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

M:\20-113-001\PLANNING\EXHIBITS\20-113-001-BLHSP WATER EXHIBIT.dwg, 5/31/2023 3:33:49 PM, tjaime, 1:1

TOWN & COUNTRY VILLAGE EL DORADO

BLHSP SEWER PLAN

EL DORADO COUNTY, CALIFORNIA

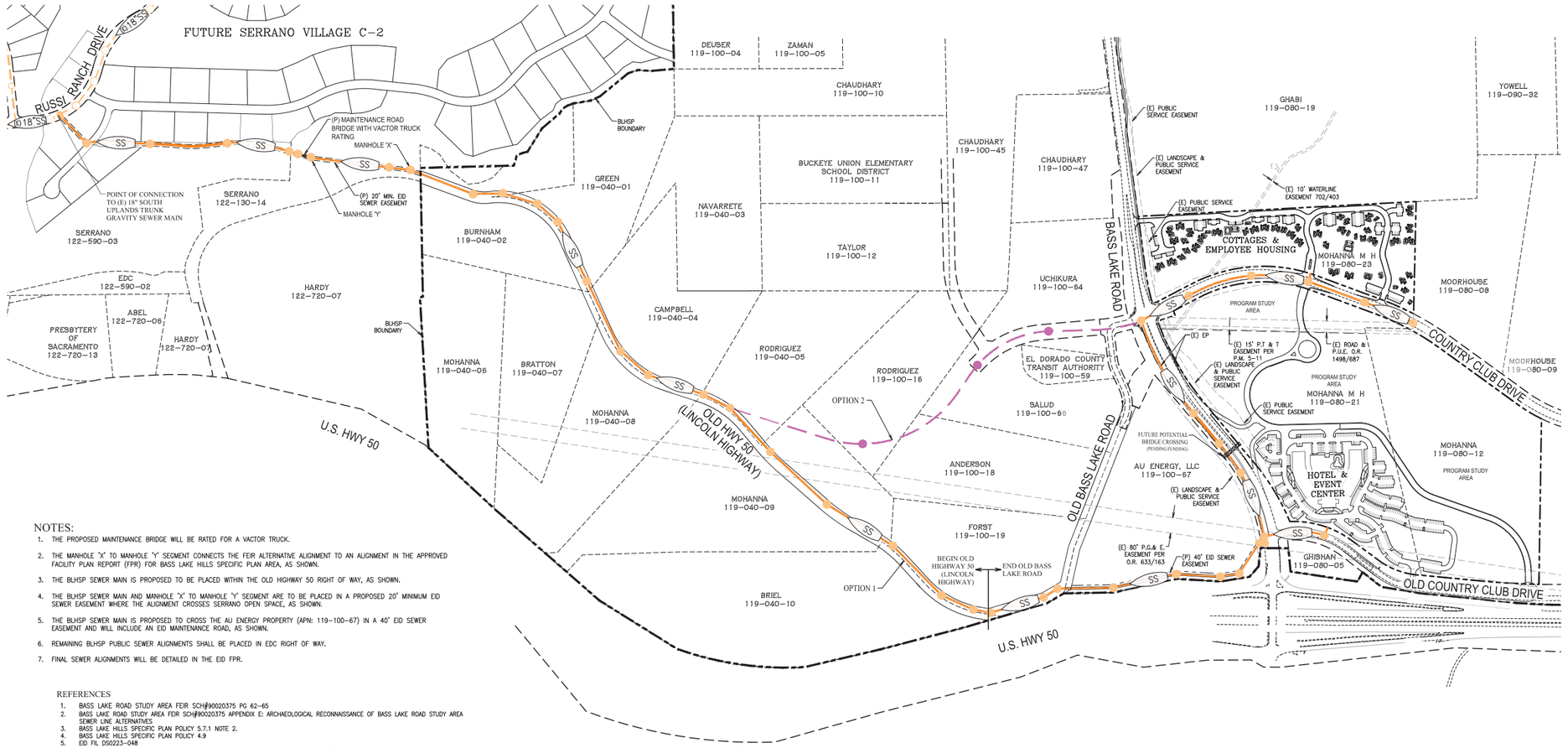
SCALE: 1"=200' MAY, 2023

LEGEND

- PROPOSED BLHSP SEWER MAIN (OPTION 1) - 10,510 LF — SS
- *PROPOSED PUBLIC SEWER MANHOLE
- EXISTING SEWER LINE — (E) 6"SS
- EXISTING SEWER MANHOLE
- *PROPOSED BLHSP SEWER MAIN (OPTION 2) (BASS LAKE HILLS SPECIFIC PLAN ALIGNMENT)
- PROPOSED SEWER EASEMENT
- TOWN & COUNTRY VILLAGE EL DORADO BOUNDARY
- EXISTING LOT LINES
- EXISTING & FUTURE SERRANO LOT LINES
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT
- BLHSP BOUNDARY
- OLD HIGHWAY 50 ROW (LINCOLN HIGHWAY)

*ACTUAL MANHOLE LOCATIONS WILL BE DETERMINED AT FACILITIES PLAN REPORT STAGE.

0 100' 200' 400'
SCALE: 1" = 200'

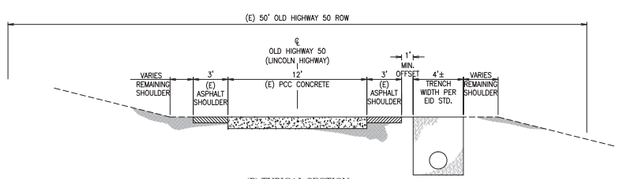


NOTES:

1. THE PROPOSED MAINTENANCE BRIDGE WILL BE RATED FOR A VACTOR TRUCK.
2. THE MANHOLE "X" TO MANHOLE "Y" SEGMENT CONNECTS THE FEIR ALTERNATIVE ALIGNMENT TO AN ALIGNMENT IN THE APPROVED FACILITY PLAN REPORT (FPR) FOR BASS LAKE HILLS SPECIFIC PLAN AREA, AS SHOWN.
3. THE BLHSP SEWER MAIN IS PROPOSED TO BE PLACED WITHIN THE OLD HIGHWAY 50 RIGHT OF WAY, AS SHOWN.
4. THE BLHSP SEWER MAIN AND MANHOLE "X" TO MANHOLE "Y" SEGMENT ARE TO BE PLACED IN A PROPOSED 20' MINIMUM EID SEWER EASEMENT WHERE THE ALIGNMENT CROSSES SERRANO OPEN SPACE, AS SHOWN.
5. THE BLHSP SEWER MAIN IS PROPOSED TO CROSS THE AU ENERGY PROPERTY (APN: 119-100-67) IN A 40' EID SEWER EASEMENT AND WILL INCLUDE AN EID MAINTENANCE ROAD, AS SHOWN.
6. REMAINING BLHSP PUBLIC SEWER ALIGNMENTS SHALL BE PLACED IN EDC RIGHT OF WAY.
7. FINAL SEWER ALIGNMENTS WILL BE DETAILED IN THE EID FPR.

REFERENCES

1. BASS LAKE ROAD STUDY AREA FEIR SCH#90020375 PG 62-65
2. BASS LAKE ROAD STUDY AREA FEIR SCH#90020375 APPENDIX E: ARCHAEOLOGICAL RECONNAISSANCE OF BASS LAKE ROAD STUDY AREA SEWER LINE ALTERNATIVES
3. BASS LAKE HILLS SPECIFIC PLAN POLICY 5.7.1 NOTE 2.
4. BASS LAKE HILLS SPECIFIC PLAN POLICY 4.9
5. EID FIL D50223-048
6. BASS LAKE ROAD RECONSTRUCTION AND COUNTRY CLUB DRIVE EXTENSION: CIP PROJECT#71360
7. MASTER FACILITY PLAN REPORT FOR BASS LAKE HILLS SPECIFIC PLAN AREA



(P) TYPICAL SECTION
TCVPA SEWER LINE INSTALLATION IN OLD HIGHWAY 50
SCALE: 1"=4'

GPA22-0003 / SP-R21-0002 / PD21-0005 / Z21-0013 / TM22-0005 / CUP23-0008
Town and Country El Dorado Hills
Exhibit N - Draft Environmental Impact Report Appendices

Figure 6

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742

APPENDIX C

CORINNE RESHA —
RE: NOTICE OF PREPARATION
DTD 7/17/23

WOULD YOU PLEASE FORWARD
A COPY OF THE TRAFFIC
IMPACT REPORT.
THANK YOU
ALAN SHERMAN
BOOMERSALS@YAHOO.COM
230 PARMA COURT
EL DORADO HILLS CA 95762



Alan Sherman
230 Parma Ct.
El Dorado Hls, CA 95762

SACRAMENTO CA 957
26 JUL 2023 PM 3 L

2023 JUL 31 AM 11:04

PLANNING DEPARTMENT

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
Or via email: TownAndCountryElDorado@edcgov.us

95667-410050

[redacted]

From: Annie Miranda <annie@acmstyling.com>
Sent: Thursday, August 17, 2023 2:25 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village Project NOP Comment

You don't often get email from annie@acmstyling.com. Learn why this is important

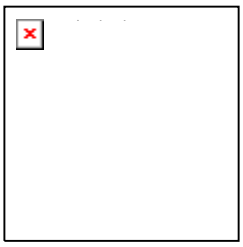
Name: Andreanna Miranda
Address: 4020 Portobello Place, El Dorado Hills, CA 95762

- Data on the financial breakdown of revenue generated by hotel, event center, cottages, museum, retail space, etc. High rents on the commercial spaces making it unaffordable for local shops and vendors (Apple Hill merchants, Wineries) to supply their goods/services. This would not fit into the idealized plan for El Dorado Hills showcasing themselves as the gateway to the county.
- Who's responsible to maintain and beautify all areas after development? Who is to fund the maintenance and beautification of the developed property? If anything falls onto the District (El Dorado Hills Community Services District) this plan will lead to further neglect across El Dorado Hills as the District staff is already spread too thin and unable to handle the current development in the region. This is evident as you drive around El Dorado Hills and look at the neglected landscaping, deteriorating structures, and as you walk our current sidewalks and trails that are overgrown and unmaintained.
- Demand for another application when the Proposed Program Study Area is mapped out with a site plan. The project is incomplete with regards to the Proposed Program Study Area and should not be lumped into this application. Per the Notice of Preparation of a Draft Environmental Impact Report states
    - "Development of the Program Study Area consists of 30.3 acres, and *may* consist of uses such as hotels, senior housing units, medical facilities, townhomes, retail shops, cottages, and *other uses allowed by the zoning district."*
- The number of acreage in commercial land use in the program study area for total acreage of 11.9 does not match up to the broken down acreage in the 2 following paragraphs on page 6. It exceeds the 11.9 by 3.4 acres.
- An event center and hotel would bring noise and traffic to a residential location. These types of buildings need to find their place within business centers or large commercial settings— not residential developments.
- As shown on Page 11 in figure 4 a large portion of the [very little] Open Space is behind a gate and unavailable to the public. A point was made by the applicant that the project's facilities would be something that the entire community would use, your figures combat that.
- The residential cottages deemed for partial employee housing is tax deductible for the business which is a loss of earnings for the county

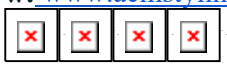
- Data on the pending developments surrounding the Town & Country Village Project

Thank you and I look forward to receiving the Environmental Impact Report with my concerns and questions answered.

With Gratitude,
Annie



Annie Miranda
ACM STYLING | PERSONAL FASHION STYLIST
w: www.acmstyling.com | **e:** annie@acmstyling.com



[redacted]

From: Andrew Wong <awong@bluemountaininc.net>
Sent: Thursday, August 17, 2023 8:17 AM
To: PL-Town and Country Village El Dorado
Cc: emami@westernmanagementcompany.com; Josh Pane; moe@mohannadevelopment.com
Subject: Supporting Town & Country Village El Dorado Development

You don't often get email from awong@bluemountaininc.net. Learn why this is important

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department

Corinne-
I am writing in support of the proposed Town & Country Village El Dorado. I have toured the property and have reviewed the preliminary plans. I believe the proposed Town & Country Village El Dorado development ties in with the rich history of the site and the region. I also believe the development also blends nicely with the surrounding area.

I am in support of the development.

Thank you.

Andrew Wong
Senior Vice President - Communities
c. 925.383.5411 o. 707.451.8111 x 691 d. 707.469.4212
e. awong@bluemountaininc.net

BLUE MOUNTAIN
COMMUNITIES

707 ALDRIDGE ROAD | VACAVILLE, CA 95688

CONFIDENTIALITY NOTICE: This transmittal is a confidential communication or may otherwise be privileged. If you are not the intended recipient, you are hereby notified that you have received this transmittal in error and that any review, dissemination, distribution or copying of this transmittal is strictly prohibited. If you have received this communication in error, please notify the sender, and immediately delete this message and all its attachments, if any.

TOWN & COUNTRY VILLAGE EL DORADO PROJECT
NOTICE OF PREPARATION (NOP) SCOPING MEETING

COMMENT FORM

To document the author of comments received, please provide the following information. Thank you.

Name: _____

Address: _____

Organization (if applicable): Neighbor

Please provide us with your written comments on the scope of the EIR by **5:00 PM, August 17, 2023**.

Please explain funding by residence of this project. Are we paying for your business profits and construction of it?

Send comments to:

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
TownAndCountryElDorado@edcgov.us

TOWN & COUNTRY VILLAGE EL DORADO PROJECT
NOTICE OF PREPARATION (NOP) SCOPING MEETING

COMMENT FORM

To document the author of comments received, please provide the following information. Thank you.

Name: ANTHONY DUBOVIK

Address: 752 MUDDOG CT EL DORADO HILLS 95762

Organization (if applicable): _____

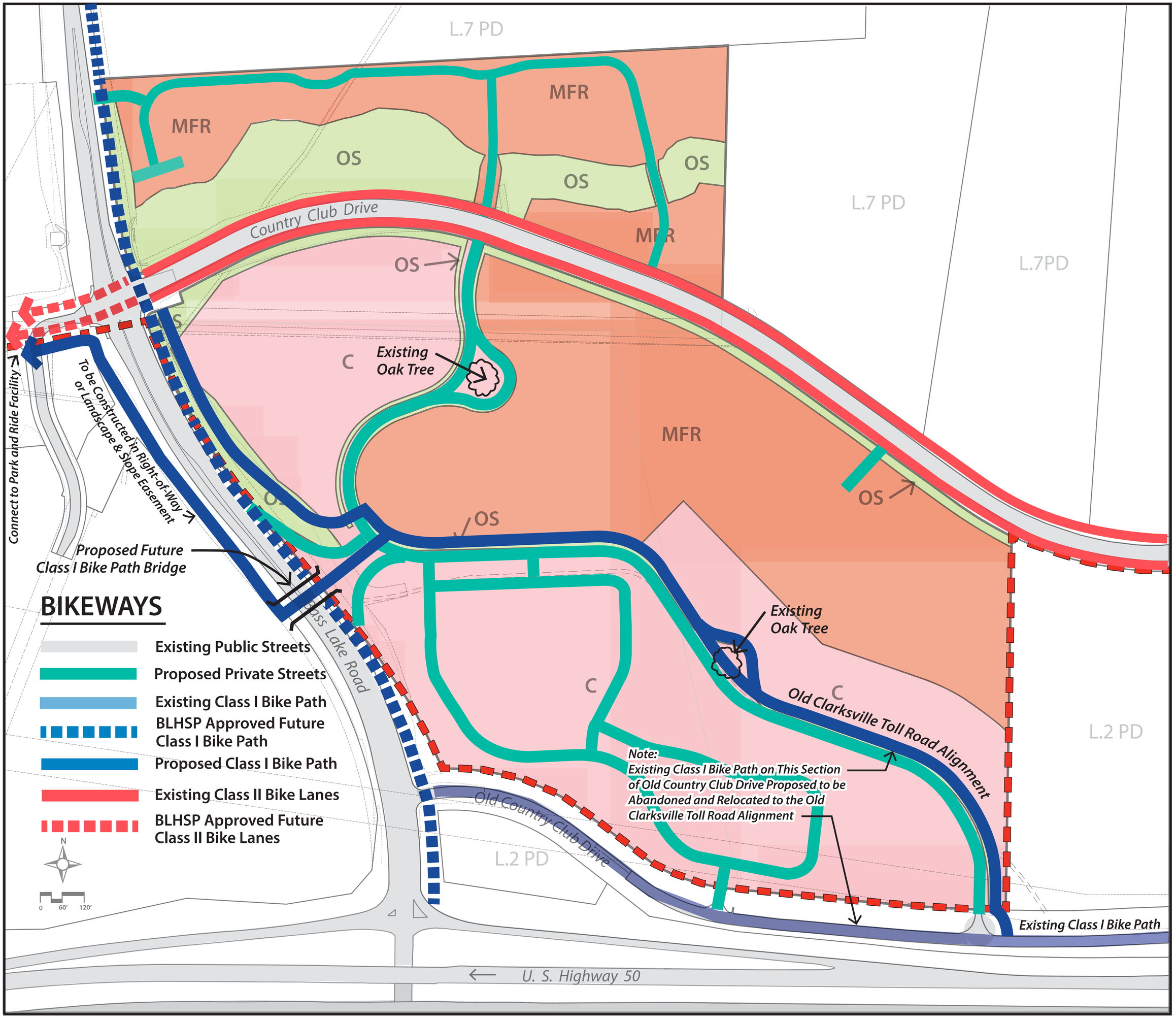
Please provide us with your written comments on the scope of the EIR by **5:00 PM, August 17, 2023.**

COMMENT #1 - I AM CONCERNED ABOUT THE INCREASED TRAFFIC. WILL THERE BE AN EXPANSION AT THE INTERCHANGE OF US50 AND BASS LAKE ROAD.

COMMENT #2 - WILL BASS LAKE ROAD BE WIDENED TO 4 LANES W/ A LEFT TURN LANE @ COUNTRY CLUB DRIVE TO US-50

Send comments to:

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
TownAndCountryElDorado@edcgov.us



Torrence Planning 05-16-23

From: Bryce Miller <brycejmiller1@gmail.com>
Sent: Wednesday, August 16, 2023 8:22 PM
To: PL-Town and Country Village El Dorado
Subject: Town and Country Development - Resident Written Comment

You don't often get email from brycejmiller1@gmail.com. Learn why this is important

Hello,

I'm writing to express my sincere concern over the proposed Town and Country Village development in El Dorado Hills. While growth and expansion of the community can be exciting, I'm concerned about the deterioration in quality of life for existing residents. Material (harmful) impacts to traffic, the environment, and community safety are likely to occur if this development moves forward.

For residents born and raised in this area, the beauty of El Dorado County is rural living in proximity to modern, convenient amenities. This community is largely a safe haven from the crime that is increasingly plaguing big cities, including our neighbor, Sacramento. In the event high-density housing, hotels, and an event center are built, this community is inviting significant foot traffic, and subsequently crime, into our safe community that is one of the few remaining exceptional places to raise a family in California. I strongly believe we should **not** move forward with this type of development. A few local examples demonstrate how all growth isn't "good growth":

- Increased crime from the building and operation of Thunder Valley Casino in Lincoln. Lincoln residents have seen notable increases in drug use, DUI, violent offences.
    - Example 1: https://fox40.com/news/local-news/man-arrested-in-woodland-in-connection-to-thunder-valley-casino-shooting/
    - Example 2: https://goldcountrymedia.com/news/189511/placer-county-sheriffs-crime-log-welfare-check-turned-arrest-casino-bathroom-robbery-more/
- In 2020 alone, migration between San Francisco County and Sacramento County grew by 70% compared to 2019.
    - Source: https://www.sfgate.com/local/article/increased-migration-bay-area-to-sacramento-18262928.php
    - Sac PD shows shooting reports are up 25% from 2020 to 2021; number of guns seized up by 34%; homicides up by 32%.
        - Source: https://www.kcra.com/article/sacramento-police-data-homicides-shootings-increasing/40291795#

While I'm certain there are good intentions behind the Town and Country development, please consider the many residents - maybe even the silent majority - that are deeply concerned about the harmful effects that this infrastructure will bring to our community. Thank you for considering this position.

Best,
Bryce Miller
530-391-8155
1208 Ravenshoe Way, EDH

From: leflar4@gmail.com
Sent: Thursday, August 17, 2023 4:26 PM
To: PL-Town and Country Village El Dorado
Cc: leflar4@gmail.com
Subject: Attn: Corinne Resha, Senior Planner: Town & Country Village El Dorado Project

You don't often get email from leflar4@gmail.com. Learn why this is important

Town & Country El Dorado Project
Notice of Preparation (NOP) Scoping Meeting

Comment Form

Name: Christy Leflar
Address: 4830 Castana Drive, Cameron Park

August 17, 2023

Hello,
I attended both scoping meetings – In person on August 8 and virtually on August 9. I would like to first point out that conveniently planning such a meeting with little notice on the night before the first day of school was both underhanded and sneaky. Once I arrived to the meeting, I understood why it was done this way. The meeting was filled with investors, real estate brokers, developers, etc…. none of them (including the applicant) are from the area, none of them care about the rural way of life we embrace here.

I am **vehemently** against this monstrosity, as is most of the community. I have several concerns listed below. It is in the best interest of our community to NOT build such a design that offers nothing to the community.

1. It is important to conduct a FULL environmental impact assessment on traffic and probable damage to the area that includes:
    - Traffic flow and circulation AND the amount of congestion this proposal will inflict upon the area – A complete assessment should include both the "old" Country Club Drive, the "new" Country Club Drive, Hwy 50 flow in both directions, Bass Lake Road, Cambridge Road (which will also be significantly impacted) and all new roads intended to build. This assessment SHOULD NOT include anything proposed North of Country Club Drive as that should require a separate assessment.
    - An environmental assessment must also include probable light pollution. As we all know, light pollution disrupts wildlife, impacts human health and it's obtrusive. We choose to live here for very significant reasons. We embrace the quiet, the peaceful, the wildlife.
    - Lastly, a complete environmental impact study will also include the impending health issues all this congestion & pollution will cause.

2. In the meeting, it was presented that 56 of the 112 residential cottage units would be deed restricted for hotel employee housing. Why? Why is there a need for employee housing for a hotel, for an event center or for a museum? This is unheard of, unnecessary and perplexing. What other hotels house their employees, and why?

3. My other HUGE concern regarding the remaining 56 "cottages"…. Why would they be available to rent for a day under a Conditional Use Permit? What are the true plans for these cottages?? Cottages = transients.

4. Water. We don't have any. Why on earth would we add to an already massive problem. Make it make sense.

5. Lastly, I would like to know how this benefits the community. It's obvious to anyone looking at the whole plan that there is no benefit.

While this is the initial proposal, it's very clear that the true intention is to over-build this area just like everywhere else. Fun fact, we don't have to build every single piece of land. Undeveloped rolling hills bring peace and provides home to the wildlife we have already grossly displaced.

It is my hope that this does not pass.

Thank you,

Christy Leflar

August 13, 2023

2023 AUG 16 AM 10:57
RECEIVED
PLANNING DEPARTMENT

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667

RE: Town & Country Village Project NOP Comment

We attended the scoping meeting Tuesday Aug 8. It was very informative and we would like the following concerns to be considered:

1. The traffic created on Old Country Club, New Country Club and Bass Lake Road with additional housing, hotel guests and special venue attendees will need careful review. When school is in session at Blue Oak Elementary and Camerado Springs Middle School, exiting our street onto Country Club is at times very difficult because cars line the street and back up when dropping off or picking up children. Please consider the impact of 700 more households and the effect on traffic (and schools). Also, on Saturdays if there is a swim meet at the community center or book sale at the library, cars already overflow the parking lots and are parked along Country Club. We would not like to see widening of Old Country Club in our residential neighborhood as an option to accommodate 700 more homes.
2. Safety is a major concern if Old Country Club is reopened to access Bass Lake Road. Cars traveling westbound exiting Hwy 50 at Bass Lake Rd do not slow down and historically it was impossible at certain times of the day to make a left turn at the stop sign. There will need to be traffic lights installed and we will need to be assured exiting the new hotels will be a right turn only on Old Country Club to Bass Lake Road, so the neighborhoods are not impacted. There was a time when we had to wait 40 cars deep on Old Country Club in the morning and afternoon to get on to Bass Lake Road. The volume of cars going to or coming from Holy Trinity School was significant. Building New Country Club was a tremendous improvement. Reopening Old Country Club is a problem.
3. Landscaping must remain consistent with the natural environment and all planning for water, sewer, drainage and lighting for the additional 700 homes in the program study area need to be considered now.

Thank you for your time and consideration. We look forward to future reports and information when it becomes available

Cinda and Jack Walton
4610 Castana Drive
Cameron Park, CA 95682

From:	Corinne E. Resha
To:	Nick Pappani; Cindy Gnos
Cc:	Bret E. Sampson
Subject:	Fw: Town & Country Village NOP Comment
Date:	Thursday, July 27, 2023 3:40:52 PM

Corinne Resha
Senior Planner

County of El Dorado
Planning and Building Department
2850 Fairlane Court, Bldg C
Placerville, CA 95667
Main Line 530.621.5355
Direct 530.621.5305
corinne.resha@edcgov.us

From: Debbie Barbour <d.lewisbarbour@gmail.com>
Sent: Tuesday, July 25, 2023 8:06 AM
To: PL-Town and Country Village El Dorado <TownandCountryElDorado@edcgov.us>
Subject: Town & Country Village NOP Comment

This email is in regards to my concerns associated with the Town & Country Village Proposed Project Development area and also the Proposed Program Study Area.

1)Traffic congestion and increase risk of accidents.- The detail of the hotel units and residential dwellings listed in Table 1 of your documents implies that this project could bring well over 1000 additional vehicles of traffic to this Bass Lake and Country Club area due to hotel workers, hotel guests (300), residents (814), events (300 persons), shopping, museum (100 visitors), restaurant patrons (120 patrons) plus trucks for deliveries. This area already faces traffic congestion during peak commute hours, and also times associated with school drop-off/pick-up times. The plan will also bring 4 new ingress/egress points onto Bass Lake Road in a very short distance AND 3 new ingress/egress points on Country Club Drive. These points will cause a cumulative impact and further congest both roadways in this area while increasing accident hazard risks and noise.

2) Traffic and impacts to air quality and gas emissions. - The addition of 1000-1600 vehicles to this concentrated location will impact the air quality and health of nearby communities.

3) Aesthetics of 5-story hotels - The placement of 5-story hotel will detract and ruin the aesthetics of a rural community by turning it into a highly commercialized zone. Most existing residents moved to this area due to the open acreage and rural landscape setting. Rezoning and commercializing this land does not promote nor preserve the area's aesthetics nor the quality of life in our community.

4) Utilities Water - El Dorado county already struggles with meeting water demands as droughts become more common due to global warming and climate change. Furthermore, water pressure for nearby Bar J Ranch development has continued to decline over the past 10

years associated with all the development of actions surrounding homes and developments. The water requirements for this project and study area to support the identified hotels, residents, events and grounds will impact water pressure and availability to the nearby communities further degrading their existing water services.

These items, associated with the Town & Country Village, will negatively impact the environment, harm neighboring communities quality of life, and degrade the value of homes in the area. This area should not be rezoned, the BLHSP should not be amended and the project with its associated study area should not be granted any planned development or conditional use permits.

Thank you for your attention to address my concerns in your EIR. If you have any questions or require and additional information, please let me know.

Respectfully,
Debbie Lewis-Barbour
Resident of Bar J Community

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This email has been scanned for spam and viruses by Proofpoint Essentials. Click here to report this email as spam.

From: Debbie Deti <dld9211958@gmail.com>
Sent: Monday, August 14, 2023 3:00 AM
To: PL-Town and Country Village El Dorado
Subject: Bass Lake Construction

You don't often get email from dld9211958@gmail.com. Learn why this is important

I think what really needs to be put in concentration is the wild life. If we keep taking all of the land and build on it. What is going to happen to the wild live? That is what El Dorado County is known for. There are already Bears, Mountain Lions and other types of wild life going into towns, and on properties. A lot of which has to do with wild fires. So you throw Construction in the mix, and where can they go? Just food for thought. I appreciate you taking the time to read. Debra Deti

---

From: Dennis Daniel <dennis-linda@att.net>
Sent: Monday, August 14, 2023 9:28 AM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village El Dorado - Proposed Project

You don't often get email from dennis-linda@att.net. Learn why this is important

Concerns/Issues

Traffic - Already there is a traffic problem on Country Club Dr east bound towards the Blue Oaks school and Community Center. Excessive speeding, cutting thru the neighborhood (Trinidad to Casa Largo).

The potential loss of too many trees in the proposed development area.

The negative impact on the creek north off Country Club Dr,

The freeway inter-change is already a problem at peak times. There is off ramp back up onto 50 freeway east bound. The west bound on ramp to 50 is to short for safe merger during peak times. The metering light which I have only seen used one time made the situation worse, as traffic backs up on to Bass Lake Road and you have to start from a stop at top of the hill, reducing the distance to merge and get up to speed.

Crime - Associated with the Hotels and worker residents, statistically there will be an increase of incidents.

Thank You,
Dennis Daniel
4219 Gailey Circle
Cameron Park 95682
916 718-7845

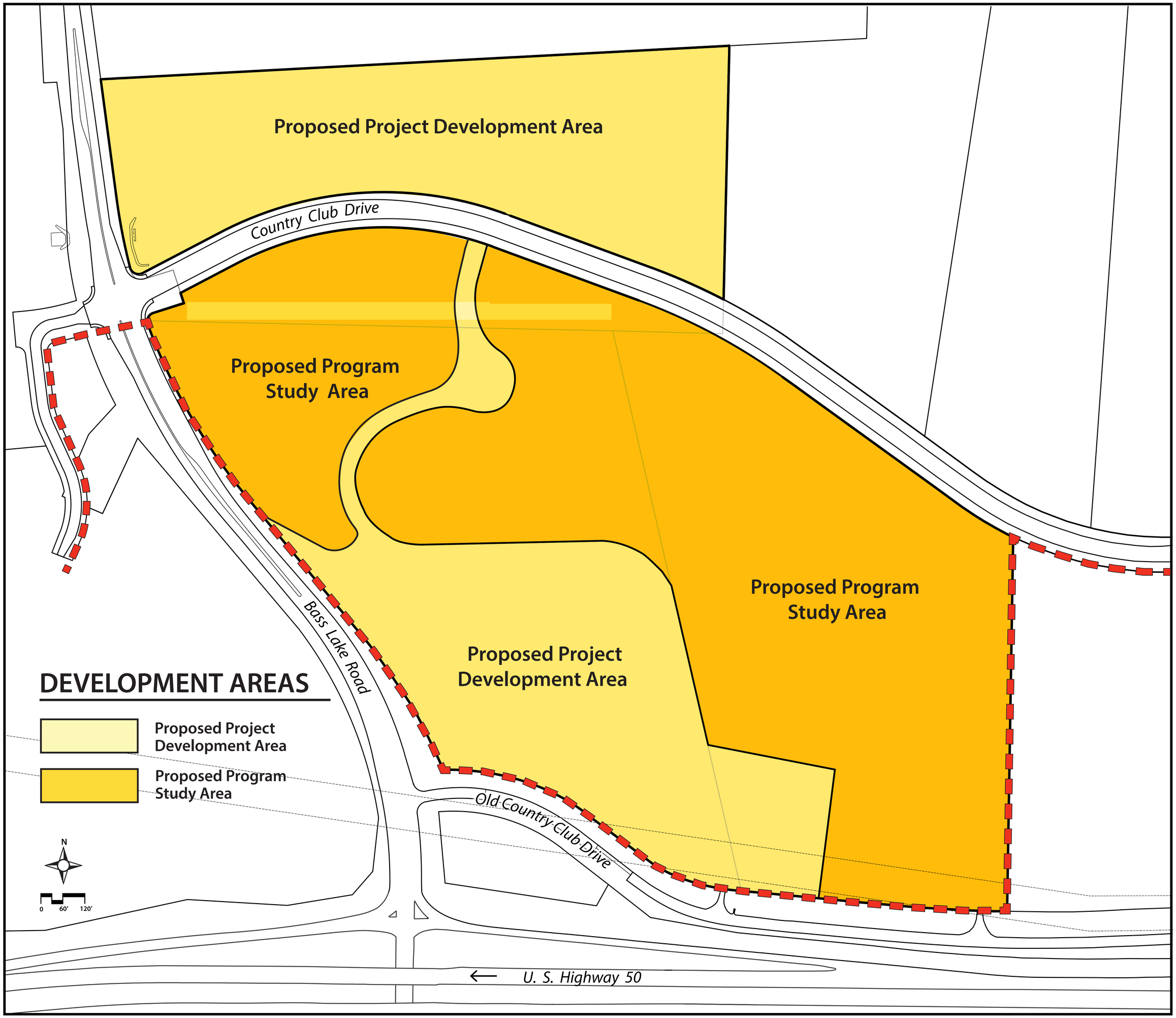
From: dbane1953 <dbane1953@gmail.com>
Sent: Tuesday, August 15, 2023 4:10 PM
To: PL-Town and Country Village El Dorado
Subject: "Town & Country Village Project NOP Comment

You don't often get email from dbane1953@gmail.com. Learn why this is important

I believe this project is good for the people of El Dorado County. It brings upscale hotel, museum, entertainment space plus boutique shops we don't have. It looks to be well planned out and again good for the County.

Dennis E Bane
4257 Arenzano Way
El Dorado Hills, CA 95762
408 472 4813

Sent from my T-Mobile 4G LTE Device



Torrence Planning 04-27-23

From: Don Dupere <ddupere@comcast.net>
Sent: Wednesday, August 16, 2023 11:02 AM
To: PL-Town and Country Village El Dorado
Subject: Environmental Impact Report - "Town and Village"

[You don't often get email from ddupere@comcast.net. Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=c0d3CmUDYH46pFnI0eukgizoy8XR7i1l_8YK320hnX8&m=d_4yVm9IomdnVBr8lzQMxIpz3J5lXMA8u-_ErP5HZI2XAjF9R0wn-dF3hsXmQ2Xk&s=g8ZhQTJoEMQm9H0thCS6CxevNpCdsBfsIaPnh0yeR4M&e=]

1) California has not increased water storage since 1980 despite;
   a) A 62% increase in population
   b) A 36% increase in wine grape production (800 gallons of water to produce 1 gallon of wine
   c) Voter approved funding of $2.7B in 2014 to improve water storage and infrastructure - with little to no progress in the last decade
   d) Multiple requests by EID to drastically cut back water usage due to impacts of the fires/ floods on their ability to process the water
   e) Many years of severe drought.

So, why would we continue to build when our water resources are already taxed beyond the limit including the collapse of water tables. It makes no sense. This project is just another nail in the coffin of California's water situation

2) We live in an area with relatively low crime. It is proven that rural areas have less crime per capita than urban areas. Why would we want to urbanize?
3) Light pollution is not on your list of issues to review in your EIR. We live in an area where we can actually see the stars at night. Why would we want to give that up?
4) Our electric grid is already taxed to the limit with no plans for the replacement of Diablo Canyon Nuclear Power Plant when it is retired in 5 years or so. We are continuing to have to purchase power from other states as well as Canada and Mexico.

Donald A. Dupere
617 Ore Cart Court
El Dorado Hills, CA 95762
(805) 868-0251

From: Frank Porter <fspsm520@gmail.com>
Sent: Thursday, August 17, 2023 11:24 AM
To: PL-Town and Country Village El Dorado
Cc: Frank Porter; Maureen Dion-Perry
Subject: Town & Country Village Project NOP Comment

You don't often get email from fspsm520@gmail.com. Learn why this is important

To: Corinne Resha, Senior Planner, County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C, Placerville, CA 95667

From: Frank Porter, 1633 Loma Verde Drive, El Dorado Hills, Ca 95762

Date: August 17, 2023

Subject: Town & Country Village Project NOP Comment

Dear EDC Planning and Building Department,

I read with great interest that the proposed Town & Country Village includes:

"Residential Cottages - The northernmost 7.9-acre portion of the project site, located north of Country Club Drive, would be developed with a total of 112 residential cottage units; ***56 units would be deed restricted for hotel employee housing,*** *and the remaining 56 units would be available for rent on a daily or extended stay basis, which would require a Conditional Use Permit (CUP23-0008). Each cottage unit would be comprised of two stories, including a separate bedroom, bathroom, full kitchen facilities, and an outdoor deck."*

I applaud and wholeheartedly support the inclusion of these 56 much needed, deed restricted hotel employee housing units in the proposed project, mixed with another 56 units available for rent on a daily or extended stay basis.

The Town & Country Village El Dorado "T&CVED" proposes to develop an upscale resort with two beautifully appointed residential villages of two story cottages with additional loft spaces along the seasonal drainage area in the Oak Grove just north of Country Club Drive for staff of the resort and hotel guests alike.

Additionally, the T&CVED proposes to reduce vehicle miles traveled by using low emission vehicles to transport guest from Church weddings, family gatherings and life celebrations at the Holy Trinity Church, Foothills Community Church and Faith Episcopal Church.

All of these activities would reduce vehicle miles traveled for both hotel guests and employees.

I urge you to include in your study of the project:

-
-
- The total possible reduction in vehicle miles traveled;
-
-

-
- The net automobile savings to staff who would be able to walk or bike to the resort -
- just a short three thousand +/- feet away?
-
-
-

- the concept of staff housing next to the resort - will be a triple net benefit for the
- environment and superior health of the employees.
-

Thank you for your consideration of my comments.

--
Frank Porter
Vice-President
Housing El Dorado
fspsm520@gmail.com
Mobile: 916-380-9352
Click here for the latest HED news

From: Glenda Carminati <glendacarminati59@gmail.com>
Sent: Thursday, August 17, 2023 2:25 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village Project NOP Comment

You don't often get email from glendacarminati59@gmail.com. Learn why this is important

Glenda Carminati
4020 Portobello Pl, El Dorado Hills, CA 95762

I would like the following data included in the E.I.R.

* Traffic Impact Survey to be conducted during the day and time in which the schools are in session.
* Data stating the quality of life for those owning properties within a 5 mile radius of the project. (Pollution Noise and Environmental, Psychological)
* Data that follows the money from beginning to end, stating who is likely to benefit financially from the project. (With current market rates in all steps of the projects.
* Data that reflects how the project will affect the natural resources, wildlife, and quality of life of all El Dorado Hills residents.
* Data that reflects the current residents and property owners of El Dorado Hills that are for, or against the project, and why. (Take the project to a vote)
*Data that reflects any change in property values (up or down), for those residents living within a 2 mile radius of the project.
* Data that reflects the true amount of revenue that will be generated for the county and where that money will be allocated to.
* Data that reflects the current and forecasted cost to maintain the streets, landscaping and open areas that surround the project. (Property of the project, as well as the county properties that are within a 5-mile radius of the project.
* Data that reflects who, what, where and how the revenue will come from to maintain the area's natural resources.
* Current data on the "EL DORADO COUNTY GENERAL PLAN CONSERVATION AND OPEN SPACE ELEMENT. CONSERVATION OF BIOLOGICAL RESOURCES".
Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.
* Data covering MEASURE CO-K Work cooperatively with the State Department of Fish and Game, U.S. Fish and Wildlife Service, and Bureau of Land Management to implement the gabbro soils rare plant ecological preserve and recovery program and to develop a long-term preserve strategy.
*Data listing the OBJECTIVE 7.4.3] Responsibility: Planning Department Time Frame: Ongoing implementation to continue immediately upon General Plan adoption. Development standards to be incorporated into updated Zoning Ordinance and design standards programs.
*Data listing MEASURE CO-L Develop guidelines for the preparation of biological study reports. [Policy 7.4.1.6] Responsibility: Planning Department and Department of Transportation Time Frame: Develop guidelines within five years of General Plan adoption.
*Survey and Monitoring Protocols and Guidelines. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities State of California Natural Resources Agency Department of Fish & Wildlife. Including, but not limited to:Plants, Invertebrates, Amphibiens, Reptiles, Birds and Mammals.
*Data that identifies any endangered species within the county.
*Data that reflects the county's rezoning history of any property within El Dorado County post General/Master Plan adoption.
*Data that reflects the date's in which a moratorium on land development within El Dorado County was adopted, and when it was lifted. (Reflects the county's intent and what direction our open space is headed.

Intent on holding those who are representing the people of El Dorado Hills accountable for the decisions they make for those of us who call this home, and actually live within the county. I look forward to receiving the E.I.R . with my questions answered.

Respectfully,
Glenda Carminati

From: Seymour, Guy <GSeymour@QuantaServices.com>
Sent: Monday, August 14, 2023 7:29 AM
To: PL-Town and Country Village El Dorado
Cc: Lynda Seymour
Subject: Attn: Corinne Resha, Senior Planner - Planned Recreation Bridge Over Bass Lake Road

You don't often get email from gseymour@quantaservices.com. Learn why this is important

Ms. Resha,

We have attended two informational meetings thus for the Town and Country Development on & near Bass Lake Road. We live in Bar J Ranch in Cameron Park & fully endorse this development & enjoy with many others the enthusiasm for this project to be approved & construction be underway.

Our concern specifically in this correspondence is the planned bridge over Bass Lake Road. We currently learned that this approval is scheduled in the second phase of approval considerations. As a recreational pathway over Bass Lake Road, which is heavily traveled since the development east of this development, is a safety concern for anyone not traveling in a vehicle.

We therefore would urge the planning board to consider integrating this approval schedule to be included in the first approval process in the event additional studies may be required that will allow time to address any unforeseen issues.

Respectively,
Guy & Lynda Seymour
4707 Castana Dr.
Cameron Park, CA 95682
Guy: (707) 373-1115
Lynda: (214) 629-4428

Guy Seymour
UNDERGROUND CONSTRUCTION CO.

5145 Industrial Way Benicia, CA 94510
Direct 707.751.2113 **Cell** 707.373.1115
Email gseymour@undergroundconstruction.com

Underground Construction Co., Inc.
A QUANTA SERVICES COMPANY

From: Seymour, Guy <GSeymour@QuantaServices.com>
Sent: Thursday, August 17, 2023 9:20 AM
To: PL-Town and Country Village El Dorado
Cc: Lynda Seymour
Subject: Town and Country Development

You don't often get email from gseymour@quantaservices.com. Learn why this is important

Ms. Resha,

We have attended two informational meetings thus far for the Town and Country Development on & near Bass Lake Road. We live in Bar J Ranch in Cameron Park & fully endorse this development, & enjoy with many others the enthusiasm for this project to be approved & construction be underway.

Change is inevitable, but with reservation for reasonable consideration to the environment, the community & the general well being of those people that live close by for the betterment of the surrounding area. Based on what we have heard from what details have been presented from these meetings, this project provides the balance of these requirements, which has gained our support accordingly.

We therefore would urge the planning board to consider approving this project, so progress toward completion can begin.

Thank you for your consideration.

Respectively,
Guy & Lynda Seymour
4707 Castana Dr.
Cameron Park, CA 95682
Guy: (707) 373-1115
Lynda: (214) 629-4428

Guy Seymour
UNDERGROUND CONSTRUCTION CO.

5145 Industrial Way Benicia, CA 94510
Direct 707.751.2113 **Cell** 707.373.1115
Email gseymour@undergroundconstruction.com

Underground Construction Co., Inc.
A QUANTA SERVICES COMPANY

From: Helen Stokes <hstokes48@comcast.net>
Sent: Thursday, August 17, 2023 4:33 PM
To: PL-Town and Country Village El Dorado
Subject: Proposed Town & Country Village

You don't often get email from hstokes48@comcast.net. Learn why this is important

Corinne Resha:

My husband & I live in Cameron Park & are opposed to this project. Just look at what has happened to Folsom & continues to happen. Bidwell St. is getting more congested with all of the new apartments & homes that have been built, & many more are under construction. Pretty soon Bidwell is going to be a nightmare to drive on. Lots of construction is also happening in El Dorado Hills. And now this proposal for this village to be built on Bass Lake Rd.!! This is getting ridiculous. It is going to add to the congestion we already have on Bass Lake Rd. due to new subdivisions & shopping center that have been built in the area. In addition, how will the water demand be met for this village? Do we really need two hotels & possibly more in this area? Our peaceful country life is starting not to be that way any more!

From: Jan Taylor <bellajfam1629@gmail.com>
Sent: Thursday, August 17, 2023 4:56 PM
To: PL-Town and Country Village El Dorado
Subject: Town and County Village Project NOP Comment

You don't often get email from bellajfam1629@gmail.com. Learn why this is important

My my name is Janice Taylor
PO Box 5020
El Dorado Hills CA
95762
Property location
4401 Silver Dove Way
El Dorado Hills CA
95762
Hello to all concerned parties.
I owned my property near Bass Lake Rd since 1978. In my many years here, many improvements have occurred in this area, to add to the betterment of this area.
I assisted with the planning of The Bass Lake Hills Specific Plan of 1995.
Noted in the 1995 plan, for the Circulation Figure 4-1, is a parallel capacity to Bass Lake Road, for a Road Right of Way as well as Public
Service Easement,
Signed in 2017.
This easement realign of Silver Way
will connect with the Country Club Dr near the El Dorado County Park and Ride, currently under construction.
I feel the improvements of Bass Lake Road, near the overcrossing at high way 50 will help with the Circulation plan.
Thank you
Jan Taylor

From: John Albano <jtalbano@yahoo.com>
Sent: Tuesday, August 15, 2023 1:23 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village Project NOP Comment

You don't often get email from jtalbano@yahoo.com. Learn why this is important

I support the Town & Country Village Project because it will benefit the El Dorado Hills community. It's a well-thought, well-planned project that will enhance the beauty of our county, and provide additional services that are needed in the Bass Lake Rd area.

John Albano
6058 Southerness Dr, El Dorado Hills, CA 95762
925-708-3895
jtalbano@yahoo.com

From: John Forst <jackfor1@me.com>
Sent: Wednesday, August 16, 2023 2:55 PM
To: PL-Town and Country Village El Dorado
Cc: Josh Pane
Subject: Town and Country Village Project

[You don't often get email from jackfor1@me.com. Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIFAg&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=c0d3CmUDYH46pFnI0eukgizoy8XR7i1l_8YK320hnX8&m=d_4yVm9IomdnVBr8lzQMxIpz3J5lXMA8u-_ErP5HZI2XAjF9R0wn-dF3hsXmQ2Xk&s=g8ZhQTJoEMQm9H0thCS6CxevNpCdsBfsIaPnh0yeR4M&e=]

My family and I have owned a 10 acre property near the proposed project site for more than 60 years. We always hoped for a culturally and environmentally sensitive project that would make the best possible use of the land. The project information that is currently available addresses the historical, environmental, and cultural issues which are of importance to us. We have experienced decades of proposals and plans that have not come to fruition. Finally someone has come up with a plan that makes sense to us. Please give serious consideration for this project to move forward.
John Forst

From: Karan Marsh <karan.marsh@gmail.com>
Sent: Thursday, August 17, 2023 4:55 PM
To: PL-Town and Country Village El Dorado
Cc: Brother Gary Yowell; Margie; Mickie Smith - Live; Steve Marsh; Brother Tom Yowell
Subject: Opposition against the "Town & Country Village Project NOP Comment

You don't often get email from karan.marsh@gmail.com. Learn why this is important

Opposition against the "Town & Country Village Project NOP Comment

Submitted to:

Corinne Resha, Senior Planner

County of El Dorado Planning and Building Department

2850 Fairlane Court, Building C

Placerville, CA 95667 - via email: TownAndCountryElDorado@edcgov.us

Submitted by:

Residents: Margie Yowell, Mickie Smith, Karan Marsh, Stephen Marsh, Thomas Yowell Jr., Lydia Yowell

This combined letter is to document our opposition of the proposed Town Home Development at **Bass Lake Road (BLR)** and Highway 50 in El Dorado Hills. Following are where we see this proposal conflicts with the existing El Dorado County General Plan:

GOAL 2.1: LAND USE Protection and conservation of existing communities and rural centers…

Policy 2.1.1.3 restricts land use to 20 residential units per acre. Our family lives directly above the proposed site since the late 70s and we've supported the general plan. This proposal, however, **conflicts** with the General plan as it exceeds the number of 20 residential units per acre limit with its multiple hotels, planned senior care units plus employee units etc. The proposal includes transient hotel accommodations which are not considered "residential". The approximately 60.5- acre site proposes at least "two hotels, retail services, two restaurants, a museum, an event center, associated parking, 56 residential cottages for employee housing, and an additional 56 residential cottages that may be rented on a daily or extended stay basis, which may require a conditional use permit. The Program Study Area consists of the central and easternmost 30.2 acres of the project site, and may include further development in the future such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the proposed zoning districts."

Policy 2.1.1.7 requires…as adequate roadways, utilities, and other public service infrastructure become available and wildfire hazards are mitigated as required by an approved Fire Safe Plan.

1. Our family is concerned that the BLR as it is today, is not adequate, should an emergency require evacuation from the proposed site. We anticipate increased bottlenecks at Highway 50 exit and on-ramps with such a proposal which will impact our EDH neighbors negatively.

2. BLR is in the Medium Fire Hazard Severity Zone based on the CALFIRE maps. CALFIRE is in the middle of updating the zones. Should a proposal be approved and if CalFire's risk changes, impacts would likely be felt with canceled fire insurance policies, and or increased premiums.

3. The Bass Lake fire station and ambulances are not equipped to adequately respond to a major fire incident in such proposed facilities. What fees from the applicant are to be provided for emergency services training to respond to the buildings and large gatherings once needed?

4. We expect an increase of calls per the elder housing and hotel center hosting large transient groups.

5. How would a disaster at the facility impact its rural neighbors? There are no safeguards within the proposal to safeguard its residential rural and suburban neighbors from potential disasters. Increased DUIs due to increased events from zero to however many they expect to host. If 1 event hosted per week, potentially 52 DUI increase at minimum.

6. The proposal includes solar power; it is not evident PGE has permitted, approved or confirmed their ability to absorb that generation of power?

7. The proposal recommends the use of a temporary in-ground septic system for their 150+ room transient facilities? We do not recall seeing such a "commercial" provision in the General Plan.

8. The El Dorado County staff is not sufficiently staffed to accommodate the increased workload of inspections and reviews of elder care, community housing and hotels. We work with EDC and understand they are understaffed without this proposal being approved.

9. Our EDH neighbors already complain, via NextDoor application, about the frequent power outages. Adding such a facility would likely increase the power drain, potentially increasing outages.

10. The Proposal will likely increase traffic volume, speed and road rage incidents. We have seen two deaths since the recent residential developments started, one at Hollow Oak and the other at the Highway 50/Bass Lake exit. About six years ago, the DOT increased the BLR speed limit from 40 mph to 50 mph "because that's how fast our new aggressive drivers drive." DOT has not repaired the pothole at Hollow Oak/BLR. It is nearly impossible for us or our neighbors to exit or enter safely at Hollow Oak/BLR. Aggressive drivers do not slow down for drivers make a right onto Hollow Oak, instead they pass left across the middle line into oncoming traffic.

GOAL 2.3: NATURAL LANDSCAPE FEATURES Maintain the characteristic natural landscape features unique to each area of the County.

11. The proposal's submitter has a current business located in downtown Sacramento and this design promotes "a downtown event center" characteristic, not a rural view. Such a program is neither rural nor suburb. Keep this facility away from the small Bass Lake Road off-ramp. A better site is just west of the proposed location and would be a nice community blend and will provide business competition within the Town and County shopping area.

GOAL 2.4: EXISTING COMMUNITY IDENTITY Maintain and enhance the character of existing rural and urban communities, emphasizing both the natural setting and built design elements which contribute to the quality of life, economic health, and community pride of County residents.

12. We see the Proposal going against keeping rural as rural. And against keeping suburbs as suburbs as established by this General Plan goal.

13. Residents have moved to this rural suburb for its peace and quiet, as we did back in the 70's. Permitting such an event center with multiple hotels defeats the rural community identity.

14. Expected increase of noise from hosted events. If we can hear football games from Bidwell, imagine noise from this close proximity. Such an event center will conflict with neighbors' ability to enjoy peace and quiet weekends. Sound travels in this area.

15. We, and our neighbors will see an increase in light, dust and noise pollution and operation of night events.

16. How long is construction planned? How many days per week, hours? Dust suppression?

So many unanswered questions from this proposal. Many thanks for your consideration and review of our comments against this proposal.

Karan & Steve Marsh
(916) 752-7735 (PST)

From: Kathleen Jermstad <kathleenjermstad@gmail.com>
Sent: Thursday, August 17, 2023 2:48 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village NOP Public Comment
Attachments: T&CV JermstadComment.pdf

> You don't often get email from kathleenjermstad@gmail.com. Learn why this is important

Greetings. Thank you for the opportunity to comment (attached) on the NOP for the Town and Country Village project. If my comments seem obtuse, it is because I tend to look at the larger landscape and how land use affects all species. I truly believe people love nature and wildlife, but do not understand the ramifications that our infrastructure can have if we are not mindful of wildlife's survival requirements.

Best Regards,

Kathleen Jermstad
Resident of El Dorado County

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~



Kathleen Jermstad
Biologist/Geneticist
Phone: (530) 957-7337
www.naturalbornferret.com
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

PUBLIC COMMENT REGARDING THE PROPOSED TOWN AND COUNTRY VILLAGE PROJECT

August 16, 2023

Potential for barrier mitigation near the Town and Country Village project:

- Although the Town and Country Village project area is not near or in an IBC, the potential for wildlife to travel within and south of the general area of Town and Country Village project is high. There is evidence that the Bass Lake overcrossing (OC) accommodates wildlife movement between the Town and Country Village Project area to Marble Valley (Fig. 1). The species that were detected within the OC are nocturnal and keep to the natural substrate on the abutment, thus posing minimal risk to themselves and to motorists. Game trails are clearly noted on the southeast side and within the OC. According to EDC's CIP, more improvements are planned for the Bass Lake Road area. Hopefully, improvements will be designed to somehow enhance wildlife movement through the OC, not impede it. It is preferable that wildlife go under the highway not over it, avoiding wildlife-vehicle collisions. Caltrans is currently determining locations along Highway 50 that are best suited for installing WUCs. There are Federal and State funding opportunities for these enhancements (see links).

- A wildlife undercrossing (WUC) should have been installed when the Silva Valley Parkway Interchange (IC) was constructed in 2015. The existing culvert could have been retrofitted for that purpose which would have connected the riparian corridor to the north of Hwy 50 (running through Serrano) to the riparian corridor to the south of Hwy 50, just east of White Rock Rd. This drainage leads to Screech Owl and Carson Creek which converges with Deer Creek northeast of Sloughhouse which converges with the Consumnes River north of the Consumnes River Preserve (Fig. 2). The westbound offramp to Silva Valley Parkway is a bridge over this riparian habitat west of the Korean Presbyterian Church. According to the EDC CIP, more improvements are pending at this location. Perhaps a wildlife undercrossing can be included at that time since these projects will further impact the riparian corridor mentioned above.

- The topography of Hwy 50 from Silva Valley Parkway east past the Town and Country Village Project area is not conducive to installing a box culvert WUC because the westbound and eastbound lanes are at two levels and the land on the North is above-grade. There is one location west of the Town and Country Village Project, near the Faith Episcopal Church (PM 4.114), where a drainage crosses under the highway creating below-grade topography that could accommodate a box culvert WUC (Fig. 3

- The intermittent drainage within the Town and Country Village Project North of Country Club Drive, is an optimal site for a nature/bike trail/open space for people and wildlife. The drainage is somewhat connected east-west to the riparian corridor that runs southwest through Serrano. However, Country Club Drive presents a barrier for safe crossing of both humans and wildlife. Low speed limits and trail undercrossings or bridges would be best for safety and enjoyment.

Major residential and commercial infrastructure is slated for western El Dorado County. Unless steps are taken now to preserve open space and riparian habitats, wildlife in this Foothill area will be limited and diminished. Residential wildlife will have barriers to dispersal and kinship mating will increase.

Summary

1) Wildlife passage across man-made barriers is important at the State and Federal level. Western EDC, with its increased growth of walled and gated communities, has an opportunity to plan for wildlife welfare.

2) The riparian corridor from Bass Lake to the Consumnes River needs to be considered whenever any type of infrastructure is planned. The interchange at Silva Valley Parkway should be mitigated.

3) Highway 50 from PM 2.14 to PM 4.01 *(the Buffalo Grade)* does not present opportunities for wildlife undercrossings. (Wildlife over crossings are most costly.)

4) Open space and setbacks for wildlife movement, even if only residential wildlife, should be maintained during the design phase of a project if quality of life is important to developers and the County. The Open Space and trails designed into the Town and Country Village project seem rightly headed in that direction.

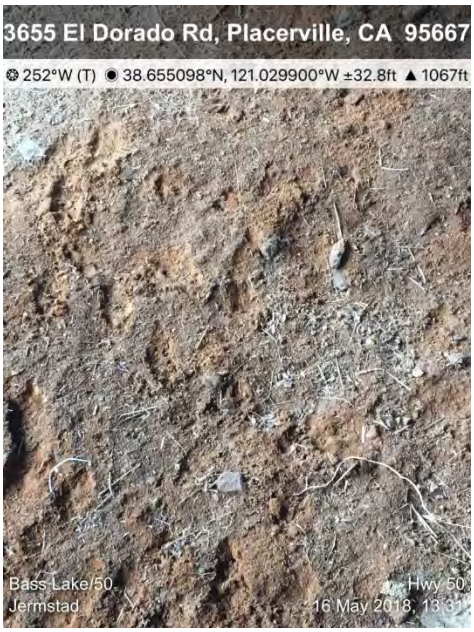
Best,

Kathleen Jermstad
Camino, CA
(530) 957-7337

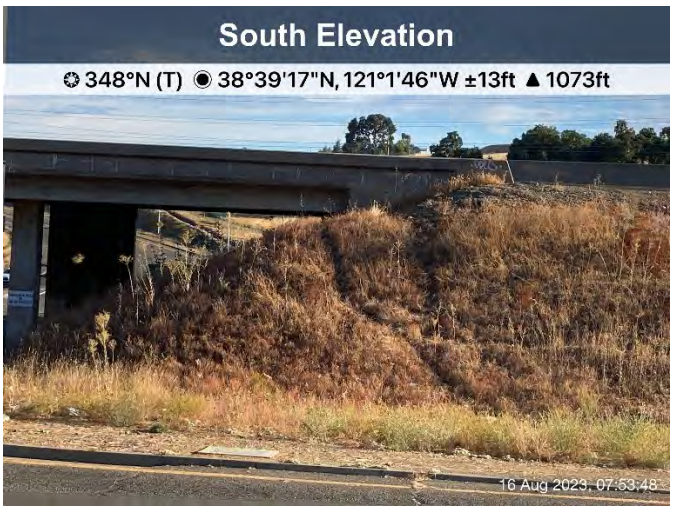
Federal Wildlife Crossing Pilot Program Grants
California Grant Portal
CA Wildlife Connectivity 2022 (EDC, pp 12 and 21)

Figure 1. Bass Lake Rd Overcrossing (photo documented in 2018 and 2023)







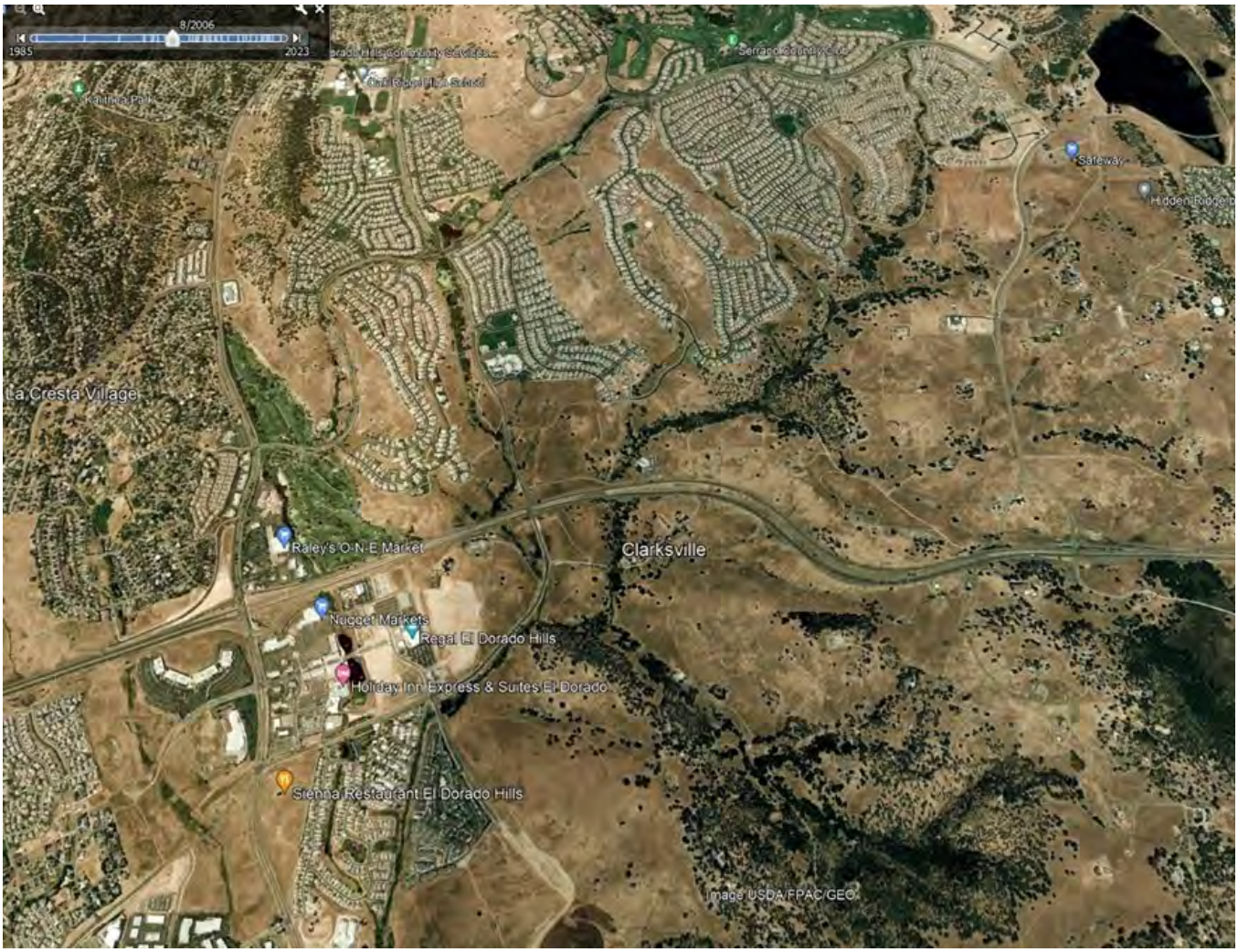






Bobcat

Figure 2. Riparian Corridor from Bass Lake under Hwy 50, through Clarksville and the Business Park



(A satellite map from 2006 depicts the riparian corridor more clearly than a current map)

From: Kathy Hatten <khatten@visitingangels.com>
Sent: Thursday, August 17, 2023 6:57 AM
To: PL-Town and Country Village El Dorado
Subject: Comments about new Town and Country project

You don't often get email from khatten@visitingangels.com. Learn why this is important

My name is Kathy Hatten and I live in El Dorado Hills and attend Holy Trinity Church. I was interested in learning more about the Town and Country development because it will be located right down the hill from my church. After reading about the project, I was really impressed with the considerate planning and vision that went into this project. I have always felt El Dorado Hills needed another hotel and an option for events (weddings, family reunions, meeting space for large groups, restaurants that can accommodate large groups, company meetings, etc.). Most of the time we have to use facilities in Folsom and out of the area. The architectural design seems really exciting that they are modeling it after the historic Ahwahnee Hotel and they will have a museum featuring the local history of the region. I also like that they plan to use the land space wisely and still have open land with bike and walking trails.

One thing I learned that not many resort style complexes like this offer is- housing for their staff. So many employees have to drive several hours to come to work because they cannot afford to live in affluent communities where these developments are located. This tells me that this developer truly cares and wants to support their employees, something you don't hear of very often.

I am very happy that an exceptional and well planned project like the Town and Country project will be using that space. It has a lot to offer the county and will be a nice neighbor to our church. I am sure once it's complete, the people of El Dorado County (and our neighboring city of Folsom) will thoroughly enjoy it.

Thanks for allowing me to submit my comments.

Kathy Hatten

Kathy Hatten

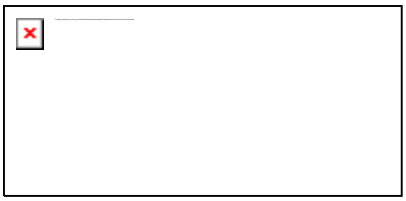
Retention Manager

3350 Country Club Drive, #101, Cameron Park, CA 95682

4465 Granite Dr., Rocklin, CA 95677

530-677-4400 / 916-424-4400

www.VisitingAngels.com/GoldCountry





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From: K and S Tank <skcaltank@yahoo.com>
Sent: Tuesday, August 15, 2023 4:43 PM
To: PL-Town and Country Village El Dorado
Subject: Bass Lake Proposal

You don't often get email from skcaltank@yahoo.com. Learn why this is important

Dear board,

I am vehemently against the proposed building of two five-story hotels, two restaurants, an event center, and more at the corner of Bass Lake and Country Club. I live off Bass Lake Road, and I drive the road daily to go teach at my school.

The proposed development does not go with the rural layout of the land. It will be an eyesore to our community and create unwanted gridlock and congestion. Bass Lake Road cannot handle the added cars and traffic. We are a rural community! I am shocked the proposal has gotten as far as it has.

I don't think any of you live in the neighborhood, but I asking to vote in our shoes.

We live here and do not want this development. Please do the right thing and vote against.

Thank you,

Kim Tank

Sent from Yahoo Mail on Android

From: Laureen Shuttleworth <lshuttleworth@att.net>
Sent: Tuesday, August 15, 2023 6:22 PM
To: BOS-District I; BOS-District II; BOS-District III; BOS-District IV; BOS-District V; PL-Town and Country Village El Dorado; Karen L. Garner; Jon X. Vegna; Kris X. Payne; Lexi Boeger; Andy Nevis; Daniel Harkin
Cc: Forrest Shuttleworth
Subject: We are 100% opposed to this project!

You don't often get email from lshuttleworth@att.net. Learn why this is important

We are 100% opposed to this project!



60-acre Bass Lake Hills project going into EIR phase
mtdemocrat.com

This project should absolutely NOT go forward due to the overwhelming crowding it will cause in El Dorado Hills, the loss of precious wildlife, resources and open natural land!!!

Laureen Shuttleworth

From: chamber@eldoradocounty.org
Sent: Thursday, August 17, 2023 8:32 AM
To: PL-Town and Country Village El Dorado
Subject: proposed project

You don't often get email from chamber@eldoradocounty.org. Learn why this is important

Conceptually this is a very interesting project and we look forward to learning more as the proposed project moves forward.

Laurel Brent-Bumb A.C.E.
Chief Executive Officer
530 621 5885

From: Laurie Heyman <lheyman@snowlinehospice.org>
Sent: Thursday, August 17, 2023 10:52 AM
To: PL-Town and Country Village El Dorado
Subject: Support for the proposed Town & Country Village El Dorado development

You don't often get email from lheyman@snowlinehospice.org. Learn why this is important

Dear Ms. Resha,

I am writing to express my enthusiastic support for the proposed Town & Country Village El Dorado development. As a 17-year El Dorado County resident and active community member, this project holds immense promise and potential for El Dorado County.

The vision of creating a vibrant and European-styled mixed-use space encompassing shops, housing, a hotel, and businesses is inspiring. This development has the potential to enhance our area's economic vitality and provide numerous benefits to our residents.

Adding new shops, businesses, and a hotel will undoubtedly attract more visitors, creating a bustling hub of activity. This influx of tourism can lead to increased revenue for local businesses, additional job opportunities, and a boost to our local economy.

A well-designed mixed-use development encourages community members to unite, interact, and engage. It can be a beautiful focal point for local events, cultural activities, and gatherings, fostering a stronger sense of community.

Including housing within the development can address our community's housing needs. They are providing diverse housing options, including affordable units for those employed with the hotel, attracting a more comprehensive range of residents and contributing to a more inclusive neighborhood.

I encourage you to consider the broader positive impact of the Town & Country Village El Dorado development on El Dorado County's future. The thoughtful integration of various amenities and businesses with distinctive architecture will create a unique destination that appeals to residents and visitors alike.

Thank you for your time and consideration. I look forward to witnessing the positive transformation the Town & Country Village El Dorado development can bring to our community.

Sincerely,

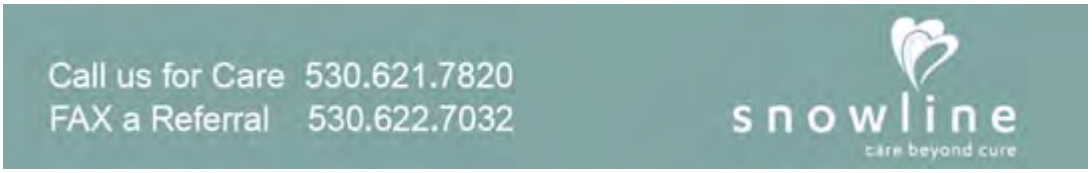
Laurie Heyman
Philanthropy Development Director Snowline Hospice
530.306.2314

Laurie F. Heyman

Philanthropy Development Director

Mobile 530.306.2314 Call us for Care 530.621.7820

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To give a gift, visit www.snowlinehospice.org

From: lianna estes <ldyluk11@yahoo.com>
Sent: Thursday, August 17, 2023 2:44 PM
To: PL-Town and Country Village El Dorado
Subject: Bass Lake 60 acre project

You don't often get email from ldyluk11@yahoo.com. Learn why this is important

Hello ,
As a resident of El Dorado Hills since 2008 I have seen the development of properties along Bass Lake Road . I live off Bass Lake Road so I see the impact it has made . Increase of traffic , retail crime ,& crimes in general . I moved here to get away from the South Bay . Now I see my beautiful town become that concrete place of greed . There are a lot of things that will need to be done for this to be a safe place for new , old residents & visitors . The increase of homes and retail business have increased the number of crimes committed especially that close to a exit of the highways . There has been a increase of retail , home and car theft in crimes close to high way 50 . Is there a increase of the counties budget that will be there to allow more Law Enforcement , Fire department & EMT's to help with events at this new development as events will take place and new residents move in ?
What about the disturbance of the wild life ? They were here before any of us were . I am grateful that I have the greenbelt behind my home . I can see the deers roaming and living as they shall be. New development will take way a lot from our community. People move here to El Dorado hills to enjoy the beautiful undeveloped land and the wildlife that lives amount us . More people moving here will make an impact of their lives as well as those who spread live here .
Also
What about all the issues with water & electricity needed to run theses homes , restaurants & businesses . Do we actually have enough without restrictions already and power outages ? The state alone has issues to supply us with those things .
I hope that some of theses concerns have been thought about before those contracts are signed & checks are cashed . A lot has to be thought of to protect the CURRENT residents that live here NOW before more concrete is poured . People are moving out for this reason . Please keep EDH the way it is . It's bad enough trying to get parking at the new Safeway on Bass Lake .

Lianna Estes

From: Luke Stratigakes CA-Carmichael <luke.stratigakes@commonspirit.org>
Sent: Tuesday, August 8, 2023 7:26 AM
To: PL-Town and Country Village El Dorado
Subject: Town & country Village Project NOP Comment

You don't often get email from luke.stratigakes@commonspirit.org. Learn why this is important

Corrine or To whomever it may concern,

My wife and I chose to live in Cameron Park, Bar J ranch, not only because of close access to schools, but to the still "rural" feel that it held.

The housing developments, new business park, have all but taken that feel away. The new stop light already slows our work commutes, now with the increased construction people will be forced to go to cambridge which will slow the commute even more.

You want to talk about "environmental impact" this area does not need another cheaply built center and more tract homes to attract tourists from the bay area just for a few extra tax dollars.

Please send me a list of people who voted to approve this project.

If there is a vote, please consider this my vote as no.

--
Luke Stratigakes
Safe Patient Handling and Mobility Coordinator, Mercy San Juan Hospital
Physical Therapist
luke.stratigakes@commonspirit.org
Caution: This email is both proprietary and confidential, and not intended for transmission to (or receipt by) any unauthorized person(s). If you believe that you have received this email in error, do not read any attachments. Instead, kindly reply to the sender stating that you have received the message in error. Then destroy it and any attachments. Thank you.

From: Lynda D Seymour <lyndathenotary@gmail.com>
Sent: Thursday, August 17, 2023 7:24 AM
To: PL-Town and Country Village El Dorado
Subject: Town and Country El Dorado Project

You don't often get email from lyndathenotary@gmail.com. Learn why this is important

To Whom It May Concern,

I would like it noted that my family and I fully support the TnC Project in Cameron Park.

My family has lived in the area for 34 years. I am also a small business owner, so we most certainly have a vested interest in the area.

Mr. Mohanna and his development team have proven beyond a doubt their love and appreciation for this area. Their purposeful actions in the design along with their genuine concern and compassion regarding the impact this will have on the residence has true virtue.

We are very fortunate to have them as part of the strategic growth of this community.

Best regards,

Lynda D Seymour
Express Admin, LLC

Thank you for your business!

From: Lynda Seymour <mrsseymour@live.com>
Sent: Thursday, August 17, 2023 8:38 AM
To: PL-Town and Country Village El Dorado
Subject: Environmental Impact for Town and Country El Dorado

You don't often get email from mrsseymour@live.com. Learn why this is important

To Whom It May Concern,

I am a resident of Cameron Park and have recently been informed about the Town and Country El Dorado Development.

In looking at the planned project, I noticed that the bridge is part of the second phase. I realize this phase could take quite a bit of time to happen and believe the bridge should be part of the first phase.

The danger posed for bikes and pedestrians crossing Bass Lake Road is high. The traffic is concentrated, the road is curvy, and the area is congested. The bridge would serve the community well, especially in providing safety for the kids.

Please consider studying this as part of the first phase.

Thanks,
Lynda D Seymour

From: Meera Ram <meeraram@yahoo.com>
Sent: Wednesday, August 9, 2023 12:57 PM
To: PL-Town and Country Village El Dorado
Subject: Town and country village project

You don't often get email from meeraram@yahoo.com. Learn why this is important

Hello
I live at 6970 benevento drive, el dorado hills Lennar community. I could not attend your both meetings.
I saw your project and just wanted to find out if it will affect my views or if I will be affected in any way
Thanks
Meera Ramakrishnan
9162884518

Sent from Yahoo Mail for iPhone

From: MJ Ultra <mjleflar@gmail.com>
Sent: Thursday, August 17, 2023 4:18 PM
To: PL-Town and Country Village El Dorado
Subject: No to Town & Country Village El Dorado

You don't often get email from mjleflar@gmail.com. Learn why this is important

Hello,

I am writing in strong opposition to the Town & Country Village project for which the applicant is seeking approval.

This project is a monstrosity that will negatively impact all residents in the surrounding area while providing no measurable benefits to anyone other than the applicant and those seeking to develop the surrounding land.

There are numerous reasons why this project does not belong at the location at which they are attempting to build:

- Horrific traffic - Traffic will increase to unacceptable levels and create nightmare gridlock for local residents. What is the number of vehicles anticipated on thoroughfares in the immediate area?
- Traffic flow and circulation on Highway 50, Bass Lake Road and especially Country Club Drive will become radically more congested to the point where it will resemble nearby intersections with horrific traffic problems such as Highway 50 and Sunrise Avenue. Would *you* want that kind of misery in *your* neighborhood?
- Environment Impact - A separate Environmental IMpact report must be done for the phase of work north of Country Club Drive. I understand that the applicant is going to attempt to sneak that phase in with the existing Environmental Impact report. This should not be allowed because the use case and type of structures planned for that area are materially different that what is included currently.
- There is no need for workforce housing for a facility that is open very limited hours. Why is this part of the plan?
- Residential Cottages - Why are 56 "cottages" included in this project? This seems to be a ploy to integrate transients into the area which will be destructive to the fabric of the community given the close proximity to schools and churches. Also, there are no services nearby that are frequently required by transient populations making this area a very poor fit for that kind of population.
- Why is the conditional use permit allowing this property in a "non corming way". There should be more structure around this to ensure that the surrounding community is not adversely affected.

I have many other concerns around water use, dust pollution during building, the fact that this project does not fit seemlessly into the area, etc. but above are my major concerns.

Please feel free to let me know any questions you may have. I can be reached at 650-270-7521 or mjleflar@gmail.com.

Thank you for listening.

Mike Leflar
Castana Drive
Cameron Park, CA

From: Peter Evenhuis <staywme@gmail.com>
Sent: Tuesday, August 15, 2023 11:40 AM
To: PL-Town and Country Village El Dorado
Subject: In favor

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While I have some minor operational questions about this project, in principle I am behind the developed as visioned by Mr Mohanna.
I suggest an early approval of his plans.
--

Peter Evenhuis

1167 Villagio Drive 3314 Treehaven Drive 3 Red Bishop

El Dorado Hills, CA 95762 Kudu Apartments and Rentals Hemel en Aarde Estate

916-693-6863 (Home) South Lake Tahoe, CA 96150 Mail Collection 129

650-255-6063 (Cell) 650-255-6063 (Cell) Hermanus, Cape 7200

South Africa

(27) 079-326-0715 (Cell)

From:	Corinne E. Resha
To:	Nick Pappani; Cindy Gnos
Cc:	Bret E. Sampson
Subject:	Fw: Town and Country Village Project NOP Comment
Date:	Thursday, July 27, 2023 3:39:35 PM

Corinne Resha
Senior Planner

County of El Dorado
Planning and Building Department
2850 Fairlane Court, Bldg C
Placerville, CA 95667
Main Line 530.621.5355
Direct 530.621.5305
corinne.resha@edcgov.us

From: Phil Alexander <philbeetle@yahoo.com>
Sent: Monday, July 24, 2023 9:22 AM
To: PL-Town and Country Village El Dorado <TownandCountryElDorado@edcgov.us>
Cc: Phil Alexander <philbeetle@yahoo.com>
Subject: Town and Country Village Project NOP Comment

Attn: Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667

Drear Planning Department:

As an El Dorado Hills (Serrano) resident, I appreciate the letter dated July 17 just received. I did not immediately see several issues in the EIR Environmental Scope section and wanted to raise them formally. If these issues are in the scope of review I would like to learn about it. I also plan to attend the August 8 meeting at EDH Fire Dept. My questions/areas are:

- US 50 access and egress onto Bass Lake Road
- Impact of hundreds of transient hotel and residential people
- Bass Lake Road Plan (one lane each way)
- Peak Traffic Study (Bass Lake Road leads to Green Valley, Folsom, I80)
- Bike/Pedestrian Access
- Impact of Park And Ride currently under construction
- Heavy equipment delays during construction
- Anticipated EDH resident tax impact

Many thanks in advance for your attention.

Phil Alexander
EDH Village J6
(650) 996-3898 mobile
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From: R W <rwahl23@yahoo.com>
Sent: Thursday, August 17, 2023 2:41 PM
To: PL-Town and Country Village El Dorado
Subject: Opposing Town and Country Development

[You don't often get email from rwahl23@yahoo.com. Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=c0d3CmUDYH46pFnI0eukgizoy8XR7i1l_8YK320hnX8&m=eeTw90ysWh4AlPcRmzHwV8ekwlpnNYLmaOktQx-8aVS_SM12xtE2141OerjWehgv&s=YiQ2aK1-Pk_vbfraicp9EzkWfDve2jPDnf6j7vilTmo&e=]

To Whom It May Concern,

I am writing to strongly oppose the town and country development located on Bass Lake Road. The best lake hills are a beautiful natural setting that attract many people to live in this community. These residents pay taxes, work for your local departments and coach your children's sports teams. These people call this area home.

Allowing a 300 room hotel with over 100 cottages to be developed in this area is not only an eyesore, but also a pollutant to noise and light in the area. The owners of this land recently put on an event at their other event, center across from Bass Lake. The noise pollution from that event could be heard a miles away in the neighboring houses and communities.

Don't sell out to another developer, even though they've owned the land for a long time, they've known what the end result was going to be by purchasing up these plots of land over the years. Keep El Dorado to the small semi rural community that everyone loves.

Thank you,

R. Wahl

From:	Corinne E. Resha
To:	Nick Pappani; Cindy Gnos
Cc:	Bret E. Sampson
Subject:	Fw: Town & Country Village Project NOP Comment
Date:	Thursday, July 27, 2023 3:43:04 PM

Corinne Resha
Senior Planner

County of El Dorado
Planning and Building Department
2850 Fairlane Court, Bldg C
Placerville, CA 95667
Main Line 530.621.5355
Direct 530.621.5305
corinne.resha@edcgov.us

From: Rex Price <rexprice@yahoo.com>
Sent: Wednesday, July 26, 2023 5:25 PM
To: PL-Town and Country Village El Dorado <TownandCountryElDorado@edcgov.us>
Subject: Town & Country Village Project NOP Comment

Is the project at Bass Lake Road going to be a casino? That seems like a huge hotel for my neighborhood and the 56 on site units for staff to live in seems unusual for a hotel. I am really concerned about this project.

Thank you,
Rex Price
4672 Castana Dr
Cameron Park, CA 95682
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From: Richard Holmes <rholmes001@aol.com>
Sent: Monday, August 14, 2023 2:06 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village Project NOP Comment

> You don't often get email from rholmes001@aol.com. Learn why this is important

Richard Holmes
3357 Chasen Drive
Cameron Park, CA 95682
rholmes001 aol.com

Dear Ms. Resha,

I wish to provide comment that I ask be incorporated into the environmental impact report for the proposed Town and Country Village project at the Bass Lake Road intersection with Highway 50.

This project is objectionable for the following reasons:
1. It is in a rural area, comprising mainly farmland. Multiple 5-story hotels in the middle of farmland??
2. It is not consistent with the overall character of El Dorado County, east of Silva Valley Road.
3. The current zoning does not support it.
4. El Dorado Hills and Folsom already have a strongly urban appearance. Do we want El Dorado county to look like just another urban cesspool? The rural character of the county is why people choose to come and/or visit in the first place.
5. Traffic is already quite bad on highway 50 during rush hour at that location.
6. In case of fire in the Bass Lake Road area, this development could be a hindrance to safe evacuation.

I would be grateful if you would confirm receipt of this comment, which is being sent on August 14, 2023.

Sincerely,
Richard B. Holmes
Cameron Park resident

From: JJ Loder <jj.l@descorbuilders.com>
Sent: Thursday, August 17, 2023 2:54 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village El Dorado Project - EIR Scope Comments & Considerations

You don't often get email from jj.l@descorbuilders.com. Learn why this is important

Corinne,

As a resident of El Dorado County for the past 6 years, I would like to submit the following mitigations measures and alternatives to be considered to be added to the inclusion of the EIR report as a part of the Town & Country Village El Dorado Project:

-To mitigate the waste of potable water by the inclusion of an Alternate Water System (gray water system) study. The City of Sacramento's Ordinance Number 2022-0031 is a fantastic start, however, the system should not just be the infrastructure for future use, but the full adoption of an AWS sized for both the Project Development Area and the Program Study Area.

-The inclusion of Stand by Power by the use of Diesel Fuel to be included added to the Air Quality Report. This alternate means of temporary power study is typically sought out later in the design as an amendment, however, it eases the process if it is considered within the EIR. Newer hotels generally have standby power as an amenity for their guest.

-The hotel unit count could be too small, and a recommended study of the surrounding existing hotels, hotels under construction, and proposed, should be taken to provide the right sizing for allowable hotel room count. I am chiefly aware of the unit count within a 20-mile radius and a study should be completed to seek alternative sizing.

-Wild Fire Mitigation as it relates to allowable building materials, site fire suppression, and landscape maintenance standards as the proposed location is with a Moderate fire hazard area and borders a High fire hazard area according to Cal Fire.

-Update of Figure 3 to a line with the Cottages' location does not appear to allow tuck-under garages. This should be updated and included within the Project Development Area and the Program Study Area as this may affect the minimum parking stall count as well as the traffic study if it is not incorporated. This is to mitigate non-event street parking, which will likely meet heavy opposition by residents and bicycle riders.

-Figure 3 identifies two (2) Clubhouses and Pools near the cottages. These structures need to be identified and held accountable by the same standards as depicted in the Project Description if they are to be included.

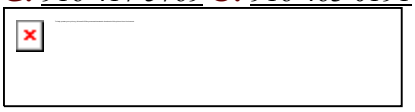
-The Aesthetic scope for both the Project Development Area and the Program Study Area has been proposed to have a "striking resemblance to The Ahwahnee Hotel at Yosemite" by supported renderings not found in the supporting Figures 1-6 within the Draft EIR. As this is a defining feature of the project, this needs to be a part of the environmental study for the influence of all structures new, proposed, and future as well as the landscape. A study needs to be conducted to see if this architectural style is acceptable to residences or if alternative designs should be considered. The findings will need to be incorporated within the Aesthetic scope.

-The list of all allowable Use Types Program Study Area has "other allowable by the Zoning district." listed. This list should be well-defined by the EIR.

Thank you for providing an avenue for scope comments and considerations. If clarification is required, please let me know.

Best Regards,

Ron "JJ" Loder
jj.l@descorbuilders.com
C: 916 417 5769 **O:** 916 463 0191



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From: Sabrene Neider <hughessabrene@yahoo.com>
Sent: Sunday, August 13, 2023 11:32 AM
To: PL-Town and Country Village El Dorado
Subject: Bass Lake Project

[You don't often get email from hughessabrene@yahoo.com. Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=c0d3CmUDYH46pFnI0eukgizoy8XR7i1l_8YK320hnX8&m=d_4yVm9IomdnVBr8lzQMxIpz3J5lXMA8u-_ErP5HZI2XAjF9R0wn-dF3hsXmQ2Xk&s=g8ZhQTJoEMQm9H0thCS6CxevNpCdsBfsIaPnh0yeR4M&e=]

My name is Sabrene Neider. I have been a resident off of bass lake since 2008. We've seen a lot of building recently and have experienced a massive rise in people moving to our area. We do not have the resources to house anymore building. Where is the water and electricity coming from? California can barely keep on what they already have. We are put on water restrictions every year, I don't see it helping by adding more load to our already strained water resources. This affects so many peoples daily lives and I will never be on board for this amount of building. It is stealing the beauty in this area, which is why people live here. You will lose residents. Are there plans to build another school as well? With families mostly coming, our local schools already have packed classrooms and not enough employees. I know first hand as I worked at a school in the area, they've already had a massive influx of new students. Maybe rather than focus on profit, you could think about the impact on the locals and how it affects our day to day life. I for one will be moving away from this area as it continues to build with no regard for the people who live here. Do better. Thank you for taking the time to read this email.

From: Salina (Western Management) <salina@westernmanagementcompany.com>
Sent: Thursday, August 10, 2023 9:13 AM
To: PL-Town and Country Village El Dorado
Subject: Town and Country Village El Dorado

[You don't often get email from salina@westernmanagementcompany.com. Learn why this is important at https://urldefense.proofpoint.com/v2/url?u=https-3A__aka.ms_LearnAboutSenderIdentification&d=DwIGaQ&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_CdpgnVfiiMM&r=c0d3CmUDYH46pFnI0eukgizoy8XR7i1l_8YK320hnX8&m=d_4yVm9IomdnVBr8lzQMxIpz3J5lXMA8u-_ErP5HZI2XAjF9R0wn-dF3hsXmQ2Xk&s=g8ZhQTJoEMQm9H0thCS6CxevNpCdsBfsIaPnh0yeR4M&e=]

Hello,

We understand that Corinne Resha in no longer with the County. We want to make sure that this is the correct email to send comments on the Town and Country Village El Dorado and also please let us know when the deadline for comments is.

Thank you,
Salina
Western Management

From: Salina (Western Management) <salina@westernmanagementcompany.com>
Sent: Friday, August 11, 2023 9:23 AM
To: PL-Town and Country Village El Dorado
Subject: Fwd: Town and Country Village El Dorado

> You don't often get email from salina@westernmanagementcompany.com. Learn why this is important

We are following up on the message we sent yesterday. Please let us know if this is the correct email for comments on the Town & Country El Dorado development.

Thank you!

-------- Forwarded Message --------
Subject: Town and Country Village El Dorado
Date: Thu, 10 Aug 2023 09:12:38 -0700
From: Salina (Western Management) <salina@westernmanagementcompany.com>
To: TownAndCountryElDorado@edcgov.us

Hello,

We understand that Corinne Resha in no longer with the County. We want to make sure that this is the correct email to send comments on the Town and Country Village El Dorado and also please let us know when the deadline for comments is.

Thank you,
Salina
Western Management

From: Sanford Ogden III <sanfordogden3@gmail.com>
Sent: Sunday, August 13, 2023 1:06 AM
To: PL-Town and Country Village El Dorado
Subject: NO To Town and Country Development

You don't often get email from sanfordogden3@gmail.com. Learn why this is important

The proposed Town and Country development does not fill any needs the region has, it does not fit in with our way of life, and it would negatively impact our valuable water, open space and roadways. Please say NO to any development of that property.

As 20+ year residents of EDH and lifetime Sacto area residents, we count on you to uphold our way of life. Please.

From: Scot Bernstein <swampadero@sbernsteinlaw.com>
Sent: Thursday, August 17, 2023 4:56 PM
To: PL-Town and Country Village El Dorado
Cc: swampadero@sbernsteinlaw.com
Subject: Town & Country Village Project NOP Comment

You don't often get email from swampadero@sbernsteinlaw.com. Learn why this is important

LAW OFFICES OF
SCOT D. BERNSTEIN
A PROFESSIONAL CORPORATION
101 PARKSHORE DRIVE
SUITE 100
FOLSOM, CALIFORNIA 95630

TELEPHONE (916) 447-0100
FACSIMILE (916) 933-5533

www.sbernsteinlaw.com

August 17, 2023

Bret Sampson
Planning Manager
County of El Dorado
Planning and Building Department
Planning Division
2850 Fairlane Court
Placerville, California 95667

Re: Town & Country Village El Dorado Project Applications
General Plan Amendment (GPA22-0003)
Specific Plan Revision (SP-R21-0002)
Planned Development Permit (PD21-0005)
Rezone (Z21-0013)
Tentative Map (TM22-0005)
Conditional Use Permit (CUP23-0008)

Dear Mr. Sampson:

My residence address is 3322 Diablo Trail, El Dorado Hills, California. I am writing to give you my thoughts as a follow-up to the recent public scoping meeting. I believe that the following issues regarding the proposed project should be included in the draft and final environmental impact report ("EIR").

Among or in addition to the subjects that already will be addressed in the EIR, the environmental factors discussed below would be potentially affected by the proposed project and should be included and addressed in the EIR.

Overview: This large project represents a dramatic change from the low-density residential use that was anticipated and relied upon by people who built on and/or bought residences on inherently quiet, natural, ten-acre parcels.

Aesthetics The area in question has been a semi-rural setting for many years. People have bought properties and built homes based on and in reliance on zoning that would preserve the rural character of the area – the abundant plant and animal life, the relative quiet, the stars shining brightly in a dark night sky.

The EIR should address the impacts that the proposed project will have on all aspects of the rural character of the area, including but not limited to those discussed above. A decision to live out on rural or semi-rural acreage is not one that is taken lightly. Proposed actions that would make major alterations in the rural character that drew people to the area deserve careful study.

Air Quality On a per-acre basis, it seems that a proposed development that includes two sizeable hotels, a museum and a concert venue will generate a lot more motor vehicle traffic than would be generated by a small number of residences. The impacts on air quality that will be brought about by a large increase in vehicle traffic should be included in the study. Other sources of potential air quality impacts, such as large-scale cooking for food service and the use of solvents and other chemicals for cleaning on a commercial scale, should be studied as well.

On-site development of employee housing has been suggested. In theory, that could eliminate at least some driving and might reduce air quality concerns in that limited context. But what assurance is there that those proposed employee residences will be built and maintained as employee residences rather than being developed as additional cottages to be hired out to paying hotel guests? Will the permission to build those cottages be deed restricted so that they cannot be converted into high-end hotel suites or otherwise hired out to paying guests?

Biological Resources The potential impacts of the increased density of development and the increased human and vehicular activity on biological resources should be studied.

Greenhouse Gas Emissions The greenhouse gas emissions that will result from increased motor vehicle traffic – both for travel on the premises and for travel to and from the premises - should be studied as well. This applies not just to hotel uses but to concerts, the proposed museum, and other public events as well.

Hazards & Hazardous Materials Hazards and hazardous materials warrant very careful study. Residents and others familiar with this area will recall the concerns about asbestos along Silva Valley Road. If there is any risk whatsoever that asbestos could be disturbed or released as a result of the development or post-development proposed use of the project, that should be studied in depth.

Hydrology/ water, Water Quality Water is a concern that should be studied. Even if the project looks like it will receive EID water, the report should study what would happen in a drought or other situation in which water was scarce. What would be the proposed development's water source if it could not get EID water? Would it draw water for commercial-scale use from already-existing or potential future wells on the project's property? Would it seek to buy water from owners of neighboring parcels?

And under those circumstances, what would the impact of that commercial-scale increased drawing of water from the aquifer be on other property owners in the area who rely solely on their wells for their water and are drawing from the same aquifer?

With regard to ground-water quality, what will be the consequences of waste handling and disposal by the proposed development when two hotels, restaurants and a concert venue are in full operation?

Noise The potential for increased noise levels should be studied. What sound levels will be generated by the proposed operation and use of the property for two hotels, a museum and a concert venue as compared with the 10-acre residential use contemplated by the current zoning?

Transportation/ Traffic The traffic study should look at what will happen when the full project is built out at the point of completion and should compare that with the traffic levels that would be expected with the current zoning.

Utilities / Service Systems If EID rations water, will the new development rely on its wells to the detriment of other existing properties in the area that are wholly dependent on their wells? Water is a concern that must be studied. Even if the project looks like the development will receive EID water, the report should study what would happen in a drought or other situation in which water was scarce. That should be studied in the context of California's long history of droughts.

What would be the proposed development's water source if it could not get EID water or if its access to EID water were rationed or reduced substantially? Would it draw water for commercial-scale use from already-existing or potential future wells on the project's property? Would it seek to buy water from owners of neighboring parcels? And what would be the impact of that on other water users in the area?

Very truly yours,

Scot Bernstein

SDB:msw

Scot Bernstein
Law Offices of Scot D. Bernstein,
A Professional Corporation
101 Parkshore Drive
Suite 100
Folsom, California 95630

Telephone: 916-447-0100
Fax: 916-933-5533

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From: Stacie Sherman <sas8721@hotmail.com>
Sent: Tuesday, August 15, 2023 4:39 PM
To: PL-Town and Country Village El Dorado
Subject: 60 Bass Lake Hills Project

You don't often get email from sas8721@hotmail.com. Learn why this is important

I saw this article https://www.mtdemocrat.com/news/60-acre-bass-lake-hills-project-going-into-eir-phase/article_fa633792-37ce-11ee-a8ad-c3fa2534bf3b.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share&fbclid=IwAR2TSERkS5w0CkJNtsLwEXpSS4KPx_GoTindDNalid-y8qvDVLeujvXpqOA

About the Bass Lake Hills project that is proposed.

We don't have the water. We already have too much traffic and road congestion.

The only one that want this project are the developers and the public officials that serve the developer and not the residents of the region.

I'm completely against this project.

Sincerely,

Stacie Sherman
Sent from Mail for Windows

TOWN & COUNTRY VILLAGE EL DORADO PROJECT
NOTICE OF PREPARATION (NOP) SCOPING MEETING

COMMENT FORM

To document the author of comments received, please provide the following information. Thank you.

Name: Stanley Price

Address: 3672 Millborae Rd Cameron Park

Organization (if applicable): Utilitarian Cyclists

Please provide us with your written comments on the scope of the EIR by **5:00 PM, August 17, 2023**.

The original road surface of ~~a~~ the Old Lincoln Highway, also referred to as Old Bass Lake Road, and Toys Road, is historic.

A reinactment of the Army Caravan crossing the country with motor vehicles, did not encounter the original cement concrete road surface until they reached this location in El Dorado County, California.

This is historical transportation and circulation, as well as historical value ~~of~~ as the white man traveled into the native lands.

Send comments to:

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
TownAndCountryElDorado@edcgov.us

From: Stanley Price <2stanleyprice@gmail.com>
Sent: Thursday, August 17, 2023 9:54 AM
To: PL-Town and Country Village El Dorado
Subject: Comments on N.O.P. for Town & Country Village El Dorado Project

You don't often get email from 2stanleyprice@gmail.com. Learn why this is important

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667

Consider the great attraction that the original pavement of the historic Lincoln Highway offers as an asset to El Dorado County. Not only is it an active transportation route and a slow street, it is a unique tourist attraction,

In the study, the sewer main line appears to follow the route of the Lincoln Highway (also called Old Bass Lake Road, and Tong Road). I do not believe a sewer line can be installed at that location without destroying the value of the beautiful historic road. The existence of the future road in that location in the existing Bass Lake plan is arbitrary and negligent.
--
Stanley Price
3672 Millbrae Road
Cameron Park, CA 95682

TOWN & COUNTRY VILLAGE EL DORADO PROJECT
NOTICE OF PREPARATION (NOP) SCOPING MEETING

COMMENT FORM

To document the author of comments received, please provide the following information. Thank you.

Name: Stanley Price

Address: 3672 Millbrae Rd Cameron Park

Organization (if applicable): Utilitarian Cyclists

Please provide us with your written comments on the scope of the EIR by **5:00 PM, August 17, 2023**.

Parking to include spaces suitable for RVrs and other large vehicles

Every Class I Bike Path should conform to the recommended State standards of California's Highway Design Manual. The bicycle way should be 12' wide with adequate walking space on each side. (Not like what El Dorado County has built with the El Dorado Trail.) Do not build to the mere minimums. in the ~~desi~~ state design.

Send comments to:

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department
2850 Fairlane Court, Building C
Placerville, CA 95667
TownAndCountryElDorado@edcgov.us

From: Stephen Ferry <stephen.ferry@icloud.com>
Sent: Friday, August 11, 2023 3:00 PM
To: PL-Town and Country Village El Dorado
Subject: Town & Country Village of El Dorado Hills

You don't often get email from stephen.ferry@icloud.com. Learn why this is important

Gentlepersons,

I would like to weigh in on the approval of the above mentioned development. I would like you to think of what else could be on that corner that would be acceptable to the citizens of El Dorado Hills. Would it be a Motel 6 with an AM-PM Gas Station and Quik Mart? Maybe add a Quality Inn and a Chevron Station with a Colonel Sanders KFC. I don't think so!

I want you to think of Town Center in El Dorado Hills. Along came the proposal to build 413 units of apartments and it was bantered back and forth but then it was approved and now I look at it and it created a real sense of community. I took my family down to the Yoga Berry Yogurt Shop the other night and the fountains were flowing and we sat out and talked for an hour just enjoying the atmosphere. It was great.

Now we have an opportunity to have another center that will be beautiful and add to the ambience of living in El Dorado Hills. I can imagine having family celebrate momentous occasions such as wedding receptions, government planning receptions, sports receptions and more. As you know you only get one chance to make a great first impression and pulling off of Highway 50 to an Ahwahnee look alike hotel and center will be breath taking.

I am certain that Mo Mohanna and his staff will bring a great vision to life and benefit El Dorado Hills in many ways. I ask you to approve the application for the Town & Country Village of El Dorado Hills.

Thank you

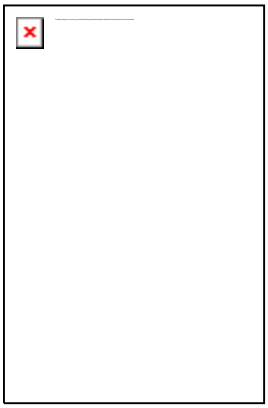
Steve Ferry
steve@steveferry.com
916-468-3300

From: Vijay Kumar <vijay.kumar5045@gmail.com>
Sent: Wednesday, August 16, 2023 9:51 PM
To: PL-Town and Country Village El Dorado

> You don't often get email from vijay.kumar5045@gmail.com. Learn why this is important

--
Regards,

Vijay Kumar
Broker
V.K Global Realty
Phone: 916 796 5759



From:	Corinne E. Resha
To:	Nick Pappani; Cindy Gnos
Cc:	Bret E. Sampson
Subject:	Fw: Town and Country Village Project NOP Comment.
Date:	Thursday, July 27, 2023 3:42:18 PM

Corinne Resha
Senior Planner

County of El Dorado
Planning and Building Department
2850 Fairlane Court, Bldg C
Placerville, CA 95667
Main Line 530.621.5355
Direct 530.621.5305
corinne.resha@edcgov.us

From: B <bill7041@gmail.com>
Sent: Tuesday, July 25, 2023 12:53 PM
To: PL-Town and Country Village El Dorado <TownandCountryElDorado@edcgov.us>
Cc: BOS-District I <bosone@edcgov.us>
Subject: Town and Country Village Project NOP Comment.

Corinne Resha, Senior Planner
County of El Dorado Planning and Building Department

Dear Corinne,

Argument Against The Town & Country Village El Dorado Project

The Town & Country Village El Dorado Project, which plans to incorporate two 150-room hotels (300 Units), 112 residential cottages, retail establishments, restaurants, an event center/museum, and parking lots, raises numerous critical concerns that demand our immediate attention. A thorough evaluation of the proposal reveals a profound lack of alignment with the community's interests and California's pressing housing needs.

Inescapable Traffic Catastrophe

The proposed project's proximity to Highway 50, shared access points at Bass Lake Road, Country Club Dr. and plans for hosting large-scale events will result in an unprecedented traffic onslaught. In combination with the impending development of the Proposed Village of Marble Valley Specific Plan, our existing infrastructure, already strained, is set to face a catastrophic congestion situation based upon the already strained single lane roads including the ingress and egress of Hwy 50. This isn't just an issue of inconvenience; it presents a significant risk to public safety,

complicating emergency evacuation efforts, potentially prolonging emergency response times, and increasing risks posed by impaired drivers. The potential for a substantial increase in alcohol-related traffic incidents poses a direct threat to residents. This project will disrupt the commute of those frequenting places like the homes in Serrano, and Safeway, as well as those relying on Green Valley Road for transit to Hwy 50. This situation contradicts principles of good governance, specifically effectiveness, efficiency, and the rule of law, as it threatens the welfare of our residents and undermines our ability to maintain orderly and safe roadways.

Unwanted Disruption of Local Character

The project, with its stark commercial undertone and hotels, threatens to shatter the tranquility of our predominantly rural and residential region. The anticipated increase in noise, light pollution, and could drastically diminish residents' quality of life, thus undermining the pursuit of healthy communities. This project if allowed will be functionally obsolete in the near future and will become a blight on the community.

Irresponsible Location and Zoning Changes

The proposed project aims to impose community region boundaries and zoning changes. This move threatens long-term land use planning, disregards the interests of current residents, and could potentially strain our infrastructure, contradicting our objectives of infrastructure preservation. These changes seem to serve the interests of developers rather than prioritizing the preservation and current zoning needs of our communities.

Ignoring State Housing Crisis

Despite California's severe housing shortage, the project overlooks the pressing need for residential housing, instead prioritizing commercial development, including hotels. This lack of focus on residential development is inconsistent with our pursuit of healthy communities and equitable allocation of resources.

Effect on Property Values:

The disruption of local character and the projected rise in noise, traffic, and other disturbances could lead to a potential decrease in property values in the surrounding areas, adversely affecting homeowners and real estate investors in the region. Also, Hotels increase crimes such as theft, assault, car break ins, and more serious crimes, adding to the already strain on local EMT’s, emergency services and Sheriff departments.

Economic Impact on Local Businesses:

The introduction of new commercial establishments may pose undue competition for existing local businesses, threatening their survival and undermining the local economy. There is already a high vacancy for retail and hotels and this project will

undermine current establishments.

Limited Local Advantage

The proposed hotels and commercial units offer minimal direct advantages to local residents. A shift towards residential development could enhance socio-economic balance and align more closely with state housing objectives and be in alignment with the current zoning.

Unwavering Local Opposition

Clear, widespread disapproval of the project exists among local residents from communities, including Cameron Park, Base Lake and Serrano. Concerns revolve around potential traffic chaos, environmental damage, and an unwanted transformation of the local character. This opposition underscores the community's commitment to preserving their quality of life and reflects their lack of engagement in the decision-making process, which runs counter to the principles of good governance.

Conclusion

In light of these arguments, the current form of the Town & Country Village El Dorado Project is untenable and should be denied. It's critical for decision-makers to prioritize projects that align closely with community needs, state housing priorities, local infrastructure capacity, environmental preservation, and long-term land use planning. This approach not only addresses traffic and preservation of local character but also emphasizes residential development. Prioritizing good governance, building healthy communities, preserving our infrastructure, and ensuring public safety are all necessary for the sustainable development and well-being of El Dorado County.

Thank you for the consideration,

William Kraft
205 Cradle Mountain Ct
El Dorado Hills, CA 96762
530-306-2076

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Town and Country Village Project
NOP Scoping Meeting Public Comments Summary

Date: August 8, 2023
Time: 6:00 PM
Location: El Dorado Hills Fire Department Community Room
1050 Wilson Boulevard
El Dorado Hills, CA 95762

I. Public Comments (arranged in order of "appearance" of commenter):

Commenter 1 (0:00:08): Donn Neher – El Dorado Hills Resident

- The commenter expresses a negative desire for El Dorado Hills and the scenic views along the road to change, and does not want the proposed project to be developed.
- The commenter has concerns about the heritage and history of the area being overwritten.
- The commenter wants tourism of the area to be promoted.

Commenter 2 (0:03:23): Ken Greenwood – Retired Land Use Planner for El Dorado County

- The commenter has concerns that the Bass Lake Hills Land Use Plan is not shown, and therefore the proposed project is not considering what the development would change (i.e. eliminating any existing community separation between El Dorado Hills and Cameron Park).
- The commenter has concerns about the best location for the proposed project, and emphasizes the need for analyzing alternative locations.

Commenter 3 (0:08:05): Daniel Mueller – Commercial Real Estate Broker

- The commenter expresses support for the proposed project and its positive effects on commercial retail businesses, the local economy, and potential highlighting of the local history.

Commenter 4 (0:11:59): Scott Green – El Dorado Hills Resident

- The commenter has concerns about the proposed changes to the General Plan, and how it may not serve the people according to the purposes of the General Plan.
- The commenter asserts that the area does not have the water supply to adequately service the proposed project and any associated population increase.
- The commenter expresses disbelief that the proposed project would generate enough revenue to turn a quick enough profit for the community, given the cost of construction.

Commenter 5 (0:16:13): Hooshang Mehrshahi – El Dorado Hills Resident

- The commenter expresses support for the project, but has concerns related to project planning and how traffic could increase on Bass Lake Road due to preserving scenic views.
- The commenter has concerns about the effects on population density because of conflicts between the Bass Lake Specific Plan and the General Plan.

Commenter 6 (0:21:29): Mary Burnham – Resident Living on Old Bass Lake Road

- The commenter expresses support for the hotel that would be built as part of the proposed project but has concerns over preserving the section of Lincoln Highway.
- The commenter has concerns over potential environmental impacts from the proposed sewer line on a creek (referred to as "Screech Owl Creek") located on her property and on oak and buckeye trees.

Commenter 7 (0:25:43): Jan Taylor – Property Owner Within the Bass Lake Hills Specific Plan

- The commenter supports the proposed project, especially the proposed bicycle trails and pedestrian facilities.

Commenter 8 (0:30:31): Mattias Bergman – Resident

- The commenter characterizes the proposed hotel as a distraction, and has concerns about the proposed 702 units added to the proposed project.

Commenter 9 (0:32:58): Lynda Seymour – Member of the Lincoln Highway Association

- The commenter expresses support for the proposed project based on the compassion of the development team.

Commenter 10 (0:34:41): John Albano – Resident

- The commenter views the proposed project as a positive development for the community, given its potential to encourage businesses and services to settle in the area.
- The commenter expresses agreement with the previously voiced concerns about traffic, but sees the proposed project as a net positive for the community.

Commenter 11 (0:37:11): Ana Azarkeyvan – Landowner Adjacent to the Proposed Project

- The commenter sees change and development as an inevitability, and sees the proposed project as a tasteful alternative to a different, hypothetical project developed by an uncaring applicant (in contrast to the thoughtful developer of the proposed project).
- The commenter addresses previous worries about additional units, and argues that those 700 units would only be developed in response to reasonable demand.

Commenter 12 (0:41:46): Enrique and Reyna Rodriguez – Residents Adjacent to Proposed Sewer Line, Director of Sales for Holiday Inn Express (El Dorado Hills Location)

- The commenters see a need for tourism promotion, commercial shopping options, and more hospitality services in the area.
- The commenter views the proposed project as an additional beautification improvement to the community.

Commenter 13 (0:46:36): Dena Nkadi – Resident

- The commenter similarly expresses the inevitability of growth and change in the community, and is therefore in support of the proposed project despite some concerns.
- The commenter predicts potential for Country Club Drive to be widened, and the associated effects on bicycle lanes and road connections to her street.
- The commenter expresses a desire for the water supply for the proposed project to come from an on-site well in order to preserve an undeveloped area for public access.

Town and Country Village Project
NOP Scoping Meeting Public Comments Summary

Date: August 9, 2023
Time: 11:00 AM
Location: Online through Zoom

I. Public Comments (arranged in order of "appearance" of commenter):

Commenter 1 (02:21): Chris Metzen – Carmichael Resident with Family in El Dorado Hills

- The commenter has concerns about the potential for asbestos in the soil, and desires the soil be tested prior to any ground-disturbing activities. Furthermore, the commenter would want the results and any potential hazards to residents nearby to be made available to the public.

Commenter 2 (03:45): Tita Bladen – Member of the Commission for Aging for El Dorado County

- The commenter has confusion on the two-story units referred to as "cottages," and their accessibility for those who have disabilities or are seniors due to their two-story nature.

Commenter 3 (05:29): John [unintelligible]

- The commenter highlights the lack of evaluation for the energy demands of the proposed project.
- The commenter has concerns about the water district's capacity to serve the proposed project, especially given the current water restrictions, and the water district's ability to meet future increased demands on top of current demands.

Commenter 4 (07:29): Nicky Smith

- The commenter has concerns about the traffic congestion on Bass Lake Road, the noise impacts on the road, and the lack of suitable light on the road, all of which could be significantly negatively affected due to development of the proposed project.

APPENDIX D

Town and Country Village - Project Development Area Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Town and Country Village - Project Development Area
Construction Start Date	4/1/2025
Operational Year	2027
Lead Agency	El Dorado County
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	10.4
Location	38.65806475379412, -121.0289202355399
County	El Dorado-Mountain County
City	Unincorporated
Air District	El Dorado County AQMD
Air Basin	Mountain Counties
TAZ	413
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	56.0	Dwelling Unit	3.95	31,360	41,955	—	142	—
Hotel	356	Room	13.8	212,360	146,045	—	—	—
Parking Lot	466	Space	4.50	0.00	0.00	—	—	—
Other Asphalt Surfaces	3.70	Acre	3.70	0.00	0.00	—	—	—
Road Widening	0.30	Mile	1.50	0.00	—	—	—	—
Bridge/Overpass Construction	0.03	Mile	0.03	0.00	—	—	—	—
User Defined Linear	3.25	Mile	1.58	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Energy	E-10-A	Establish Onsite Renewable Energy Systems: Generic
Water	W-7	Adopt a Water Conservation Strategy

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.75	24.6	79.2	80.6	0.18	3.22	25.5	28.7	2.96	11.0	13.9	—	19,814	19,814	0.66	0.82	9.96	20,085

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.90	24.5	29.8	29.3	0.06	1.23	9.41	10.6	1.14	3.70	4.84	—	6,801	6,801	0.27	0.27	0.21	6,826
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.38	9.22	18.4	18.4	0.04	0.77	6.99	7.76	0.71	3.08	3.79	—	4,022	4,022	0.16	0.11	1.39	4,043
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	1.68	3.36	3.35	0.01	0.14	1.28	1.42	0.13	0.56	0.69	—	666	666	0.03	0.02	0.23	669

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.75	8.21	79.2	80.6	0.18	3.22	25.5	28.7	2.96	11.0	13.9	—	19,814	19,814	0.66	0.82	9.96	20,085
2026	2.12	24.6	12.9	22.1	0.03	0.41	1.63	2.04	0.38	0.39	0.77	—	5,241	5,241	0.13	0.27	8.04	5,332
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.90	3.28	29.8	29.3	0.06	1.23	9.41	10.6	1.14	3.70	4.84	—	6,801	6,801	0.27	0.06	0.02	6,826
2026	3.71	24.5	27.3	28.5	0.06	1.12	9.41	10.5	1.03	3.70	4.73	—	6,797	6,797	0.27	0.27	0.21	6,822
2027	1.94	24.5	12.5	20.1	0.03	0.36	1.63	2.00	0.34	0.39	0.73	—	5,051	5,051	0.14	0.26	0.19	5,132
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.38	2.00	18.4	18.4	0.04	0.77	6.99	7.76	0.71	3.08	3.79	—	4,022	4,022	0.16	0.06	0.34	4,043
2026	1.43	9.22	9.73	13.4	0.02	0.36	1.76	2.12	0.33	0.60	0.92	—	3,092	3,092	0.10	0.11	1.39	3,129
2027	0.13	2.16	0.80	1.32	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	—	328	328	0.01	0.02	0.21	333

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.43	0.37	3.36	3.35	0.01	0.14	1.28	1.42	0.13	0.56	0.69	—	666	666	0.03	0.01	0.06	669
2026	0.26	1.68	1.78	2.45	< 0.005	0.07	0.32	0.39	0.06	0.11	0.17	—	512	512	0.02	0.02	0.23	518
2027	0.02	0.39	0.15	0.24	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.2	54.2	< 0.005	< 0.005	0.03	55.1

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.75	8.21	79.2	80.6	0.18	3.22	25.5	28.7	2.96	11.0	13.9	—	19,814	19,814	0.66	0.82	9.96	20,085
2026	2.12	24.6	12.9	22.1	0.03	0.41	1.63	2.04	0.38	0.39	0.77	—	5,241	5,241	0.13	0.27	8.04	5,332
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.90	3.28	29.8	29.3	0.06	1.23	9.41	10.6	1.14	3.70	4.84	—	6,801	6,801	0.27	0.06	0.02	6,826
2026	3.71	24.5	27.3	28.5	0.06	1.12	9.41	10.5	1.03	3.70	4.73	—	6,797	6,797	0.27	0.27	0.21	6,822
2027	1.94	24.5	12.5	20.1	0.03	0.36	1.63	2.00	0.34	0.39	0.73	—	5,051	5,051	0.14	0.26	0.19	5,132
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.38	2.00	18.4	18.4	0.04	0.77	6.99	7.76	0.71	3.08	3.79	—	4,022	4,022	0.16	0.06	0.34	4,043
2026	1.43	9.22	9.73	13.4	0.02	0.36	1.76	2.12	0.33	0.60	0.92	—	3,092	3,092	0.10	0.11	1.39	3,129
2027	0.13	2.16	0.80	1.32	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	—	328	328	0.01	0.02	0.21	333
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.43	0.37	3.36	3.35	0.01	0.14	1.28	1.42	0.13	0.56	0.69	—	666	666	0.03	0.01	0.06	669
2026	0.26	1.68	1.78	2.45	< 0.005	0.07	0.32	0.39	0.06	0.11	0.17	—	512	512	0.02	0.02	0.23	518
2027	0.02	0.39	0.15	0.24	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.2	54.2	< 0.005	< 0.005	0.03	55.1

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.4	18.0	8.48	49.8	0.08	0.41	4.63	5.03	0.40	1.18	1.57	143	12,133	12,275	15.2	0.43	351	13,134
Mit.	12.4	17.9	8.29	49.7	0.08	0.39	4.63	5.02	0.38	1.18	1.56	136	11,662	11,798	14.5	0.41	351	12,633
% Reduced	< 0.5%	< 0.5%	2%	< 0.5%	1%	4%	—	< 0.5%	4%	—	1%	4%	4%	4%	5%	5%	—	4%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.36	15.0	9.05	39.5	0.08	0.39	4.63	5.01	0.38	1.18	1.56	143	11,696	11,839	15.3	0.47	333	12,693
Mit.	9.34	14.9	8.86	39.4	0.08	0.37	4.63	5.00	0.37	1.18	1.55	136	11,225	11,361	14.6	0.45	333	12,192
% Reduced	< 0.5%	< 0.5%	2%	< 0.5%	1%	4%	—	< 0.5%	4%	—	1%	4%	4%	4%	5%	4%	—	4%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	15.9	7.43	42.7	0.07	0.28	4.60	4.87	0.27	1.17	1.44	143	9,964	10,107	15.2	0.45	340	10,961
Mit.	10.2	15.8	7.23	42.6	0.07	0.26	4.60	4.86	0.26	1.17	1.43	136	9,493	9,629	14.5	0.43	340	10,460
% Reduced	< 0.5%	< 0.5%	3%	< 0.5%	2%	5%	—	< 0.5%	5%	—	1%	4%	5%	5%	5%	5%	—	5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87	2.89	1.36	7.80	0.01	0.05	0.84	0.89	0.05	0.21	0.26	23.6	1,650	1,673	2.52	0.07	56.3	1,815
Mit.	1.86	2.89	1.32	7.77	0.01	0.05	0.84	0.89	0.05	0.21	0.26	22.6	1,572	1,594	2.41	0.07	56.3	1,732
% Reduced	< 0.5%	< 0.5%	3%	< 0.5%	2%	5%	—	< 0.5%	5%	—	1%	4%	5%	5%	5%	5%	—	5%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.0	9.69	4.28	34.9	0.06	0.07	4.63	4.69	0.06	1.18	1.24	—	5,920	5,920	0.43	0.35	18.6	6,053
Area	2.16	8.15	1.97	13.2	0.01	0.17	—	0.17	0.16	—	0.16	0.00	2,405	2,405	0.05	< 0.005	—	2,407
Energy	0.25	0.12	2.23	1.71	0.01	0.17	—	0.17	0.17	—	0.17	—	3,787	3,787	0.42	0.03	—	3,805
Water	—	—	—	—	—	—	—	—	—	—	—	20.7	20.8	41.6	2.13	0.05	—	110
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	12.4	18.0	8.48	49.8	0.08	0.41	4.63	5.03	0.40	1.18	1.57	143	12,133	12,275	15.2	0.43	351	13,134
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.90	8.48	4.96	37.0	0.05	0.07	4.63	4.69	0.06	1.18	1.24	—	5,530	5,530	0.54	0.38	0.48	5,658
Area	0.22	6.35	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Energy	0.25	0.12	2.23	1.71	0.01	0.17	—	0.17	0.17	—	0.17	—	3,787	3,787	0.42	0.03	—	3,805
Water	—	—	—	—	—	—	—	—	—	—	—	20.7	20.8	41.6	2.13	0.05	—	110
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	9.36	15.0	9.05	39.5	0.08	0.39	4.63	5.01	0.38	1.18	1.56	143	11,696	11,839	15.3	0.47	333	12,693
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.97	8.58	4.72	34.7	0.06	0.07	4.60	4.66	0.06	1.17	1.23	—	5,603	5,603	0.50	0.37	8.02	5,734
Area	1.00	7.15	0.47	6.30	< 0.005	0.04	—	0.04	0.04	—	0.04	0.00	553	553	0.01	< 0.005	—	553
Energy	0.25	0.12	2.23	1.71	0.01	0.17	—	0.17	0.17	—	0.17	—	3,787	3,787	0.42	0.03	—	3,805
Water	—	—	—	—	—	—	—	—	—	—	—	20.7	20.8	41.6	2.13	0.05	—	110

Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	10.2	15.9	7.43	42.7	0.07	0.28	4.60	4.87	0.27	1.17	1.44	143	9,964	10,107	15.2	0.45	340	10,961
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.64	1.57	0.86	6.34	0.01	0.01	0.84	0.85	0.01	0.21	0.22	—	928	928	0.08	0.06	1.33	949
Area	0.18	1.31	0.09	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	91.5	91.5	< 0.005	< 0.005	—	91.6
Energy	0.05	0.02	0.41	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	627	627	0.07	< 0.005	—	630
Water	—	—	—	—	—	—	—	—	—	—	—	3.43	3.45	6.89	0.35	0.01	—	18.2
Waste	—	—	—	—	—	—	—	—	—	—	—	20.2	0.00	20.2	2.02	0.00	—	70.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0
Total	1.87	2.89	1.36	7.80	0.01	0.05	0.84	0.89	0.05	0.21	0.26	23.6	1,650	1,673	2.52	0.07	56.3	1,815

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.0	9.69	4.28	34.9	0.06	0.07	4.63	4.69	0.06	1.18	1.24	—	5,920	5,920	0.43	0.35	18.6	6,053
Area	2.16	8.15	1.97	13.2	0.01	0.17	—	0.17	0.16	—	0.16	0.00	2,405	2,405	0.05	< 0.005	—	2,407
Energy	0.23	0.11	2.04	1.56	0.01	0.16	—	0.16	0.16	—	0.16	—	3,323	3,323	0.36	0.02	—	3,338
Water	—	—	—	—	—	—	—	—	—	—	—	14.5	14.2	28.7	1.49	0.04	—	76.6
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	12.4	17.9	8.29	49.7	0.08	0.39	4.63	5.02	0.38	1.18	1.56	136	11,662	11,798	14.5	0.41	351	12,633
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.90	8.48	4.96	37.0	0.05	0.07	4.63	4.69	0.06	1.18	1.24	—	5,530	5,530	0.54	0.38	0.48	5,658

Area	0.22	6.35	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Energy	0.23	0.11	2.04	1.56	0.01	0.16	—	0.16	0.16	—	0.16	—	3,323	3,323	0.36	0.02	—	3,338
Water	—	—	—	—	—	—	—	—	—	—	—	14.5	14.2	28.7	1.49	0.04	—	76.6
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	9.34	14.9	8.86	39.4	0.08	0.37	4.63	5.00	0.37	1.18	1.55	136	11,225	11,361	14.6	0.45	333	12,192
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.97	8.58	4.72	34.7	0.06	0.07	4.60	4.66	0.06	1.17	1.23	—	5,603	5,603	0.50	0.37	8.02	5,734
Area	1.00	7.15	0.47	6.30	< 0.005	0.04	—	0.04	0.04	—	0.04	0.00	553	553	0.01	< 0.005	—	553
Energy	0.23	0.11	2.04	1.56	0.01	0.16	—	0.16	0.16	—	0.16	—	3,323	3,323	0.36	0.02	—	3,338
Water	—	—	—	—	—	—	—	—	—	—	—	14.5	14.2	28.7	1.49	0.04	—	76.6
Waste	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	10.2	15.8	7.23	42.6	0.07	0.26	4.60	4.86	0.26	1.17	1.43	136	9,493	9,629	14.5	0.43	340	10,460
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.64	1.57	0.86	6.34	0.01	0.01	0.84	0.85	0.01	0.21	0.22	—	928	928	0.08	0.06	1.33	949
Area	0.18	1.31	0.09	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	91.5	91.5	< 0.005	< 0.005	—	91.6
Energy	0.04	0.02	0.37	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	550	550	0.06	< 0.005	—	553
Water	—	—	—	—	—	—	—	—	—	—	—	2.40	2.35	4.76	0.25	0.01	—	12.7
Waste	—	—	—	—	—	—	—	—	—	—	—	20.2	0.00	20.2	2.02	0.00	—	70.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0
Total	1.86	2.89	1.32	7.77	0.01	0.05	0.84	0.89	0.05	0.21	0.26	22.6	1,572	1,594	2.41	0.07	56.3	1,732

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	5.20	4.96	0.01	0.22	—	0.22	0.21	—	0.21	—	870	870	0.04	0.01	—	873
Dust From Material Movement	—	—	—	—	—	—	3.23	3.23	—	1.66	1.66	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.95	0.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.59	0.59	—	0.30	0.30	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.10	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	196	196	0.01	0.01	0.76	199
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.7	29.7	< 0.005	< 0.005	0.05	30.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.91	4.91	< 0.005	< 0.005	0.01	4.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	5.20	4.96	0.01	0.22	—	0.22	0.21	—	0.21	—	870	870	0.04	0.01	—	873
Dust From Material Movement	—	—	—	—	—	—	3.23	3.23	—	1.66	1.66	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.95	0.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	144	144	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.59	0.59	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.10	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	196	196	0.01	0.01	0.76	199

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.7	29.7	< 0.005	< 0.005	0.05	30.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.91	4.91	< 0.005	< 0.005	0.01	4.98
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.19	11.1	10.6	0.02	0.46	—	0.46	0.42	—	0.42	—	2,467	2,467	0.10	0.02	—	2,475
Dust From Material Movement	—	—	—	—	—	—	3.44	3.44	—	1.37	1.37	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	2.02	1.93	< 0.005	0.08	—	0.08	0.08	—	0.08	—	408	408	0.02	< 0.005	—	410
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	1.26	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	228

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.09	0.99	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.1	77.1	< 0.005	< 0.005	0.14	78.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	12.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.19	11.1	10.6	0.02	0.46	—	0.46	0.42	—	0.42	—	2,467	2,467	0.10	0.02	—	2,475
Dust From Material Movement	—	—	—	—	—	—	3.44	3.44	—	1.37	1.37	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	2.02	1.93	< 0.005	0.08	—	0.08	0.08	—	0.08	—	408	408	0.02	< 0.005	—	410
Dust From Material Movement	—	—	—	—	—	—	0.63	0.63	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.07	1.26	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	228
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.09	0.99	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.1	77.1	< 0.005	< 0.005	0.14	78.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	12.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.25	3.29	0.01	0.13	—	0.13	0.12	—	0.12	—	788	788	0.03	0.01	—	790
Dust From Material Movement	—	—	—	—	—	—	1.10	1.10	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.59	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.92	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	< 0.005	0.01	0.02	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.2	24.2	< 0.005	< 0.005	0.04	24.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.00	4.00	< 0.005	< 0.005	0.01	4.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.25	3.29	0.01	0.13	—	0.13	0.12	—	0.12	—	788	788	0.03	0.01	—	790
Dust From Material Movement	—	—	—	—	—	—	1.10	1.10	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.59	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.92	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	< 0.005	0.01	0.02	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.2	24.2	< 0.005	< 0.005	0.04	24.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.00	4.00	< 0.005	< 0.005	0.01	4.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	0.40	3.70	4.87	0.01	0.14	—	0.14	0.13	—	0.13	—	901	901	0.04	0.01	—	904
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.89	< 0.005	0.03	—	0.03	0.02	—	0.02	—	149	149	0.01	< 0.005	—	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.32	6.44	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,204	1,204	0.02	0.04	4.34	1,222
Vendor	0.04	0.04	1.83	0.32	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,265	1,265	< 0.005	0.20	2.83	1,326
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.45	0.45	5.05	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,084	1,084	0.03	0.04	0.11	1,098
Vendor	0.04	0.04	1.93	0.34	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,265	1,265	< 0.005	0.20	0.07	1,323
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.15	1.93	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	416	416	0.01	0.02	0.70	422
Vendor	0.02	0.01	0.72	0.12	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	475	475	< 0.005	0.07	0.46	498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	68.9	68.9	< 0.005	< 0.005	0.12	69.8
Vendor	< 0.005	< 0.005	0.13	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.7	78.7	< 0.005	0.01	0.08	82.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.70	4.87	0.01	0.14	—	0.14	0.13	—	0.13	—	901	901	0.04	0.01	—	904
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.68	0.89	< 0.005	0.03	—	0.03	0.02	—	0.02	—	149	149	0.01	< 0.005	—	150
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.32	6.44	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,204	1,204	0.02	0.04	4.34	1,222
Vendor	0.04	0.04	1.83	0.32	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,265	1,265	< 0.005	0.20	2.83	1,326
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.50	0.45	0.45	5.05	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,084	1,084	0.03	0.04	0.11	1,098
Vendor	0.04	0.04	1.93	0.34	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,265	1,265	< 0.005	0.20	0.07	1,323
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.15	1.93	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	416	416	0.01	0.02	0.70	422
Vendor	0.02	0.01	0.72	0.12	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	475	475	< 0.005	0.07	0.46	498
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.35	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	68.9	68.9	< 0.005	< 0.005	0.12	69.8
Vendor	< 0.005	< 0.005	0.13	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	78.7	78.7	< 0.005	0.01	0.08	82.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.43	0.41	4.72	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,066	1,066	0.03	0.04	0.10	1,080
Vendor	0.04	0.03	1.82	0.33	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,242	1,242	< 0.005	0.19	0.07	1,297
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	68.2	68.2	< 0.005	< 0.005	0.11	69.1
Vendor	< 0.005	< 0.005	0.11	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.7	77.7	< 0.005	0.01	0.07	81.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.4
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.01	13.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.59	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.43	0.41	4.72	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,066	1,066	0.03	0.04	0.10	1,080
Vendor	0.04	0.03	1.82	0.33	0.01	0.01	0.31	0.32	0.01	0.08	0.09	—	1,242	1,242	< 0.005	0.19	0.07	1,297
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	68.2	68.2	< 0.005	< 0.005	0.11	69.1
Vendor	< 0.005	< 0.005	0.11	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.7	77.7	< 0.005	0.01	0.07	81.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	0.02	11.4
Vendor	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.01	13.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.56	2.18	< 0.005	0.07	—	0.07	0.06	—	0.06	—	331	331	0.01	< 0.005	—	332
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.8	54.8	< 0.005	< 0.005	—	55.0
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.88	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	165	165	< 0.005	0.01	0.60	168
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.06	0.06	0.69	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	149	149	< 0.005	0.01	0.02	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.3	33.3	< 0.005	< 0.005	0.06	33.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.51	5.51	< 0.005	< 0.005	0.01	5.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516

Paving	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.56	2.18	< 0.005	0.07	—	0.07	0.06	—	0.06	—	331	331	0.01	< 0.005	—	332
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.8	54.8	< 0.005	< 0.005	—	55.0
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.88	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	165	165	< 0.005	0.01	0.60	168
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.69	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	149	149	< 0.005	0.01	0.02	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.3	33.3	< 0.005	< 0.005	0.06	33.8

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.51	5.51	< 0.005	< 0.005	0.01	5.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.7
Architectural Coatings	—	7.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.70	7.70	< 0.005	< 0.005	—	7.73
Architectural Coatings	—	1.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.06	1.29	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	241	241	< 0.005	0.01	0.87	244
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.01	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	217	217	0.01	0.01	0.02	220
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.1	77.1	< 0.005	< 0.005	0.13	78.2

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	12.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.30	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.7
Architectural Coatings	—	7.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.70	7.70	< 0.005	< 0.005	—	7.73
Architectural Coatings	—	1.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.06	1.29	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	241	241	< 0.005	0.01	0.87	244
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.09	1.01	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	217	217	0.01	0.01	0.02	220
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.1	77.1	< 0.005	< 0.005	0.13	78.2

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	12.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Architectural Coatings	—	2.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.99	1.99	< 0.005	< 0.005	—	2.00
Architectural Coatings	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	0.94	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	213	213	0.01	0.01	0.02	216
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.6	19.6	< 0.005	< 0.005	0.03	19.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.25	3.25	< 0.005	< 0.005	0.01	3.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	22.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Architectural Coatings	—	2.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.99	1.99	< 0.005	< 0.005	—	2.00
Architectural Coatings	—	0.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	0.94	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	213	213	0.01	0.01	0.02	216
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.6	19.6	< 0.005	< 0.005	0.03	19.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.25	3.25	< 0.005	< 0.005	0.01	3.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	7.61	7.99	0.01	0.44	—	0.44	0.41	—	0.41	—	1,122	1,122	0.05	0.01	—	1,126

Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.15	6.15	< 0.005	< 0.005	—	6.17
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.02	1.02	< 0.005	< 0.005	—	1.02
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.94	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	168	168	0.01	0.01	0.65	171
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Linear, Grubbing & Land Clearing (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	7.61	7.99	0.01	0.44	—	0.44	0.41	—	0.41	—	1,122	1,122	0.05	0.01	—	1,126
Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.15	6.15	< 0.005	< 0.005	—	6.17
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.02	1.02	< 0.005	< 0.005	—	1.02
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.94	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	168	168	0.01	0.01	0.65	171
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.86
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Linear, Grading & Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.36	4.50	40.3	45.6	0.09	1.81	—	1.81	1.66	—	1.66	—	9,494	9,494	0.39	0.08	—	9,527
Dust From Material Movement	—	—	—	—	—	—	4.26	4.26	—	0.46	0.46	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.22	1.37	< 0.005	0.05	—	0.05	0.05	—	0.05	—	286	286	0.01	< 0.005	—	287
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.4	47.4	< 0.005	< 0.005	—	47.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.16	2.99	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	533	533	0.02	0.02	2.06	541
Vendor	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	63.0	63.0	< 0.005	0.01	0.15	66.0
Hauling	0.11	0.09	6.93	0.73	0.04	0.04	0.89	0.93	0.04	0.24	0.28	—	4,232	4,232	0.02	0.66	6.99	4,437
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.03	15.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.99
Hauling	< 0.005	< 0.005	0.22	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	128	128	< 0.005	0.02	0.09	134
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33
Hauling	< 0.005	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.02	22.1

3.20. Linear, Grading & Excavation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.36	4.50	40.3	45.6	0.09	1.81	—	1.81	1.66	—	1.66	—	9,494	9,494	0.39	0.08	—	9,527
Dust From Material Movement	—	—	—	—	—	—	4.26	4.26	—	0.46	0.46	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.22	1.37	< 0.005	0.05	—	0.05	0.05	—	0.05	—	286	286	0.01	< 0.005	—	287
Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.4	47.4	< 0.005	< 0.005	—	47.5

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.23	0.16	2.99	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	533	533	0.02	0.02	2.06	541
Vendor	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	63.0	63.0	< 0.005	0.01	0.15	66.0
Hauling	0.11	0.09	6.93	0.73	0.04	0.04	0.89	0.93	0.04	0.24	0.28	—	4,232	4,232	0.02	0.66	6.99	4,437
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.03	15.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.99
Hauling	< 0.005	< 0.005	0.22	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	128	128	< 0.005	0.02	0.09	134
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.31	0.31	< 0.005	< 0.005	< 0.005	0.33
Hauling	< 0.005	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	21.1	21.1	< 0.005	< 0.005	0.02	22.1

3.21. Linear, Drainage, Utilities, & Sub-Grade (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.42	2.86	25.4	31.0	0.06	1.00	—	1.00	0.92	—	0.92	—	5,703	5,703	0.23	0.05	—	5,722
Dust From Material Movement	—	—	—	—	—	—	1.59	1.59	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.49	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	109	109	< 0.005	< 0.005	—	110
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.24	0.16	3.14	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	561	561	0.03	0.02	2.17	570
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.89	9.89	< 0.005	< 0.005	0.02	10.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Linear, Drainage, Utilities, & Sub-Grade (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.42	2.86	25.4	31.0	0.06	1.00	—	1.00	0.92	—	0.92	—	5,703	5,703	0.23	0.05	—	5,722

Dust From Material Movement	—	—	—	—	—	—	1.59	1.59	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.49	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	109	109	< 0.005	< 0.005	—	110
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.24	0.16	3.14	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	561	561	0.03	0.02	2.17	570
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.89	9.89	< 0.005	< 0.005	0.02	10.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Linear, Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.86	7.92	11.7	0.02	0.34	—	0.34	0.31	—	0.31	—	1,769	1,769	0.07	0.01	—	1,775
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.4	19.4	< 0.005	< 0.005	—	19.4

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.21	3.21	< 0.005	< 0.005	—	3.22
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.10	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	196	196	0.01	0.01	0.76	199
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Linear, Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.86	7.92	11.7	0.02	0.34	—	0.34	0.31	—	0.31	—	1,769	1,769	0.07	0.01	—	1,775
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.4	19.4	< 0.005	< 0.005	—	19.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.21	3.21	< 0.005	< 0.005	—	3.22
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	1.10	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	196	196	0.01	0.01	0.76	199
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.54	2.45	1.06	8.61	0.01	0.02	1.12	1.14	0.02	0.29	0.30	—	1,442	1,442	0.11	0.09	4.51	1,475
Hotel	7.50	7.24	3.22	26.3	0.04	0.05	3.50	3.55	0.05	0.89	0.94	—	4,478	4,478	0.32	0.26	14.1	4,578
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	10.0	9.69	4.28	34.9	0.06	0.07	4.63	4.69	0.06	1.18	1.24	—	5,920	5,920	0.43	0.35	18.6	6,053

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.25	2.14	1.22	9.21	0.01	0.02	1.12	1.14	0.02	0.29	0.30	—	1,348	1,348	0.14	0.10	0.12	1,379
Hotel	6.65	6.34	3.73	27.8	0.04	0.05	3.50	3.55	0.05	0.89	0.94	—	4,182	4,182	0.40	0.29	0.36	4,279
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.90	8.48	4.96	37.0	0.05	0.07	4.63	4.69	0.06	1.18	1.24	—	5,530	5,530	0.54	0.38	0.48	5,658
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.41	0.40	0.21	1.57	< 0.005	< 0.005	0.20	0.21	< 0.005	0.05	0.05	—	226	226	0.02	0.02	0.32	231
Hotel	1.22	1.17	0.65	4.77	0.01	0.01	0.63	0.64	0.01	0.16	0.17	—	702	702	0.06	0.05	1.01	718
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.64	1.57	0.86	6.34	0.01	0.01	0.84	0.85	0.01	0.21	0.22	—	928	928	0.08	0.06	1.33	949

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	2.54	2.45	1.06	8.61	0.01	0.02	1.12	1.14	0.02	0.29	0.30	—	1,442	1,442	0.11	0.09	4.51	1,475
Hotel	7.50	7.24	3.22	26.3	0.04	0.05	3.50	3.55	0.05	0.89	0.94	—	4,478	4,478	0.32	0.26	14.1	4,578
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	10.0	9.69	4.28	34.9	0.06	0.07	4.63	4.69	0.06	1.18	1.24	—	5,920	5,920	0.43	0.35	18.6	6,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.25	2.14	1.22	9.21	0.01	0.02	1.12	1.14	0.02	0.29	0.30	—	1,348	1,348	0.14	0.10	0.12	1,379
Hotel	6.65	6.34	3.73	27.8	0.04	0.05	3.50	3.55	0.05	0.89	0.94	—	4,182	4,182	0.40	0.29	0.36	4,279
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.90	8.48	4.96	37.0	0.05	0.07	4.63	4.69	0.06	1.18	1.24	—	5,530	5,530	0.54	0.38	0.48	5,658
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.41	0.40	0.21	1.57	< 0.005	< 0.005	0.20	0.21	< 0.005	0.05	0.05	—	226	226	0.02	0.02	0.32	231
Hotel	1.22	1.17	0.65	4.77	0.01	0.01	0.63	0.64	0.01	0.16	0.17	—	702	702	0.06	0.05	1.01	718
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.64	1.57	0.86	6.34	0.01	0.01	0.84	0.85	0.01	0.21	0.22	—	928	928	0.08	0.06	1.33	949

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	267	267	0.04	0.01	—	269
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	727	727	0.12	0.01	—	734
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	96.0	96.0	0.02	< 0.005	—	96.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,090	1,090	0.18	0.02	—	1,101
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	267	267	0.04	0.01	—	269
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	727	727	0.12	0.01	—	734
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	96.0	96.0	0.02	< 0.005	—	96.9
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,090	1,090	0.18	0.02	—	1,101
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	44.2	44.2	0.01	< 0.005	—	44.6
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	120	120	0.02	< 0.005	—	122
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	15.9	15.9	< 0.005	< 0.005	—	16.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	180	180	0.03	< 0.005	—	182

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	212	212	0.03	< 0.005	—	214
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	569	569	0.09	0.01	—	574
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	76.8	76.8	0.01	< 0.005	—	77.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	857	857	0.14	0.02	—	866
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	212	212	0.03	< 0.005	—	214

Hotel	—	—	—	—	—	—	—	—	—	—	—	—	569	569	0.09	0.01	—	574
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	76.8	76.8	0.01	< 0.005	—	77.5
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	857	857	0.14	0.02	—	866
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	35.1	35.1	0.01	< 0.005	—	35.4
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	94.2	94.2	0.02	< 0.005	—	95.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	12.7	12.7	< 0.005	< 0.005	—	12.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	142	142	0.02	< 0.005	—	143

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.02	0.41	0.18	< 0.005	0.03	—	0.03	0.03	—	0.03	—	522	522	0.05	< 0.005	—	524
Hotel	0.20	0.10	1.82	1.53	0.01	0.14	—	0.14	0.14	—	0.14	—	2,175	2,175	0.19	< 0.005	—	2,181
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.12	2.23	1.71	0.01	0.17	—	0.17	0.17	—	0.17	—	2,697	2,697	0.24	0.01	—	2,705
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.02	0.41	0.18	< 0.005	0.03	—	0.03	0.03	—	0.03	—	522	522	0.05	< 0.005	—	524
Hotel	0.20	0.10	1.82	1.53	0.01	0.14	—	0.14	0.14	—	0.14	—	2,175	2,175	0.19	< 0.005	—	2,181
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.12	2.23	1.71	0.01	0.17	—	0.17	0.17	—	0.17	—	2,697	2,697	0.24	0.01	—	2,705
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	86.4	86.4	0.01	< 0.005	—	86.7
Hotel	0.04	0.02	0.33	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	360	360	0.03	< 0.005	—	361
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.05	0.02	0.41	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	447	447	0.04	< 0.005	—	448

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	475	475	0.04	< 0.005	—	477
Hotel	0.18	0.09	1.67	1.40	0.01	0.13	—	0.13	0.13	—	0.13	—	1,990	1,990	0.18	< 0.005	—	1,996
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.11	2.04	1.56	0.01	0.16	—	0.16	0.16	—	0.16	—	2,465	2,465	0.22	< 0.005	—	2,472
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.02	0.37	0.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	475	475	0.04	< 0.005	—	477
Hotel	0.18	0.09	1.67	1.40	0.01	0.13	—	0.13	0.13	—	0.13	—	1,990	1,990	0.18	< 0.005	—	1,996
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.11	2.04	1.56	0.01	0.16	—	0.16	0.16	—	0.16	—	2,465	2,465	0.22	< 0.005	—	2,472
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	< 0.005	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	—	78.7	78.7	0.01	< 0.005	—	78.9
Hotel	0.03	0.02	0.30	0.26	< 0.005	0.02	—	0.02	0.02	—	0.02	—	329	329	0.03	< 0.005	—	330
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.37	0.28	< 0.005	0.03	—	0.03	0.03	—	0.03	—	408	408	0.04	< 0.005	—	409

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.22	0.11	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Consumer Products	—	5.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.94	1.80	0.11	12.4	< 0.005	0.02	—	0.02	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.6
Total	2.16	8.15	1.97	13.2	0.01	0.17	—	0.17	0.16	—	0.16	0.00	2,405	2,405	0.05	< 0.005	—	2,407
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.22	0.11	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Consumer Products	—	5.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.22	6.35	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	87.7	87.7	< 0.005	< 0.005	—	87.8
Consumer Products	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.17	0.16	0.01	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.79	3.79	< 0.005	< 0.005	—	3.81
Total	0.18	1.31	0.09	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	91.5	91.5	< 0.005	< 0.005	—	91.6

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.22	0.11	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Consumer Products	—	5.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.94	1.80	0.11	12.4	< 0.005	0.02	—	0.02	0.01	—	0.01	—	46.5	46.5	< 0.005	< 0.005	—	46.6

Total	2.16	8.15	1.97	13.2	0.01	0.17	—	0.17	0.16	—	0.16	0.00	2,405	2,405	0.05	< 0.005	—	2,407
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.22	0.11	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Consumer Products	—	5.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.22	6.35	1.86	0.79	0.01	0.15	—	0.15	0.15	—	0.15	0.00	2,358	2,358	0.04	< 0.005	—	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.08	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	87.7	87.7	< 0.005	< 0.005	—	87.8
Consumer Products	—	0.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.17	0.16	0.01	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.79	3.79	< 0.005	< 0.005	—	3.81
Total	0.18	1.31	0.09	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	91.5	91.5	< 0.005	< 0.005	—	91.6

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.43	3.63	7.06	0.35	0.01	—	18.4
Hotel	—	—	—	—	—	—	—	—	—	—	—	17.3	17.2	34.5	1.78	0.04	—	91.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.7	20.8	41.6	2.13	0.05	—	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	3.43	3.63	7.06	0.35	0.01	—	18.4
Hotel	—	—	—	—	—	—	—	—	—	—	—	17.3	17.2	34.5	1.78	0.04	—	91.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.7	20.8	41.6	2.13	0.05	—	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.57	0.60	1.17	0.06	< 0.005	—	3.04
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.86	2.85	5.72	0.29	0.01	—	15.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.43	3.45	6.89	0.35	0.01	—	18.2

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.40	2.44	4.85	0.25	0.01	—	12.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	12.1	11.8	23.9	1.24	0.03	—	63.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.5	14.2	28.7	1.49	0.04	—	76.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.40	2.44	4.85	0.25	0.01	—	12.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	12.1	11.8	23.9	1.24	0.03	—	63.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	14.5	14.2	28.7	1.49	0.04	—	76.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.40	0.40	0.80	0.04	< 0.005	—	2.11
Hotel	—	—	—	—	—	—	—	—	—	—	—	2.01	1.95	3.95	0.21	< 0.005	—	10.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.40	2.35	4.76	0.25	0.01	—	12.7

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.78	0.00	2.78	0.28	0.00	—	9.73
Hotel	—	—	—	—	—	—	—	—	—	—	—	17.4	0.00	17.4	1.74	0.00	—	60.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.2	0.00	20.2	2.02	0.00	—	70.6

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	1.68	0.00	—	58.7
Hotel	—	—	—	—	—	—	—	—	—	—	—	105	0.00	105	10.5	0.00	—	368
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	122	0.00	122	12.2	0.00	—	426
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2.78	0.00	2.78	0.28	0.00	—	9.73
Hotel	—	—	—	—	—	—	—	—	—	—	—	17.4	0.00	17.4	1.74	0.00	—	60.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.2	0.00	20.2	2.02	0.00	—	70.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	332	332
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	55.0	55.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2025	6/23/2025	5.00	60.0	—
Grading	Grading	6/24/2025	3/2/2026	5.00	180	—
Building Construction	Building Construction	6/23/2026	2/1/2027	5.00	160	—
Paving	Paving	3/3/2026	6/22/2026	5.00	80.0	—
Architectural Coating	Architectural Coating	7/7/2026	2/15/2027	5.00	160	—
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	4/1/2025	4/3/2025	5.00	2.00	—
Linear, Grading & Excavation	Linear, Grading & Excavation	4/4/2025	4/19/2025	5.00	11.0	—

Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	4/20/2025	4/29/2025	5.00	7.00	—
Linear, Paving	Linear, Paving	4/30/2025	5/5/2025	5.00	4.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43

Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	4.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	5.00	8.00	84.0	0.37
Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	3.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	5.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Linear, Drainage, Utilities, & Sub-Grade	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Drainage, Utilities, & Sub-Grade	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	4.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	5.00	8.00	84.0	0.37

Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	3.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	5.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Linear, Drainage, Utilities, & Sub-Grade	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Drainage, Utilities, & Sub-Grade	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	109	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	40.8	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	21.9	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	15.0	14.3	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	8.80	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	47.5	14.3	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	8.80	HHDT,MHDT
Linear, Grading & Excavation	Hauling	47.8	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	50.0	14.3	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	8.80	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	14.3	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	8.80	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2

Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	109	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	40.8	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	21.9	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	15.0	14.3	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	8.80	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT

Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	47.5	14.3	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	8.80	HHDT,MHDT
Linear, Grading & Excavation	Hauling	47.8	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	50.0	14.3	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	8.80	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	14.3	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	8.80	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	63,504	21,168	318,540	106,180	21,432

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	90.0	0.00	—
Grading	—	—	540	0.00	—
Paving	0.00	0.00	0.00	0.00	11.9
Linear, Grubbing & Land Clearing	—	—	3.11	0.00	—
Linear, Grading & Excavation	1,146	3,061	3.11	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	3.11	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.62	0%
Hotel	0.00	0%
Parking Lot	4.50	100%
Other Asphalt Surfaces	3.70	100%
Road Widening	1.50	100%
Bridge/Overpass Construction	0.03	100%
User Defined Linear	1.58	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2025	147	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	536	536	536	195,611	1,576	1,576	1,576	575,077
Hotel	1,574	1,574	1,574	574,335	4,909	4,909	4,909	1,791,948
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	536	536	536	195,611	1,576	1,576	1,576	575,077
Hotel	1,574	1,574	1,574	574,335	4,909	4,909	4,909	1,791,948
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	20
Gas Fireplaces	56
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Hotel	—
Wood Fireplaces	0
Gas Fireplaces	56
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	300

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	20
Gas Fireplaces	56
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	0
Hotel	—
Wood Fireplaces	0
Gas Fireplaces	56
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	300

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
63504	21,168	318,540	106,180	21,432

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	477,440	204	0.0330	0.0040	1,629,041
Hotel	1,301,353	204	0.0330	0.0040	6,786,387
Parking Lot	171,714	204	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	379,213	204	0.0330	0.0040	1,482,817
Hotel	1,017,663	204	0.0330	0.0040	6,209,504
Parking Lot	137,371	204	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,791,157	550,304
Hotel	9,030,570	1,567,322
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	1,253,810	275,152
Hotel	6,321,399	783,661
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	31.2	—
Hotel	195	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	31.2	—
Hotel	195	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0

Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	Land use adjustments were made based on project-specific data provided by the project applicant.
Construction: Construction Phases	Phase timing adjustments were made based on project-specific data provided by the project applicant. Based on typical construction practices, architectural coating assumed to start two weeks after the start of building construction and last for the same number of days.
Construction: Off-Road Equipment	Adjustments made to linear off-road equipment assumptions to account for "user defined linear" land use and based on standard industry practice.
Construction: On-Road Fugitive Dust	All roads in project area are paved.
Construction: Architectural Coatings	Based on guidance from EDCAQMD and in compliance with Rule 215.
Operations: Vehicle Data	Trip Generation and VMT consistent with project-specific data from T. Kear Transportation.
Operations: Hearths	All cottages would include a natural gas fireplace.
Operations: Architectural Coatings	Based on guidance from EDCAQMD and in compliance with Rule 215.
Operations: Road Dust	All roads in project area are paved.

Town and Country - Program Study Area Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Town and Country - Program Study Area
Construction Start Date	4/1/2027
Operational Year	2029
Lead Agency	El Dorado County
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	10.4
Location	38.658153667821736, -121.02894169320967
County	El Dorado-Mountain County
City	Unincorporated
Air District	El Dorado County AQMD
Air Basin	Mountain Counties
TAZ	413
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Strip Mall	90.0	1000sqft	2.40	90,000	14,413	—	—	—
Retirement Community	150	Dwelling Unit	4.61	159,000	33,212	—	381	—
Apartments Mid Rise	552	Dwelling Unit	20.0	529,920	140,373	—	1,402	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-1	Buildings Exceed 2019 Title 24 Building Envelope Energy Efficiency Standards
Energy	E-10-A	Establish Onsite Renewable Energy Systems: Generic
Water	W-7	Adopt a Water Conservation Strategy

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.51	36.3	28.0	50.2	0.06	1.17	19.8	21.0	1.08	10.1	11.2	—	12,204	12,204	0.27	0.68	28.9	12,441
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.08	36.0	16.6	42.5	0.04	0.37	7.16	7.53	0.34	1.70	2.05	—	11,512	11,512	0.26	0.69	0.75	11,725
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.81	25.7	11.0	29.6	0.03	0.32	5.09	5.33	0.29	1.45	1.75	—	8,207	8,207	0.17	0.50	8.10	8,367

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51	4.69	2.01	5.40	0.01	0.06	0.93	0.97	0.05	0.27	0.32	—	1,359	1,359	0.03	0.08	1.34	1,385

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.51	36.3	28.0	50.2	0.06	1.17	19.8	21.0	1.08	10.1	11.2	—	12,204	12,204	0.27	0.68	28.9	12,441
2028	4.15	36.1	15.0	48.0	0.04	0.33	7.16	7.49	0.31	1.70	2.01	—	12,005	12,005	0.21	0.68	26.2	12,238
2029	4.01	35.8	14.2	45.8	0.04	0.31	7.16	7.46	0.28	1.70	1.98	—	11,814	11,814	0.21	0.66	23.6	12,040
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.08	36.0	16.6	42.5	0.04	0.37	7.16	7.53	0.34	1.70	2.05	—	11,512	11,512	0.26	0.69	0.75	11,725
2028	3.92	35.7	15.7	40.7	0.04	0.33	7.16	7.49	0.31	1.70	2.01	—	11,327	11,327	0.25	0.69	0.68	11,540
2029	3.80	35.5	14.8	39.0	0.04	0.31	7.16	7.46	0.28	1.70	1.98	—	11,148	11,148	0.25	0.67	0.61	11,356
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.80	9.23	9.64	17.3	0.02	0.32	4.11	4.43	0.29	1.45	1.75	—	4,341	4,341	0.12	0.19	3.33	4,405
2028	2.81	25.7	11.0	29.6	0.03	0.24	5.09	5.33	0.22	1.21	1.43	—	8,207	8,207	0.17	0.50	8.10	8,367
2029	0.87	8.90	3.35	9.02	0.01	0.07	1.63	1.70	0.06	0.39	0.45	—	2,570	2,570	0.05	0.15	2.33	2,618
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.33	1.69	1.76	3.15	< 0.005	0.06	0.75	0.81	0.05	0.27	0.32	—	719	719	0.02	0.03	0.55	729
2028	0.51	4.69	2.01	5.40	0.01	0.04	0.93	0.97	0.04	0.22	0.26	—	1,359	1,359	0.03	0.08	1.34	1,385
2029	0.16	1.62	0.61	1.65	< 0.005	0.01	0.30	0.31	0.01	0.07	0.08	—	425	425	0.01	0.02	0.39	433

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.51	36.3	28.0	50.2	0.06	1.17	19.8	21.0	1.08	10.1	11.2	—	12,204	12,204	0.27	0.68	28.9	12,441
2028	4.15	36.1	15.0	48.0	0.04	0.33	7.16	7.49	0.31	1.70	2.01	—	12,005	12,005	0.21	0.68	26.2	12,238
2029	4.01	35.8	14.2	45.8	0.04	0.31	7.16	7.46	0.28	1.70	1.98	—	11,814	11,814	0.21	0.66	23.6	12,040
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.08	36.0	16.6	42.5	0.04	0.37	7.16	7.53	0.34	1.70	2.05	—	11,512	11,512	0.26	0.69	0.75	11,725
2028	3.92	35.7	15.7	40.7	0.04	0.33	7.16	7.49	0.31	1.70	2.01	—	11,327	11,327	0.25	0.69	0.68	11,540
2029	3.80	35.5	14.8	39.0	0.04	0.31	7.16	7.46	0.28	1.70	1.98	—	11,148	11,148	0.25	0.67	0.61	11,356
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.80	9.23	9.64	17.3	0.02	0.32	4.11	4.43	0.29	1.45	1.75	—	4,341	4,341	0.12	0.19	3.33	4,405
2028	2.81	25.7	11.0	29.6	0.03	0.24	5.09	5.33	0.22	1.21	1.43	—	8,207	8,207	0.17	0.50	8.10	8,367
2029	0.87	8.90	3.35	9.02	0.01	0.07	1.63	1.70	0.06	0.39	0.45	—	2,570	2,570	0.05	0.15	2.33	2,618
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.33	1.69	1.76	3.15	< 0.005	0.06	0.75	0.81	0.05	0.27	0.32	—	719	719	0.02	0.03	0.55	729
2028	0.51	4.69	2.01	5.40	0.01	0.04	0.93	0.97	0.04	0.22	0.26	—	1,359	1,359	0.03	0.08	1.34	1,385
2029	0.16	1.62	0.61	1.65	< 0.005	0.01	0.30	0.31	0.01	0.07	0.08	—	425	425	0.01	0.02	0.39	433

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	59.0	76.9	29.6	277	0.46	0.68	37.4	38.0	0.64	9.51	10.2	514	50,823	51,337	54.7	2.49	126	53,573
Mit.	59.0	76.9	29.4	276	0.46	0.66	37.4	38.0	0.63	9.51	10.1	497	50,054	50,551	52.9	2.44	126	52,727
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	< 0.5%	3%	—	< 0.5%	3%	—	< 0.5%	3%	2%	2%	3%	2%	—	2%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	49.2	67.0	33.4	233	0.43	0.65	37.4	38.0	0.63	9.51	10.1	514	47,623	48,137	55.3	2.72	9.48	50,338
Mit.	49.1	67.0	33.1	233	0.43	0.63	37.4	38.0	0.61	9.51	10.1	497	46,853	47,351	53.5	2.67	9.48	49,491
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	< 0.5%	3%	—	< 0.5%	3%	—	< 0.5%	3%	2%	2%	3%	2%	—	2%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	51.6	69.4	32.1	245	0.44	0.66	37.1	37.8	0.63	9.45	10.1	514	48,271	48,785	55.1	2.63	58.1	51,003
Mit.	51.5	69.4	31.9	244	0.43	0.64	37.1	37.8	0.62	9.45	10.1	497	47,502	47,999	53.2	2.58	58.1	50,156
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	< 0.5%	3%	—	< 0.5%	3%	—	< 0.5%	3%	2%	2%	3%	2%	—	2%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.41	12.7	5.87	44.6	0.08	0.12	6.77	6.90	0.12	1.72	1.84	85.1	7,992	8,077	9.12	0.43	9.63	8,444
Mit.	9.41	12.7	5.83	44.6	0.08	0.12	6.77	6.89	0.11	1.72	1.84	82.4	7,864	7,947	8.82	0.43	9.63	8,304
% Reduced	< 0.5%	< 0.5%	1%	< 0.5%	< 0.5%	3%	—	< 0.5%	3%	—	< 0.5%	3%	2%	2%	3%	2%	—	2%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	54.4	52.1	26.5	231	0.44	0.43	37.4	37.8	0.41	9.51	9.92	—	45,023	45,023	2.53	2.30	120	45,892
Area	4.35	24.7	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	123	123	0.01	< 0.005	—	123
Energy	0.32	0.16	2.71	1.24	0.02	0.22	—	0.22	0.22	—	0.22	—	5,624	5,624	0.66	0.05	—	5,655
Water	—	—	—	—	—	—	—	—	—	—	—	55.8	53.2	109	5.73	0.14	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	59.0	76.9	29.6	277	0.46	0.68	37.4	38.0	0.64	9.51	10.2	514	50,823	51,337	54.7	2.49	126	53,573
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	48.9	46.3	30.7	232	0.41	0.43	37.4	37.8	0.41	9.51	9.92	—	41,945	41,945	3.09	2.53	3.11	42,779
Area	0.00	20.6	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.32	0.16	2.71	1.24	0.02	0.22	—	0.22	0.22	—	0.22	—	5,624	5,624	0.66	0.05	—	5,655
Water	—	—	—	—	—	—	—	—	—	—	—	55.8	53.2	109	5.73	0.14	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	49.2	67.0	33.4	233	0.43	0.65	37.4	38.0	0.63	9.51	10.1	514	47,623	48,137	55.3	2.72	9.48	50,338
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	49.1	46.7	29.2	222	0.42	0.43	37.1	37.6	0.41	9.45	9.86	—	42,533	42,533	2.86	2.44	51.8	43,384
Area	2.14	22.6	0.20	21.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	60.5	60.5	< 0.005	< 0.005	—	60.7
Energy	0.32	0.16	2.71	1.24	0.02	0.22	—	0.22	0.22	—	0.22	—	5,624	5,624	0.66	0.05	—	5,655
Water	—	—	—	—	—	—	—	—	—	—	—	55.8	53.2	109	5.73	0.14	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	51.6	69.4	32.1	245	0.44	0.66	37.1	37.8	0.63	9.45	10.1	514	48,271	48,785	55.1	2.63	58.1	51,003

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.96	8.52	5.34	40.5	0.08	0.08	6.77	6.85	0.07	1.72	1.80	—	7,042	7,042	0.47	0.40	8.57	7,183
Area	0.39	4.12	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	10.0	10.0	< 0.005	< 0.005	—	10.0
Energy	0.06	0.03	0.49	0.23	< 0.005	0.04	—	0.04	0.04	—	0.04	—	931	931	0.11	0.01	—	936
Water	—	—	—	—	—	—	—	—	—	—	—	9.24	8.80	18.0	0.95	0.02	—	48.5
Waste	—	—	—	—	—	—	—	—	—	—	—	75.9	0.00	75.9	7.58	0.00	—	266
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06	1.06
Total	9.41	12.7	5.87	44.6	0.08	0.12	6.77	6.90	0.12	1.72	1.84	85.1	7,992	8,077	9.12	0.43	9.63	8,444

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	54.4	52.1	26.5	231	0.44	0.43	37.4	37.8	0.41	9.51	9.92	—	45,023	45,023	2.53	2.30	120	45,892
Area	4.35	24.7	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	123	123	0.01	< 0.005	—	123
Energy	0.29	0.14	2.48	1.14	0.02	0.20	—	0.20	0.20	—	0.20	—	4,871	4,871	0.56	0.04	—	4,897
Water	—	—	—	—	—	—	—	—	—	—	—	39.1	36.8	75.8	4.01	0.10	—	205
Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	59.0	76.9	29.4	276	0.46	0.66	37.4	38.0	0.63	9.51	10.1	497	50,054	50,551	52.9	2.44	126	52,727
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	48.9	46.3	30.7	232	0.41	0.43	37.4	37.8	0.41	9.51	9.92	—	41,945	41,945	3.09	2.53	3.11	42,779
Area	0.00	20.6	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.29	0.14	2.48	1.14	0.02	0.20	—	0.20	0.20	—	0.20	—	4,871	4,871	0.56	0.04	—	4,897
Water	—	—	—	—	—	—	—	—	—	—	—	39.1	36.8	75.8	4.01	0.10	—	205

Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	49.1	67.0	33.1	233	0.43	0.63	37.4	38.0	0.61	9.51	10.1	497	46,853	47,351	53.5	2.67	9.48	49,491
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	49.1	46.7	29.2	222	0.42	0.43	37.1	37.6	0.41	9.45	9.86	—	42,533	42,533	2.86	2.44	51.8	43,384
Area	2.14	22.6	0.20	21.6	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	60.5	60.5	< 0.005	< 0.005	—	60.7
Energy	0.29	0.14	2.48	1.14	0.02	0.20	—	0.20	0.20	—	0.20	—	4,871	4,871	0.56	0.04	—	4,897
Water	—	—	—	—	—	—	—	—	—	—	—	39.1	36.8	75.8	4.01	0.10	—	205
Waste	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Total	51.5	69.4	31.9	244	0.43	0.64	37.1	37.8	0.62	9.45	10.1	497	47,502	47,999	53.2	2.58	58.1	50,156
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.96	8.52	5.34	40.5	0.08	0.08	6.77	6.85	0.07	1.72	1.80	—	7,042	7,042	0.47	0.40	8.57	7,183
Area	0.39	4.12	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	10.0	10.0	< 0.005	< 0.005	—	10.0
Energy	0.05	0.03	0.45	0.21	< 0.005	0.04	—	0.04	0.04	—	0.04	—	806	806	0.09	0.01	—	811
Water	—	—	—	—	—	—	—	—	—	—	—	6.47	6.09	12.6	0.66	0.02	—	33.9
Waste	—	—	—	—	—	—	—	—	—	—	—	75.9	0.00	75.9	7.58	0.00	—	266
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06	1.06
Total	9.41	12.7	5.83	44.6	0.08	0.12	6.77	6.89	0.11	1.72	1.84	82.4	7,864	7,947	8.82	0.43	9.63	8,304

3. Construction Emissions Details

3.1. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.63	3.05	28.0	28.3	0.05	1.17	—	1.17	1.08	—	1.08	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.53	1.55	< 0.005	0.06	—	0.06	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	1.08	1.08	—	0.55	0.55	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.97	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	189	189	< 0.005	0.01	0.63	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.55	9.55	< 0.005	< 0.005	0.02	9.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.63	3.05	28.0	28.3	0.05	1.17	—	1.17	1.08	—	1.08	—	5,298	5,298	0.21	0.04	—	5,316

Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.53	1.55	< 0.005	0.06	—	0.06	0.06	—	0.06	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	1.08	1.08	—	0.55	0.55	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.1	48.1	< 0.005	< 0.005	—	48.2
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	0.97	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	189	189	< 0.005	0.01	0.63	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.55	9.55	< 0.005	< 0.005	0.02	9.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.51	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.15	3.36	0.01	0.13	—	0.13	0.12	—	0.12	—	813	813	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	—	1.13	1.13	—	0.45	0.45	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.58	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.10	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	217	217	< 0.005	0.01	0.72	220
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.6	24.6	< 0.005	< 0.005	0.04	24.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.06	4.06	< 0.005	< 0.005	0.01	4.12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.51	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.15	3.36	0.01	0.13	—	0.13	0.12	—	0.12	—	813	813	0.03	0.01	—	816
Dust From Material Movement	—	—	—	—	—	—	1.13	1.13	—	0.45	0.45	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.58	0.61	< 0.005	0.02	—	0.02	0.02	—	0.02	—	135	135	0.01	< 0.005	—	135
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	1.10	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	217	217	< 0.005	0.01	0.72	220
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.6	24.6	< 0.005	< 0.005	0.04	24.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.06	4.06	< 0.005	< 0.005	0.01	4.12
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.27	2.48	3.42	0.01	0.09	—	0.09	0.08	—	0.08	—	633	633	0.03	0.01	—	635
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.62	< 0.005	0.02	—	0.02	0.01	—	0.01	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.54	2.34	1.56	29.5	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,784	5,784	0.09	0.20	19.3	5,867
Vendor	0.09	0.06	3.79	0.69	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,733	2,733	< 0.005	0.41	5.65	2,861
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.19	2.12	1.99	23.1	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,207	5,207	0.13	0.22	0.50	5,275
Vendor	0.09	0.06	4.00	0.73	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,733	2,733	< 0.005	0.41	0.15	2,856
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.56	0.47	6.21	0.00	0.00	1.42	1.42	0.00	0.33	0.33	—	1,405	1,405	0.03	0.06	2.21	1,425
Vendor	0.02	0.02	1.05	0.19	< 0.005	< 0.005	0.18	0.18	< 0.005	0.05	0.05	—	722	722	< 0.005	0.11	0.65	755
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.13	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	0.01	0.01	0.37	236
Vendor	< 0.005	< 0.005	0.19	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	120	120	< 0.005	0.02	0.11	125
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.27	2.48	3.42	0.01	0.09	—	0.09	0.08	—	0.08	—	633	633	0.03	0.01	—	635
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.62	< 0.005	0.02	—	0.02	0.01	—	0.01	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.54	2.34	1.56	29.5	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,784	5,784	0.09	0.20	19.3	5,867
Vendor	0.09	0.06	3.79	0.69	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,733	2,733	< 0.005	0.41	5.65	2,861
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.19	2.12	1.99	23.1	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,207	5,207	0.13	0.22	0.50	5,275

Vendor	0.09	0.06	4.00	0.73	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,733	2,733	< 0.005	0.41	0.15	2,856
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.58	0.56	0.47	6.21	0.00	0.00	1.42	1.42	0.00	0.33	0.33	—	1,405	1,405	0.03	0.06	2.21	1,425
Vendor	0.02	0.02	1.05	0.19	< 0.005	< 0.005	0.18	0.18	< 0.005	0.05	0.05	—	722	722	< 0.005	0.11	0.65	755
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	1.13	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	0.01	0.01	0.37	236
Vendor	< 0.005	< 0.005	0.19	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	120	120	< 0.005	0.02	0.11	125
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.29	2.24	1.38	27.7	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,671	5,671	0.08	0.20	17.6	5,752
Vendor	0.09	0.06	3.57	0.66	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,669	2,669	< 0.005	0.41	5.11	2,797
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.10	1.88	1.79	21.6	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,106	5,106	0.12	0.22	0.46	5,173
Vendor	0.09	0.06	3.77	0.69	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,669	2,669	< 0.005	0.41	0.13	2,792
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.51	1.46	1.13	15.9	0.00	0.00	3.84	3.84	0.00	0.90	0.90	—	3,736	3,736	0.08	0.15	5.43	3,789
Vendor	0.06	0.04	2.67	0.48	0.01	0.01	0.48	0.50	0.01	0.13	0.14	—	1,912	1,912	< 0.005	0.30	1.58	2,001
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.27	0.21	2.90	0.00	0.00	0.70	0.70	0.00	0.16	0.16	—	619	619	0.01	0.03	0.90	627

Vendor	0.01	0.01	0.49	0.09	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	316	316	< 0.005	0.05	0.26	331
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.29	2.24	1.38	27.7	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,671	5,671	0.08	0.20	17.6	5,752
Vendor	0.09	0.06	3.57	0.66	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,669	2,669	< 0.005	0.41	5.11	2,797
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.10	1.88	1.79	21.6	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,106	5,106	0.12	0.22	0.46	5,173
Vendor	0.09	0.06	3.77	0.69	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,669	2,669	< 0.005	0.41	0.13	2,792
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.51	1.46	1.13	15.9	0.00	0.00	3.84	3.84	0.00	0.90	0.90	—	3,736	3,736	0.08	0.15	5.43	3,789
Vendor	0.06	0.04	2.67	0.48	0.01	0.01	0.48	0.50	0.01	0.13	0.14	—	1,912	1,912	< 0.005	0.30	1.58	2,001
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.27	0.21	2.90	0.00	0.00	0.70	0.70	0.00	0.16	0.16	—	619	619	0.01	0.03	0.90	627
Vendor	0.01	0.01	0.49	0.09	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	316	316	< 0.005	0.05	0.26	331
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.93	2.90	0.01	0.06	—	0.06	0.06	—	0.06	—	539	539	0.02	< 0.005	—	541
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	89.3	89.3	< 0.005	< 0.005	—	89.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.21	2.01	1.18	26.0	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,576	5,576	0.08	0.20	15.8	5,654
Vendor	0.09	0.06	3.36	0.64	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,593	2,593	< 0.005	0.40	4.56	2,715
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.03	1.81	1.60	20.2	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,021	5,021	0.12	0.22	0.41	5,088

Vendor	0.09	0.06	3.54	0.67	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,593	2,593	< 0.005	0.40	0.12	2,711
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	0.35	4.65	0.00	0.00	1.21	1.21	0.00	0.28	0.28	—	1,154	1,154	0.02	0.05	1.54	1,170
Vendor	0.02	0.01	0.79	0.15	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.04	—	584	584	< 0.005	0.09	0.44	611
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.85	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	191	191	< 0.005	0.01	0.25	194
Vendor	< 0.005	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.6	96.6	< 0.005	0.01	0.07	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.93	2.90	0.01	0.06	—	0.06	0.06	—	0.06	—	539	539	0.02	< 0.005	—	541
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	89.3	89.3	< 0.005	< 0.005	—	89.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.21	2.01	1.18	26.0	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,576	5,576	0.08	0.20	15.8	5,654
Vendor	0.09	0.06	3.36	0.64	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,593	2,593	< 0.005	0.40	4.56	2,715
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.03	1.81	1.60	20.2	0.00	0.00	5.40	5.40	0.00	1.27	1.27	—	5,021	5,021	0.12	0.22	0.41	5,088
Vendor	0.09	0.06	3.54	0.67	0.02	0.02	0.68	0.70	0.02	0.18	0.20	—	2,593	2,593	< 0.005	0.40	0.12	2,711
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.41	0.35	4.65	0.00	0.00	1.21	1.21	0.00	0.28	0.28	—	1,154	1,154	0.02	0.05	1.54	1,170
Vendor	0.02	0.01	0.79	0.15	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.04	—	584	584	< 0.005	0.09	0.44	611
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.85	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	191	191	< 0.005	0.01	0.25	194

Vendor	< 0.005	< 0.005	0.14	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.6	96.6	< 0.005	0.01	0.07	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.95	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	145
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.83	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	162	162	< 0.005	0.01	0.54	165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02	14.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.37	2.37	< 0.005	< 0.005	< 0.005	2.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.67	0.95	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	145
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.83	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	162	162	< 0.005	0.01	0.54	165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.02	14.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.37	2.37	< 0.005	< 0.005	< 0.005	2.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.20	0.27	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Architectural Coatings	—	7.64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.23	5.23	< 0.005	< 0.005	—	5.25
Architectural Coatings	—	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.47	0.31	5.90	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,157	1,157	0.02	0.04	3.87	1,173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.42	0.40	4.61	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,041	1,041	0.03	0.04	0.10	1,055
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.08	1.11	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	252	252	0.01	0.01	0.40	255
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	41.7	41.7	< 0.005	< 0.005	0.07	42.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.20	0.27	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.6	31.6	< 0.005	< 0.005	—	31.7
Architectural Coatings	—	7.64	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.23	5.23	< 0.005	< 0.005	—	5.25
Architectural Coatings	—	1.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.47	0.31	5.90	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,157	1,157	0.02	0.04	3.87	1,173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.42	0.40	4.61	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,041	1,041	0.03	0.04	0.10	1,055
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.08	1.11	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	252	252	0.01	0.01	0.40	255
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	41.7	41.7	< 0.005	< 0.005	0.07	42.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.58	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.6	95.6	< 0.005	< 0.005	—	96.0
Architectural Coatings	—	23.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Architectural Coatings	—	4.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.28	5.55	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,134	1,134	0.02	0.04	3.51	1,150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.36	4.33	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,021	1,021	0.02	0.04	0.09	1,035
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.29	0.23	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	747	747	0.02	0.03	1.09	758
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.58	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	124	124	< 0.005	0.01	0.18	125
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.58	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.6	95.6	< 0.005	< 0.005	—	96.0
Architectural Coatings	—	23.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Architectural Coatings	—	4.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.28	5.55	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,134	1,134	0.02	0.04	3.51	1,150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.36	4.33	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,021	1,021	0.02	0.04	0.09	1,035
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.29	0.23	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	747	747	0.02	0.03	1.09	758
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.58	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	124	124	< 0.005	0.01	0.18	125
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.7	33.7	< 0.005	< 0.005	—	33.8
Architectural Coatings	—	8.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.58	5.58	< 0.005	< 0.005	—	5.60
Architectural Coatings	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.40	0.24	5.20	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,115	1,115	0.02	0.04	3.17	1,131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.36	0.32	4.05	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,004	1,004	0.02	0.04	0.08	1,018
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.04	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	259	259	0.01	0.01	0.35	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.9	42.9	< 0.005	< 0.005	0.06	43.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2029) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	32.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.20	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.7	33.7	< 0.005	< 0.005	—	33.8
Architectural Coatings	—	8.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.58	5.58	< 0.005	< 0.005	—	5.60
Architectural Coatings	—	1.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.40	0.24	5.20	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,115	1,115	0.02	0.04	3.17	1,131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.36	0.32	4.05	0.00	0.00	1.08	1.08	0.00	0.25	0.25	—	1,004	1,004	0.02	0.04	0.08	1,018
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.04	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	259	259	0.01	0.01	0.35	262
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.9	42.9	< 0.005	< 0.005	0.06	43.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	36.1	34.6	17.8	155	0.30	0.29	25.2	25.5	0.27	6.42	6.70	—	30,375	30,375	1.69	1.54	81.0	30,958
Retirement Community	2.11	2.03	1.01	8.80	0.02	0.02	1.40	1.42	0.02	0.36	0.37	—	1,695	1,695	0.10	0.09	4.51	1,728
Apartments Mid Rise	16.1	15.5	7.70	67.2	0.13	0.12	10.7	10.9	0.12	2.73	2.85	—	12,953	12,953	0.74	0.67	34.4	13,206
Total	54.4	52.1	26.5	231	0.44	0.43	37.4	37.8	0.41	9.51	9.92	—	45,023	45,023	2.53	2.30	120	45,892
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	32.5	30.7	20.6	155	0.28	0.29	25.2	25.5	0.27	6.42	6.70	—	28,296	28,296	2.06	1.70	2.10	28,855

Retirement Commun	1.90	1.80	1.17	8.87	0.02	0.02	1.40	1.42	0.02	0.36	0.37	—	1,580	1,580	0.12	0.10	0.12	1,611
Apartments Mid Rise	14.5	13.7	8.92	67.8	0.12	0.12	10.7	10.9	0.12	2.73	2.85	—	12,070	12,070	0.91	0.74	0.89	12,313
Total	48.9	46.3	30.7	232	0.41	0.43	37.4	37.8	0.41	9.51	9.92	—	41,945	41,945	3.09	2.53	3.11	42,779
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	5.96	5.66	3.58	27.1	0.05	0.05	4.57	4.63	0.05	1.16	1.21	—	4,750	4,750	0.32	0.27	5.79	4,845
Retirement Community	0.35	0.33	0.20	1.54	< 0.005	< 0.005	0.25	0.26	< 0.005	0.06	0.07	—	265	265	0.02	0.02	0.32	271
Apartments Mid Rise	2.66	2.53	1.55	11.8	0.02	0.02	1.95	1.97	0.02	0.50	0.52	—	2,026	2,026	0.14	0.12	2.46	2,067
Total	8.96	8.52	5.34	40.5	0.08	0.08	6.77	6.85	0.07	1.72	1.80	—	7,042	7,042	0.47	0.40	8.57	7,183

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	36.1	34.6	17.8	155	0.30	0.29	25.2	25.5	0.27	6.42	6.70	—	30,375	30,375	1.69	1.54	81.0	30,958
Retirement Community	2.11	2.03	1.01	8.80	0.02	0.02	1.40	1.42	0.02	0.36	0.37	—	1,695	1,695	0.10	0.09	4.51	1,728
Apartments Mid Rise	16.1	15.5	7.70	67.2	0.13	0.12	10.7	10.9	0.12	2.73	2.85	—	12,953	12,953	0.74	0.67	34.4	13,206
Total	54.4	52.1	26.5	231	0.44	0.43	37.4	37.8	0.41	9.51	9.92	—	45,023	45,023	2.53	2.30	120	45,892

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	32.5	30.7	20.6	155	0.28	0.29	25.2	25.5	0.27	6.42	6.70	—	28,296	28,296	2.06	1.70	2.10	28,855
Retirement Community	1.90	1.80	1.17	8.87	0.02	0.02	1.40	1.42	0.02	0.36	0.37	—	1,580	1,580	0.12	0.10	0.12	1,611
Apartments Mid Rise	14.5	13.7	8.92	67.8	0.12	0.12	10.7	10.9	0.12	2.73	2.85	—	12,070	12,070	0.91	0.74	0.89	12,313
Total	48.9	46.3	30.7	232	0.41	0.43	37.4	37.8	0.41	9.51	9.92	—	41,945	41,945	3.09	2.53	3.11	42,779
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	5.96	5.66	3.58	27.1	0.05	0.05	4.57	4.63	0.05	1.16	1.21	—	4,750	4,750	0.32	0.27	5.79	4,845
Retirement Community	0.35	0.33	0.20	1.54	< 0.005	< 0.005	0.25	0.26	< 0.005	0.06	0.07	—	265	265	0.02	0.02	0.32	271
Apartments Mid Rise	2.66	2.53	1.55	11.8	0.02	0.02	1.95	1.97	0.02	0.50	0.52	—	2,026	2,026	0.14	0.12	2.46	2,067
Total	8.96	8.52	5.34	40.5	0.08	0.08	6.77	6.85	0.07	1.72	1.80	—	7,042	7,042	0.47	0.40	8.57	7,183

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	438	438	0.07	0.01	—	443

Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	373	373	0.06	0.01	—	376
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,394	1,394	0.23	0.03	—	1,407
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,204	2,204	0.36	0.04	—	2,226
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	438	438	0.07	0.01	—	443
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	373	373	0.06	0.01	—	376
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,394	1,394	0.23	0.03	—	1,407
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,204	2,204	0.36	0.04	—	2,226
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	72.5	72.5	0.01	< 0.005	—	73.3
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	61.7	61.7	0.01	< 0.005	—	62.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	231	231	0.04	< 0.005	—	233
Total	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.06	0.01	—	369

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	334	334	0.05	0.01	—	337
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.05	0.01	—	298
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,103	1,103	0.18	0.02	—	1,114
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,733	1,733	0.28	0.03	—	1,750
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	334	334	0.05	0.01	—	337
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	295	295	0.05	0.01	—	298
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,103	1,103	0.18	0.02	—	1,114
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,733	1,733	0.28	0.03	—	1,750
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	55.3	55.3	0.01	< 0.005	—	55.8
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	48.9	48.9	0.01	< 0.005	—	49.4
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	183	183	0.03	< 0.005	—	184
Total	—	—	—	—	—	—	—	—	—	—	—	—	287	287	0.05	0.01	—	290

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	249	249	0.02	< 0.005	—	249
Retirement Community	0.07	0.03	0.58	0.24	< 0.005	0.05	—	0.05	0.05	—	0.05	—	731	731	0.06	< 0.005	—	733
Apartments Mid Rise	0.22	0.11	1.92	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,440	2,440	0.22	< 0.005	—	2,447
Total	0.32	0.16	2.71	1.24	0.02	0.22	—	0.22	0.22	—	0.22	—	3,419	3,419	0.30	0.01	—	3,429
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	249	249	0.02	< 0.005	—	249
Retirement Community	0.07	0.03	0.58	0.24	< 0.005	0.05	—	0.05	0.05	—	0.05	—	731	731	0.06	< 0.005	—	733
Apartments Mid Rise	0.22	0.11	1.92	0.82	0.01	0.16	—	0.16	0.16	—	0.16	—	2,440	2,440	0.22	< 0.005	—	2,447
Total	0.32	0.16	2.71	1.24	0.02	0.22	—	0.22	0.22	—	0.22	—	3,419	3,419	0.30	0.01	—	3,429
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.2	41.2	< 0.005	< 0.005	—	41.3
Retirement Community	0.01	0.01	0.11	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	121	121	0.01	< 0.005	—	121

Apartme Mid Rise	0.04	0.02	0.35	0.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	404	404	0.04	< 0.005	—	405
Total	0.06	0.03	0.49	0.23	< 0.005	0.04	—	0.04	0.04	—	0.04	—	566	566	0.05	< 0.005	—	568

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.02	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	228
Retirement Community	0.06	0.03	0.53	0.23	< 0.005	0.04	—	0.04	0.04	—	0.04	—	674	674	0.06	< 0.005	—	676
Apartments Mid Rise	0.21	0.10	1.76	0.75	0.01	0.14	—	0.14	0.14	—	0.14	—	2,238	2,238	0.20	< 0.005	—	2,244
Total	0.29	0.14	2.48	1.14	0.02	0.20	—	0.20	0.20	—	0.20	—	3,139	3,139	0.28	0.01	—	3,147
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	0.02	0.01	0.19	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	227	227	0.02	< 0.005	—	228
Retirement Community	0.06	0.03	0.53	0.23	< 0.005	0.04	—	0.04	0.04	—	0.04	—	674	674	0.06	< 0.005	—	676
Apartments Mid Rise	0.21	0.10	1.76	0.75	0.01	0.14	—	0.14	0.14	—	0.14	—	2,238	2,238	0.20	< 0.005	—	2,244
Total	0.29	0.14	2.48	1.14	0.02	0.20	—	0.20	0.20	—	0.20	—	3,139	3,139	0.28	0.01	—	3,147
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.6	37.6	< 0.005	< 0.005	—	37.7
Retirement Community	0.01	0.01	0.10	0.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	112	112	0.01	< 0.005	—	112
Apartments Mid Rise	0.04	0.02	0.32	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	370	370	0.03	< 0.005	—	372
Total	0.05	0.03	0.45	0.21	< 0.005	0.04	—	0.04	0.04	—	0.04	—	520	520	0.05	< 0.005	—	521

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.35	4.10	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	—	123	123	0.01	< 0.005	—	123
Total	4.35	24.7	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	123	123	0.01	< 0.005	—	123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	20.6	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.39	0.37	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.0	10.0	< 0.005	< 0.005	—	10.0
Total	0.39	4.12	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	10.0	10.0	< 0.005	< 0.005	—	10.0

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	3.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.35	4.10	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	—	123	123	0.01	< 0.005	—	123
Total	4.35	24.7	0.41	43.8	< 0.005	0.03	—	0.03	0.02	—	0.02	0.00	123	123	0.01	< 0.005	—	123
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	16.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.89	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	20.6	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	3.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.39	0.37	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.0	10.0	< 0.005	< 0.005	—	10.0
Total	0.39	4.12	0.04	3.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	10.0	10.0	< 0.005	< 0.005	—	10.0

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	12.8	11.8	24.6	1.31	0.03	—	66.7
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	9.19	8.79	18.0	0.94	0.02	—	48.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	33.8	32.6	66.4	3.47	0.08	—	178
Total	—	—	—	—	—	—	—	—	—	—	—	55.8	53.2	109	5.73	0.14	—	293
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	12.8	11.8	24.6	1.31	0.03	—	66.7
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	9.19	8.79	18.0	0.94	0.02	—	48.3
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	33.8	32.6	66.4	3.47	0.08	—	178
Total	—	—	—	—	—	—	—	—	—	—	—	55.8	53.2	109	5.73	0.14	—	293
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2.11	1.95	4.07	0.22	0.01	—	11.0
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	1.52	1.46	2.98	0.16	< 0.005	—	8.00

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	5.60	5.39	11.0	0.58	0.01	—	29.5
Total	—	—	—	—	—	—	—	—	—	—	—	9.24	8.80	18.0	0.95	0.02	—	48.5

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.94	8.24	17.2	0.92	0.02	—	46.7
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	6.44	6.07	12.5	0.66	0.02	—	33.7
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	23.7	22.5	46.1	2.43	0.06	—	124
Total	—	—	—	—	—	—	—	—	—	—	—	39.1	36.8	75.8	4.01	0.10	—	205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.94	8.24	17.2	0.92	0.02	—	46.7
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	6.44	6.07	12.5	0.66	0.02	—	33.7
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	23.7	22.5	46.1	2.43	0.06	—	124
Total	—	—	—	—	—	—	—	—	—	—	—	39.1	36.8	75.8	4.01	0.10	—	205
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.48	1.36	2.84	0.15	< 0.005	—	7.73
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	1.07	1.01	2.07	0.11	< 0.005	—	5.59
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	3.92	3.72	7.64	0.40	0.01	—	20.6
Total	—	—	—	—	—	—	—	—	—	—	—	6.47	6.09	12.6	0.66	0.02	—	33.9

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	50.9	0.00	50.9	5.09	0.00	—	178
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	187	0.00	187	18.7	0.00	—	656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	220	0.00	220	22.0	0.00	—	770
Total	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	50.9	0.00	50.9	5.09	0.00	—	178

Retirement	—	—	—	—	—	—	—	—	—	—	—	187	0.00	187	18.7	0.00	—	656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	220	0.00	220	22.0	0.00	—	770
Total	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.43	0.00	8.43	0.84	0.00	—	29.5
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	109
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	36.4	0.00	36.4	3.64	0.00	—	127
Total	—	—	—	—	—	—	—	—	—	—	—	75.9	0.00	75.9	7.58	0.00	—	266

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	50.9	0.00	50.9	5.09	0.00	—	178
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	187	0.00	187	18.7	0.00	—	656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	220	0.00	220	22.0	0.00	—	770
Total	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	50.9	0.00	50.9	5.09	0.00	—	178
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	187	0.00	187	18.7	0.00	—	656
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	220	0.00	220	22.0	0.00	—	770
Total	—	—	—	—	—	—	—	—	—	—	—	458	0.00	458	45.8	0.00	—	1,604
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	8.43	0.00	8.43	0.84	0.00	—	29.5
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	31.0	0.00	31.0	3.10	0.00	—	109
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	36.4	0.00	36.4	3.64	0.00	—	127
Total	—	—	—	—	—	—	—	—	—	—	—	75.9	0.00	75.9	7.58	0.00	—	266

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56

Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.80	3.80
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.80	3.80
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.63
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06	1.06

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.80	3.80
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.56	0.56
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.02	2.02
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.80	3.80
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.37	6.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.09
Retirement Community	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.33	0.33
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.63	0.63
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.06	1.06

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2027	4/28/2027	5.00	20.0	—
Grading	Grading	4/29/2027	6/30/2027	5.00	45.0	—
Building Construction	Building Construction	8/19/2027	4/25/2029	5.00	440	—
Paving	Paving	7/1/2027	8/18/2027	5.00	35.0	—
Architectural Coating	Architectural Coating	9/2/2027	5/9/2029	5.00	440	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	534	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	89.8	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	107	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	534	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	89.8	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	107	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	1,395,063	465,021	135,000	45,000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	30.0	0.00	—
Grading	—	—	135	0.00	—
Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Retirement Community	—	0%
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	7,973	7,973	7,973	2,910,182	35,410	35,410	35,410	12,924,604
Retirement Community	471	471	471	171,915	1,971	1,971	1,971	719,422
Apartments Mid Rise	3,599	3,599	3,599	1,313,650	15,061	15,061	15,061	5,497,303

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Strip Mall	7,973	7,973	7,973	2,910,182	35,410	35,410	35,410	12,924,604
Retirement Community	471	471	471	171,915	1,971	1,971	1,971	719,422
Apartments Mid Rise	3,599	3,599	3,599	1,313,650	15,061	15,061	15,061	5,497,303

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)

Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	150
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	552

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Retirement Community	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	150
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	552

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
1395063	465,021	135,000	45,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Strip Mall	784,087	204	0.0330	0.0040	776,304
Retirement Community	666,730	204	0.0330	0.0040	2,279,870
Apartments Mid Rise	2,493,832	204	0.0330	0.0040	7,613,456

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Strip Mall	597,368	204	0.0330	0.0040	708,191
Retirement Community	528,717	204	0.0330	0.0040	2,103,012
Apartments Mid Rise	1,974,069	204	0.0330	0.0040	6,982,192

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	6,666,527	154,680
Retirement Community	4,797,743	435,633
Apartments Mid Rise	17,655,692	1,841,220

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Strip Mall	4,666,569	77,340
Retirement Community	3,358,420	217,816
Apartments Mid Rise	12,358,985	920,610

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	94.5	—
Retirement Community	348	—
Apartments Mid Rise	408	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Strip Mall	94.5	—
Retirement Community	348	—
Apartments Mid Rise	408	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Retirement Community	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Retirement Community	Household refrigerators and/or freezers	R-134a	1,430	0.22	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

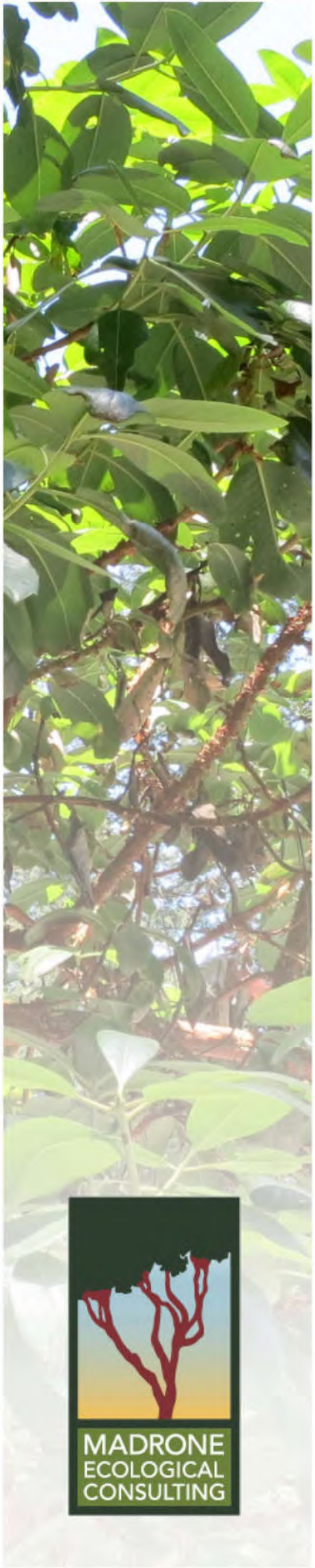
5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	Land use assumptions based on information provided by project applicant.
Construction: Construction Phases	Demolition not required. Based on typical construction practices, architectural coating assumed to start two weeks after the start of building construction and last for the same number of days
Construction: On-Road Fugitive Dust	All roads in project area are paved.
Construction: Architectural Coatings	Based on EDCAQMD guidance and compliance with Rule 215.
Operations: Vehicle Data	Trip Generation and VMT consistent with project-specific data from T. Kear Transportation.
Operations: Road Dust	All roads in project area are paved.
Operations: Hearths	Fireplaces not proposed.
Operations: Architectural Coatings	Based on EDCAQMD guidance and consistent with Rule 215.

APPENDIX E



Biological Resources Assessment

Town & Country Village El Dorado

El Dorado County, California
July 2024

MADRONE ECOLOGICAL CONSULTING

Prepared for:

Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

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1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) conducted for the Town & Country Village El Dorado Project (Project). The Project Area is comprised of the area currently proposed for development (the Project Development Area), two off-site sewer alternatives (Alternative 1 and Alternative 2), and two off-site waterline alternatives (Alternative 1 and Alternative 2) (**Figures 1 and 2**). The Study Area for this document is the Project Area plus the Program Study Area (PSA), as shown on **Figure 2**[1]. The PSA is an area adjacent to (and partially enclosed by) the Project Development Area that may be developed at some point in the future. Within this document, impacts within the Project Area are analyzed in detail at the "project level", while potential impacts that may occur within the PSA are analyzed more broadly at the "program level".

The Study Area is located north of Interstate Highway 50, largely south of Stone Hill Road, east of Silva Valley Parkway, and largely west of Morrison Road in western El Dorado County, California (**Figure 1**). The Development Area is located generally north of Country Club Drive and east of Bass Lake Road. The approximately 81.8-acre Study Area is located in portions of Section 1, Township 9 North, Range 8 East and Sections 5-7, Township 9 North, Range 9 East (MDBM) of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

1.1 Project Description

The Project includes development of two 150-room hotels, retail services, two restaurants, a museum, an event center, recreational amenities, associated parking, 56 residential cottages for employee housing, and an additional 56 residential cottages that may be rented on a daily or extended stay basis. Additionally, the Project would involve construction of internal roadways and a new Class I bicycle path within the Project Development Area, and off-site sewer and water connections, as detailed below in **Sections 1.2 and 1.3**. A preliminary site plan for the Project as analyzed in this document is included as **Attachment A.**

1.2 Off-Site Sewer Alternatives

Both public and private sewer systems are being considered for providing wastewater service to the Project. The public system would require the construction of an approximately 10,510-foot gravity trunk sewer main connecting the development to the existing 18-inch South Uplands Trunk Sewer-Gravity Main located in Russi Ranch Drive, approximately 1.6 miles to the west. Two alignment alternatives for this public sewer connection will be evaluated in this document, as shown in **Figure 2**. The two alternatives share the same alignment from the Russi Ranch Road on the west end, east across Carson Creek and up onto Old Bass Lake Road, where they split, with Alternative 1 continuing along Old Bass Lake Road, and Alternative 2 heading north to the intersection of Bass Lake Road and Country Club Drive. Both alternatives involve a crossing of

[1] A portion of Waterline Alternative 2 has been analyzed under a separate CEQA document, and as a result, that portion of Waterline Alternative 2 is not included in the Study Area for this document. This is shown graphically on **Figure 2**.

Carson Creek, which would be accomplished with a pipe suspended over the creek. No direct impacts to Carson Creek are anticipated, but there will be construction impacts adjacent to the channel.

1.3 Off-Site Waterline Alignment Alternatives

Two waterline alternatives have been proposed, as shown in **Figure 2**. The two alternatives share the same alignment from the intersection of Bass Lake Road and Country Club Drive and east. Where they differ, Waterline Alternative 1 would be within the paved roadbed of the existing Bass Lake Road, and Waterline Alternative 2 would be within a future proposed bike trail just east of Bass Lake Road. Waterline Alternative 2 has been previously analyzed under a different CEQA document, and therefore, Waterline Alternative 2, while shown for clarity on **Figure 2**, is not included in our Study Area and will not be analyzed or mentioned further in this document.

1.4 Program Study Area

Potential future development within the PSA could include additional hotels, medical facilities, senior housing, townhomes and cottages, and/or other uses allowed by the proposed zoning districts. Temporary impacts within the Project Development Area may ultimately be permanently impacted during future development within the PSA, but are included in the Project Development Area for purposes of impact analysis in this document.

2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this assessment of biological resources.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed wildlife species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take." In addition, FESA prohibits malicious damage or destruction of listed plant species on federal lands or in association with federal actions, and the removal, cutting, digging up, damage, or destruction of listed plant species in violation of state law. FESA does not afford any protections to federally listed plant species that are not also included on a state endangered species list on private lands with no associated federal action.

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of dredged or fill material into waters of the United States, including some wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. As of the date of this document, waters of the United States (waters of the U.S.) are defined as follows (40 CFR 120.2):

1. Waters which are:
    i. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    ii. The territorial seas; or
    iii. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under item (5) below;
3. Tributaries of waters identified in items (1) or (2) above that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    i. Waters identified in item (1) of this section; or
    ii. Relatively permanent, standing or continuously flowing bodies of water identified in items (2) or (3) above and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in items (1) or (3) above.

Under the current definition of waters of the U.S., "adjacent" means *having a continuous surface connection*.

Waters subject to regulation under Section 404 are referred to as "jurisdictional waters".

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter,

transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. The USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g. tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e. that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code Section 2081).

2.2.3 California Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code, § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.4 California Species of Special Concern

The Species of Special Concern (SSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered or meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.6 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.7 California Water Code, Porter-Cologne Act

Waters that are not considered waters of the U.S. may be considered waters of the State of California (waters of the State) under the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the state of California.

2.2.8 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes includes those that are dry for periods of time as well as those that flow year round. If notification is required and CDFW believes the proposed activity is likely to substantially adversely affect fish and wildlife resources, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.9 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.2.10 California Fish and Game Code, Section 3511, 4700, 5050, and 5515 – Fully Protected Species

California Fish and Game Code identifies "fully protected species" in sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). The state initially identified fully protected species in the 1960s to identify and provide additional protection to animals that were rare or faced possible extinction. Subsequent passage of the California Endangered Species Act has offered additional protection to some fully protected species.

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

2.3 Local Regulations

2.3.1 El Dorado County Zoning Ordinance, Protection of Wetlands and Sensitive Riparian Habitat

The El Dorado County Zoning Ordinance Site Planning and Project Design Standards for setback requirements (Section 130.30.050) establishes standards for avoidance and minimization of impacts to wetlands and sensitive riparian habitat. This section of the Ordinance applies to discretionary projects adjacent to perennial streams, intermittent streams, wetlands, or any sensitive riparian habitat within El Dorado County (County). The Ordinance requires new development to avoid or minimize impacts to these habitat types. If the habitats cannot be avoided, the County requires an assessment that establishes appropriate buffers to reduce impacts to a less than significant level and mitigation consistent with state or federal permit requirements. The County has established standardized setbacks of 25 feet from any intermittent stream, wetland or sensitive riparian habitat, or a distance of 50 feet from any perennial lake, river or stream. Storm drain, irrigation outflow structures, and bridges are permitted as long as they are approved by the County as part of the development process.

2.3.2 El Dorado County Zoning Ordinance, Oak Resources Conservation

Chapter 130.39 of the El Dorado County Zoning Ordinance requires mitigation for impacts to native oak trees in all portions of unincorporated El Dorado County below 4,000 feet in elevation. This Chapter requires documentation of all oak woodlands, individual native oak trees, and heritage native oak trees (collectively, Oak Resources) on a site if any oak impacts are proposed on that site. Furthermore, an *Oak Resources Technical Report* must be prepared as stipulated in the Chapter. Mitigation for impacts to Oak Resources may be accomplished through payment of an in-lieu fee to the Oak Woodland Conservation Fund, conservation using a deed restriction or conservation easement, and/or replacement planting.

2.3.3 El Dorado County Ecological Preserve Fee Ordinance

Chapter 130.71 of the El Dorado County Code requires mitigation or payment of a fee in-lieu of mitigation for development of any property within Mitigation Areas 0, 1, or 2. This fee is commonly referred to as the Rare Plant Mitigation fee, and is to be paid in full upon issuance of a building permit for all new developments within the County. "Mitigation Area 0" means lands within the Gabbro Soils Rare Plant Ecological Preserve, as shown on maps on file in the Department, adopted by Ordinance 4500. "Mitigation Area 1" means lands outside of Mitigation Area 0 but within the area described as the "rare soils study area" on the same map, and "Mitigation Area 2" means lands outside of Mitigation Areas 0 and 1 but within the El Dorado Irrigation District service area, excluding those lots served by wells. The Study Area is not located within any of the mitigation areas, and as such, this ordinance does not apply to this Project.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2024) query of the Study Area and all areas within 5 miles of the Study Area (**Figures 3 and 4**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2024) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2024) query of the "Clarksville, California" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**); and
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2024).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the Study Area.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG (WBWG 2024); and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
  - CRPR 1A: Plants presumed extinct.
  - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
  - CRPR 2A: Plants extirpated in California, but common elsewhere.

- CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
- CRPR 3: Plants about which the CNPS needs more information – a review list.

3.2 Field Surveys

Madrone senior biologists Daria Snider and Bonnie Peterson conducted field surveys of various portions of the Study Area on 13 April 2022, 27 September 2023, and 6 October 2023 to assess the suitability of habitats within the Study Area to support special-status species and to conduct the protocol-level surveys listed below. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and Evens 2009), and plant taxonomy was based on the nomenclature in the Jepson eFlora (Jepson Flora Project 2024). A list of all wildlife species observed during field surveys is included as **Attachment D**.

The following surveys have been or are in the process of being performed within the Study Area:

- Special-status plant surveys of the entire Study Area were completed on several dates in 2022, 2023, and 2024 in accordance with the U.S. Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000), California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018a), and the CNPS *Botanical Survey Guidelines* (CNPS 2001). The report for this survey is included as **Attachment E**.
- An aquatic resources delineation of the entire Study Area was conducted on 27 September and 6 October 2023 in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (USACE 2016). The report for this survey is included as **Attachment F**. This report was submitted to the USACE for verification, and during the verification process, USACE staff requested that some additional acreage be added to the map. We have incorporated those changes into this report, and as a result, the acreage discussed in **Section 4.2** and shown on the maps throughout this document is somewhat greater than that summarized in the report in **Attachment F**.
- An oak resources inventory was conducted throughout the Study Area on 27 September and 6 October 2023 as required by El Dorado County's *Oak Resources Management Plan* (ORMP) (EDC 2017). The Oak Resources Technical Report is included as **Attachment G**.

4.0 EXISTING CONDITIONS

The Study Area is largely comprised of ungrazed Annual Brome Grasslands with widely scattered oak trees (**Figure 5**). Oak Woodlands occur in the vicinity of the intermittent drainage and perennial Carson Creek. The intermittent drainage is located in the northern portion of the Study Area, and Carson Creek is in the

western portion. Carson Creek runs over bedrock, and the adjacent slopes are quite steep, restricting the extent of riparian vegetation, which consists of a narrow band of Arroyo Willow Riparian Scrub. The Oak Woodland south of the creek has a dense, closed canopy, as is typical for north-facing slopes in the region. Bass Lake Road cuts from north to south through the Study Area, and Country Club Drive runs from west to east. Portions of Old Bass Lake Road and Old Country Club Drive also occur within portions of the Study Area. Several seasonal wetlands and two seasonal wetland swales occur just north of Old Country Club Drive, and one seasonal wetland occurs near an ephemeral drainage in the western portion of the Study Area. A few seeps occur on slopes in the Annual Brome Grasslands. Roadside ditches run along the edges of a number of roadways within the Study Area, and three portions of ephemeral drainages occur within infrastructure-related portions of the Study Area. Inclusions of unvegetated areas are scattered throughout the Study Area along farm roads. The terrain within the Study Area is gently rolling, and generally slopes from the east down towards the west.

Elevations range from approximately 1,320 feet above mean sea level (MSL) at the eastern edge of the Study Area to approximately 800 feet at the western extent along Carson Creek and Russi Ranch Drive (**Figure 1**).

Surrounding properties are similar to those within the Study Area. They are largely comprised of ungrazed Annual Brome Grasslands, scattered Oak Woodlands, and rural residences. The western and eastern ends of the Study Area abut urban residential areas, and the Study Area is bordered by Interstate Highway 50 to the south.

4.1 Terrestrial Vegetation Communities

Table 1 summarizes the terrestrial vegetation communities mapped within the Study Area, their extents are shown on **Figure 5**, and the following sections provide narrative descriptions of each of them.

Table 1. Terrestrial Vegetation Communities Within the Study Area

Vegetation Communities	Project Area (Acres)	Program Study Area (Acres)	Total (Acres)
Annual Brome Grassland	37.0	27.9	64.9
Arroyo Willow Riparian Woodland	0.1		0.1
Oak Woodland	6.2		6.2
Dirt Road	1.5		1.5
Paved Road	8.9	0.2	9.1
Total	**53.7**	**28.1**	**81.8**

4.1.1 Annual Brome Grassland

The Annual Brome Grassland within the Study Area is dominated by ripgut brome (*Bromus diandrus*), soft brome (*B. hordeaceus*), wild oat (*Avena fatua*), Italian ryegrass (*Festuca perennis*), purple false brome (*Brachypodium distachyon),* and winter vetch *(Vicia villosa* subsp. *varia)*. Other species occurring frequently in this vegetation community within the Study Area include wild radish (*Raphanus sativus*), Ithuriel's spear

(*Triteleia laxa*), rose clover (*Trifolium hirtum*), and purple clarkia (*Clarkia purpurea* subsp. *quadrivulnera*). Seasonal wetlands, seasonal wetland swales, and seeps occur occasionally throughout this community.

4.1.2 Arroyo Willow Riparian Scrub

A narrow band of Arroyo Willow Riparian Scrub occurs along Carson Creek within the sewer alternative overlap portion of the Study Area. This canopy of this community is dominated by arroyo willow (*Salix lasiolepis*) and buttonwillow (*Cephalanthus occidentalis*). The understory is comprised primarily of bedrock, but a few herbaceous species have established in cracks in the bedrock, and in sediment along the creek's edge. These include Indian hemp (*Apocynum cannabinum*), Torrey's willowherb (*Epilobium torreyi),* sticktight (*Bidens frondosa)*, Lady's thumb (*Persicaria maculosa),* False waterpepper (*Persicaria hydropiperoides),* western goldenrod (*Euthamia occidentalis),* mugwort (*Artemisia douglasiana),* tall nutsedge (*Cyperus eragrostis),* rice cutgrass (*Leersia oryzoides),* and seep monkeyflower (*Erythranthe guttata).*

4.1.3 Oak Woodland

Oak woodland occurs in the northern portion of the Study Area, in association with the intermittent creek, and in the portions of the sewer alternatives. The Oak Woodland has a primarily closed canopy that is dominated by interior live oak (*Quercus wislizeni*) and blue oak (*Quercus douglasii*). Other commonly occurring species include Valley oak (*Quercus lobata*), California buckeye (*Aesculus californica*) and foothill pine (*Pinus sabiniana)*. Western poison oak (*Toxicodendron diversilobum*) and chaparral honeysuckle (*Lonicera interrupta*) are dominants in the shrub layer. The herbaceous understory is dominated by ripgut brome, slender wild oat (*Avena barbata*), and tall sock-destroyer (*Torilis arvensis*), as well as occasional Italian thistle (*Carduus pycnocephalus* subsp. *pycnocephalus*), bristly dogtail grass (*Cynosurus echinatus),* goldback fern (*Pentagramma triangularis),* twining brodiaea (*Dichelostemma volubile),* soft brome, and common soap plant (*Chlorogalum pomeridianum var. pomeridianum)*. Several rock outcrops are interspersed within the Oak Woodland area.

4.1.4 Roads

Bass Lake Road, Country Club Drive, and Old Country Club Drive are paved roadways within the Study Area. Just west of the Bass Lake Road and Country Club Drive intersection is an area that was under active construction at the time of our survey – this is presumed to be developed now and was also mapped as paved road. Old Bass Lake Road and regularly used driveways within the Sewer Alternatives have been mapped as dirt road – these are well maintained, regularly used dirt roads. We did not map the portion of the dirt road that runs through the Oak Woodlands, as the tree canopies overhang almost the entire roadway, and as such, we anticipate that impacts within the roadway could impact the adjacent oak trees.

4.2 Aquatic Resources

Madrone conducted a protocol-level aquatic resources delineation throughout the Study Area, as detailed in **Section 3.2** (**Attachment F**). Aquatic resources mapped within the Study Area are depicted in **Figure 5** and summarized in **Table 2** below. A total of 1.059 acres of aquatic resources were mapped within the Study Area (**Table 2**). A description of each of the aquatic resources types is included below.

Table 2. Aquatic Resources Mapped within the Study Area

Waters Type	Project Area (Acres[1])	Program Study Area (Acres[1])	Total (Acres[1])
Wetlands			
Seasonal Wetland	0.031	--	0.031
Seasonal Wetland Swale	0.017	--	0.017
Seep	0.360	0.015	0.375
Other Waters			
Drainage Ditch	0.005	--	0.005
Ephemeral Drainage	0.038	--	0.038
Intermittent Drainage	0.311	--	0.311
Perennial Creek (Carson Creek)	0.033	--	0.033
Roadside Ditch	0.150	0.100	0.250
Total	**0.945**	**0.115**	**1.059**

[1] *Summation errors may occur due to rounding.*

4.2.1 Seasonal Wetland

Four seasonal wetlands occur within the southern portion of the Study Area. Seasonal wetlands are depressional wetlands that pond water seasonally. Two of the seasonal wetlands are depressional and are dominated by needle-leaf navarretia (*Navarretia intertexta*), Mediterranean beard grass (*Polypogon maritimus*) and Mediterranean barley (*Hordeum marinum*). Other species in these features include bractless hedge-hyssop (*Gratiola ebracteata*), slender popcorn flower (*Plagiobothrys stipitatus var. micranthus*), annual hairgrass (*Deschampsia danthonioides*), hyssop loosestrife (*Lythrum hyssopifolium*), slender tarweed (*Holocarpha virgata*), turkey mullein (*Croton setiger*), creeping spikerush (*Eleocharis macrostachya*), stinkwort (*Dittrichia graveolens*), and hairy cat's ear (*Leontodon saxatilis*). The remaining seasonal wetlands are slope wetlands, and are dominated by iris-leaved rush (*Juncus xiphioides*) and annual rabbitsfoot grass (*Polypogon monspeliensis*). Other species commonly occurring in these features include Baltic rush (*Juncus balticus*) and Spanish lotus (*Acmispon americanus*).

4.2.2 Seasonal Wetland Swale

Two seasonal wetland swales are present within the Study Area. Seasonal wetland swales are linear seasonal wetlands that convey surface runoff and may detain it for short periods of time. The vegetation in the seasonal wetland swales is similar to that found in the sloping seasonal wetlands. They are dominated by

iris-leaved rush. Other species commonly found in these features include Spanish lotus, curly dock (*Rumex crispus*), and Mediterranean beard grass.

4.2.3 Seep

Seeps are areas where groundwater reaches the surface through porous soil or cracks in rock. Seeps result in seasonal or perennial soil saturation with minimal standing water and gentle flows. Five seeps were mapped within the Study Area. Dominant plant species identified within the seeps include iris-leaved rush, Baltic rush, and Sonoma hedge nettle (*Stachys stricta*). Other common plants include hyssop loosestrife, annual quaking grass (*Briza minor),* cut-leaf geranium (*Geranium dissectum*), common sow thistle (*Sonchus oleraceus),* and Italian thistle (*Carduus pycnocephalus*).

4.2.4 Drainage Ditch

A constructed drainage ditch conveys flows collected in roadside ditches along Country Club Drive into the intermittent drainage to the north. This drainage ditch is lined with rocks and is entirely unvegetated.

4.2.5 Ephemeral Drainage

Five ephemeral drainages occur within the Study Area. Ephemeral drainages are linear features that convey runoff for short periods of time, during and immediately following rain events, and do not convey any groundwater flows. Several ephemeral drainages occur within the sewer alternatives. These features are almost entirely unvegetated, and any sparse vegetation that does occur is typical of the surrounding terrestrial vegetation community.

4.2.6 Intermittent Drainage

One intermittent drainage runs through the northern portion of the Study Area. This feature has a variable substrate, ranging from sand and mud in some areas to bedrock in others. It is entirely unvegetated within the channel due to the depth and scouring effects of water. This feature runs through Oak Woodlands for much of its length, and as a result of the closed canopy, very little herbaceous vegetation occurs along the banks in those areas. Portions of the drainage that run through Annual Brome Grasslands are primarily bordered by grasses and forbs typical of that community, but also support scattered seep monkeyflower (*Erythranthe guttata*) and other herbaceous hydrophytes.

4.2.7 Perennial Creek (Carson Creek)

Carson Creek, which is perennial with a bedrock substrate, runs through the western portion of the Study Area. It is almost entirely unvegetated within the channel, but there are a few plants occurring on the banks and in areas where sediment has accumulated within the channel. These plants are described above in the description of Arroyo Willow Scrub, which borders the creek. To reiterate, plants observed within and adjacent to Carson Creek include narrow-leaved cattail (*Typha angustifolia),* Torrey's willowherb, sticktight,

Lady's thumb, False waterpepper, western goldenrod, mugwort, tall nutsedge, rice cutgrass, and seep monkeyflower.

4.2.8 Roadside Ditch

Several roadside ditches were mapped within the Study Area along Bass Lake Road, Country Club Drive, and Old Country Club Drive. The roadside ditches were constructed adjacent to the roadways, and serve to convey stormwater runoff away from the road. These features are entirely unvegetated due to ditch maintenance and due to the fact that many of these features are lined with rock, presumably for flow attenuation.

4.3 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2024), four soil mapping units occur within the Study Area (**Figure 6**): (AkC) Argonaut gravelly loam, 2 to 15 percent slopes; (AwD) Auburn silt loam, 2 to 30 percent slopes; (AxD) Auburn very rocky silt loam, 2 to 30 percent slopes; and (AyF) Auburn extremely rocky silt loam, 3 to 70 percent slopes. These soils are all somewhat acidic. The Auburn soils are formed in amphibolite schist (metamorphic rock) while the Argonaut soils are formed in weathered meta-andesite (weathered volcanic rock) (NRCS 2024).

5.0 RESULTS

Table 3 provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following set of criteria was used to determine each species' potential for occurrence within the Study Area:

- Present: Species occurs within the Study Area based on CNDDB records, and/or was observed within the Study Area during field surveys.
- High: The Study Area is within the known range of the species and suitable habitat exists.
- Moderate: The Study Area is within the known range of the species and very limited suitable habitat exists.
- Low: The Study Area is within the known range of the species and there is marginally suitable habitat or the Study Area is on the very edge of the known range of the species.
- Absent/No Habitat Present: The Study Area does not contain suitable habitat for the species, the species was not observed during protocol-level floristic surveys conducted within the Study Area, or the Study Area is outside of the known range of the species.

Figures 3 and 4 are exhibits displaying CNDDB occurrences within five miles of the Study Area. Below is a discussion of all special-status plant and animal species with potential to occur within the Study Area.

Table 3. Special-Status Species Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Plants				
Allium jepsonii Jepson's onion	--	CRPR 1B.2	Prefers cismontane woodland or lower montane coniferous forests associated with serpentine soils or volcanic slopes (elevation 985'-4,300')	**No Habitat Present.** No serpentine or basalt are located within the Study Area.
Balsamorhiza macrolepis Big-scale balsamroot	--	CRPR 1B.2	Prefers chaparral, cismontane woodland, and valley and foothill grasslands. Often associated with serpentine soils (elevation 150'-5,100').	**Absent.** Marginally suitable habitat is present (due to the lack of serpentine soils). This plant was not found during protocol surveys of the Study Area.
Calycadenia spicata Spicate rosinweed	--	CRPR 1B.3	Occurs in disturbed areas and openings in cismontane woodland and annual grassland between 130 and 4,600 ft. Often associated with adobe clay, gravelly areas, rock outcrops and mine tailings.	**Absent.** Suitable habitat for this species occurs in the vicinity of rock outcrops and gravelly areas in Annual Brome Grasslands throughout the Study Area. This plant was not found during protocol surveys of the Study Area.
Calystegia stebbinsii Stebbins' morning glory	FE	CE, CRPR 1B.1	Foothill chaparral and cismontane woodland associated with gabbro soils (elevation 605'-3,575').	**No Habitat Present.** Gabbro soils do not occur within the Study Area.
Carex xerophila Chaparral sedge	--	CRPR 1B.2	Prefers chaparral, cismontane woodland, lower montane coniferous forest with serpentine or gabbro soils (elevation 1,445'-2,525').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.
Ceanothus roderickii Pine Hill ceanothus	FE	CR, CRPR 1B.1	Foothill chaparral and cismontane woodland associated with gabbro and serpentine soils (elevation 805'-3,575').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.

Table 3. Special-Status Species Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Chlorogalum grandiflorum Red Hills soaproot	--	CRPR 1B.2	Prefers cismontane woodland, chaparral, and lower montane coniferous forest. Occurs frequently on serpentine or gabbro, but also on non-ultramafic substrates; often on "historically disturbed" sites (elevation 805'-5,545').	**Absent.** Marginally suitable habitat is present within the oak woodlands throughout the Study Area. Habitat is only marginally suitable due to the lack of gabbro or serpentine soils. This plant was not found during protocol surveys of the Study Area.
Crocanthemum suffrutescens Bisbee Peak rush rose	--	CRPR 3.2	Occurs in open areas within chaparral. Sometimes found in Gabbro soils (elevation 245'-2,200').	**No Habitat Present.** Chaparral does not occur within the Study Area.
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Mesic areas in valley and foothill grassland, and vernal pools (elevation 3' – 1,460').	**Absent.** The Study Area is at the edge of the elevational range for the species, but limited suitable habitat occurs within the seasonal wetlands within the Study Area. This plant was not found during protocol surveys of the Study Area.
Eryngium pinnatisectum Tuolumne button-celery	--	CRPR 1B.2	Found in vernal pools and other mesic areas in cismontane woodland and lower montane coniferous forests (elevation 230'-3,000').	**Absent.** Suitable habitat for this species occurs within and on the edges of aquatic resources throughout the Study Area. This plant was not found during protocol surveys of the Study Area.
Fremontodendron decumbens Pine Hill flannelbush	FE	CR, CRPR 1B.2	Foothill chaparral and cismontane woodland. Rocky ridges; gabbro or serpentine; often among rocks and boulders (elevation 1,395'-2,495').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.
Galium californicum ssp. *sierrae* El Dorado bedstraw	FE	CR, CRPR 1B.2	Foothill chaparral and cismontane woodland. Restricted to gabbroic or serpentine soils (elevation 330'-1,920').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.

Table 3. Special-Status Species Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Gratiola heterosepala Boggs Lake hedge-hyssop	--	CE, CRPR 1B.2	Vernal pools and margins of lakes/ponds on clay soils (elevation 35' - 7,790').	**No Habitat Present.** Vernal pools, lakes, and clay soils do not occur within the Study Area.
Juncus leiospermus var. ahartii Ahart's dwarf rush	--	CRPR 1B.2	Occurs along edges of vernal pool and other seasonally ponded features (elevation 100'-750').	**No Habitat Present.** Outside of the elevational range for the species.
Legenere limosa Legenere	--	CRPR 1B.1	Occurs in vernal pools (elevation 5'-2,885').	**No Habitat Present.** Vernal pools or other suitable features do not occur within the Study Area.
Navarretia myersii ssp. myersii Pincushion navarretia	--	CRPR 1B.1	Found in vernal pools (often acidic) (elevation 65' - 1,085').	**No Habitat Present.** Vernal pools do not occur within the Study Area.
Orcuttia tenuis Slender Orcutt grass	FT	CE, CRPR 1B.1	Occurs in vernal pools and other seasonally ponded features (elevation 115'-5,775').	**No Habitat Present.** Vernal pools or other suitable features do not occur within the Study Area.
Orcuttia viscida Sacramento Orcutt grass	FE	CE, CRPR 1B.1	Occurs in vernal pools (elevation 100'-330').	**No Habitat Present.** Vernal pools do not occur within the Study Area.
Packera layneae Layne's ragwort	FT	CR, CRPR 1B.2	Foothill chaparral and cismontane woodland with rocky, gabbroic, or serpentine soils (elevation 655'-3,560').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.
Sagittaria sanfordii Sanford's arrowhead	--	CRPR 1B.2	Occurs in emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches (elevation 0' - 2,135').	**Absent.** Suitable habitat for this species occurs within Carson Creek and the intermittent drainage within the Study Area. This plant was not found during protocol surveys of the Study Area.
Wyethia reticulata El Dorado County mule ears	--	CRPR 1B.2	Foothill chaparral and cismontane woodland associated with clay or gabbro soils (elevation 605'-2065').	**No Habitat Present.** Serpentine and gabbro soils do not occur within the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Invertebrates				
Bombus crotchii Crotch bumble bee	--	CC	Occurs in open grasslands and scrub habitats. This species occurs primarily in California including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California.	**High**. The Annual Brome Grasslands throughout the Study Area provide suitable habitat for this species.
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Occurs in vernal pools.	**Low.** Two depressional seasonal wetlands in Sewer Alternative 2 and the Project Development Area represent marginally suitable habitat for this species.
Danaus plexippus Monarch butterfly	FC	--	Migratory species; most prevalent in the Central Valley in summer and early fall. Dependent upon milkweed (*Asclepias* species) plants as their exclusive larval host.	**Present.** Some small patches of milkweed plants are present within the Study Area, but at least one butterfly has been observed within the Study Area.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry (*Sambucus* species) plant as primary host species. Occurs in the Sacramento and northern San Joaquin Valleys up to 500 feet in elevation (USFWS 2023).	**No Habitat Present.** The Study Area is outside of the elevational range of the species.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	Occurs in vernal pools.	**No Habitat Present.** None of the seasonal wetlands within the Study Area have a sufficiently long period of inundation to support this species.

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Amphibians				
Ambystoma californiense California tiger salamander	FT	CT, CSC	Breeds in ponds or other deeply ponded wetlands and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**No Habitat Present.** The Study Area is outside of the known range of the species.
Rana boylii Foothill yellow-legged frog – South Sierra DPS	FE	CE	Prefers gravelly or sandy streams with open banks near woodlands.	**Low.** Carson Creek provides suitable habitat for this species, but is on the very edge of its distributional range.
Rana draytonii California red-legged frog	FT	CSC	Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages.	**No Habitat Present.** Carson Creek within the Study Area does not provide the slow-moving water this species prefers.
Spea hammondii Western spadefoot	FPT	CSC	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	**No Habitat Present.** None of the seasonal wetlands within the Study Area have a sufficiently long period of inundation to support this species.
Reptiles				
Actinemys marmorata Northwestern pond turtle	FPT	CSC	Occurs in ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**High.** Suitable habitat for this species is present in Carson Creek in the western portion of the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Phrynosoma blainvillii Coast (Blainville's) Horned Lizard	--	CSC	Open areas of sandy soil and low vegetation in grasslands, coniferous forests, woodlands, and chaparral. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills. Typically found below 3,000 ft in elevation.	**No Habitat Present.** Sandy soils are not present within the Study Area.
Birds				
Agelaius tricolor Tricolored blackbird	--	CE, CSC	Colonial nester in cattails (*Typha* species), bulrush (*Schoenoplectus* species), or blackberry (*Rubus* species) associated with marsh habitats.	**Low.** Dense vegetation that would provide nesting habitat does not occur within the Study Area, but the Annual Brome Grasslands could provide marginally suitable foraging habitat.
Aquila chrysaetos Golden eagle	--	CFP	Forages in open areas including grasslands, savannahs, deserts, and early successional stages of shrub and forest communities. Nests in large trees and cliffs.	**High.** Large, isolated trees within the Study Area could be used for nesting, and the Annual Brome Grassland is suitable foraging habitat.
Athene cunicularia Burrowing owl	--	CSC	Nests in abandoned ground squirrel (*Otospermophilus beecheyi*) burrows associated with open grassland habitats.	**Low.** The Study Area is on the very edge of the species elevational range, and no ground squirrel burrows were observed within the Study Area. The Annual Brome Grassland could provide marginally suitable wintering habitat.

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Buteo swainsoni Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland below approximately 600 ft near large riparian corridors.	**No Habitat Present.** The Study Area is outside of the elevational range of the species.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT	CE	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, adjacent to slow-moving waterways, backwaters, or seeps.	**No Habitat Present.** The Study Area does not support the extensive riparian woodlands this species requires.
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**High.** The Study Area is outside of the nesting range of the species, but it could occur as a winter migrant or occasional summer forager within the Annual Brome Grasslands.
Haliaeetus leucocephalus Bald eagle	--	CE	Nest in large trees within 1 mile of lakes, rivers, or larger streams.	**Low.** Suitable foraging habitat does not occur within the Study Area, but the species could nest in large trees within the Study Area, and the Project Development Area is within approximately one mile of three lakes/large ponds.
Icteria virens Yellow-breasted chat	--	CSC	This species occupies early-successional riparian habitats with well-developed shrub layer and open canopy along streams, creeks, sloughs, and rivers.	**Moderate.** The Arroyo Willow Riparian Scrub along Carson Creek within the Sewer Alternatives represents suitable habitat for this species, but only 0.1 acre of this habitat occurs within the Study Area. As a result, the species is

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
				unlikely to nest within the Study Area.
Lanius ludovicianus Loggerhead shrike	--	CSC	Occurs in open areas with sparse trees, shrubs, and other perches.	**High.** The Annual Brome Grasslands within the Study Area represent suitable habitat for the species.
Laterallus jamaicensis coturniculus California black rail	--	CT	Nests and forages in salt, brackish, and fresh marshes with abundant vegetative cover.	**No Habitat Present.** Densely vegetated marshes are not present within the Study Area.
Strix occidentalis occidentalis California spotted owl	--	CSC	Breeds and roosts in forests and woodlands with large old trees and snags, high basal areas of trees and snags, dense canopies, multiple canopy layers, and downed woody debris.	**No Habitat Present.** The Study Area is outside of the range of the species.
Mammals				
Antrozous pallidus Pallid bat	--	CSC, WBWG H	Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows and bole cavities of very large trees, exfoliating Ponderosa pine and Valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings.	**High.** Suitable roosting habitat for this species is present in tree hollows and under exfoliating bark on trees scattered throughout the Study Area.
Corynorhinus townsendii townsendii Townsend's big-eared bat	--	CSC, WBWG H	Roosts in caves and cave analogues, such as abandoned mines, buildings, bridges, rock crevices and large basal hollows of trees. Extremely sensitive to human disturbance.	**High.** Suitable roosting habitat could be present in very large tree cavities within large, decadent trees within the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Town & Country Village El Dorado Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
Bassariscus astutus raptor Northern California ringtail	--	FP	Occurs in riparian habitats, forest brush, and shrublands in association with rocky areas. Ringtail is known to nest in rock recesses, hollow trees, logs, snags, and abandoned burrows.	**High.** The Arroyo Willow Riparian Scrub and dense Oak Woodlands along Carson Creek within the Sewer Alternatives portion of the Study Area provide suitable habitat for this species.
Lasionycteris noctivagans Silver-haired bat	--	WBWG M	Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features.	**High.** Suitable roosting habitat for this species is present in tree hollows and under exfoliating bark on trees in the vicinity of Carson Creek and the intermittent drainage within the Sewer Alternatives and Project Development portions of the Study Area.
Lasiurus blossevillii Western red bat	--	CSC, WBWG H	Requires large leaf trees such as cottonwoods (*Populus* species), willows (*Salix* species), and fruit/nut trees for daytime roosts. Often associated with wooded habitats that are protected from above and open below. Often found in association with riparian corridors. Requires open space for foraging.	**Moderate.** The Arroyo Willow Riparian Scrub along Carson Creek within the Sewer Alternatives represents suitable habitat for this species, but only 0.1 acre of this habitat occurs within the Study Area. As a result, the species is unlikely to roost within the Study Area.
Lasiurus cinereus Hoary bat	--	WBWG M	Roosts primarily in foliage of both coniferous and deciduous trees at the edges of clearings.	**High.** Trees scattered throughout the Study Area are suitable roosting habitat for this species.

[1] *Status Codes:*

CC - CDFW Candidate for Listing *CE - CDFW Endangered* *CFP - CDFW Fully Protected* *CRPR - California Rare Plant Rank* *CR - California Rare*
CSC - CDFW Species of Concern *CT - CDFW Threatened* *FE - Federally Endangered* *FT - Federally Threatened* *FC - Federal Candidate for Listing*
FPT – Federally Proposed Threatened *WBWG H - Western Bat Working Group High Threat Rank* *WBWG M - Western Bat Working Group Medium Threat Rank*

5.1 Plants

Special-status plant surveys of the entire Study Area were completed on several dates in 2022, 2023, and 2024 in accordance with the U.S. Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000), California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018a), and the CNPS *Botanical Survey Guidelines* (CNPS 2001). No special-status plants were found during this survey. The report for this survey is included as **Attachment E**.

5.1.1 Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 150 and 5100 feet (CNPS 2024). Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2024).

The Annual Brome Grassland and Oak Woodlands throughout the Study Area provide marginally suitable habitat for big-scale balsamroot. However, this species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area. There are no records of this species within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.1.2 Spicate Rosinweed

Spicate rosinweed (*Calycadenia spicata*) is not federally or state listed, but it is classified as a CRPR List 1B.3 plant. It is a perennial herbaceous species that occurs in disturbed areas and openings in annual grasslands and cismontane woodland between 130 and 4,600 feet (CNPS 2024). Spicate rosinweed blooms from May through September and has been found on a variety of open habitats including adobe clay, rock outcrops, gravelly areas, and mine tailings (CNPS 2024).

The Annual Brome Grassland and Oak Woodlands throughout the Study Area provide suitable habitat for spicate rosinweed. However, this species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area. There are no records of this species within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.1.3 Red Hills Soaproot

Red Hills soaproot (*Chlorogalum grandiflorum*) is not a state or federally listed species but is classified as a CRPR List 1B.2 plant. Red Hill soaproot is a bulbiferous perennial that is commonly found in chaparral, cismontane woodland, and lower montane coniferous forests. Occurs frequently on serpentine or gabbro soils, but can also occur on non-ultramafic substrates; often on "historically disturbed" sites. This species

blooms from as early as April, but typically from May through June at elevations from 805 to 5545 feet (CNPS 2024).

The Oak Woodlands throughout the Study Area provide marginally suitable habitat for Red Hills soaproot. However, this species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area. There are seven records of this species within five miles of the Study Area in the CNDDB (CNDDB 2024). The nearest of these is Occurrence #33, which is located approximately 2.5 miles to the east, northeast of the intersection of Meder Road and Cameron Park Drive in Cameron Park (CNDDB 2024).

5.1.4 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 2B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and mesic valley and foothill grassland, and is found in elevations ranging from five to 1460 feet (CNPS 2024). Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May (CNPS 2024).

The seasonal wetlands and seasonal wetland swales within the Study Area represent marginally suitable habitat for dwarf downingia. However, this species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area. There are no records of this species within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.1.5 Tuolumne Button-Celery

Tuolumne button-celery (*Eryngium pinnatisectum*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. This species occurs in mesic areas in cismontane woodlands and coniferous forests, as well as vernal pools. Tuolumne button-celery blooms from May through August and is found from approximately 230 feet to 3,000 feet (CNPS 2024).

Aquatic resources throughout the Study Area provide suitable habitat for this species. However, this species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area. There are no records of this species within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.1.6 Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer. This perennial rhizomatous species blooms from May to October, and occurs from sea level to approximately 2,000 feet (CNPS 2024).

Suitable habitat is present for this species in Carson Creek and the intermittent drainage within the Study Area. However, this species was not observed during the 2022-2024 protocol level special-status plant

survey of the Study Area. There is one record of this species within five miles of the Study Area in the CNDDB (CNDDB 2024). This record is Occurrence #64, which is located approximately 2.8 miles to the southwest, within various tributaries of Carson Creek, south of White Rock Road (CNDDB 2024).

5.2 Invertebrates

5.2.1 Crotch Bumble Bee

Crotch bumble bee (*Bombus crotchii*) is not federally listed but is a candidate for listing under CESA. Crotch bumble bee has a limited distribution in southwestern North America. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, West Desert, Great Valley, and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and Baja California Sur) (Williams et al. 2014) and has been documented in southwest Nevada, near the California border. This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range (Williams et al. 2014). In California, *B. crotchii* inhabits open grasslands and scrub habitats.

All bumble bees have three basic requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the entirety of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Nests are often located underground in abandoned holes made by ground squirrels, mice, and rats or occasionally abandoned bird nests (Osborne et al 2008). Some species nest on the surface of the ground (in tufts of grass) or in empty cavities. Bumble bees that nest aboveground may require undisturbed areas with nesting resources such as grass and hay to protect nests. Furthermore, areas with woody cover, or other sheltered areas provide bumble bees sites to build their nests (e.g., downed wood, rock walls, brush piles, etc.).

Bumble bees depend on the availability habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. The queen collects nectar and pollen from flowers to support the production of her eggs, which are fertilized by sperm she has stored from mating the previous fall. As generalist foragers, bumble bees do not depend on any one flower type. They generally prefer flowers that are purple, blue or yellow; they are essentially blind to the color red. The plant families most commonly associated with Crotch bumblebee observations in California include Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae (Xerces Society 2018). Very little is known about hibernacula, or overwintering sites utilized by most bumble bees. Generally, bumble bees overwinter in soft, disturbed soil (Goulson 2010), under leaf litter or other debris (Williams et al. 2014), in abandoned holes made by fossorial mammals or occasionally in abandoned bird nests (Osborne at all 2008). Some species nest on the surface of the ground (in grassy tussocks) or in empty cavities (hollow logs, dead trees, under rocks, etc.). Queens most likely overwinter in small cavities just below or on the ground surface.

The Annual Brome Grassland throughout the Study Area represents suitable habitat for Crotch's bumble bee. There are no documented occurrences of this species in the CNDDB within 5 miles of the Study Area (CNDDB 2024).

5.2.2 Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal Endangered Species Act. Historically, the range of vernal pool fairy shrimp extended throughout the Central Valley of California. Vernal pool fairy shrimp populations have been found in several locations throughout California, with habitat extending from Stillwater Plain in Shasta County through the Central Valley to Pixley in Tulare County, and along the Central Coast range from northern Solano County to Pinnacles National Monument in San Benito County (Eng et al. 1990, Fugate 1992). Additional populations occur in San Luis Obispo, Santa Barbara, and Riverside counties. The historic and current ranges of vernal pool fairy shrimp are very similar in extent; however, the remaining populations are more fragmented and isolated than during historical times (USFWS 2005). The life cycle of vernal pool fairy shrimp is adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Fairy shrimp embryos survive the dry season in cyst form. Cysts "hatch" soon after pools become inundated during the wet season. Fairy shrimp complete their life cycle quickly and feed on small particles of detritus, algae, and bacteria (Eriksen and Belk 1999).

The depressional seasonal wetlands within the Sewer Alternative 2 and within the southern portion of the Project Development Area represent marginally suitable habitat for this species. There is one documented CNDDB occurrence of vernal pool fairy shrimp within five miles of the Study Area (CNDDB 2024). This occurrence (#168) is roughly 3 miles to the west near Mormon Island Dam (CNDDB 2024).

5.2.3 Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is a candidate for listing pursuant to the federal Endangered Species Act. It is a large conspicuous species that occurs in North, Central, and South America; Australia; New Zealand; islands of the Pacific and Caribbean, and elsewhere (Malcolm and Zalucki 1993 in USFWS 2020). During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (*Asclepias* spp.), and larvae emerge after two to five days (Zalucki 1982 in USFWS 2020). Larvae develop over a period of eight to 18 days, feeding on the milkweed and then pupate into chrysalis before eclosing six to 14 days later as an adult butterfly (USFWS 2020). Multiple generations of monarchs are produced during the breeding season, with most adult butterflies living approximately two to five weeks (USFWS 2020).

In California, monarchs continue to occupy and breed in areas near their overwintering groves along the California coast into northern Baja California throughout the year, and also disperse over multiple generations to occupy and breed throughout the state in the spring through fall (USFWS 2020). Migrating monarchs in western North America tend to occur more frequently near water sources such as rivers, creeks, roadside ditches, and irrigated gardens (Morris et al. 2015 in USFWS 2020). Adult monarch butterflies require a diversity of blooming nectar resources during breeding and migration (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat.

Milkweed plants throughout the Study Area represent suitable habitat for Monarch butterfly, and at least one Monarch butterfly has been observed within the Study Area. There are no documented occurrences of this species in the CNDDB within 5 miles of the Study Area (CNDDB 2024).

5.3 Amphibians

5.3.1 Foothill Yellow-Legged Frog – South Sierra DPS

Foothill yellow-legged frog (*Rana boylii*) (FYLF) South Sierra Distinct Population Segment (DPS) is listed as endangered under both the federal Endangered Species Act and the California Endangered Species Act. FYLF is a small to medium sized frog with unusual rough and granular skin with many tiny tubercules (Stebbins 2003). Their historic range extends through foothill and mountain streams from the San Gabriel River in Los Angeles County to southern Oregon west of the Sierra-Cascade crest at elevations below 5,000 feet (Nussbaum 1983, Stebbins 2003).

This species occurs in different habitats depending on life stage, season, and weather conditions. Breeding habitat includes margins of relatively wide and shallow channel sections, habitats that experience reduced flow variation (Kupferberg 1996). Foothill yellow-legged frog tadpoles also breed in water temperatures above 13 degrees Celsius in slower-moving pool habitats. The foothill yellow-legged frog occurs in a wide variety of vegetation types including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral and wet meadows. The frog is closely associated with streams and is rarely observed far from the water's edge. Breeding stream habitat is typically shallow, rocky and at least partially exposed to direct sunlight.

Carson Creek within the Study Area provides suitable habitat for this species, but the Study Area is located at the very edge of the specie's range, and as such, the likelihood of foothill yellow-legged frog occurring within the Study Area is low. There are two CNDDB occurrences of this species within 5 miles of the Study Area. The nearest of these (Occurrence #2) is located approximately 3.4 miles northwest of the Study Area near the intersection of Salmon Falls Road and Green Valley Road, and is considered extirpated. The nearest extant occurrence (#276) is located 4.2 miles to the north along Sweetwater Creek at about 700 feet in elevation, and was most recently documented at this location in October 2023 (CNDDB 2024).

5.4 Reptiles

5.4.1 Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata*) is proposed for federal listing as threatened and is a CDFW species of special concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites (Jennings and Hayes 1994). Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Northwestern pond turtle predators include raccoons, coyotes, raptors,

weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks (Jennings and Hayes 1994).

Carson Creek within the Study Area provides suitable habitat for northwestern pond turtle. There are seven documented CNDDB occurrences of northwestern pond turtle within 5 miles of the Study Area, the nearest of which (Occurrence #1646) is located 0.6 miles west of the Study Area in a drainage between ponds west of Silva Valley Parkway (CNDDB 2024).

5.5 Birds

5.5.1 Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) populations, which are currently in decline throughout the state, were listed as threatened under the CESA by the California Fish and Game Commission on 19 April 2018. Historically, colonies were established in freshwater marshes dominated by cattails (*Typha* spp.) and bulrushes (*Scirpus* or *Schoenoplectus* spp.). More recently, they have utilized non-native mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Circium* spp.), and mallows (*Malva* spp.) as nesting substrate (Airola et al. 2016). Since the 1980s, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder (Meese 2014 in CDFW 2018b). This current trend of nesting in active agricultural fields has further imperiled the species as nestlings typically are not fledged by the time the triticale is harvested.

Annual Brome Grassland within the Study Area provides marginally suitable foraging habitat. There are 10 documented CNDDB occurrences of tricolored blackbird within five miles of the Study Area, the nearest of which (CNDDB Occurrence #93) is located approximately 0.6 miles east of the Study Area at Crazy Horse Campground (CNDDB 2024). This site is considered extirpated, but the nearest apparently extant record is #452, approximately three miles to the west, just south of Iron Point Road (CNDDB 2024).

5.5.2 Golden Eagle

Golden eagle (*Aquila chrysaetos*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is categorized as a species of special concern and a fully protected species by the CDFW, and is protected under the federal Bald and Golden Eagle Protection Act. This species is a very large solitary raptor that feeds on mammals, carrion, and reptiles. It typically nests in large trees or cliffsides in rolling to mountainous terrain, and forages in large, expansive open grasslands and savannas (Shuford and Gardali 2008). Although its natural densities are generally believed to be low, it was once relatively common to the open areas of California. Today, golden eagles are rarely observed in the Central Valley. This species typically nests between February and August.

Large, isolated trees within the Study Area provide potential nesting habitat and the Annual Brome Grassland provides suitable foraging habitat. There are two CNDDB occurrences of golden eagle nests

within 5 miles of the Study Area, the nearest of which (CNDDB Occurrence #321) is located approximately 2.1 miles west of the Study Area along Via Fiori Road in El Dorado Hills (CNDDB 2024).

5.5.3 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFW. They typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (CDFG 1995). The breeding season extends from February 1 through August 31 (CBOC 1993, CDFG 1995).

Although no ground squirrel burrows were observed, the Annual Brome Grassland could provide marginally suitable wintering habitat under scattered debris, or in culverts. There are three CNDDB records of burrowing owls within five miles of the Study Area, the nearest of which (Occurrence #1166) is located approximately 2.3 miles southwest of the Study Area just west of the Sacramento/El Dorado County line (CNDDB 2024).

5.5.4 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not federally or state listed, but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

The Study Area is outside of the nesting range of the species, but the Annual Brome Grassland throughout the Study Area represents suitable foraging habitat for white-tailed kite, and this species could occur as a winter migrant or occasional summer forager. There are two records of white-tailed kite in the CNDDB, the nearest of which is Occurrence #149, which is located approximately 2.9 miles west of the Study Area just west of Sophia Parkway in El Dorado Hills (CNDDB 2024).

5.5.5 Bald Eagle

Bald eagle (*Haliaeetus leucocephalus*) is no longer federally listed, but it is listed as endangered by CDFW, and is fully protected under state law and the federal Bald and Golden Eagle Protection Act. This species requires large bodies of water or free-flowing rivers with abundant fish and adjacent snags or other perches. It nests in large, live trees with open branchwork, most frequently in stands with less than 40% canopy and near a permanent water source (Zeiner et al. 1998 as updated).

Large, scattered trees throughout the Study Area provide marginally suitable nesting habitat for bald eagle. There are records of bald eagles in the CNDDB within five miles of the Study Area, and this species is regularly documented foraging at Bass Lake and Cameron Park Lake (eBird 2024), both of which are within one mile of the Study Area. The nearest nesting record (CNDDB Occurrence #358) is located approximately 4.2 miles northwest of the Study Area along the edge of Folsom Lake (CNDDB 2024).

5.5.6 Yellow-Breasted Chat

The yellow-breasted chat (*Icteria virens*) is not federally or state listed but is designated as a Species of Special Concern by the CDFW. This species is an uncommon summer (breeding) resident in coastal California and in foothills of the Sierra Nevada. Yellow-breasted chats spend the breeding season in dense scrubs along a stream or river and frequent dense, brushy thickets and tangles near water, and thick understory in riparian woodland. In the valley foothill riparian, this species may occur up to about 4,800 feet elevation and up to 6,500 feet east of the Sierra Nevada (Garrett and Dunn 1981). Loss and degradation of riparian habitat have caused a marked decline in the breeding population in recent decades in California (Remsen 1978).

The arroyo willow riparian scrub along Carson Creek within the Study Area provides suitable habitat for this species, although the likelihood of the species occurring is low due to the small acreage of habitat within the Study Area. Yellow-breasted chat has not been documented within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.5.7 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed and protected pursuant to either the California or federal Endangered Species Acts; but is a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). The nesting season ranges from March through June.

The Annual Brome Grassland within the Study Area provides suitable habitat for loggerhead shrike. Loggerhead shrike has not been documented within five miles of the Study Area in the CNDDB (CNDDB 2024).

5.6 Mammals

5.6.1 Pallid Bat

The Pallid bat (*Antrozous pallidus*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species along the western coast in California. It favors roosting sites in crevices in rock outcrops and cliffs, caves, abandoned mines, hollows of trees, and human-made structures such as barns, attics, and sheds (WBWG 2024). Though pallid bats are gregarious, they tend to group in smaller colonies of 2 to 20 individuals and are known to roost alone as well. This

species is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing. They forage over open shrub-steppe grasslands, oak savannah grasslands, open Ponderosa pine forests, talus slopes, gravel roads, fruit orchards, and vineyards. (WBWG 2024).

Tree hollows and exfoliating bark on the trees within the Study Area represent suitable roosting habitat for pallid bat. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.6.2 Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species along the western coast in California. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet (WBWG 2024). Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. Townsend's big-eared bat is a moth specialist with over 90 percent of its diet composed of Lepidopterans. Foraging habitat includes edge habitats along streams as well as adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (WBWG 2024).

Large tree cavities in large decadent trees within the Study Area provide suitable roosting habitat for the Townsend's big-eared bat. The open areas within the Study Area provide suitable foraging habitat for this species. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.6.3 Northern California Ringtail

The ringtail (*Bassariscus astutus)* is not federally or state listed but is considered a CDFW fully protected species. This nocturnal species occurs in various riparian habitats, forest brush, and shrublands in association with rocky areas. Ringtail is known to is known to nest in rock recesses, hollow trees, logs, snags, and abandoned burrows, and is usually within approximately 0.6 miles from permanent water (Zeiner et al 1988).

The arroyo willow riparian scrub and the relatively dense oak woodland south of Carson Creek within the Study Area provides suitable habitat for ringtail. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.6.4 Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is not federally or state listed but is classified by the WBWG as a Medium priority species. The silver-haired bat occurs in more xeric environments during winter and seasonal migrations (WBWG 2024). This species changes roosts frequently, and use multiple roosts within a limited area, indicating that clusters of large trees are necessary (WBWG 2024). Silver-haired bat roosts in hollow trees, abandoned woodpecker holes, under sloughing bark, in rock crevices, and occasionally under wood piles. They tend to forage above the canopy, over open meadows, and in the riparian zone along water courses. This species is known to eat a wide variety of species; however, moths appear to be a major portion of dietary prey (WBWG 2024).

Tree hollows and exfoliating bark on the trees within the Study Area represent suitable roosting habitat for this species. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.6.5 Western Red Bat

The Western red bat (*Lasiurus blossevillii*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species. This species is typically solitary, roosting primarily in the foliage of trees or shrubs (WBWG 2024). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores). Roost sites are generally hidden from all directions except below; allowing the bat to drop downward for flight (WBWG 2024).

The arroyo willow riparian scrub along Carson Creek within the Study Area provides suitable roosting habitat for this species, although the likelihood of the species occurring is low due to the small acreage of habitat within the Study Area. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.6.6 Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not federally or state listed but is classified by the WBWG as a medium priority species. It is also considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, and usually at the edge of a clearing (WBWG 2024). This species is primarily crepuscular or nocturnal and requires open areas to hunt its preferred prey item, moths. The hoary bat is considered a forest/woodland species, and in California they are often associated with undisturbed riparian or stream corridors (WBWG 2024).

Trees scattered throughout the Study Area represent suitable roosting habitat for hoary bat. This species has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2024).

5.7 Oak Resources

The tree inventory within the Study Area was conducted in accordance with the ORMP, which requires an inventory of all native oak trees greater than 24" DBH within Oak Woodlands, and all native oak trees greater than 6" DBH outside of the Oak Woodlands. Additionally, the ORMP specifies different mitigation requirements for trees greater than 36" DBH (Heritage Trees), so those are broken out in this section as well.

Oak resources inventoried within the Study Area include 6.2 acres of Oak Woodlands, a total of 17 individual native oak trees greater than 6" DBH outside of the Oak Woodlands (of which 5 are greater than 36" DBH, and 55 native oaks greater than 24" DBH within the Oak Woodlands (of which 28 are greater than 36" DBH) (**Attachment G** and **Table 4**).

Table 4. Oak Trees Inventoried within the Study Area

			Number of Trees (DBH)			
			Blue Oak	**Interior Live Oak**	**Valley Oak**	**Total**
Within Oak Woodlands	**Fair to Good**	24-35" DBH	4 (114.6)	16 (468.1)	1 (24.8)	21 (607.5)
		≥36" DBH	0	24 (1,148.9)	2 (78.3)	26 (1,227.2)
	Poor Condition	24-35" DBH	0	6 (170.7)	0	6 (170.7)
		≥36" DBH	0	2 (81.7)	0	2 (81.7)
Subtotal						55 (2,079.1)
Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	3 (71.0)	0	6 (165.6)	9 (236.6)
		≥36" DBH	2 (83.8)	0	2 (79.7)	4 (163.5)
	Poor Condition	6-35" DBH	0	2 (50.0)	1 (15.7)	3 (65.7)
		≥36" DBH	0	0	1 (37.1)	1 (37.1)
Subtotal						17 (502.9)
Total			9 (269.4)	50 (1,911.4)	13 (401.2)	72 (2,582.0)

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential impacts to the biological resources discussed above within the Project Area associated with construction of the Project, as discussed in **Section 1.1** and shown on **Figure 2** and in **Attachment A**, including those associated with each of the two sewer alternatives (outlined in **Section 1.2** and shown on **Figure 2**). Waterline Alternative 1 is entirely contained within existing paved areas, would not result in impacts to sensitive biological resources and therefore is not discussed in this section. As noted in **Section 1.3**, Waterline Alternative 2 is not being evaluated in this document. Impacts within the Program Study Area are not known as this area is being evaluated at a programmatic level; therefore, this area is not discussed in this section. However, the vegetation communities and aquatic resources within the Program Study Area are summarized in **Table 1** and **Table 2**, sensitive species with potential to occur within these communities are detailed in **Section 5.0**, and mitigation measures for these resources are provided in **Section 7.0**, below.

Impacts analyzed within this section include both permanent and temporary impacts. Permanent impacts range from mass grading and lot construction to permanent shading of stream areas under bridges. Adjacent to drainages, where bridges are proposed, permanent impacts may include bridge footings and abutments, pan deck, and approach grading. Temporary impacts are impacts that will occur for less than one year's time before the area is restored, and will involve activities including but not limited to: slope grading, utility trenching, environmentally sensitive area fencing, and heavy equipment access into an area for infrastructure installation. Note that where temporary impacts overlap oak resources, those impacts are considered permanent to the oak resources, as the resource cannot be replaced within one year. Some four foot wide dirt pedestrian trails are proposed in the northern portion of the Project Development Area that are not shown on our impact maps; these trails will be designed in-situ to avoid individual oak trees, and given that no concrete will be used, they are expected to cause little to no impact and are not addressed further in this section.

6.1 Aquatic Resources

6.1.1 Project Development Impacts

Within the Project Development Area and Program Study Area, of the 0.977 acre of mapped aquatic resources, 0.560 acre will be permanently impacted by the Project, 0.038 acre will be temporarily impacted by the Project, and 0.380 acre will be avoided (**Table 5** and **Attachment F**).

6.1.2 Sewer Alternative Impacts

6.1.2.1 Sewer Alternative 1

If Sewer Alternative 1 were selected, 0.027 acre of aquatic resources would be permanently impacted, and 0.036 acre would be temporarily impacted.

6.1.2.2 Sewer Alternative 2

If Sewer Alternative 2 were selected, 0.027 acre of aquatic resources would be permanently impacted, and 0.035 acre would be temporarily impacted.

6.1.3 Overall Project Impacts

The Project combined with the sewer line would result in a total of 0.585-0.589 acre of permanent impacts and 0.072-0.073 acre of temporary impacts (**Table 5** and **Attachment F**). The range above represents the full range of cumulative aquatic resources impacts, with the lower end assuming the least impactful sewer alternative, and the upper end assuming the most impactful sewer alternative.

Table 5. Impacts to Aquatic Resources Associated with the Project

Aquatic Resources	Permanent Impacts								Temporary Impacts								Total Impacts							
	PDA[1]		Sewer Alt 1		Sewer Alt 2		Total		PDA[1]		Sewer Alt 1		Sewer Alt 2		Total		PDA[1]		Sewer Alt 1		Sewer Alt 2		Total	
	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)	(acres)	(linear feet)
Seasonal Wetland	0.025		--		0.007		0.025-0.031		--		--		--		--		0.025		--		0.007		0.025-0.031	
Seasonal Wetland Swale	0.017[2]		--		--		0.017		--		--		--		--		0.017		--		--		0.017	
Seep	0.370		--		--		0.370		--		0.005		0.005		0.005		0.370		0.005		0.005		0.375	
Drainage Ditch	0.001	21	--	--	--	--	0.001	21	0.002	35	--	--	--	--	0.002	35	0.003	56	--	--	--	--	0.003	56
Ephemeral Drainage	0.003	159	0.012	176	0.007	108	0.010-0.015	267-335	--	--	0.010	153	0.010	152	0.010	152-153	0.003	159	0.022	329	0.017	260	0.020 – 0.023	419-488
Intermittent Drainage	0.019	109	--	--	--	--	0.019	109	0.015	81	--	--	--	--	0.015	81	0.034	208	--	--	--	--	0.034	208
Perennial Creek	--	--	0.013	22	0.013	22	0.013	22	--	--	0.020	33	0.020	33	0.020	33	--	--	0.033	55	0.033	55	0.033	55
Roadside Ditch	0.125	1,837	0.002	46	--	--	0.125-0.127	1,837-1,883	0.020	269	0.001	31	<0.001	16	0.020-0.021	285-300	0.145	2,106	0.003	77	<0.001	16	0.145 – 0.0148	2,122-2,199
Total	**0.560**	**2,124**	**0.027**	**244**	**0.027**	**130**	**0.585-0.589**	**2,254-2,368**	**0.038**	**244**	**0.036**	**217**	**0.035**	**201**	**0.072-0.073**	**586-602**	**0.597**	**2,529**	**0.063**	**400**	**0.062**	**331**	**0.652 – 0.664**	**2,840-2,986**

[1] Project Development Area

[2] 0.001 acre of seasonal wetland swale that is in the Program Study Area was considered permanently impacted by the Project.

Note: Small summation errors may occur due to rounding. The lower end of the impact ranges assumes the least impactful sewer alternative the upper end of the impact ranges assumes the most impactful sewer alternative.

6.2 Special-Status Plant Species

The vegetation communities proposed for impact represent suitable habitat for a variety of special-status plant species. Protocol-level special-status plant surveys have been conducted throughout the Study Area with negative results. Given that special-status plants are not present within the Study Area, the Project is not expected to have any impact on special-status plants.

6.3 Crotch Bumble Bee

The Annual Grassland within the Project Area is suitable habitat for Crotch bumble bee. This species could be adversely affected if construction activity results in the removal of nests of the species.

6.4 Vernal Pool Fairy Shrimp

6.4.1 Project Development Area Impacts

One depressional seasonal wetland comprising 0.006 acre is suitable habitat for vernal pool fairy shrimp and will be permanently impacted by within the Project Development Area.

6.4.2 Sewer Alternative Impacts

6.4.2.1 Sewer Alternative 1

No vernal pool fairy shrimp habitat is present within Sewer Alternative 1; therefore, implementation of this alternative would not impact vernal pool fairy shrimp.

6.4.2.2 Sewer Alternative 2

One depressional seasonal wetland comprising 0.007 acre is suitable habitat for vernal pool fairy shrimp within Sewer Alternative 2. Implementation of this alternative would permanently impact this feature.

6.4.3 Overall Project Impacts

The Project, including impacts within the Project Development Area and the sewer line would permanently impact 0.006-0.013 acre vernal pool fairy shrimp habitat. The range above represents the full range of cumulative impacts, with the lower end assuming the least impactful sewer alternative, and the upper end assuming the most impactful sewer alternative.

6.5 Monarch Butterfly

Milkweed plants within the Project Area are suitable habitat for Monarch butterfly. Eggs or caterpillars could be destroyed if construction activity results in the removal of milkweed plants that they are occupying.

6.6 Foothill Yellow-Legged Frog

Suitable habitat for foothill yellow-legged frog occurs in Carson Creek in the western portion of the sewer alternatives, and the immediately adjacent uplands. While no fill is proposed in the creek itself, individual frogs could be killed if they were present in the construction area adjacent to the creek.

6.7 Northwestern Pond Turtle

Suitable aquatic habitat for northwestern pond turtle occurs in Carson Creek in the western portion of the sewer alternatives, and the adjacent Oak Woodlands and Arroyo Willow Riparian Scrub within 150 feet provide potential movement habitat. While no fill is proposed in the creek itself, permanent and temporary impacts are proposed in the Oak Woodlands and Arroyo Willow Riparian Scrub adjacent to the creek. If western pond turtles or their nests were present in those areas during construction, individual turtles could be injured or killed, or nests could be destroyed.

Approximately 0.13 acre of northwestern pond turtle movement habitat within 150 feet of Carson Creek will be permanently impacted by the Project along the sewer alignment, and 0.15 acre will be temporarily impacted (**Attachment I**).

6.8 Nesting Raptors and Songbirds

Golden eagle, bald eagle, yellow-breasted chat, and loggerhead shrike have the potential to nest within the Project Area, as do other more common bird species protected by the MBTA. If they were nesting on-site, removal of the nests could kill individuals of these species. Furthermore, birds nesting in avoided areas adjacent to construction could be disturbed by construction, which could result in nest abandonment.

6.9 Burrowing Owl

The Annual Brome Grassland throughout the Project Area provides suitable wintering habitat for burrowing owl, and occasional ground-squirrel burrows and debris throughout the Project Area provide marginally suitable burrow habitat. If ground disturbance occurred while burrowing owls were in burrows, individuals of this species could be killed.

6.10 Foraging Birds

Tricolored blackbird and white-tailed kite have the potential to utilize the Annual Brome Grasslands within Project Area for winter foraging. As there is a relatively large amount of this vegetation type in the vicinity, these species are not anticipated to be significantly impacted.

6.11 Roosting Bats

Trees throughout the Project Area are habitat for various special-status bat species. If special-status bats were roosting in trees to be removed by Project construction, they could be injured or killed during the removal.

6.12 Northern California Ringtail

Removal of trees, downed logs, or snags within the Arroyo Willow Riparian Scrub or dense Oak Woodland south of Carson Creek along the sewer alignment could destroy northern California ringtail nests, and kill individual ringtails if they were present.

6.13 Oak Resources

In accordance with the El Dorado County Oak Resources Conservation Ordinance, impacts to oak resources are calculated differently for Oak Woodland areas and non-Oak Woodland areas. Within mapped Oak Woodlands, impacts are calculated based on impact to oak canopy, plus impacts to any individual native oak trees within the woodland that are 36" or greater DBH. Outside of mapped Oak Woodlands, impacts are calculated based on impacts to each native oak tree that is 6" or greater DBH. Mitigation is only required for trees that are in Fair or better condition, and as a result, impacts have been broken out below based on condition. Note that trees were considered permanently impacted if the trunk fell within either the permanent or temporary impact boundary, or if greater than approximately 30% of the tree's dripline area would be permanently impacted. Impacted and avoided Oak Woodlands and oak trees are shown on **Attachment J**.

6.13.1 Project Development Area Impacts

A total of 0.3 acre of Oak Woodland will be permanently impacted within the Project Development Area, and 0.2 acre of Oak Woodland will be temporarily impacted within the Project Development Area. Within this area, a total of seven native oak trees with a DBH of 36" or greater will be impacted (six of which are in fair to good condition) (**Table 6**).

In addition, one individual native oak tree with a DBH of 6" or greater outside of Oak Woodlands will be permanently impacted within the Project Development Area, but this tree is in poor condition (**Table 6**).

In summary, a total of 0.5 acres of Oak Woodland and six individual trees in fair to good condition (with a cumulative DBH of 264.3 inches) would be subject to mitigation as a result of impacts within the Project Development Area (**Table 6**).

Table 6. Oak Tree Impacts within the Project Development Area

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	6 (264.3)	0	6 (264.3)
	Poor Condition		0	1 (38.4)	0	1 (38.4)
Subtotal						7 (302.7)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	0	0	0	0
		≥36" DBH	0	0	0	0
	Poor Condition	6-35" DBH	0	1 (23.4)	0	1 (23.4)
		≥36" DBH	0	0	0	0
Subtotal						1 (23.4)
Total Trees in Fair to Good Condition			0	6 (264.3)	0	6 (264.3)
TOTAL			0	8 (326.1)	0	8 (326.1)

6.13.2 Sewer Alternative Impacts

6.13.2.1 Sewer Alternative 1

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 1, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 1. Within this area, two native oak trees with a DBH of 36" or greater will be impacted (both of which are in fair to good condition) (**Table 7**).

In addition, a total of four individual native oak trees with a DBH of 6" or greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 1 (three of which are in fair to good condition) (**Table 7**). Of those three trees in fair to good condition that may be impacted, one has a DBH of 36" or greater. In summary, a total of 2.2 acres of Oak Woodland and five individual trees in fair to good condition (with a cumulative DBH of 200 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 1 (**Table 7**).

Table 7. Oak Tree Impacts within Sewer Alternative 1

			Number of Impacted Trees (DBH)			
			Blue Oak	**Interior Live Oak**	**Valley Oak**	**Total**
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	2 (41.0)	0	0	2 (41.0)
		≥36" DBH	0	0	1 (43.1)	1 (43.1)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						4 (110.7)
Total Trees in Fair to Good Condition			2 (41.0)	2 (115.9)	1 (43.1)	5 (200.0)
TOTAL			2 (41.0)	3 (142.5)	1 (43.1)	6 (226.6)

6.13.2.1 Sewer Alternative 2

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 2, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 2. Within this area, two native oak trees with a DBH of 36" or greater will be impacted (both of which are in fair to good condition) (**Table 8**).

In addition, a total of three individual native oak trees with a DBH of 6" or greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 2 (two of which are in fair to good condition) (**Table 8**). Of those two trees in fair to good condition that may be impacted, one has a DBH of 36" or greater.

In summary, a total of 2.2 acres of Oak Woodland and four individual trees in fair to good condition (with a cumulative DBH of 189.4 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 2 (**Table 8**).

Table 8. Oak Tree Impacts within Sewer Alternative 2

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	0	0	1 (35.0)	1 (35.0)
		≥36" DBH	1 (38.5)	0	0	1 (38.5)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						3 (100.1)
Total Trees in Fair to Good Condition			1 (38.5)	2 (115.9)	1 (35.0)	4 (189.4)
TOTAL			1 (38.5)	3 (142.5)	1 (35.0)	5 (216.0)

6.13.3 Overall Project Impacts

The Project combined with the sewer line would permanently impact 1.5 acres of Oak Woodland, and temporarily impact 1.2 acres of Oak Woodland. Within the Oak Woodlands, the Project combined with the sewer line would impact nine native oak trees with a DBH of 36" or greater (eight of which are in fair to good condition).

In addition, a total of 3 - 4 individual native oak trees with a DBH of 6" or greater outside of Oak Woodlands would be permanently impacted by the Project combined with the sewer line (2 - 3 of which are in fair to good condition). Of the 2 - 3 trees in fair to good condition that may be impacted, 2 have a DBH of 36" or greater (one along each sewer alternative).

Of these impacts, a cumulative total of 2.7 acres of Oak Woodland and 11-12 individual trees in fair to good condition (with a cumulative DBH of 453.7 - 464.3) would be subject to mitigation. The ranges above represent the full range of cumulative impacts, with the lower end assuming the least impactful sewer alternative, and the upper end assuming the most impactful sewer alternative. Where impacts are the same for both sewer alternative, no range is presented.

6.14 Sensitive Natural Communities

One vegetation community mapped within the Project Area is considered to be a "Sensitive Natural Community" by CDFW: Arroyo Willow Riparian Scrub. Arroyo Willow Riparian Scrub does not occur within the Project Development Area, but occurs within the portion of the proposed sewer line alignment that is shared by both alternatives. Whichever sewer alternative is selected, approximately 0.03 acre of Arroyo Willow Riparian Scrub will be permanently impacted by the Project, and 0.05 acre will be temporarily impacted (**Attachment I**).

6.15 Wildlife Corridors

The majority of the Project Area is comprised of Annual Brome Grasslands and paved roadways virtually identical to surrounding areas, and largely conducive to wildlife movement, but not necessarily corridors. The Oak Woodlands around the intermittent drainage could serve as a low-quality wildlife corridor, and the Arroyo Willow Riparian Scrub and surrounding Oak Woodland along Carson Creek is also expected to serve as a wildlife corridor. Lastly, deer may utilize the Bass Lake Road undercrossing under Highway 50 to the south of the Project Area as a migration corridor to access open areas south of Highway 50.

The potential wildlife corridor along the intermittent drainage is low-quality due to the fact that the current western terminus of the drainage is a relatively small culvert that carries the flow under Bass Lake Road. This structure does not allow for large wildlife passage, and a tall (20 foot plus) road prism and the very busy Bass Lake Road are the only way for large wildlife to continue west. As a result, wildlife use of this corridor is likely minimal. However, the Project has been designed to preserve this wildlife corridor to the extent possible.

The much higher quality wildlife corridor along Carson Creek would be largely unaffected by the Project. This wildlife corridor is located within the portion of the proposed sewer line alignment that is shared by both alternatives. The Creek itself will be crossed with a bridge, and the only permanent impact in this location apart from the bridge will be a sewer maintenance road that may be used as a recreational trail by area residents. Trails are easily crossed by wildlife and maintenance vehicles will only very occasionally use the access road. As a result, this impact is not expected to significantly impact existing wildlife corridors.

Deer use of the Bass Lake Road undercrossing to access open areas south of Highway 50 could be somewhat impacted by development within the PDA, as the grasslands within the PDA will be removed. However, extensive grasslands will still be available to the west of the PDA, and some grasslands will still be present to the east, and as a result, substantial impacts to deer movement are not anticipated. Furthermore, the Project will not impact the undercrossing itself. Therefore, the Project is not expected to significantly impact deer use of the Bass Lake Road undercrossing.

In summary, no significant impacts to wildlife corridors are expected as a result of Project implementation.

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following are mitigation measures that are often required by CEQA lead agencies for impacts to sensitive biological resources that may be associated with construction of the Project.

7.1 Aquatic Resources

1. The Project proponent shall apply for a Section 404 permit from the U.S. Army Corps of Engineers for impacts to regulated Waters (Waters) of the U.S. Waters that will be impacted shall be replaced

or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.

2. The Project proponent shall apply for WDRs and/or a Water Quality Certification from the RWQCB (depending on the limit of federal jurisdiction to wetlands and waters of the U.S. in place at the time) and adhere to the certification conditions. Waters of the state that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the RWQCB.
3. The Project proponent shall apply for a Section 1600 Lake or Streambed Alteration Agreement from CDFW. Minimization and avoidance measures will be proposed as appropriate and may include: preconstruction species surveys and reporting, protective fencing around avoided biological resources, worker environmental awareness training, seeding disturbed areas adjacent to open space areas with native seed, and installation of project-specific storm water BMPs. Mitigation may include restoration or enhancement of resources on- or off-site, purchase habitat credits from an agency-approved mitigation/ conservation bank, off-site, working with a local land trust to preserve land, or any other method acceptable to CDFW.

7.2 Special-Status Plant Species

Special-status plant surveys have been conducted throughout the Study Area with negative results. However, given enough time, plants may become established in areas where suitable habitat exists. If construction does not commence prior to the spring of 2026, another round of special-status plant surveys shall be conducted in areas proposed for impact prior to commencement of construction. Surveys shall be conducted area in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). This protocol includes conducting surveys at the appropriate time of year, when plants are in bloom.

If no special-status plant species are found, no further mitigation would be required. If special-status plants are found and will be impacted, mitigation for those impacts will be determined by a qualified botanist/biologist. Specific mitigation measures will be determined based on the plant species affected, physical conditions at the impact site, and conditions at a proposed mitigation site (if applicable). Options for mitigating annual plants could include:

- Avoidance
- Seed collection and planting at a mitigation site
- Collection of seed-bearing soil, to be spread at a mitigation site

Options for perennial plants could include:

- Avoidance
- Transplantation of plant to a mitigation site
- Propagation using cuttings, to be planted at a mitigation site
- Seed collection and planting at a mitigation site

If special-status plants will be impacted, a qualified biologist shall prepare an avoidance and mitigation plan detailing protection and avoidance measures, transplantation procedures, success criteria, and long-term monitoring protocols. This plan shall be approved by the County, and shall ensure that mitigation for the impacts to rare plants will result in no net loss of individual plants after a five year monitoring period. In addition, a pre-construction worker awareness training shall be conducted to alert workers to the presence of and protections for special-status plants.

If plants listed under FESA or CESA are located within the Project impact area and those plants cannot be avoided, the Project proponent shall coordinate with USFWS or CDFW (as appropriate) for issuance of an Incidental Take Permit (ITP) and shall implement similar mitigation measures as outlined above and ultimately approved by the appropriate agency.

7.3 Crotch Bumble Bee

Crotch bumble bee was designated as a candidate for listing under the CESA in 2019, but no decision on listing has been published. If, at the time of Project implementation, the species is not a CESA candidate or CESA listed, and it does not fall into any of the other special-status categories defined in **Section 3.0**, then it would not qualify for protections under CEQA and no mitigation is necessary. Furthermore, because Crotch bumble bee is a candidate species, appropriate mitigation measures are still being developed and refined. Madrone has developed the following measure based on current literature and research. If at a later date a different mitigation measure is determined to be more appropriate, that can be submitted to the County at that time for review and approval.

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between 1 September and 31 March (i.e., outside the colony active period), if feasible, to avoid impacts on Crotch bumble bee.
- If completing all initial ground-disturbing work between 1 September and 31 March is not feasible, then a senior biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a pre-construction survey for Crotch bumble bee in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65° F and 90° F, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae.
- At a minimum, pre-construction survey methods shall include the following:

  - Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.
  - If bumble bees are observed, attempt to photograph the individual and identify it to species.
  - If Crotch bumble bee is observed, watch any Crotch bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.
  - Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.
  - If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than 4 inches to assist with locating the nest.
  - Look for concentrated Crotch bumble bee activity.
  - Listen for the humming of a nest colony.
- The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a Crotch bumble bee nest(s) may be present or if construction activities could result in take of Crotch bumble bees. The report shall be submitted to the County prior to the commencement of construction activities.
- If no bumble bees are located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then no further mitigation or coordination with CDFW is required.
- If any sign(s) of a bumble bee nest is observed, and if it cannot be established the species present is not a Crotch bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identification as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include but not be limited to: waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.
- It is recommended, but not required that the Project Applicant also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying Crotch bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.
- If Crotch bumble bees are located, and after coordination with CDFW take of Crotch bumble bees cannot be avoided, the Applicant shall obtain an ITP from CDFW prior to County approval of permits authorizing construction, and the Project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project Applicant translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources in portions of the Project Area that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

7.4 Vernal Pool Fairy Shrimp

Two depressional seasonal wetlands within the Project Area represent potential habitat for vernal pool fairy shrimp. The applicant may choose to conduct surveys for this species; these surveys shall be conducted in accordance with the *Survey Guidelines for the Listed Large Branchiopods* (USFWS 2017). If vernal pool fairy shrimp are not found during protocol-level wet and dry season surveys, no further mitigation will be required. If protocol-level surveys of these features are not conducted, or if vernal pool fairy shrimp are found during protocol-level wet- or dry season surveys of the features, then the Project proponent or the USACE (depending on the regulatory mechanism) shall consult with the USFWS regarding impacts to vernal pool fairy shrimp associated with the Project.

The Project proponent shall comply with any conditions of the appropriate take authorization from the USFWS prior to County approval of any permit authorizing construction. The conditions in this take authorization may include but will not be limited to fencing off avoided habitat, worker awareness trainings, preservation, restoration, or enhancement of habitat on- or off-site to compensate for indirect and/or direct effects; purchase of habitat credits from an agency-approved mitigation/conservation bank; working with a local land trust to preserve land; or any other method acceptable to USFWS.

7.5 Monarch Butterfly

Monarch butterfly was designated as a candidate for listing under the ESA in 2020, but no decision on listing has been published. If, at the time of project implementation, it is not a ESA candidate or ESA listed, and it does not fall into any of the other "special-status" categories defined in **Section 3.0**, then it would not qualify for protections under CEQA and no mitigation is necessary. Furthermore, as this is a candidate species, appropriate mitigation measures are still being developed and refined for this species. We have developed the following measure based on current literature and research. If at a later date, a different mitigation measure is determined to be more appropriate, that can be submitted to the County and USFWS at that time for review and approval.

If construction occurs within annual brome grassland during the time when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September), a pre-construction survey shall be conducted by a qualified biologist no earlier than 15 days prior to construction within the proposed impact area and a 50-foot buffer in accessible areas. The biologist shall comprehensively search the Survey Area for milkweed plants, and all milkweed plants found shall be surveyed for monarch eggs, larvae (i.e., caterpillars), and chrysalises. Additionally, other plants immediately adjacent to milkweed plants shall also be searched for chrysalises. If no eggs, caterpillars, or chrysalises are detected, no additional mitigation measures are necessary.

If eggs, caterpillars or chrysalises are found, the plants shall be avoided with a 50-foot buffer until metamorphosis is completed and adult butterflies emerge and voluntarily leave the host plant. If the eggs, larvae, or chrysalises cannot be avoided, all eggs, larvae, and chrysalises, including the portion of the plant to which they are attached, will be translocated to an alternative location. That location must be a minimum

of 50 feet outside of the impact area and contain a similarly sized or larger population of larval host plants. The portions of the plants supporting eggs or chrysalises shall be tied to the live stem of the avoided larval host plant while caterpillars will be placed directly on a stem or leaf of a larval host plant. Should the species be listed under FESA in the future, coordination with USFWS shall be conducted prior to translocation.

7.6 Foothill Yellow-Legged Frog

Carson Creek represents suitable habitat for foothill yellow-legged frog (FYLF). We recommend the following measures to mitigate potential impacts to this species prior to initiation of ground disturbance activities within 100 feet of Carson Creek, associated with the off-site sewer pipe.

- As part of the CWA Section 404 USACE permitting for the Project, the USACE will conduct formal Endangered Species Act consultation with the USFWS on potential impacts to federally-listed species or species that are proposed for listing; this may include FYLF[2]. If the USACE consults with USFWS on FYLF, the Applicant shall prepare a Biological Assessment, which will include details on potential impacts and mitigation for foothill yellow-legged frog, to be submitted to the USACE and the USFWS.
- If take of FYLF is determined to be likely, the Applicant shall submit an application for an CDFW Code Section 2081 Incidental Take Permit.
- If it is determined that take of FYLF is likely to occur, the Applicant shall abide by mitigation measures developed during the course of the Endangered Species Act consultation with the USFWS and CDFW. These mitigation measures could include, but are not limited to seasonal work restrictions for initial ground disturbance, pre-construction surveys by a qualified biologist, the installation of wildlife exclusion fencing, biological monitoring, and worker environmental awareness training. If it is determined that take of FYLF is likely to occur, additional measures could include preservation, restoration, or enhancement of habitat on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to USFWS and CDFW. The mitigation measures listed below may be implemented if take of FYLF is likely to occur. The mitigation measures listed below may differ from mitigation measures included in a USFWS Biological Opinion or a CDFW Incidental Take Permit. If that occurs, the measures in the USFWS Biological Opinion and CDFW Incidental Take Permit take precedence.
    - The Project proponent shall develop a Pre-Construction Survey Plan for FYLF and submit it to the USFWS and CDFW for approval prior to ground-disturbing activities within 100 feet of Carson Creek. The Plan shall include what life-stage(s) shall be surveyed for, survey method(s), and timing of survey(s). The Plan shall provide justification for timing and methodology of survey design (e.g., watershed characteristics, regional snow pack, timing and rate of spring runoff, day length, average ambient air and water temperatures, local and seasonal conditions). For sites with suitable breeding habitat, two consecutive seasons of negative egg mass/larval surveys are recommended to support a negative finding.

[2] The USACE may choose not to consult with USFWS on FYLF as no direct impacts to USACE jurisdictional FYLF habitat are proposed; impacts would only be indirect.

- Within 3-5 days prior to entering or working within 100 feet of Carson Creek, a USFWS and CDFW-approved biologist shall perform a pre-construction survey, as specified in the Pre-Construction Survey Plan, within a 500-foot buffer zone upstream and downstream of the construction area (if permitted by adjacent land owners). The survey shall include a description of any standing or flowing water. Permittee shall provide Pre-Construction Survey notes and observations to the USFWS and CDFW prior to commencing Covered Activities.
- The Project proponent shall develop a Relocation Plan for FYLF and submit it to the USFWS and CDFW for approval prior to ground-disturbing activities within 100 feet of Carson Creek. The Relocation Plan shall include what life stage(s) will be relocated (e.g., adults or egg masses) and specific protocols for each life stage. The Relocation Plan shall quantify the amount, location, and quality of suitable receiving habitat (e.g., breeding and dispersal habitat). The Relocation Plan shall include capture and handling methods specific to each life stage.
- The Project proponent shall ensure that Covered Activities involving construction and heavy equipment use (such as excavation, grading, and contouring) that are conducted in streams, ponds, and riparian areas are limited to the period from May 1 to October 15 of each year (Dry Season). Any work outside of the Dry Season shall be subject to approval of the USFWS and CDFW.
- Prior to the start of construction within 100 feet of Carson Creek, high visibility orange fencing shall be installed around approved work areas. The fencing shall remain in place while construction activities are ongoing and shall be regularly inspected and fully maintained at all times.
- The Project proponent shall develop a Water Diversion Plan for FYLF and submit it to CDFW for approval prior to any in-stream activities. The Water Diversion Plan shall contain detailed descriptions of the water intake screening (e.g., screen material, size, cleaning method, etc.), the duration of the water diversion, how the Project proponent will ensure that aquatic life will be maintained or relocated from the dewatered area, diversion materials (unacceptable materials that are deleterious to fish and wildlife include particle board, plastic sheeting, bentonite, pressure-treated lumber, creosote, concrete, or asphalt), and monitoring methods for the diversion.

▪ If it is determined that take of FYLF is unlikely to occur, the Applicant shall conduct a pre-construction Visual Encounter Survey (VES) survey for the species within 15 days prior to initiation of ground disturbance within 100 feet of Carson Creek. The survey shall be conducted in accordance with the Peek et al (2017) *Visual encounter survey protocol for Rana boylii in lotic environments*, but only implement the life-stage survey(s) that are appropriate for the time of year of the survey (which will be based on when construction commences). If survey results are negative, then no further mitigation will be required. If FYLF are found during the survey, then take should be considered likely to occur, and consultation with USFWS and CDFW as outlined above shall occur.

7.7 Northwestern Pond Turtle

A northwestern pond turtle survey shall be conducted no more than 48 hours prior to construction where construction activities overlap with suitable aquatic habitat (Carson Creek), and where construction will occur in arroyo willow riparian scrub or oak woodlands within 150 feet of these aquatic resources. If no northwestern pond turtles or nests are found, no further mitigation is necessary. If a northwestern pond turtle is observed within the proposed impact area, a qualified biologist shall relocate the individual to habitat of equivalent or greater value outside of the proposed impact area prior to construction. If a northwestern pond turtle nest is observed within the proposed impact area, the nest shall be fenced off and avoided until the eggs hatch. The exclusion fencing shall be placed no less than 25 feet from the nest. A qualified biologist shall monitor the nest daily during construction to ensure that hatchlings do not disperse into the construction area. Relocation of hatchlings will occur as stipulated above, if necessary.

If as part of the CWA Section 404 USACE permitting for the Project, the USACE determines that formal Endangered Species Act (ESA) consultation with the USFWS is needed, the Project proponent shall abide by the mitigation measures developed during the course of the Endangered Species Act consultation, which shall supersede these measures. These mitigation measures could include but are not limited to, seasonal work restrictions for initial ground disturbance, dewatering protocols, pre-construction surveys by a qualified biologist, the installation of wildlife exclusion fencing, turtle relocation, nest avoidance, biological monitoring, and worker environmental awareness training. Additional measures could include preservation, restoration, or enhancement of habitat on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to USFWS.

7.8 Nesting Raptors and Other Birds

Project construction will require the removal of vegetation that provides nesting habitat for migratory bird species, including special-status species such as tricolored blackbird, golden eagle, bald eagle, yellow-breasted chat, and loggerhead shrike,. If birds are nesting in the Project Area at the time of construction, activity could disturb nesting birds, resulting in the loss of eggs or young or nest abandonment. In order to prevent potential disturbance and/or direct effects to active nests, the Project proponent shall implement the following:

- If ground disturbance or other construction activities are proposed during the bird nesting season (February 1 – August 31), a focused survey for nesting raptors and migratory bird nests shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within the following buffer areas:
  - 0.5-mile for bald eagle and golden eagle
  - 0.25-mile for tree-nesting raptors
  - 500 feet for all other species

- Burrowing owl pre-construction surveys of suitable habitat will be conducted within 14 days prior to the beginning of construction activities consistent with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).
- If active raptor nests are found, no construction activities shall take place within 0.25-mile for golden eagles or within 500 feet of other raptor nest(s) until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced based on consultation and approval by the County.
- The limit of work shall be indicated by bright orange temporary fencing or other similar highly-visible marker. No construction activities or personnel shall cross the fencing, except with approval of a qualified biologist. If trees containing nests or burrows must be removed as a result of Project implementation, removal shall be completed during the nonbreeding season (late September to March) if possible, or after a qualified biologist determines that the young have fledged (during the breeding season).
- If no active nests are found during the required pre-construction surveys, no further mitigation will be required.
- Survey results shall be provided to the County within 15 days of completion of all surveys. Surveys shall be repeated if there is a break of construction of more than 14 days during the nesting season.

7.9 Roosting Bats

A qualified biologist shall conduct a bat habitat assessment of all potential roosting habitat features, including trees and structures within the proposed impact footprint. This habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to one (1) year prior to the start of construction.

If potential roosting habitat is identified within the areas proposed for impact, the biologist shall survey the potential roosting habitat within 14 days prior to tree removal to determine presence of roosting bats. These surveys are recommended to be conducted utilizing methods that are considered acceptable by CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras or a combination thereof.

If pre-construction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by a qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by a qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and the next day cutting down the remaining portion of the tree. Once the bats have been excluded, tree removal may occur.

7.10 Northern California Ringtail

Within 14 days prior to the initiation of any construction activities in suitable habitat (riparian habitats, oak woodlands with shrubby understory, and/or trees five inches DBH or greater in riparian areas, particularly those with cavities), a qualified biologist shall conduct non-invasive preconstruction surveys for Northern California ringtail and ringtail nests in suitable habitat that will be disturbed by construction activity. Non-invasive methods may include camera traps and track plates as well as physical surveys of suitable habitat. If ringtail are found prior to the initiation of, and/or during construction activities, a qualified biologist shall consult with CDFW prior to relocation of any individual ringtail. The camera trap may be removed once construction begins.

If a ringtail nest is observed within the Project Area during the preconstruction survey, a qualified biologist shall establish a 250 foot no-disturbance buffer and the nest shall be fenced off and avoided until the young have left the nest, and the nest is no longer active as determined by the qualified biologist. A qualified biologist shall monitor to ensure that ringtails do not disperse into the construction area.

If any ringtails are observed within the Project Area, work will be suspended in a 100-foot radius of the animal until the animal leaves the Project Area on its own volition. If necessary, the qualified biologist will notify CDFW to determine the appropriate procedures related to relocation. Any worker who inadvertently injures or kills a ringtail or who finds one dead, injured, or entrapped must immediately report the incident to a qualified biologist.

CDFW may require mitigation for potential impacts to ringtail as part of a streambed alteration agreement. If CDFW assigns mitigation that is more stringent than the measure proposed above, the CDFW measure shall take precedence.

7.11 Oak Resources

Project implementation would result in permanent impacts to Oak Woodland, as well as individual oak trees. Note that all areas of temporary impacts to Oak Woodlands have been considered permanent for purposes of this analysis as large trees cannot be removed and immediately replaced. During final review, it may be determined that some of these areas are not permanently impacted as they only fall under canopy and do not result in tree removal. An Oak Resources Technical Report as required by Chapter 130.39 of the El Dorado County Code has been prepared and is included as **Attachment G**. This document shall be updated if the Project design is modified or refined.

Heritage trees are defined as native oak trees with a DBH of 36" or greater. In accordance with the ORMP, mitigation for impacts to these trees must occur at a ratio of 3:1.

Mitigation for Oak Woodlands and Individual Oak Trees shall be accomplished using one or more of the following options:

a. In-lieu fee payment based on the percent of on-site Oak Woodland impacted by the development and the DBH inches of trees impacted (as detailed in **Sections 7.10.1 and 7.10.2** below) to be either used by the County to acquire off-site deed restrictions and/or conservation easements or to be given by the County to a land conservation organization to acquire off-site deed restrictions and/or conservation easements. Note that the current in-lieu fee is $8,285 per acre of Oak Woodland mitigation, and $153 per DBH inch for mitigation of Individual Trees.
b. Off-site deed restriction or conservation easement acquisition for purposes of off-site Oak Woodland conservation consistent with Chapter 4.0 (Priority Conservation Areas) of the ORMP;
c. Replacement planting within an area on-site for up to 50 percent of the total Oak Woodland mitigation requirement consistent with Section 2.4 (Replacement Planting Guidelines) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement;
d. Replacement planting within an area off-site for up to 50 percent of the total Oak Woodland mitigation requirement. Off-site replacement planting areas shall be consistent with Section 2.4 (Replacement Planting Guidelines) and Chapter 4.0 (Priority Conservation Areas) of the ORMP. This area shall be subject to a Deed Restriction or Conservation Easement; or
e. A combination of options a through d above.

7.11.1 Oak Woodland

The Project as proposed would impact 0.5 acres of the 4.0 acres of Oak Woodland mapped within the Project Development Area. Implementation of either sewer alternative would result in impacts to 2.2 acres of Oak Woodland. This is a cumulative total of 2.7 acres (44%) of impact of the total 6.2 acres of Oak Woodland mapped within the Project Area. In accordance with the ORMP, the Project proponent would be required to mitigate at a ratio of 1:1 for impacts to 0-50% of the Oak Woodland within the Project Area. Based on this ratio, the Project would require 2.7 acres of Oak Woodland mitigation. Payment of the in-lieu fee for this impact would cost a total of $22,369.50, based on the current in-lieu fee.

7.11.2 Heritage and Individual Tree Mitigation

7.11.2.1 Project Development Area

As detailed in **Section 6.11.1**, six Heritage Trees in fair to good condition occur within the Oak Woodland proposed for impact within the Project Development Area. There are no individual trees outside of mapped Oak Woodland in fair to good condition that are proposed for impact. The six Heritage Trees proposed for impact have a cumulative DBH of 264.3 inches. Based on a mitigation ratio of 3:1 for Heritage Trees, impacts to these trees within the Project Development Area would incur mitigation DBH of 792.9 DBH inches. Payment of the in-lieu fee for impacts to these trees would cost a total of $121,313.70, based on the current in-lieu fee.

7.11.2.2 Sewer Alternative 1

As detailed in **Section 6.11.2.1**, two Heritage Trees in fair to good condition occur within the Oak Woodland proposed for impact within Sewer Alternative 1, and one individual Heritage Tree is also proposed for impact. In addition, two smaller individual trees outside of mapped Oak Woodland are proposed for impact. The three Heritage Trees have a cumulative DBH of 159.0 inches, and the two individual trees have a cumulative DBH of 41.0 inches. Based on a mitigation ratio of 3:1 for Heritage Trees and 1:1 for smaller trees, impacts to these trees associated with Sewer Alternative 1 would incur mitigation DBH of 518.0 DBH inches. Payment of the in-lieu fee for impacts to these trees would cost a total of $79,254.00, based on the current in-lieu fee.

7.11.2.3 Sewer Alternative 2

As detailed in **Section 6.11.2.2**, two Heritage Trees in fair to good condition occur within the Oak Woodland proposed for impact within Sewer Alternative 2, and one individual Heritage Tree is also proposed for impact. In addition, one smaller individual tree outside of mapped Oak Woodland is proposed for impact. The three Heritage Trees have a cumulative DBH of 154.4 inches, and the individual tree has a DBH of 35.0 inches. Based on a mitigation ratio of 3:1 for Heritage Trees and 1:1 for smaller trees, impacts to these trees associated with Sewer Alternative 2 would incur mitigation DBH of 498.2 DBH inches. Payment of the in-lieu fee for impacts to these trees would cost a total of $76,224.60, based on the current in-lieu fee.

7.11.2.4 Overall Project Impacts

The Project combined with the sewer line would impact nine Heritage Trees in fair to good condition within the Oak Woodland proposed for impact, and one individual Heritage Tree. In addition, the Project combined with the sewer line would impact 1 - 2 smaller individual trees outside of mapped Oak Woodland. The ten Heritage Trees have a cumulative DBH of 418.7 – 423.2 inches, and the 1 - 2 individual trees have a cumulative DBH of 35.0 – 41.0 inches. Based on a mitigation ratio of 3:1 for Heritage Trees and 1:1 for smaller trees, impacts to trees for the Project combined with the sewer line would incur mitigation DBH of 1,291.1 – 1,310.6 DBH inches. Payment of the in-lieu fee for impacts to these trees would cost a total of $197,538.3 - $200,521.80, based on the current in-lieu fee.

7.12 Worker Environmental Awareness Training

Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A

handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts.

7.13 Program Study Area

As summarized in Tables 1 and 2 above, the Program Study Area (PSA) is comprised of 27.9 acres of annual brome grassland and 0.2 acre of paved road. No oak or other trees occur within the PSA. Within the annual brome grassland are 0.001 acre of seasonal wetland swale and 0.100 acre of roadside ditch. These terrestrial and aquatic resources represent potential habitat for the following species:

- Big-scale balsamroot (CRPR List 1B.2)
- Spicate rosinweed (CRPR List 1B.3)
- Crotch bumblebee (California candidate for listing)
- Monarch butterfly (Federal candidate for listing)
- Tricolored blackbird foraging (California endangered and California species of special concern)
- Golden eagle foraging (California fully protected species)
- Burrowing owl wintering (California species of special concern)
- White-tailed kite foraging (California fully protected species)
- Loggerhead shrike (California species of special concern)

Depending on the ultimate development proposal, impacts within the PSA could impact up to 27.9 acres of annual brome grassland, 0.2 acre of paved road, 0.001 acre of seasonal wetland swale, and 0.100 acre of roadside ditch. Mitigation measures that may apply to potential future development within the Program Study Area include the following:

- **Section 7.1 – Aquatic Resources,**
- **Section 7.2 – Special-Status Plants,**
- **Section 7.3 – Crotch Bumblebee,**
- **Section 7.5 – Monarch Butterfly,**
- **Section 7.8 – Nesting Raptors and Other Birds, and**
- **Section 7.12 – Worker Environmental Awareness Training**.

8.0 REFERENCES

Airola, D.A., D. Ross, C.W. Swarth, D. Lasprugato, R.J. Meese, and M.C. Marshall. 2016. *Breeding status of the Tricolored Blackbird in the grassland-dominated region of the Sierra Nevada, California in 2016*. Central Valley Bird Club Bulletin 19:82-109.

California Burrowing Owl Consortium (CBOC). 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. Dated April 1993.

California Department of Fish and Game (CDFG). 1995. *Staff Report on Burrowing Owl Mitigation*. Dated 25 September 1995.

California Department of Fish and Game (CDFG). 2012. *Staff Report on Burrowing Owl Mitigation*. Dated 7 March 2012.

California Department of Fish and Wildlife (CDFW). 2018a. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. State of California Natural Resource Agency Department of Fish and Wildlife. Dated 20 March 2018. Website https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959.

California Department of Fish and Wildlife (CDFW). 2018b. *A Status Review of the Tricolored Blackbird (Agelaius tricolor) in Californi*a. Dated February 2018.

California Native Plant Society (CNPS), Rare Plant Program. 2024. *Inventory of Rare and Endangered Plants* online edition, v9.5 California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed September 2023 through January 2024].

California Native Plant Society (CNPS). 2001. *CNPS botanical survey guidelines*. Pages 38-40 *in* California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (D.P. Tibor, editor). Sixth edition. Special Publication No. 1, California Native Plant Society, Sacramento, 387 pp.

California Natural Diversity Database (CNDDB). 2024. *RareFind 5*. California Department of Fish and Wildlife. Accessed January 2024.

El Dorado County (EDC). 2017. *El Dorado County Oak Resources Management Plan*. Published by El Dorado County Community Development Agency, Long Range Planning Division. Dated September 2017.

Eng, L., D. Belk, and C. Eriksen. 1990. *Californian Anostraca: Distribution, Habitat, and Status*. Journal of Crustacean Biology 10(2):247-277.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

Eriksen, C. and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas*. Mad River Press, Inc. Eureka, CA.

Fugate, M. 1992. *Speciation in the fairy shrimp genus* Branchinecta *(Crustacea: Anostraca) from North America*. Ph.D. thesis, University of California, Riverside.

Garrett, K. and J. Dunn. 1981. *Birds of southern California: Status and distribution*. Los Angeles Audubon Society, Los Angeles.

Goulson, D. 2010. *Bumblebees: behaviour, ecology, and conservation*. Oxford University Press,

Jennings, M. R., and M.P. Hayes. 1994. *Amphibian and Reptile Species of Special Concern* in Jennings, W.B. (1996). "*Status of amphibians*." Sierra Nevada Ecosystem Project, Final Report to Congress, 2, 921-944.

Jepson Flora Project (eds.). 2024. *Jepson eFlora*, http://ucjeps.berkeley.edu/eflora/ [accessed September 2023 through January 2024]

Kupferberg, S. 1996a. *Hydrologic and geomorphic factors affecting conservation of a river-breeding frog (Rana boylii)*. Ecological Applications 6(4):1322-1344.

Nussbaum, R. A., E. D. Brodie, Jr., and R. M. Storm. 1983. *Amphibians & reptiles of the Pacific Northwest*. University Press of Idaho. 332 pp.

Osborne, J. L., A. P. Martin, C. R. Shortall, A. D. Todd, D. Goulson, M. E. Knight, R. J. Hale, and R. A. Sanderson. 2008. *Quantifying and comparing bumble bee nest densities in gardens and countryside habitats*. Journal of Applied Ecology 45:784-792.

Peek, R. A., S. M. Yarnell, and A. J. Lind. 2017. *Visual encounter survey protocol for Rana boylii in lotic environments*. Center for Watershed Sciences, University of California, Davis. 9 p.

Remsen, J. V., Jr. 1978. *Bird Species of Special Concern in California*. California Department of Fish and Game, Nongame Invest. Report 78-1, Sacramento, California.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA. 1300 pp.

Shuford, W. D., and Gardali, T., editors. 2008. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2024. *Web Soil Survey*. Available online at http://websoilsurvey.nrcs.usda.gov/.

Stebbins, R. C. 2003. *A Field Guide to Western Reptiles and Amphibians. Third Edition*. Boston: Houghton Mifflin Company.

The Xerces Society (Xerces Society). 2018. *A Petition to the State of California Fish and Game Commission to List the Crotch Bumble Bee (*Bombus crotchii*), Franklin's Bumble Bee (*Bombus franklini*), Suckley Cuckoo Bumble Bee (*Bombus suckleyi*), and Western Bumble Bee (*Bombus occidentalis*) as Endangered Under the California Endangered Species Act*. Dated 16 October 2018.

U.S. Army Corps of Engineers (USACE). 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers (USACE). 2008b. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. A Delineation Manual*. Prepared by R. W. Lichvar and S. M. McColley. ERDC/CRREL TR-08-12. Cold Regions Research and Engineering Laboratory.

U.S. Army Corps of Engineers (USACE). 2016. *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports*. U.S. Army Corps of Engineers, Sacramento District. Dated January 2016. Available online at: http://www.spk.usace.army.mil/Portals/12/documents/regulatory/jd/minimum-standards/Minimum_Standards_for_Delineation_with_Template-final.pdf.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2000. *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*. Sacramento, CA.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2017. *Survey Guidelines for the Listed Large Branchiopods*. Sacramento, CA. Dated 13 November 2017.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2023. *5-Year Review Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)*. Dated 26 September 2023.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2024. *IPaC Trust Resource Report for the Study Area*. Generated from http://ecos.fws.gov/ipac/ on 21 January 2024.

U.S. Geological Survey (USGS). 2021. *"Clarksville, California"* 7.5-Minute Series Topographic Quadrangle Map. U.S. Geological Survey. Denver, Colorado.

Western Bat Working Group (WBWG). 2024. *Species Matrix and Species Accounts*. Accessed on-line at http://wbwg.org/ in December 2023 and January 2024.

Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. *The Bumble bees of North America: An Identification guide*. Princeton University Press, Princeton.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988. *California's Wildlife. Vol. I-III.* California Department of Fish and Game, Sacramento, California. Periodically updated by WHR staff.

Figures

Figure 1. Site and Vicinity

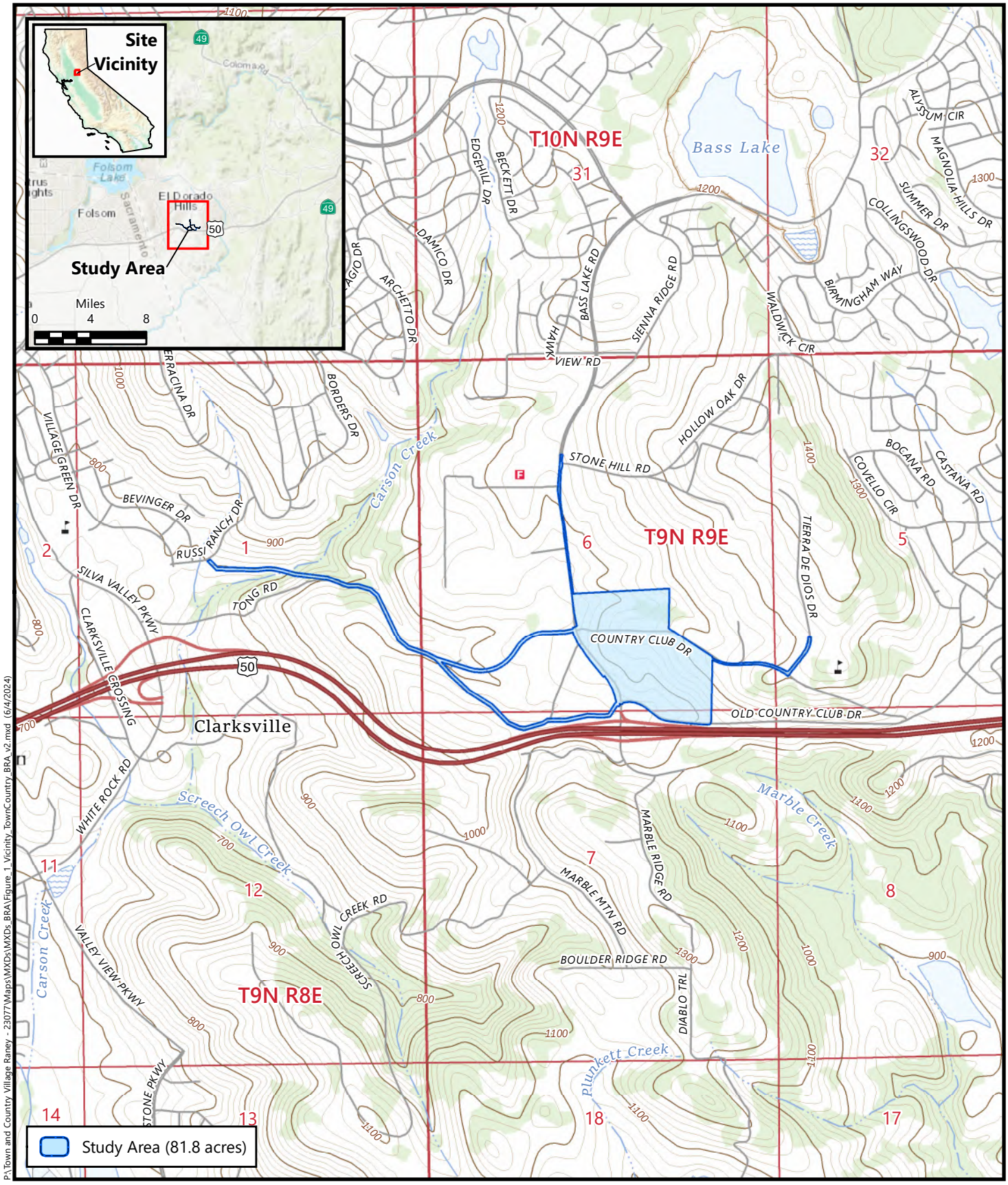
Figure 2. Project Components

Figure 3. California Natural Diversity Database Occurrences of Plant Species

Figure 4. California Natural Diversity Database Occurrences of Wildlife Species and Critical Habitat

Figure 5. Aquatic Resources and Vegetation Communities

Figure 6. NRCS Soils Map



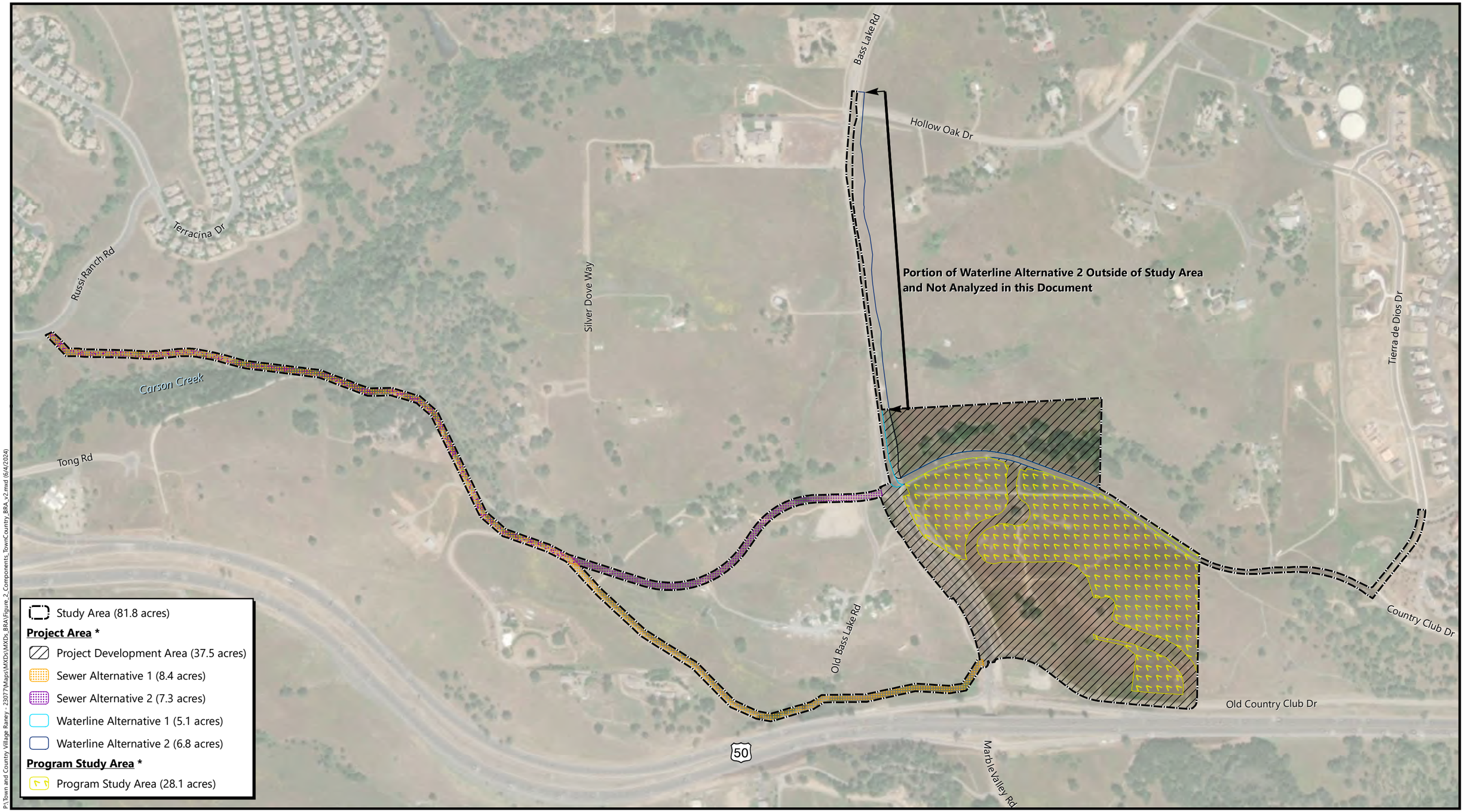
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Source: United States Geologic Survey, 2021
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 1, Township 9 North, Range 8 East, MDBM and
Sections 5-7, Township 9 North, Range 9 East, MDBM
Latitude (NAD83): 38.658668°, Longitude (NAD83): -121.029902°

Figure 1
Site and Vicinity

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



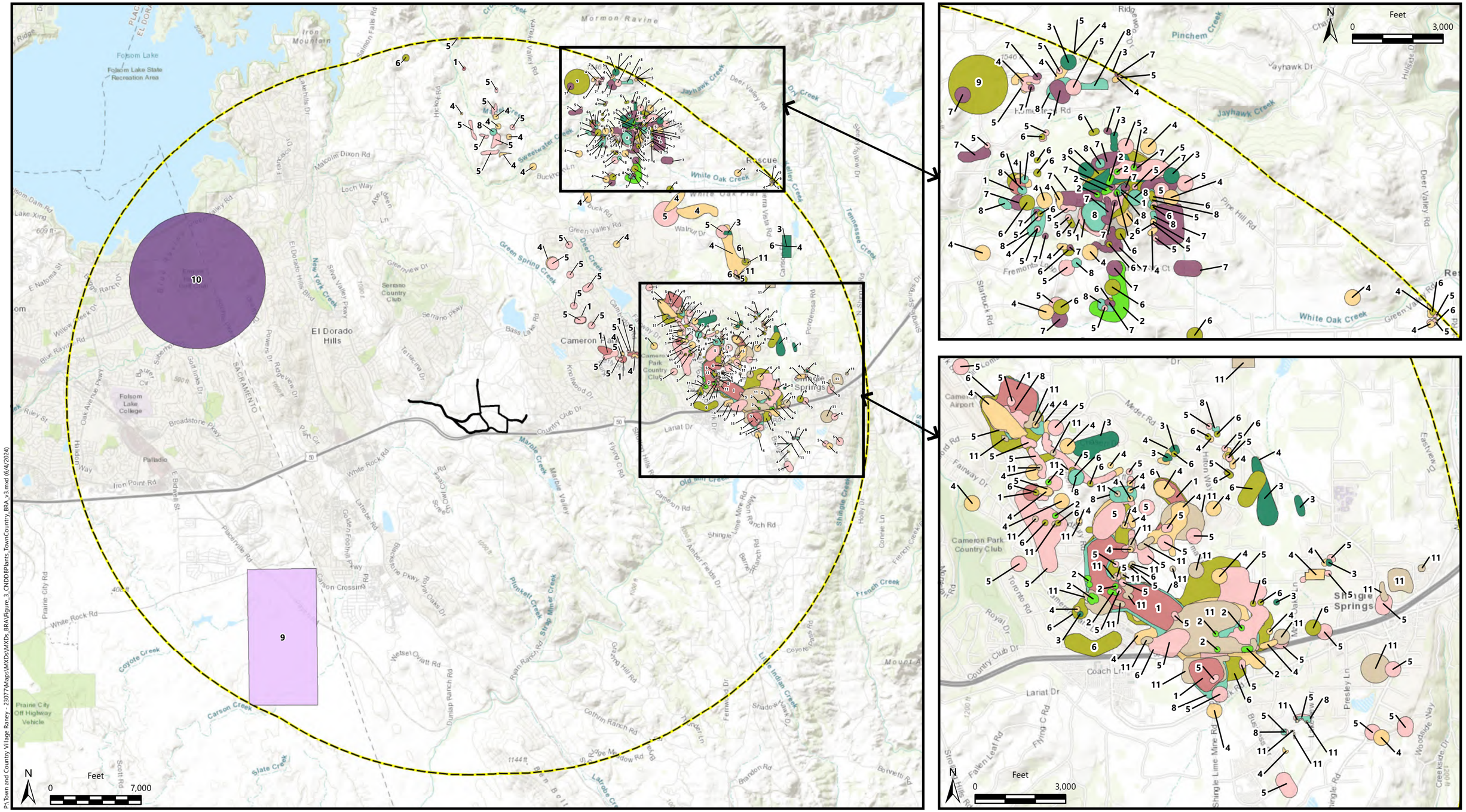
* *Component acreages do not sum to the Study Area acreage due to overlapping alternatives*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022

Figure 2
Project Components

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



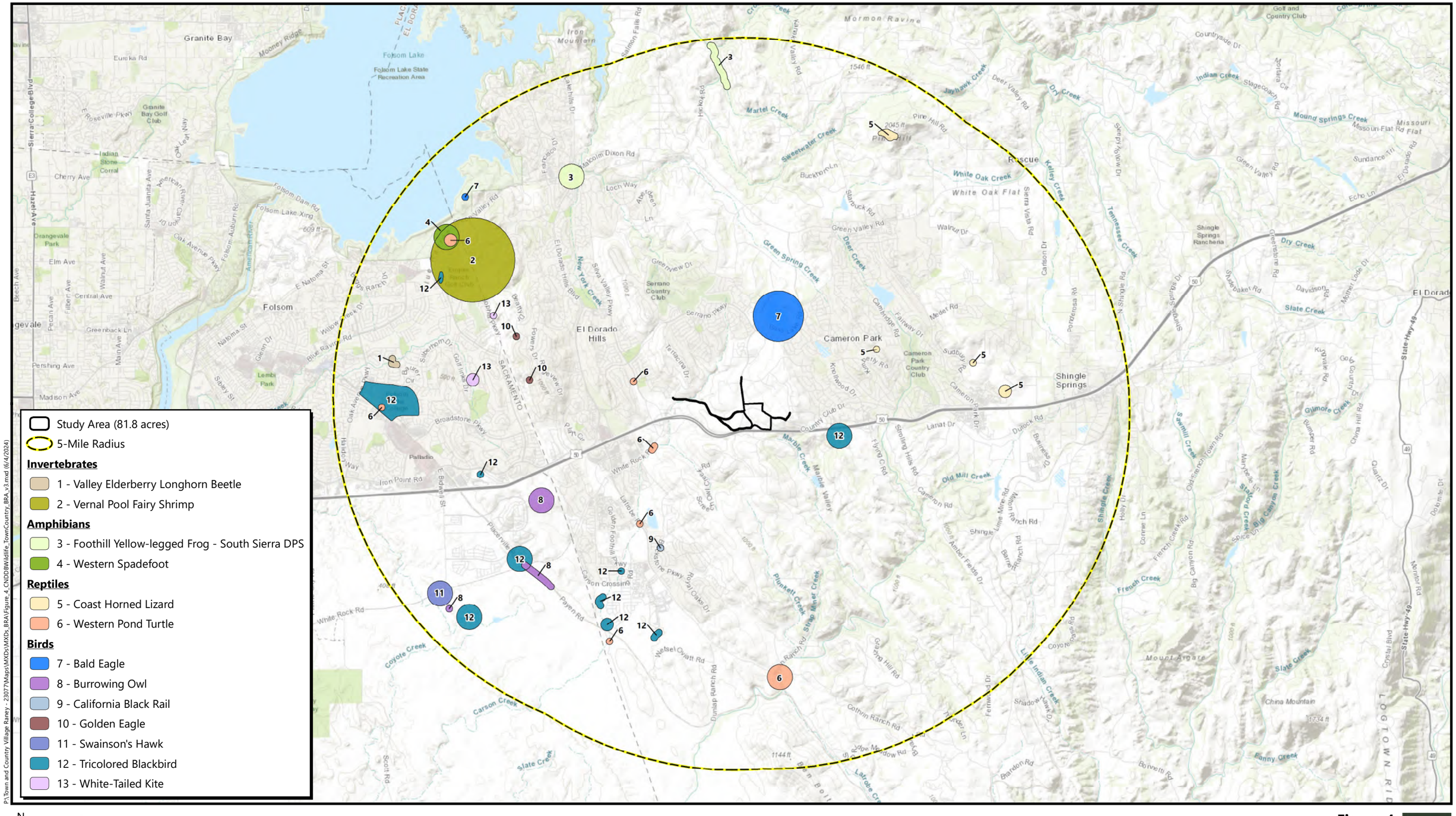
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Source: *California Department of Fish and Wildlife*, December 2023
Basemap Source: *ESRI* World Topography

Figure 3
California Natural Diversity Database Occurrences of Plant Species

Town and Country Village El Dorado
El Dorado County, California

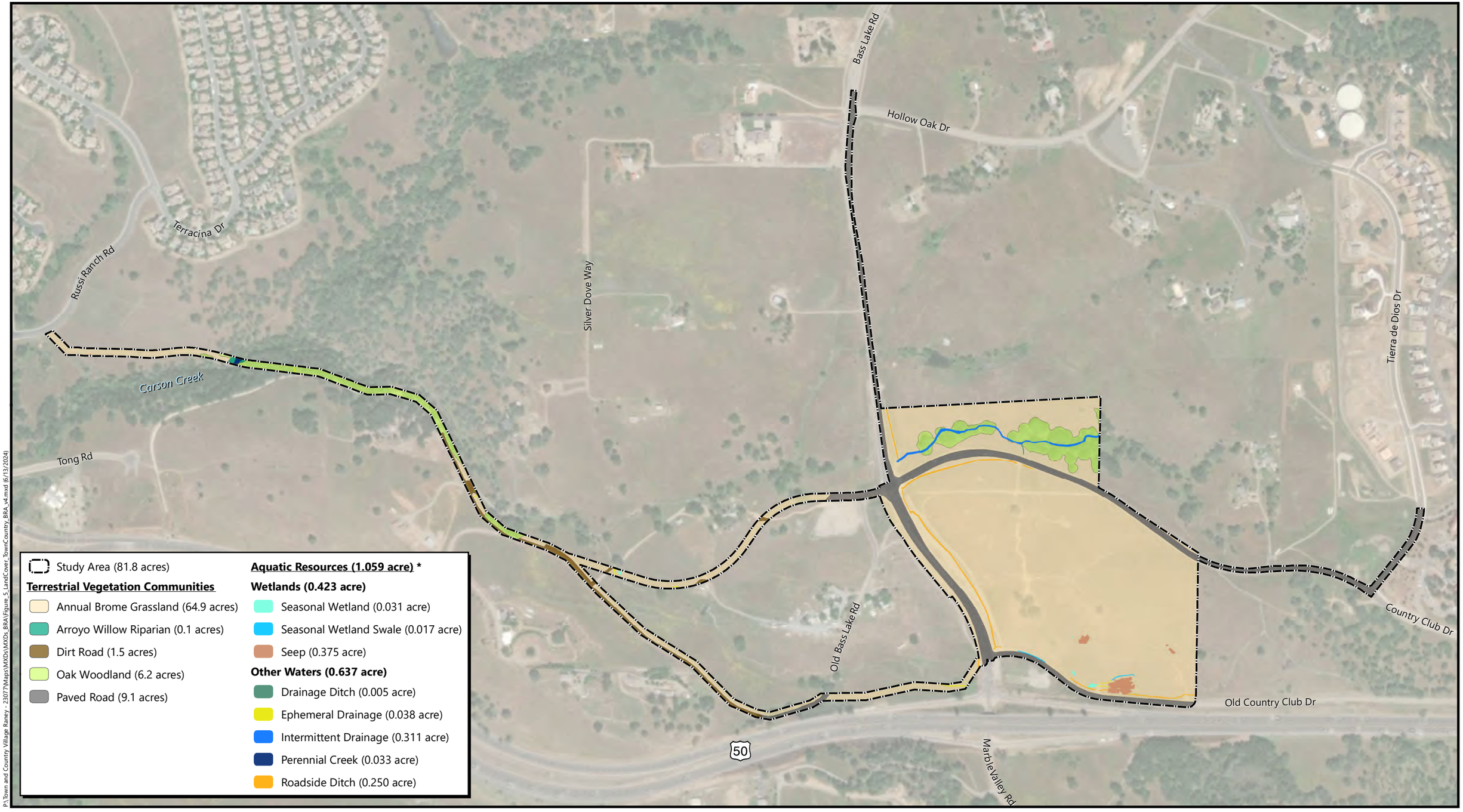
MADRONE ECOLOGICAL CONSULTING



Source: *California Department of Fish and Wildlife*, May 2024
Basemap Source: *ESRI* World Topography

Figure 4
California Natural Diversity Database Occurrences of Wildlife Species

Town and Country Village El Dorado
El Dorado County, California



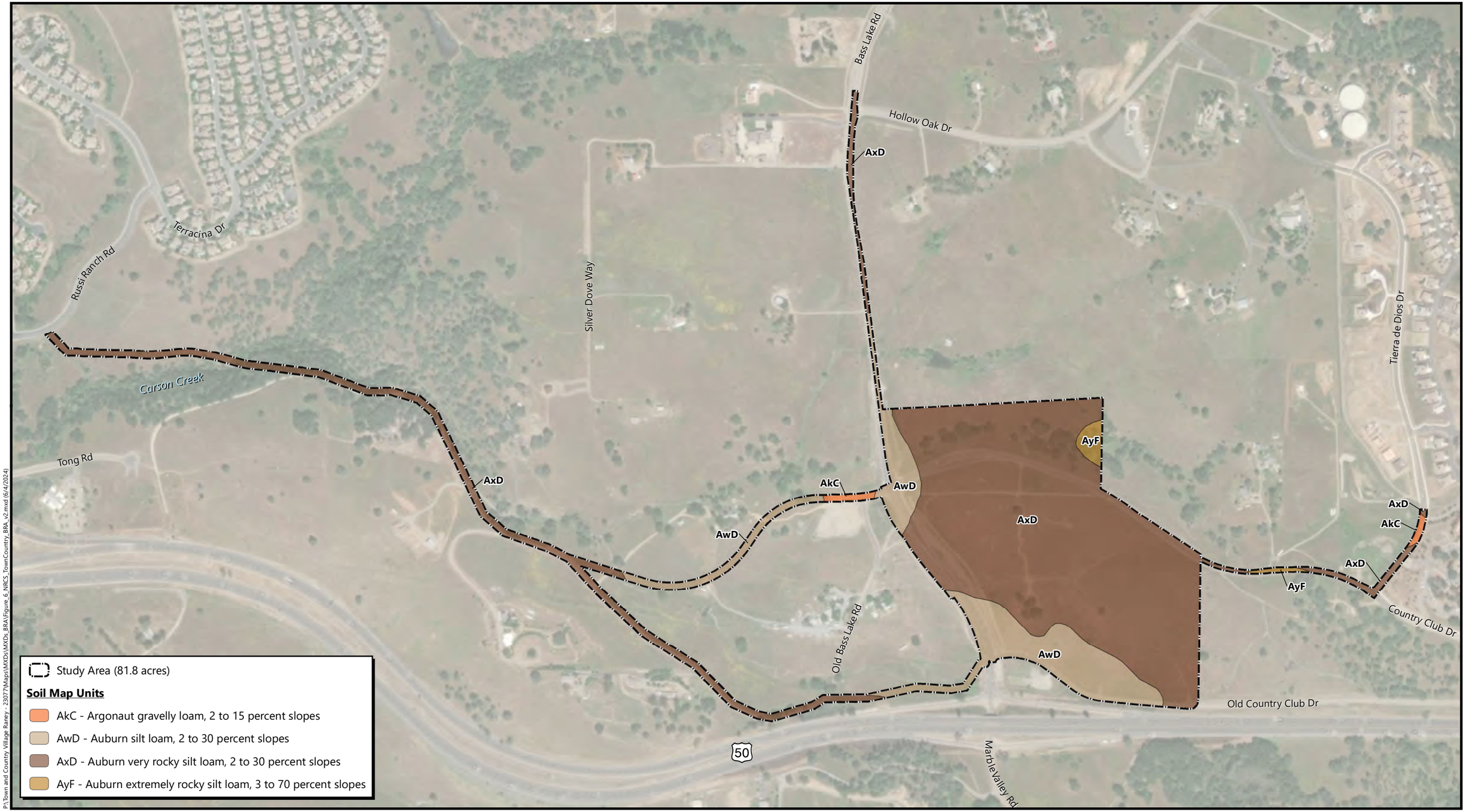
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Figure 5
Aquatic Resources and Vegetation Communities

Town and Country Village El Dorado
El Dorado County, California

* *Small summation errors may occur due to rounding*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022



P:\Town and Country Village Raney - 23077\Maps\MXDs\MXDs_BRA\Figure_6_NRCS_TownCountry_BRA_v2.mxd (6/4/2024)

Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for El Dorado County, California*
Aerial Source: Maxar, 1 May 2022

Figure 6
Natural Resources Conservation Service Soils

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Town & Country Village El Dorado Site Plan

Attachment B. IPaC Trust Resource Report for the Study Area

Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Clarksville, California" USGS Quadrangle and Eight Surrounding Quadrangles

Attachment D. Wildlife List

Attachment E. Special-Status Plant Survey Report for Town & Country Village El Dorado

Attachment F. Aquatic Resources Delineation Report for Town and Country Village

Attachment G. Oak Resources Technical Report for Town & Country Village El Dorado

Attachment H. Impacts to Aquatic Resources

Attachment I. Impacts to Vegetation Communities

Attachment J. Impacts to Oak Resources

Attachment A

Town & Country Village El Dorado Site Plan

TOWN & COUNTRY VILLAGE EL DORADO

OVERALL SITE PLAN

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=100' MARCH, 2024

APPLICANT

JOSH PANE
1123 J STREET, 3RD FLOOR
SACRAMENTO, CA 95814

OWNER

MOHAMMAD MOHANNA
CAP FUNDING
1025 9th STREET, SUITE 205
SACRAMENTO, CA 95814

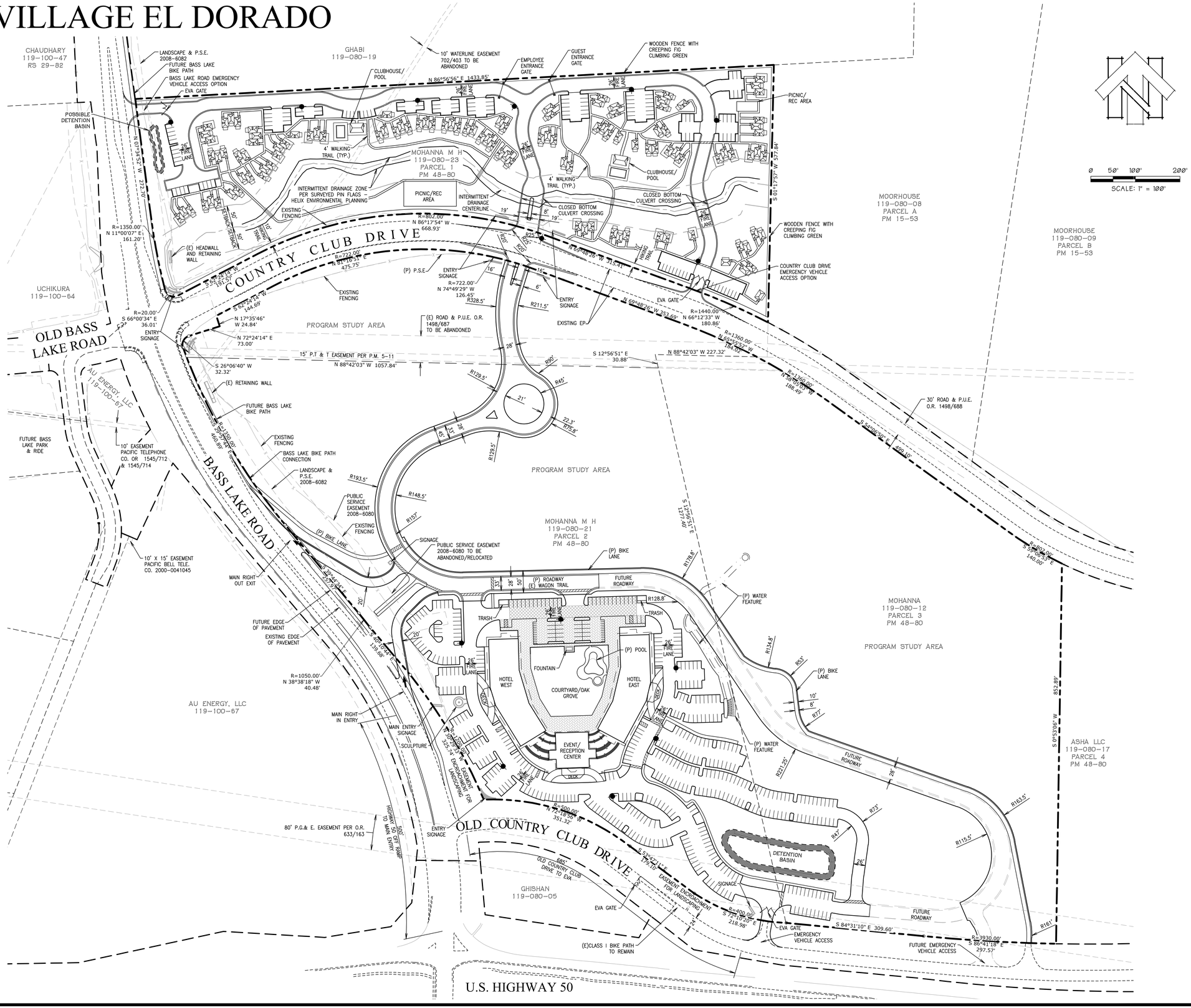
ENGINEER

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PROPOSED BUILDINGS	GROSS SQUARE FOOTAGE (FOOTPRINT)
HOTELS	16,000
EVENT CENTER	7,000
COTTAGES	280
CLUBHOUSES	600

LEGEND

- PROJECT BOUNDARY
- (E) LOT BOUNDARY
- (E) RIGHT OF WAY
- (E) EASEMENT
- (E) EDGE OF PAVEMENT
- (E) FENCE
- GRASS PAVERS
- LANDSCAPE PAVERS
- FIRE DEPARTMENT PATH OF TRAVEL TURNING RADII INSIDE RADIUS=35' OUTSIDE RADIUS=55'
- FIRE HYDRANT



Attachment B

IPaC Trust Resource Report for the Study Area

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

El Dorado County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog Rana boylii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5133	Endangered
Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS

NOT FOR CONSULTATION

Monarch Butterfly Danaus plexippus — Candidate
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
Wherever found
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2246

Flowering Plants

NAME	STATUS

El Dorado Bedstraw Galium californicum ssp. sierrae — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5209

Layne's Butterweed Senecio layneae — Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4062

NOT FOR CONSULTATION

Pine Hill Ceanothus Ceanothus roderickii — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3293

Pine Hill Flannelbush Fremontodendron californicum ssp. decumbens — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4818

Stebbins' Morning-glory Calystegia stebbinsii — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3991

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

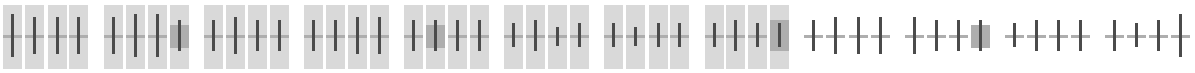
probability of presence breeding season survey effort no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Bald Eagle
Non-BCC
Vulnerable



Golden Eagle
Non-BCC
Vulnerable



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

NOT FOR CONSULTATION

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31

NOT FOR CONSULTATION

Belding's Savannah Sparrow Passerculus sandwichensis beldingi — Breeds Apr 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

Black Tern Chlidonias niger — Breeds May 15 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3093

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cassin's Finch Carpodacus cassinii — Breeds May 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9462

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

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Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Marbled Godwit Limosa fedoa — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

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Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

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3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

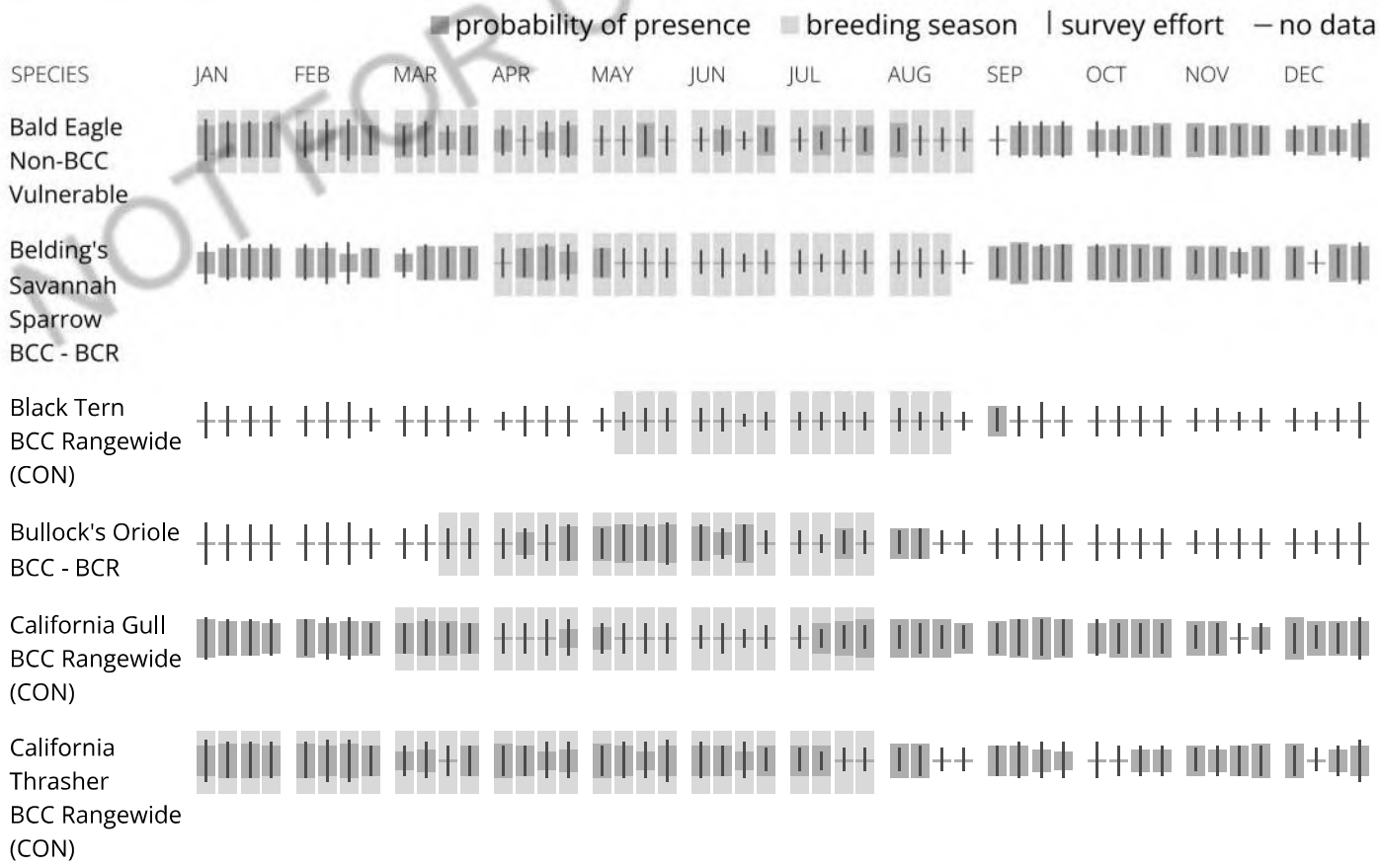
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

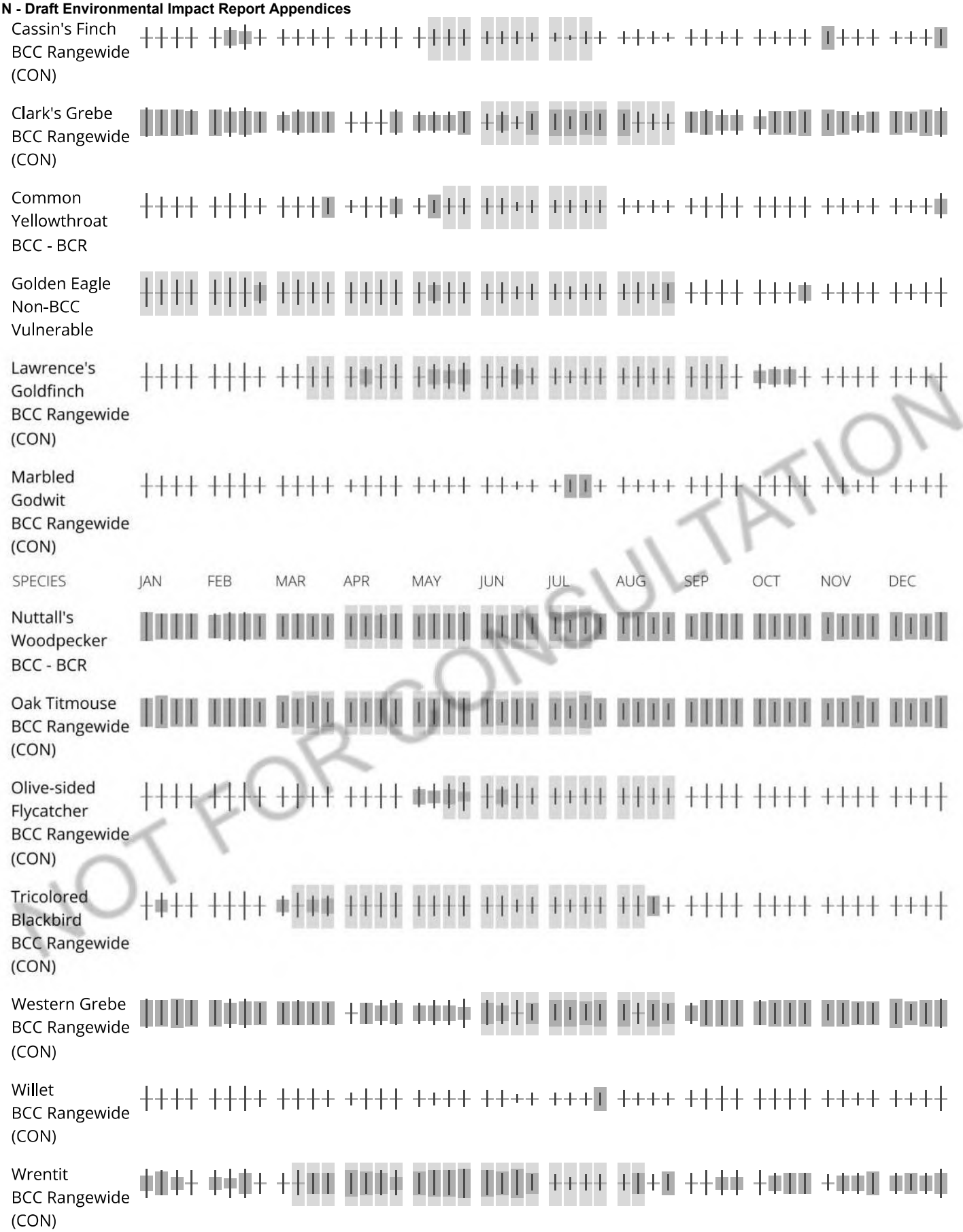
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Yellow-billed Magpie BCC Rangewide (CON)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

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on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key

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component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

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Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Attachment C

CNPS Inventory of Rare and Endangered Plants Query for the "Clarksville, California" USGS Quadrangle and Eight Surrounding Quadrangles

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

36 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3812058:3812068:3812078:3812151:3812162:3812161:3812171:3812172:3812152**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
Allium jepsonii	Jepson's onion	Alliaceae	Apr-Aug	None	None	1B.2
Allium sanbornii var. *sanbornii*	Sanborn's onion	Alliaceae	May-Sep	None	None	4.2
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	Mar-Jun	None	None	1B.2
Brodiaea rosea ssp. *vallicola*	valley brodiaea	Themidaceae	Apr-May(Jun)	None	None	4.2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	(Jan)Mar-Jun	None	None	4.2
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	Apr-Jul	FE	CE	1B.1
Carex xerophila	chaparral sedge	Cyperaceae	Mar-Jun	None	None	1B.2
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	(Apr)May-Jul	None	None	4.3
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	Apr-Jun	FE	CR	1B.1
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	(Apr)May-Jun	None	None	1B.2
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	(Mar)May-Jul	None	None	4.2
Claytonia parviflora ssp. *grandiflora*	streambank spring beauty	Montiaceae	Feb-May	None	None	4.2
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	Apr-Aug	None	None	3.2
Downingia pusilla	dwarf downingia	Campanulaceae	Mar-May	None	None	2B.2
Eriogonum tripodum	tripod buckwheat	Polygonaceae	May-Jul	None	None	4.2
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	Apr-Jun	None	None	4.3
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	May-Aug	None	None	1B.2
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	Apr-Jul	FE	CR	1B.2
Fritillaria agrestis	stinkbells	Liliaceae	Mar-Jun	None	None	4.2
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	May-Jun	FE	CR	1B.2
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	May-Jun	None	None	4.3
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	Apr-Aug	None	CE	1B.2
Hesperevax caulescens	hogwallow starfish	Asteraceae	Mar-Jun	None	None	4.2
Iris longipetala	coast iris	Iridaceae	Mar-May(Jun)	None	None	4.2
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	Mar-May	None	None	1B.2
Legenere limosa	legenere	Campanulaceae	Apr-Jun	None	None	1B.1
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	Mar-Jun	None	None	4.2
Lilium humboldtii ssp. *humboldtii*	Humboldt lily	Liliaceae	May-Jul(Aug)	None	None	4.2
Navarretia heterandra	Tehama navarretia	Polemoniaceae	Apr-Jun	None	None	4.3

Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	Apr-May	None	None	1B.1
Orcuttia tenuis	slender Orcutt grass	Poaceae	May-Sep(Oct)	FT	CE	1B.1
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	Apr-Jul(Sep)	FE	CE	1B.1
Packera layneae	Layne's ragwort	Asteraceae	Apr-Aug	FT	CR	1B.2
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	May-Oct(Nov)	None	None	1B.2
Trichostema rubisepalum	Hernandez bluecurls	Lamiaceae	Jun-Aug	None	None	4.3
Wyethia reticulata	El Dorado County mule ears	Asteraceae	Apr-Aug	None	None	1B.2

Showing 1 to 36 of 36 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 22 January 2024].

Attachment D

Wildlife List

Wildlife Species Observed within the Town and Country Village Study Area 13 April 2022, 27 September and 6 October 2023

Species Name	Common name
Reptiles	
Crotalus oreganus oreganus	Northern Pacific rattlesnake
Sceloporus occidentalis	Western fence lizard
Birds	
Cathartes aura	Turkey vulture
Accipiter cooperi	Cooper's hawk
Buteo lineatus	Red-shouldered hawk
Buteo jamaicensis	Red-tailed hawk
Tyto alba	Barn owl
Melanerpes formicivorus	Acorn woodpecker
Falco sparverius	American kestrel
Aphelocoma californica	California scrub jay
Sitta carolinensis	White-breasted nuthatch
Agelaius phoeniceus	Red-wing blackbird
Melozone crissalis	California towhee
Sturnella neglecta	Western meadowlark
Mammals	
Lepus californicus	Black-tailed jackrabbit

Attachment E

Special-Status Plant Survey Report for Town & Country Village El Dorado



Special-Status Plant Survey Report

Town and Country Village El Dorado

El Dorado County, California
June 2024

MADRONE ECOLOGICAL CONSULTING

Prepared for:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2024. *Special-Status Plant Survey Report for Town and Country Village El Dorado*. Prepared for Raney Planning & Management, Inc. Published on 5 June 2024.

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Attachments

Attachment A: Botanist Qualifications
Attachment B: Target Plant Species Reference Population Information
Attachment C: Plant Species Observed within the Town and Country Village El Dorado Study Area

1.0 INTRODUCTION

This report presents the results of a special-status plant survey conducted for the approximately 81.8-acre Town and Country Village El Dorado Study Area. The Study Area is located north of Interstate Highway 50, largely south of Stone Hill Road, east of Silva Valley Parkway, and largely west of Morrison Road in western El Dorado County, California. The Study Area is located in portions of Section 1, Township 9 North, Range 8 East and Sections 5-7, Township 9 North, Range 9 East (MDBM) of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) botanists Daria Snider and Bonnie Peterson conducted protocol-level rare plant surveys of the Study Area on 13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024 in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). The surveys occurred over the course of three years due to changes in the Study Area boundary; however, all areas received both early season (April and May) surveys and late season (September and October) surveys such that surveys were comprehensive for all target plant species.

A list of special-status plant species with potential to occur within the Study Area was developed by reviewing the following:

- the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2024) query of CRPR Lists 1A, 1B, 2A, 2B, and 3 within the "Clarksville, California" USGS topo quadrangle, and the eight surrounding quadrangles; and
- the California Natural Diversity Database occurrences of special-status plant species within 5 miles of the Study Area (CNDDB 2024).

The target species for this survey were:

- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Spicate rosinweed (*Calycadenia spicata*)
- Red Hills soaproot (*Chlorogalum grandiflorum*)
- Dwarf downingia (*Downingia pusilla*)
- Tuolumne button-celery (*Eryngium pinnatisectum*)
- Sanford's arrowhead (*Sagittaria sanfordii*)

The Study Area was comprehensively surveyed on foot by walking rough transects through the site to ensure full coverage. The surveys were floristic in nature, which means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. Plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2024). Vegetation communities were

classified according to the *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Qualifications for the botanists that conducted the surveys are included in **Attachment A**, a list of reference populations of target plants visited is included in **Attachment B**, and a comprehensive list of all plant species observed during surveys of the Study Area is included in **Attachment C**.

3.0 EXISTING CONDITIONS

The Study Area is largely comprised of ungrazed Annual Brome Grasslands with widely scattered oak trees (**Figure 2**). Oak Woodlands occur in the vicinity of the intermittent drainage and perennial Carson Creek. The intermittent drainage is located in the northern portion of the Study Area, and Carson Creek is in the western portion. Carson Creek runs over bedrock, and the adjacent slopes are quite steep, restricting the extent of riparian vegetation, which consists of a narrow band of Arroyo Willow Riparian Scrub. The Oak Woodland south of the creek has a dense, closed canopy, as is typical for north-facing slopes in the region. Bass Lake Road cuts from north to south through the Study Area, and Country Club Drive runs from west to east. Portions of Old Bass Lake Road and Old Country Club Drive also occur within portions of the Study Area. Several seasonal wetlands and two seasonal wetland swales occur just north of Old Country Club Drive, and one seasonal wetland occurs near an ephemeral drainage in the western portion of the Study Area. A few seeps occur on slopes in the Annual Brome Grasslands. Roadside ditches run along the edges of a number of roadways within the Study Area, and three portions of ephemeral drainages occur within infrastructure-related portions of the Study Area. Inclusions of unvegetated areas are scattered throughout the Study Area along farm roads. The terrain within the Study Area is gently rolling, and generally slopes from the east down towards the west.

Elevations range from approximately 1,320 feet above mean sea level (MSL) at the eastern edge of the Study Area to approximately 800 feet at the western extent along Carson Creek and Russi Ranch Drive (**Figure 1**).

Surrounding properties are similar to those within the Study Area. They are largely comprised of ungrazed Annual Brome Grasslands, scattered Oak Woodlands, and rural residences. The western and eastern ends of the Study Area abut urban residential areas, and the Study Area is bordered by Interstate Highway 50 to the south.

3.1 Terrestrial Vegetation Communities

3.1.1 Annual Brome Grassland

The Annual Brome Grassland within the Study Area is dominated by ripgut brome (*Bromus diandrus*), soft brome (*B. hordeaceus*), wild oat (*Avena fatua*), Italian ryegrass (*Festuca perennis*), purple false brome (*Brachypodium distachyon),* and winter vetch *(Vicia villosa* subsp. *varia)*. Other species occurring frequently in this vegetation community within the Study Area include wild radish (*Raphanus sativus*), Ithuriel's spear (*Triteleia laxa*), rose clover (*Trifolium hirtum*), and purple clarkia (*Clarkia purpurea* subsp. *quadrivulnera*). Seasonal wetlands, seasonal wetland swales, and seeps occur occasionally throughout this community.

3.1.2 Arroyo Willow Riparian Scrub

A narrow band of Arroyo Willow Riparian Scrub occurs along Carson Creek within the sewer alternative overlap portion of the Study Area. This canopy of this community is dominated by arroyo willow (*Salix lasiolepis*) and buttonwillow (*Cephalanthus occidentalis*). The understory is comprised primarily of bedrock, but a few herbaceous species have established in cracks in the bedrock, and in sediment along the creek's edge. These include Indian hemp (*Apocynum cannabinum*), Torrey's willowherb (*Epilobium torreyi),* sticktight (*Bidens frondosa)*, Lady's thumb (*Persicaria maculosa),* False waterpepper (*Persicaria hydropiperoides),* western goldenrod (*Euthamia occidentalis),* mugwort (*Artemisia douglasiana),* tall nutsedge (*Cyperus eragrostis),* rice cutgrass (*Leersia oryzoides),* and seep monkeyflower (*Erythranthe guttata)*.

3.1.3 Oak Woodland

Oak woodland occurs in the northern portion of the Study Area, in association with the intermittent creek, and in the portions of the sewer alternatives. The Oak Woodland has a primarily closed canopy that is dominated by interior live oak (*Quercus wislizeni*) and blue oak (*Quercus douglasii*). Other commonly occurring species include Valley oak (*Quercus lobata*), California buckeye (*Aesculus californica*) and foothill pine (*Pinus sabiniana)*. Western poison oak (*Toxicodendron diversilobum*) and chaparral honeysuckle (*Lonicera interrupta*) are dominants in the shrub layer. The herbaceous understory is dominated by ripgut brome, slender wild oat (*Avena barbata*), and tall sock-destroyer (*Torilis arvensis*), as well as occasional Italian thistle (*Carduus pycnocephalus* subsp. *pycnocephalus*), bristly dogtail grass (*Cynosurus echinatus),* goldback fern (*Pentagramma triangularis),* twining brodiaea (*Dichelostemma volubile),* soft brome, and common soap plant (*Chlorogalum pomeridianum var. pomeridianum)*. Several rock outcrops are interspersed within the Oak Woodland area.

3.1.4 Roads

Bass Lake Road, Country Club Drive, and Old Country Club Drive are paved roadways within the Study Area. Just west of the Bass Lake Road and Country Club Drive intersection is an area that was under active construction at the time of our survey – this is presumed to be developed now and was also mapped as paved road. Old Bass Lake Road and regularly used driveways within the Sewer Alternatives have been mapped as dirt road – these are well maintained, regularly used dirt roads. We did not map the portion of the dirt road that runs through the Oak Woodlands, as the tree canopies overhang almost the entire roadway, and as such, we anticipate that impacts within the roadway could impact the adjacent oak trees.

3.2 Aquatic Resources

3.2.1 Seasonal Wetland

Five seasonal wetlands occur within the southern portion of the Study Area. Seasonal wetlands are depressional wetlands that pond water seasonally. Two of the seasonal wetlands are depressional and are

dominated by needle-leaf navarretia (*Navarretia intertexta*), Mediterranean beard grass (*Polypogon maritimus*) and Mediterranean barley (*Hordeum marinum*). Other species in these features include bractless hedge-hyssop (*Gratiola ebracteata*), slender popcorn flower (*Plagiobothrys stipitatus var. micranthus*), annual hairgrass (*Deschampsia danthonioides*), hyssop loosestrife (*Lythrum hyssopifolium*), slender tarweed (*Holocarpha virgata*), turkey mullein (*Croton setiger*), creeping spikerush (*Eleocharis macrostachya*), stinkwort (*Dittrichia graveolens*), and hairy cat's ear (*Leontodon saxatilis*). The remaining seasonal wetlands are slope wetlands, and are dominated by iris-leaved rush (*Juncus xiphioides*) and annual rabbitsfoot grass (*Polypogon monspeliensis*). Other species commonly occurring in these features include Baltic rush (*Juncus balticus*) and Spanish lotus (*Acmispon americanus*).

3.2.2 Seasonal Wetland Swale

Two seasonal wetland swales are present within the Study Area. Seasonal wetland swales are linear seasonal wetlands that convey surface runoff and may detain it for short periods of time. The vegetation in the seasonal wetland swales is similar to that found in the sloping seasonal wetlands. They are dominated by iris-leaved rush. Other species commonly found in these features include Spanish lotus, curly dock (*Rumex crispus*), and Mediterranean beard grass.

3.2.3 Seep

Seeps are areas where groundwater reaches the surface through porous soil or cracks in rock. Seeps result in seasonal or perennial soil saturation with minimal standing water and gentle flows. Three seeps were mapped within the Study Area. Dominant plant species identified within the seeps include iris-leaved rush, Baltic rush, and Sonoma hedge nettle (*Stachys stricta*). Other common plants include hyssop loosestrife, annual quaking grass (*Briza minor),* cut-leaf geranium (*Geranium dissectum*), common sow thistle (*Sonchus oleraceus),* and Italian thistle (*Carduus pycnocephalus*).

3.2.4 Drainage Ditch

A constructed drainage ditch conveys flows collected in roadside ditches along Country Club Drive into the intermittent drainage to the north. This drainage ditch is lined with rocks and is entirely unvegetated.

3.2.5 Ephemeral Drainage

Five ephemeral drainages occur within the Study Area. Ephemeral drainages are linear features that convey runoff for short periods of time, during and immediately following rain events, and do not convey any groundwater flows. Several ephemeral drainages occur within the sewer alternatives. These features are almost entirely unvegetated, and any sparse vegetation that does occur is typical of the surrounding terrestrial vegetation community.

3.2.6 Intermittent Drainage

One intermittent drainage runs through the northern portion of the Study Area. This feature has a variable substrate, ranging from sand and mud in some areas to bedrock in others. It is entirely unvegetated within the channel due to the depth and scouring effects of water. This feature runs through Oak Woodlands for much of its length, and as a result of the closed canopy, very little herbaceous vegetation occurs along the banks in those areas. Portions of the drainage that run through Annual Brome Grasslands are primarily bordered by grasses and forbs typical of that community, but also support scattered seep monkeyflower (*Erythranthe guttata*) and other herbaceous hydrophytes.

3.2.7 Perennial Creek (Carson Creek)

Carson Creek, which is perennial with a bedrock substrate, runs through the western portion of the Study Area. It is almost entirely unvegetated within the channel, but there are a few plants occurring on the banks and in areas where sediment has accumulated within the channel. These plants are described above in the description of Arroyo Willow Scrub, which borders the creek. To reiterate, plants observed within and adjacent to Carson Creek include narrow-leaved cattail (*Typha angustifolia),* Torrey's willowherb*,* sticktight, Lady's thumb*,* False waterpepper*,* western goldenrod*,* mugwort*,* tall nutsedge*,* rice cutgrass*,* and seep monkeyflower.

3.2.8 Roadside Ditch

Several roadside ditches were mapped within the Study Area along Bass Lake Road, Country Club Drive, and Old Country Club Drive. The roadside ditches were constructed adjacent to the roadways, and serve to convey stormwater runoff away from the road. These features are entirely unvegetated due to ditch maintenance and due to the fact that many of these features are lined with rock, presumably for flow attenuation.

3.3 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2024), four soil mapping units occur within the Study Area (**Figure 3**): (AkC) Argonaut gravelly loam, 2 to 15 percent slopes; (AwD) Auburn silt loam, 2 to 30 percent slopes; (AxD) Auburn very rocky silt loam, 2 to 30 percent slopes; and (AyF) Auburn extremely rocky silt loam, 3 to 70 percent slopes. These soils are all somewhat acidic. The Auburn soils are formed in amphibolite schist (metamorphic rock) while the Argonaut soils are formed in weathered meta-andesite (weathered volcanic rock) (NRCS 2024).

4.0 SURVEY RESULTS

4.1 Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 150 and 5100 feet (CNPS 2024). Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2024).

The Annual Brome Grassland and Oak Woodlands throughout the Study Area provide marginally suitable habitat for big-scale balsamroot. This species was not observed during the 2022-2024 protocol-level special status plant surveys, which were conducted in April when this species would have been in bloom.

4.2 Spicate Rosinweed

Spicate rosinweed (*Calycadenia spicata*) is not federally or state listed, but it is classified as a CRPR List 1B.3 plant. It is a perennial herbaceous species that occurs in disturbed areas and openings in annual grasslands and cismontane woodland between 130 and 4,600 feet (CNPS 2024). Spicate rosinweed blooms from May through September and has been found on a variety of open habitats including adobe clay, rock outcrops, gravelly areas, and mine tailings (CNPS 2024).

The Annual Brome Grassland and Oak Woodlands throughout the Study Area provide suitable habitat for spicate rosinweed. However, this species was not observed during the 2023 protocol level late-season special-status plant survey of the Study Area, which were conducted when this plant would have been in bloom and identifiable.

4.3 Red Hills Soaproot

Red Hills soaproot (*Chlorogalum grandiflorum*) is not a state or federally listed species but is classified as a CRPR List 1B.2 plant. Red Hill soaproot is a bulbiferous perennial that is commonly found in chaparral, cismontane woodland, and lower montane coniferous forests. Occurs frequently on serpentine or gabbro soils, but can also occur on non-ultramafic substrates; often on "historically disturbed" sites. This species blooms from as early as April, but typically from May through June at elevations from 805 to 5545 feet (CNPS 2024).

The Oak Woodlands throughout the Study Area provide marginally suitable habitat for Red Hills soaproot. This species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area, which was conducted in May, when this species was observed in bloom at other nearby sites.

4.4 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 2B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and mesic valley and foothill grassland, and is found in elevations ranging from five to 1460 feet (CNPS 2024). Dwarf downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May (CNPS 2024).

The seasonal wetlands and seasonal wetland swales within the Study Area represent marginal habitat for this species. This species was not observed during the 2022-2024 protocol level special-status plant survey of the Study Area, which was conducted in April, when this species was observed in bloom at other nearby sites.

4.5 Tuolumne Button-Celery

Tuolumne button-celery (*Eryngium pinnatisectum*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. This species occurs in mesic areas in cismontane woodlands and coniferous forests, as well as vernal pools. Tuolumne button-celery blooms from May through August and is found from approximately 230 feet to 3,000 feet (CNPS 2024).

Aquatic resources throughout the Study Area provide suitable habitat for this species. However, this species was not observed during the 2023 protocol level late-season special-status plant survey of the Study Area.

4.6 Sanford's Arrowhead

Sanford's arrowhead is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow-moving water into early summer. It is a perennial rhizomatous emergent species that blooms from May to October at elevations from sea level to 2,130 feet (CNPS 2016).

Suitable habitat is present for this species in Carson Creek and the intermittent drainage within the Study Area. However, this species was not observed during the 2023 late-season special-status plant survey of the Study Area.

5.0 CONCLUSION

No special-status plants were observed during the 2022-2024 special-status plant survey of the Study Area.

6.0 REFERENCES

California Department of Fish and Wildlife (CDFG). 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Dated November 24, 2009.

California Natural Diversity Database (CNDDB). 2024. *RareFind 5*. California Department of Fish and Wildlife. Accessed May 2024.

California Native Plant Society (CNPS). 2001. *CNPS botanical survey guidelines*. Pages 38-40 *in* California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (D.P. Tibor, editor). Sixth edition. Special Publication No. 1, California Native Plant Society, Sacramento, 387 pp.

California Native Plant Society (CNPS), Rare Plant Program. 2024. *Inventory of Rare and Endangered Plants* online edition, v9.5 California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed April 2022 through May 2024].

Jepson Flora Project (eds.). 2024. *Jepson eFlora*, http://ucjeps.berkeley.edu/eflora/ [accessed April 2022 through May 2024]

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA. 1300 pp.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2024. *Web Soil Survey*. Available online at http://websoilsurvey.nrcs.usda.gov/.

U.S. Geological Survey (USGS). 2021. *"Clarksville, California"* 7.5-Minute Series Topographic Quadrangle. U.S. Geological Survey. Denver, Colorado.

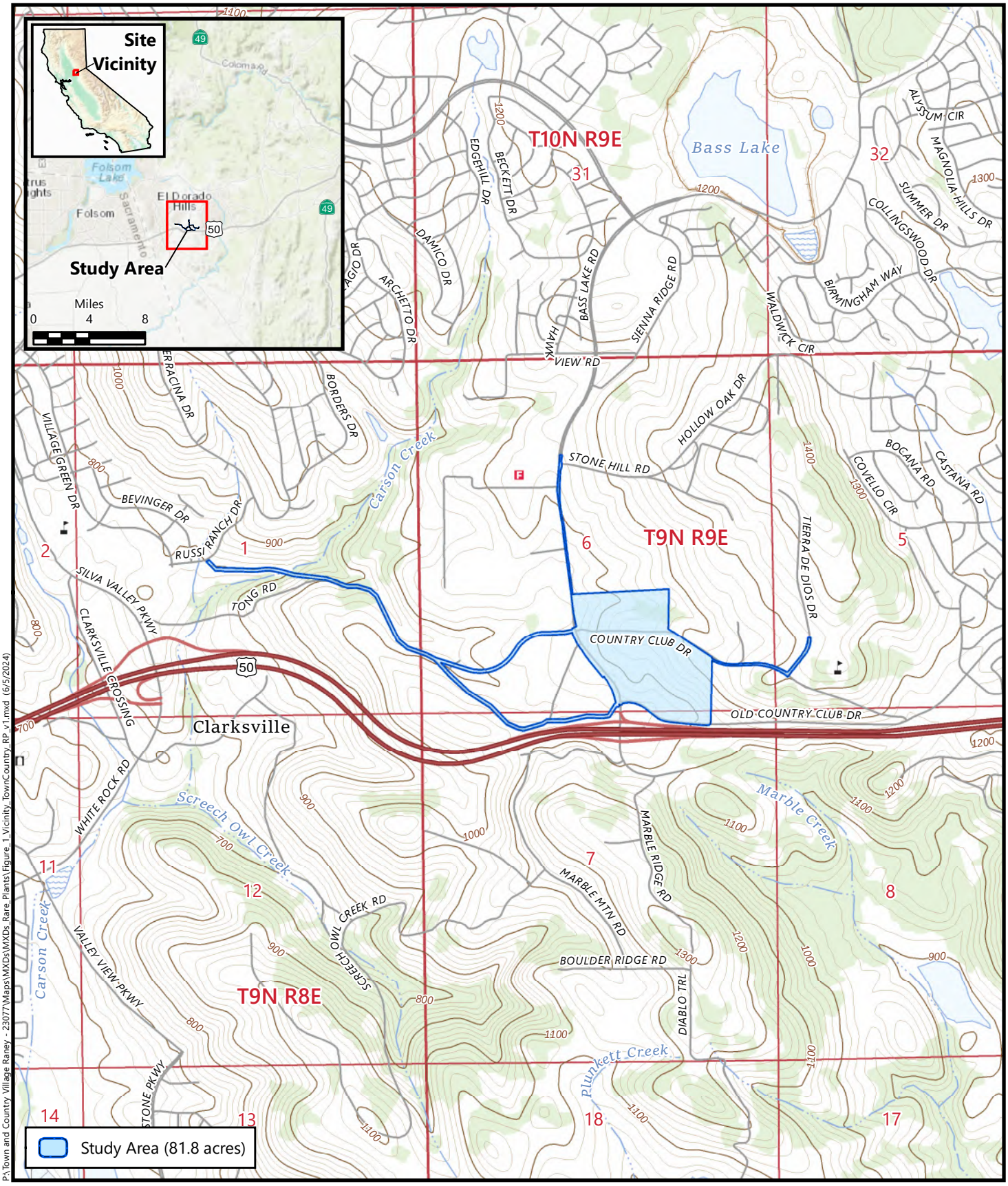
U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2000. *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*. Sacramento, CA.

Figures

Figure 1. Vicinity Map

Figure 2. Aquatic Resources and Vegetation Communities

Figure 3. Natural Resources Conservation Service Soils



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Source: United States Geologic Survey, 2021
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 1, Township 9 North, Range 8 East, MDBM and
Sections 5-7, Township 9 North, Range 9 East, MDBM
Latitude (NAD83): 38.658668°, Longitude (NAD83): -121.029902°

Figure 1
Site and Vicinity

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

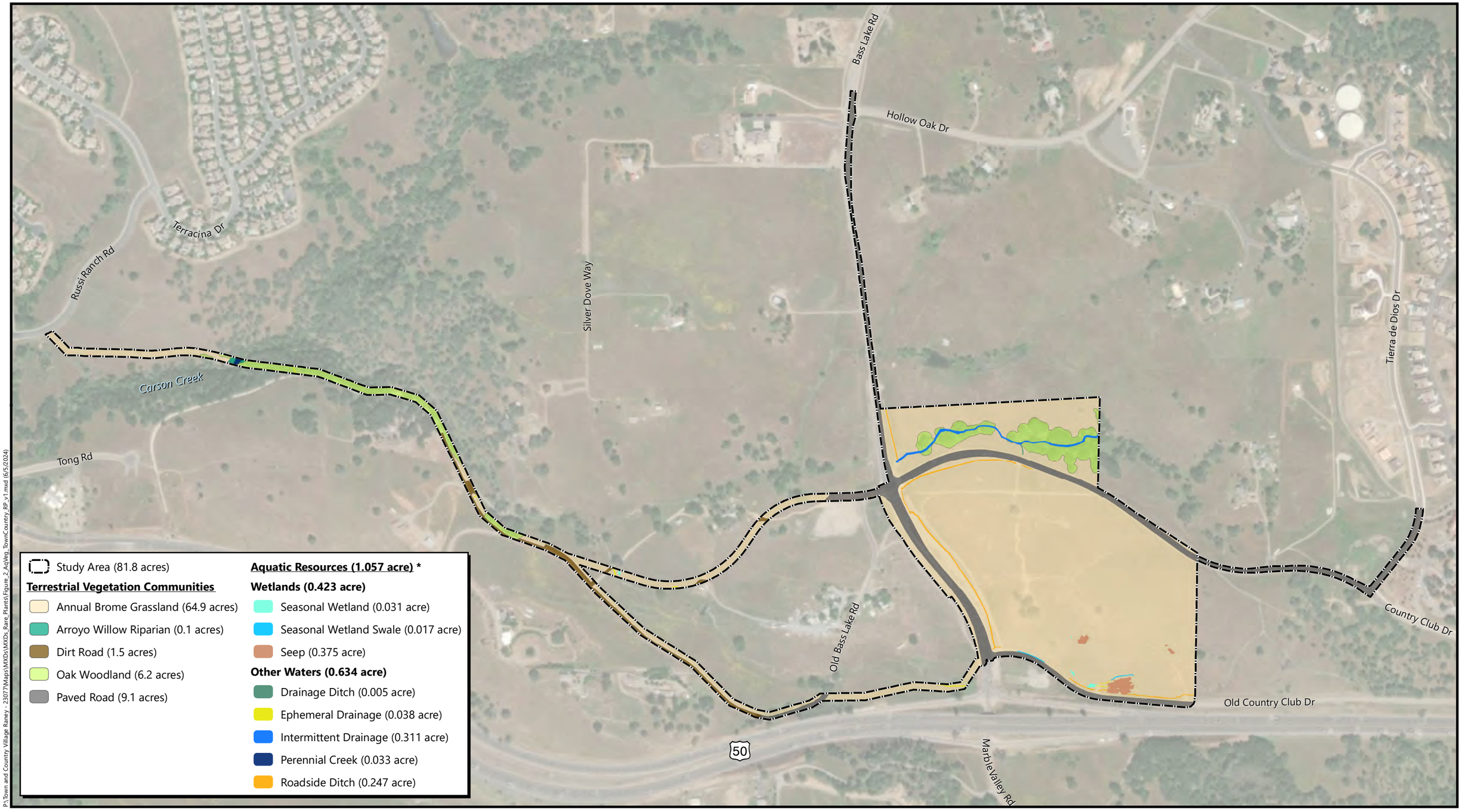
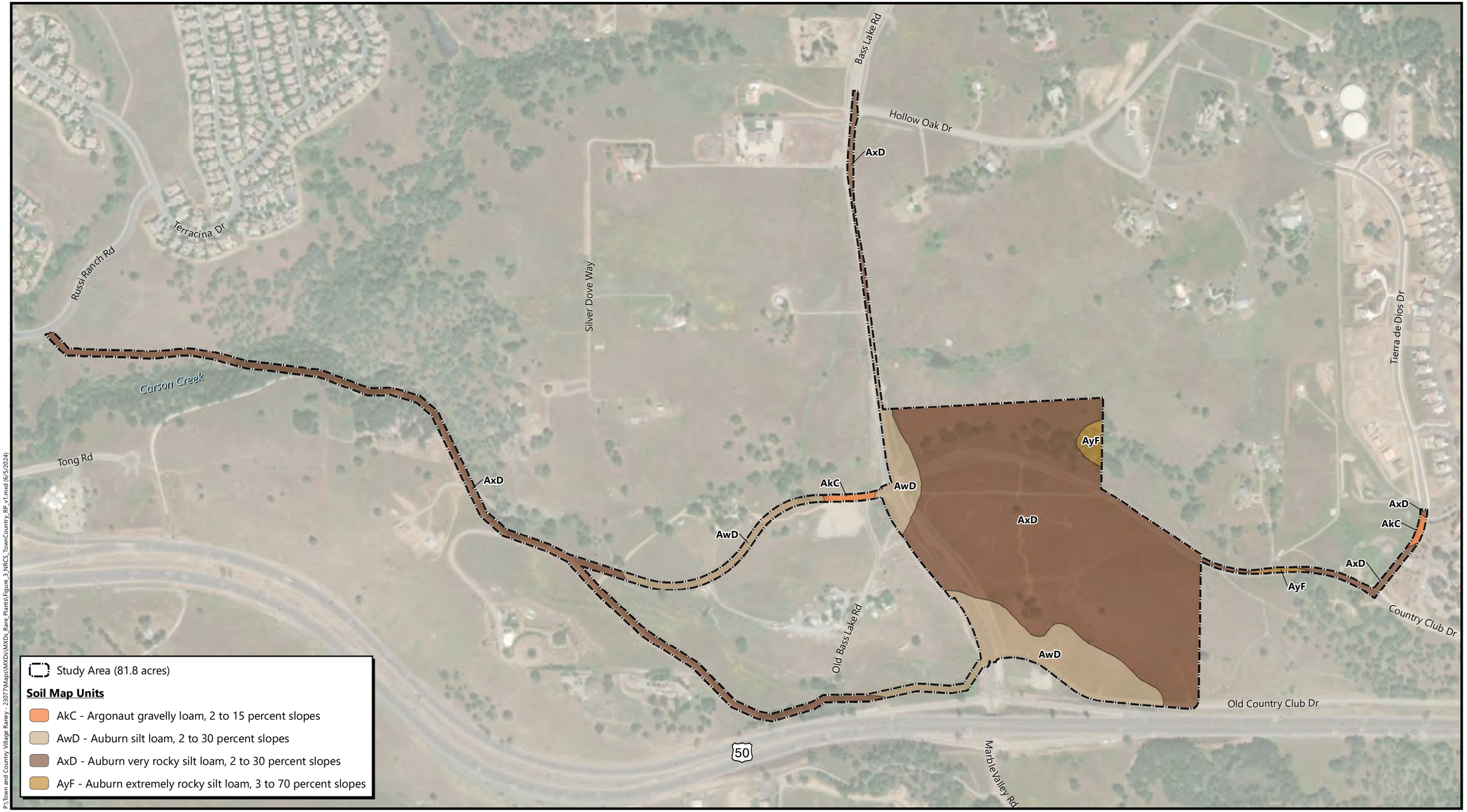


Figure 2
Aquatic Resources and Vegetation Communities

Town and Country Village El Dorado
El Dorado County, California

* *Small summation errors may occur due to rounding*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022



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Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for El Dorado County, California*
Aerial Source: Maxar, 1 May 2022

Figure 3
Natural Resources Conservation Service Soils

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A: Botanist Qualifications

Attachment B: Target Plant Species Reference Population Information

Attachment C: Plant Species Observed within the Town and Country Village El Dorado Study Area

Attachment A

Botanist Qualifications

Special-Status Plant Survey Botanist Qualifications

Daria Snider

Ms. Snider has more than 20 years of experience conducting botanical inventories. As a senior biologist, she specializes in rare plant surveys, wetland delineations, and general biological resource inventories. In addition to rare plant surveys, her botanical experience includes general vegetation surveys, aerial and field vegetation mapping, Certified Arborist tree inventories, CRAM Assessments, floristic monitoring, and invasive species identification and mapping. Ms. Snider's experience includes a wide variety of habitat types, including vernal pools, annual grasslands, oak woodland, riparian communities, coastal sage scrub, chaparral, cismontane and montane forests, and desert. Her geographic expertise covers much of California, from Shasta County in the north to the Mojave Desert and San Gabriel Mountains in the south, and from Sonoma County in the west to the Sierra Nevada foothills and mountains in the east. Her primary focus is on the Sacramento Valley and the adjacent Sierra Nevada foothills.

Bonnie Peterson

Ms. Peterson has a B.S. in Conservation Biology from California State University, Sacramento, and more than 20 years of experience in environmental consulting. As a senior biologist she conducts a range of activities to aid in planning and to assure regulatory compliance, including rare plant surveys, wetland delineations, environmental awareness training, and surveys and habitat assessments for valley elderberry longhorn beetle, burrowing owl, Swainson's hawk, giant garter snake, listed vernal pool branchiopods, and other special-status species; riparian and oak tree monitoring; and vernal pool floristic monitoring. She has monitored constructed and reference wetlands, monitored conservation areas and mitigation banks, prepared annual reports; prepared Mitigation Monitoring Plans and Open Space Monitoring Plans; and prepared a variety of other biological resource documentation. She has completed plant taxonomy courses at the University level, as well as continuing education through participation in California Native Plant Society sponsored plant identification workshops. She possesses a plant voucher collecting permit issued by the California Department of Fish and Wildlife.

Attachment B

Target Plant Species
Reference Population Information

Target Plant Species Reference Population Information for the Town and Country Village El Dorado Special-Status Plant Survey

Plant Species	Location of Reference Population	Date of Visit	Phenology of Reference Population/ Distinctive Characteristics
Balsamorhiza macrolepis Big-scale balsamroot	Herbarium specimen at UC Davis Center for Plant Diversity Online Jepson Manual and Calflora	23 April 2019 March through May 2024	Pressed specimen. Similar to *Wyethia*, but with grey, dissected leaves. Leaves are mostly basal (as opposed to *Wyethia*, which has basal and cauline leaves).
Calycadenia spicata Spicate rosinweed	Online Jepson Manual and Calflora	May through August 2024	Identified from other *Calycadenia* species by a central ray lobe much smaller than the lateral ray lobes and 4-15 disk flowers with white corollas 7-10 mm in size.
Chlorogalum grandiflorum Red Hills soaproot	Hillside just north of Meder Road in Cameron Park (CNDDB Occurrence #33)	29 May 2024	Abundant. Plants were just coming into bloom, and the characteristic short pedicel that is indicative of this species was readily identifiable. Plants are relatively small rosettes with wavy leaf margins.
Downingia pusilla Dwarf downingia	Woodcreek Oaks Open Space Preserve (CNDDB #142)	10 April 2024	Plants are just coming into bloom below *Plagiobothrys stipitatus* and *Ranunculus bonariensis*. Should be in full bloom in about a week.
Eryngium pinnatisectum Tuolumne button-celery	Herbarium specimen at UC Davis Center for Plant Diversity Online Jepson Manual and Calflora	31 March 2016 2022-2024	Pressed specimen. Flowers have very distinctive inflorescence bracts with thickened margins and no marginal spines.
Sagittaria sanfordii Sanford's arrowhead	Population in Laguna Creek north of Elk Grove Blvd in Elk Grove (CNDDB Occurrence #43)	20 May 2024	Plants were in early bloom, with some plants still entirely aquatic. Those that had terrestrial leaves exhibited the typical triangular cross-section, and the blooms and fruit made blooming plants readily identifiable to species.

Attachment C

Plant Species Observed within the Town and Country Village El Dorado Study Area

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Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
AGAVACEAE		
Chlorogalum angustifolium	Narrow-leaved soap plant	Native
Chlorogalum pomeridianum var. pomeridianum	Common soap plant	Native
ALLIACEAE		
Allium hyalinum	Glassy onion	Native
ANACARDIACEAE		
Pistacia altantica	Atlas pistachio	Non-Native
Schinus molle	Pepper tree	Non-Native
Toxicodendron diversilobum	Western poison oak	Native
APIACEAE		
Anthriscus caucalis	Bur-chervil	Non-Native
Daucus pusillus	Wild carrot	Native
Eryngium castrense	Great valley coyote-thistle	Native
Lomatium marginatum var. marginatum	Hartweg's lomatium	Native
Perideridia kelloggii	Yampah	Native
Sanicula bipinnatifida	Purple sanicle	Native
Sanicula crassicaulis	Pacific sanicle	Native
Scandix pecten-veneris	Venus' needle	Non-Native
Torilis arvensis	Tall sock-destroyer	Non-Native
APOCYNACEAE		
Apocynum cannabinum	Hemp dogbane	Native
Asclepias fascicularis	Narrow-leaf milkweed	Native
Vinca major	Greater periwinkle	Non-Native
ASTERACEAE		
Achillea millefolium	Yarrow	Native
Artemisia douglasiana	Mugwort	Native
Baccharis pilularis subsp. pilularis	Coyote brush	Native
Bidens frondosa	Sticktight	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
ASTERACEAE (continued)		
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Non-Native
Dittrichia graveolens	Stinkwort	Non-Native
Erigeron canadensis	Horseweed	Native
Euthamia occidentalis	Western goldenrod	Native
Helminthotheca echioides	Bristly ox-tongue	Non-Native
Holocarpha virgata	Narrow tarplant	Native
Hypochaeris glabra	Smooth cat's-ear	Non-Native
Lactuca serriola	Prickly lettuce	Non-Native
Leontodon saxatilis	Hairy hawkbit	Non-Native
Logfia gallica	Daggerleaf cottonrose	Non-Native
Madia gracilis	Gumweed	Native
Matricaria discoidea	Pineapple weed	Native
Micropus californicus	Q-tips	Native
Psilocarphus oregonus	Oregon woollyheads	Native
Senecio vulgaris	Common groundsel	Non-Native
Silybum marianum	Milk thistle	Non-Native
Soliva sessilis	South American soliva	Non-Native
Sonchus asper subsp. asper	Prickly sow thistle	Non-Native
Sonchus oleraceus	Common sow thistle	Non-Native
Wyethia angustifolia	Narrow leaved mule ears	Native
BORAGINACEAE		
Amsinckia eastwoodiae	Eastwood's fiddleneck	Native
Amsinckia intermedia	Common fiddleneck	Native
Amsinckia menziesii	Common fiddleneck	Native
Amsinckia retrorsa	Rigid fiddleneck	Native
Cryptantha muricata	Prickly-nut cryptantha	Native
Phacelia cicutaria var. cicutaria	Caterpillar phacelia	Native
Plagiobothrys fulvus var. campestris	Field popcornflower	Native
Plagiobothrys infectivus	Dye popcornflower	Native
Plagiobothrys nothofulvus	Rusty popcornflower	Native
Plagiobothrys stipitatus var. micranthus	Slender popcornflower	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
BRASSICACEAE		
Brassica nigra	Black mustard	Non-Native
Cardamine oligosperma	Little western bittercress	Native
Lepidium didymum	Lesser swine cress	Non-Native
Lepidium nitidum	Shining peppergrass	Native
Raphanus sativus	Radish	Non-Native
Thysanocarpus curvipes	Common fringe pod	Native
CAPRIFOLIACEAE		
Lonicera interrupta	Chaparral honeysuckle	Native
CARYOPHYLLACEAE		
Cerastium fontanum subsp. vulgare	Common mouse-ear chickweed	Non-Native
Cerastium glomeratum	Sticky mouse-ear chickweed	Non-Native
Petrorhagia dubia	Grass pink	Non-Native
Silene gallica	Small-flower catchfly	Non-Native
Spergularia rubra	Red sand-spurrey	Non-Native
Stellaria media	Common chickweed	Non-Native
CONVOLVULACEAE		
Convolvulus arvensis	Bindweed	Non-Native
CRASSULACEAE		
Crassula tillaea	Moss pygmyweed	Non-Native
CUCURBITACEAE		
Marah fabacea	California man-root	Native
CYPERACEAE		
Carex praegracilis	Black creeper or freeway sedge	Native
Cyperus eragrostis	Tall nutsedge	Native
Eleocharis macrostachya	Creeping spikerush	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
EUPHORBIACEAE		
Croton setiger	Turkey-mullein	Native
FABACEAE		
Acmispon americanus	Spanish lotus	Native
Acmispon micranthus	Small flowered lotus	Native
Lupinus bicolor	Miniature lupine	Native
Lupinus nanus	Valley sky lupine	Native
Melilotus indicus	Sourclover	Non-Native
Trifolium bifidum var. bifidum	Pinole clover	Native
Trifolium ciliolatum	Foothill clover	Native
Trifolium depauperatum	Dwarf sack clover	Native
Trifolium dubium	Little hop clover	Non-Native
Trifolium glomeratum	Clustered clover	Non-Native
Trifolium hirtum	Rose clover	Non-Native
Trifolium incarnatum	Crimson clover	Non-Native
Trifolium microcephalum	Small-head clover	Native
Trifolium microdon	Thimble clover	Native
Trifolium subterraneum	Subterranean clover	Non-Native
Trifolium variegatum var. variegatum	Variegated clover	Native
Vicia hirsuta	Hairy vetch	Non-Native
Vicia sativa	Spring vetch	Non-Native
Vicia villosa subsp. varia	Winter vetch	Non-Native
Vicia villosa subsp. villosa	Hairy vetch	Non-Native
FAGACEAE		
Quercus douglasii	Blue oak	Native
Quercus lobata	Valley oak	Native
Quercus wislizeni	Interior live oak	Native
GERANIACEAE		
Erodium botrys	Filaree	Non-Native
Erodium cicutarium	Redstem filaree	Non-Native
Geranium dissectum	Cut-leaf geranium	Non-Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
GERANIACEAE (continued)		
Geranium molle	Soft geranium	Non-Native
HYPERICACEAE		
Hypericum perforatum subsp. perforatum	Klamathweed	Non-Native
JUNCACEAE		
Juncus acuminatus	Tapered rush	Native
Juncus balticus subsp. ater	Baltic rush	Native
Juncus bufonius	Toad rush	Native
Juncus oxymeris	Pointed rush	Native
Juncus tenuis	Poverty or slender rush	Native
Juncus xiphioides	Iris-leaved rush	Native
LAMIACEAE		
Mentha pulegium	Pennyroyal	Non-Native
Stachys stricta	Sonoma hedge nettle	Native
Trichostema lanceolatum	Vinegar weed	Native
LIMNANTHACEAE		
Limnanthes alba subsp. versicolor	White meadowfoam	Native
Limnanthes douglasii subsp. striata	Foothill meadowfoam	Native
LINACEAE		
Linum bienne	Flax	Non-Native
LYTHRACEAE		
Lythrum hyssopifolia	Hyssop loosestrife	Non-Native
MONTIACEAE		
Calandrinia menziesii	Red maids	Native
Claytonia parviflora subsp. parviflora	Miner's lettuce	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
MORACEAE		
Ficus carica	Edible fig	Non-Native
MYRSINACEAE		
Lysimachia arvensis	Scarlet pimpernel	Non-Native
ONAGRACEAE		
Clarkia gracilis subsp. gracilis	Graceful clarkia	Native
Clarkia purpurea subsp. quadrivulnera	Four-spot	Native
Epilobium brachycarpum	Willowherb	Native
Epilobium ciliatum	Slender willow herb	Native
Epilobium torreyi	Torrey's willowherb	Native
OROBANCHACEAE		
Bellardia viscosa	Yellow parentucellia	Non-Native
Castilleja attenuata	Valley tassels	Native
OXALIDACEAE		
Oxalis micrantha	Dwarf wood-sorrel	Non-Native
PAPAVERACEAE		
Eschscholzia californica	California poppy	Native
Eschscholzia lobbii	Frying pans	Native
PHRYMACEAE		
Erythranthe guttata	seep monkeyflower	Native
Erythranthe microphylla	Small leaved monkeyflower	Native
PINACEAE		
Pinus sabiniana	Gray pine	Native
PLANTAGINACEAE		
Collinsia heterophylla var. heterophylla	Chinese-houses	Native
Collinsia sparsiflora var. collina	Hillside collinsia	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
PLANTAGINACEAE (continued)		
Gratiola ebracteata	Bractless hedge-hyssop	Native
Plantago erecta	California plantain	Native
Plantago lanceolata	English plantain	Non-Native
POACEAE		
Aegilops triuncialis	Barbed goat grass	Non-Native
Aira caryophyllea	Silver hair grass	Non-Native
Avena barbata	Slender wild oat	Non-Native
Brachypodium distachyon	Purple false brome	Non-Native
Briza minor	Annual quaking grass	Non-Native
Bromus diandrus	Ripgut grass	Non-Native
Bromus hordeaceus	Soft chess	Non-Native
Bromus madritensis spp. *rubens*	Red brome	Non-Native
Bromus rubens	Red brome	Non-Native
Bromus sitchensis var. carinatus	California brome	Native
Bromus sterilis	Sterile brome	Non-Native
Cynosurus echinatus	Bristly dogtail grass	Non-Native
Deschampsia danthonioides	Annual hair grass	Native
Elymus caput-medusae	Medusa head	Non-Native
Elymus ponticus	Tall wheat grass	Non-Native
Festuca bromoides	Brome fescue	Non-Native
Festuca microstachys	Small fescue	Native
Festuca myuros	Rattail sixweeks grass	Non-Native
Festuca perennis	Rye grass	Non-Native
Hordeum marinum subsp. gussoneanum	Mediterranean barley	Non-Native
Hordeum murinum	Wall barley	Non-Native
Leersia oryzoides	Rice cutgrass	Native
Melica torreyana	Torrey's melic	Native
Muhlenbergia rigens	Deer grass	Native
Poa annua	Annual blue grass	Non-Native
Poa bulbosa	Bulbous blue grass	Non-Native
Polypogon maritimus	Mediterranean beard grass	Non-Native
Polypogon monspeliensis	Annual rabbitfoot grass	Non-Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
POACEAE (continued)		
Stipa pulchra	Purple needle grass	Native
POLEMONIACEAE		
Leptosiphon ciliatus	Whisker brush	Native
Navarretia intertexta	Needle-leaf navarretia	Native
POLYGONACEAE		
Persicaria hydropiperoides	False waterpepper	Native
Persicaria maculosa	Lady's thumb	Non-Native
Pterostegia drymarioides	Fairy mist	Native
Rumex crispus	Curly dock	Non-Native
Rumex pulcher	Fiddle dock	Non-Native
Rumex salicifolius	Willow dock	Native
POLYPODIACEAE		
Polypodium calirhiza	Licorice fern	Native
PTERIDACEAE		
Adiantum jordanii	California maidenhair	Native
Pentagramma triangularis	Goldback fern	Native
RANUNCULACEAE		
Delphinium variegatum subsp. variegatum	Royal larkspur	Native
Ranunculus bonariensis var. trisepalus	Vernal pool buttercup	Native
RHAMNACEAE		
Frangula californica subsp. tomentella	Hoary coffeeberry	Native
ROSACEAE		
Aphanes occidentalis	Ladie's mantle	Native
Heteromeles arbutifolia	Toyon	Native
Horkelia californica var. elata	California horkelia	Native

Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
ROSACEAE (continued)		
Rubus armeniacus	Armenian blackberry	Non-Native
RUBIACEAE		
Cephalanthus occidentalis	California button willow	Native
Galium aparine	Goose grass	Native
Galium parisiense	Wall bedstraw	Non-Native
Galium porrigens var. tenue	Climbing bedstraw	Native
Sherardia arvensis	Field madder	Non-Native
SALICACEAE		
Salix gooddingii	Goodding's black willow	Native
Salix laevigata	Red willow	Native
Salix lasiandra	Pacific willow	Native
Salix lasiolepis	Arroyo willow	Native
SAPINDACEAE		
Aesculus californica	California buckeye	Native
SAXIFRAGACEAE		
Lithophragma heterophyllum	Woodland star	Native
SCROPHULARIACEAE		
Verbascum blattaria	Moth mullein	Non-Native
SELAGINELLACEAE		
Selaginella hansenii	Hansen's spike-moss	Native
SOLANACEAE		
Datura wrightii	Jimsonweed	Native
THEMIDACEAE		
Brodiaea elegans	Harvest brodiaea	Native
Dichelostemma volubile	Twining brodiaea	Native

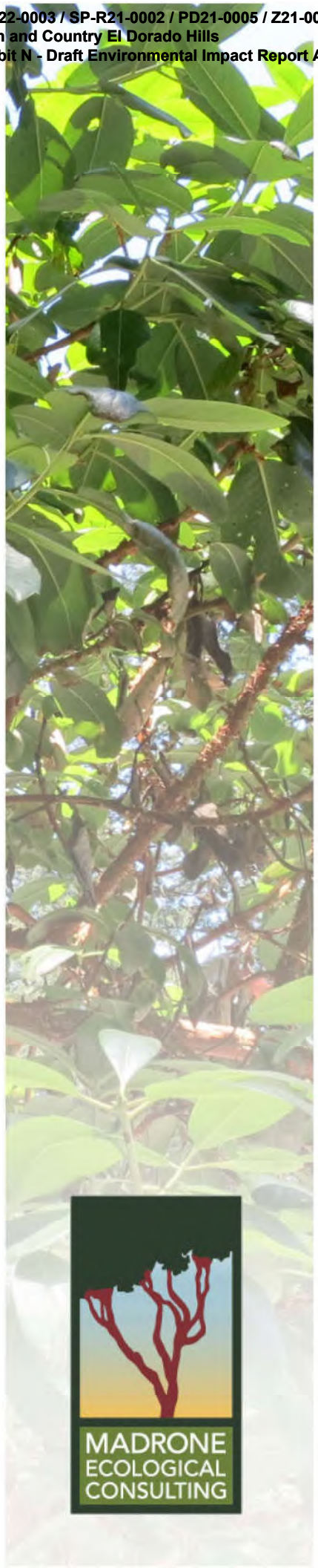
Plant Species Observed within the Town and Country Village El Dorado Study Area

13 April 2022, 27 September 2023, 6 October 2023, 26 April 2024 and 29 May 2024

Family / Species Name	Common Name	Native / Non-Native
THEMIDACEAE (continued)		
Dipterostemon capitatus	Blue dicks	Native
Triteleia hyacinthina	White brodiaea	Native
Triteleia laxa	Ithuriel's spear	Native
TYPHACEAE		
Typha angustifolia	Narrow-leaved cattail	Native or Non-Native
Typha domingensis	Southern cattail	Native
Typha latifolia	Broad-leaved cattail	Native
VISCACEAE		
Phoradendron leucarpum subsp. tomentosum	Oak mistletoe	Native

Attachment F

Aquatic Resources Delineation Report for Town and Country Village



Aquatic Resources Delineation Report

Town and Country Village

El Dorado County, California

February 2024

MADRONE ECOLOGICAL CONSULTING

Prepared for:

Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Recommended Citation:

Madrone Ecological Consulting, LLC (Madrone). 2024. *Aquatic Resources Delineation Report for Town and Country Village*. Prepared for Raney Planning & Management, Inc. Published on 12 February 2024.

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Town and Country Village

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1.0 INTRODUCTION

This report presents the results of a delineation of aquatic resources within Town and Country Village (Study Area) conducted by Madrone Ecological Consulting, LLC (Madrone). The approximately 81.8-acre Study Area is generally located north of Interstate Highway 50, largely south of Stone Hill Road, east of Silva Valley Parkway, and largely west of Morrison Road in western El Dorado County, California. The Study Area is within portions of Section 1, Township 9 North, Range 8 East and Sections 5-7, Township 9 North, Range 9 East (MDBM) of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

1.1 Contact Information

Property Owner
Moe Mohanna
M.H, Mohanna & Co.
1025 9th Street, 2nd Floor
Sacramento, CA 95814
Telephone: 916-870-7236
Email: moe@mohannadevelopment.com

Agent
Sarah VonderOhe
Madrone Ecological Consulting
8421 Auburn Blvd., Suite #248
Citrus Heights, CA 95610
Telephone: (916) 822-3230
Email: svonderohe@madroneeco.com

2.0 METHODOLOGY

Madrone biologists Daria Snider and Bonnie Peterson conducted a delineation of aquatic resources within the Study Area on 27 September and 6 October 2023. Water features and data points were mapped in the field with a GPS unit capable of sub-meter accuracy (Arrow 100). Three-parameter data (vegetation, soils, and hydrology) were collected at each data point, documenting wetland/waters or upland status, as appropriate. The delineation map was prepared in accordance with the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016a). The GPS data was overlaid on aerial photographs (Maxar 2022).

The delineation was performed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (USACE 2016b). U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. The most recent *National Wetland Plant List* (USACE 2020) was used to determine the wetland indicator status of plants observed in the Study Area. The *Jepson eFlora* (Jepson Flora Project 2024) was used for plant nomenclature.

3.0 EXISTING CONDITIONS

The Study Area is largely comprised of ungrazed annual brome grasslands with widely scattered oak trees. Oak woodlands occur in the vicinity of the intermittent drainage and perennial Carson Creek. The intermittent drainage is located in the northern portion of the Study Area, and Carson Creek is in the western portion. Carson Creek runs over bedrock, and the adjacent slopes are quite steep, restricting the extent of riparian vegetation, which consists of a narrow band of arroyo willow riparian scrub. The oak woodland south of the creek has a dense, closed canopy, as is typical for north-facing slopes in the region. Bass Lake Road cuts from north to south through the Study Area, and Country Club Drive runs from west to east. Portions of Old Bass Lake Road and Old Country Club Drive also occur within portions of the Study Area. Several seasonal wetlands and two seasonal wetland swales occur just north of Old Country Club Drive, and one seasonal wetland occurs near an ephemeral drainage in the western portion of the Study Area. A few seeps occur on slopes in the annual brome grasslands. Roadside ditches run along the edges of a number of roadways within the Study Area, and three portions of ephemeral drainages occur within infrastructure-related portions of the Study Area. Inclusions of unvegetated areas are scattered throughout the Study Area along farm roads. The terrain within the Study Area is gently rolling, and generally slopes from the east down towards the west. Elevations range from approximately 1,320 feet above mean sea level (MSL) at the eastern edge of the Study Area to approximately 800 feet at the western extent along Russi Ranch Drive (**Figure 1**).

Surrounding properties are similar to those within the Study Area. They are largely comprised of ungrazed annual grasslands, scattered oak woodlands, and rural residences. The western and eastern ends of the Study Area abut urban residential areas, and the Study Area is bordered by Interstate Highway 50 to the south.

3.1 Hydrology

Surface water within the Study Area is primarily driven by rainfall, but there are also some groundwater inputs. Water across the site generally drains from east to west. The wetlands generally drain into the roadside ditches and ephemeral drainages, which are tributary to the intermittent drainage and Carson Creek. The seeps and some of the seasonal wetlands are supported by varying amounts of groundwater inputs. Carson Creek is a tributary to Deer Creek, which empties into the Cosumnes River. The Study Area is located in the *Carson Creek Watershed*, which is part of the larger *Upper Cosumnes River Watershed* (HUC 18040013) (USGS 1984).

3.2 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2024), four soil mapping units occur within the Study Area (Figure 6) (**Table 1**). These soils are all somewhat acidic. The Auburn soils are formed in amphibolite schist (metamorphic rock) while the Argonaut soils are formed in weathered meta-andesite (weathered volcanic rock) (NRCS 2024). None of the soil units have hydric components, but the Argonaut soils has 1% hydric inclusions on fan remnants (NRCS 2024).

Table 1. Hydric Rating of Soils within the Study Area

Soil Unit Name	Map Unit Symbol	Hydric Rating
Argonaut gravelly loam, 2 to 15% slopes	AkC	No
Auburn silt loam, 2 to 30% slopes	AwD	No
Auburn very rocky silt loam, 2 to 30% slopes	AxD	No
Auburn extremely rocky silt loam, 3 to 70% slopes	AyF	No

3.3 Driving Directions

The Study Area is located off of Old Country Club Drive in El Dorado County, California. To access the Study Area from Sacramento, drive east on Highway 50 towards Clarksville. Take exit 32 towards Bass Lake Road. Head north on Bass Lake Road. The Study Area is on either side of Bass Lake Road just north of the Highway.

4.0 RESULTS

A total of approximately 0.909 acre of aquatic resources were delineated within the Study Area, including approximately 0.278 acre of wetlands and 0.631 acre of other waters. Seasonal wetlands, seasonal wetland swales, seeps, a drainage ditch, ephemeral drainages, intermittent drainages, Carson Creek, and roadside ditches were delineated within the Study Area. A summary of the aquatic resources found on-site and their acreages is shown in **Table 2** below.

Table 2. Aquatic Resources Delineated within the Study Area

Resource Type	Acreage[1]
Wetlands	
Seasonal Wetland	0.211
Seasonal Wetland Swale	0.017
Seep	0.051
Other Waters	
Drainage Ditch	0.005
Ephemeral Drainage	0.035
Intermittent Drainage	0.311
Perennial Creek (Carson Creek)	0.033
Roadside Ditch	0.247
Total	**0.909**

[1] *Small summation errors may occur due to rounding.*

Data sheets are included in **Attachment A**. Maps of the aquatic resources within the Study Area are included as **Figure 3** and **Attachment B**, and a list of the plant species observed in the Study Area with their wetland indicator status is included in **Attachment C**. GIS Shapefiles and the *Aquatic Resources Excel Spreadsheet* for the aquatic resources shown on **Figure 3** and **Attachment B** will be digitally transmitted with this document when it is submitted. Each of the feature types are described below.

4.1 Seasonal Wetland

Five seasonal wetlands occur within the southern portion of the Study Area. Seasonal wetlands are depressional wetlands that pond water seasonally. Two of the seasonal wetlands are depressional and are dominated by needle-leaf navarretia (*Navarretia intertexta*), Mediterranean beard grass (*Polypogon maritimus*) and Mediterranean barley (*Hordeum marinum*). Other species in these features include bractless hedge-hyssop (*Gratiola ebracteata*), slender popcorn flower (*Plagiobothrys stipitatus var. micranthus*), annual hairgrass (*Deschampsia danthonioides*), hyssop loosestrife (*Lythrum hyssopifolium*), slender tarweed (*Holocarpha virgata*), turkey mullein (*Croton setiger*), creeping spikerush (*Eleocharis macrostachya*), stinkwort (*Dittrichia graveolens*), and hairy cat's ear (*Leontodon saxatilis*). The remaining seasonal wetlands are slope wetlands, and are dominated by iris-leaved rush (*Juncus xiphioides*) and annual rabbitsfoot grass (*Polypogon monspeliensis*). Other species commonly occurring in these features include Baltic rush (*Juncus balticus*) and Spanish lotus (*Acmispon americanus*).

Three data points were collected within seasonal wetlands (DP 3, DP 5, and DP 7). Wetland hydrology indicators at these points included oxidized rhizospheres along living roots, presence of biotic crust, and the Fac-neutral test. Soils at points were considered hydric based on the presence of Field Indicators F3 (Depleted Matrix), F8 (Redox Depressions) or TF2 (Red Parent Material).

4.2 Seasonal Wetland Swale

Two seasonal wetland swales are present within the Study Area. Seasonal wetland swales are linear seasonal wetlands that convey surface runoff and may detain it for short periods of time. The vegetation in the seasonal wetland swales is similar to that found in the sloping seasonal wetlands. They are dominated by iris-leaved rush. Other species commonly found in these features include Spanish lotus, curly dock (*Rumex crispus*), and Mediterranean beard grass.

One data point was collected within a seasonal wetland swale (DP 9). Wetland hydrology indicators at these points included oxidized rhizospheres along living roots, and the Fac-neutral test. Soils at this point were considered hydric based on the presence of Field Indicators F3 (Depleted Matrix).

4.3 Seep

Seeps are areas where groundwater reaches the surface through porous soil or cracks in rock. Seeps result in seasonal or perennial soil saturation with minimal standing water and gentle flows. Three seeps were mapped within the Study Area. Dominant plant species identified within the seeps include iris-leaved rush, Baltic rush, and Sonoma hedge nettle (*Stachys stricta*). Other common plants include hyssop loosestrife, annual quaking grass (*Briza minor),* cut-leaf geranium (*Geranium dissectum*), common sow thistle (*Sonchus oleraceus),* and Italian thistle (*Carduus pycnocephalus*).

One data point was collected within a seep (DP 1). Wetland hydrology indicators at these points included saturation, and the Fac-neutral test. Soils at this point were considered hydric based on the presence of TF2 (Red Parent Material).

4.4 Drainage Ditch

A constructed drainage ditch conveys flows collected in roadside ditches along Country Club Drive into the intermittent drainage to the north. This drainage ditch is lined with rocks and is entirely unvegetated.

The drainage ditch was mapped at the OHWM, which was determined based on drift deposits and water marks.

4.5 Ephemeral Drainage

Five ephemeral drainages occur within the Study Area. Ephemeral drainages are linear features that convey runoff for short periods of time, during and immediately following rain events, and do not convey any groundwater flows. Several ephemeral drainages occur within the sewer alternatives. These features are almost entirely unvegetated, and any sparse vegetation that does occur is typical of the surrounding terrestrial vegetation community.

The ephemeral drainages were mapped at the OHWM, which was identified based on the extent of scour and extent of adjacent vegetation.

4.6 Intermittent Drainage

One intermittent drainage runs through the northern portion of the Study Area. This feature has a variable substrate, ranging from sand and mud in some areas to bedrock in others. It is entirely unvegetated within the channel due to the depth and scouring effects of water. This feature runs through oak woodlands for much of its length, and as a result of the closed canopy, very little herbaceous vegetation occurs along the banks in those areas. Portions of the drainage that run through annual brome grasslands are primarily bordered by grasses and forbs typical of that community, but also support scattered seep monkeyflower (*Erythranthe guttata*) and other herbaceous hydrophytes.

The intermittent drainage was mapped at the OHWM, which was identified based on the extent of scour, topographic breaks, and changes in vegetation.

4.7 Perennial Creek (Carson Creek)

Carson Creek, which is perennial with a primarily bedrock substrate, runs through the western portion of the Study Area. . It is almost entirely unvegetated within the channel, but there are a few plants occurring on the banks and in areas where sediment has accumulated within the channel. These plants include narrow-leaved cattail (*Typha angustifolia*), Torrey's willowherb (*Epilobium torreyi*), sticktight (*Bidens frondosa*), Lady's

thumb (*Persicaria maculosa*), False waterpepper (*Persicaria hydropiperoides*), western goldenrod (*Euthamia occidentalis*), mugwort (*Artemesia douglasiana*), tall nutsedge (*Cyperus eragrostis*), rice cutgrass (*Leersia oryzoides*), and seep monkeyflower.

The perennial creek was mapped at the OHWM, which was identified based on water marks, sediment sorting, topographic breaks, and changes in vegetation.

4.8 Roadside Ditch

Several roadside ditches were mapped within the Study Area along Bass Lake Road, Country Club Drive, and Old Country Club Drive. The roadside ditches were constructed adjacent to the roadways, and serve to convey stormwater runoff away from the road. These features are entirely unvegetated due to ditch maintenance and due to the fact that many of these features are lined with rock, presumably for flow attenuation.

The ephemeral drainages were mapped at the OHWM, which was identified based on the extent of scour, water marks, and extent of adjacent vegetation.

5.0 CONCLUSION

We believe that of the 0.909 acre of aquatic resources mapped within the Study Area, 0.622 acre may be subject to USACE jurisdiction, and the remaining 0.287 acre may be exempt from USACE jurisdiction, or otherwise non-jurisdictional.

The drainage ditch (0.005 acre) and roadside ditches (0.247 acre) were all constructed in uplands to convey stormwater runoff from the associated constructed roadways, and have ephemeral flow. We feel that these features would be categorically exempt from USACE jurisdiction under paragraph (b)(3) of the Confirming Clean Water Rule.

The ephemeral drainages (0.035 acre) are tributary to Carson Creek, but do not meet the relatively permanent standard, and do not fit any other jurisdictional category, and therefore would not be considered subject to USACE jurisdiction.

The remaining features may be subject to USACE jurisdiction. We are requesting an Approved Jurisdictional Determination for the Aquatic Resources Delineation Map of the Study Area (**Attachment B**) at this time to document the extent of aquatic resources and USACE jurisdiction. A JD request form is attached in **Attachment D**.

6.0 REFERENCES

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station. Vicksburg, Miss.

Jepson Flora Project (eds.) 2024. *Jepson eFlora*. Available on-line at: http://ucjeps.berkeley.edu/eflora/ [accessed September 2023 through January 2024].

Maxar. 2022. *Aerial Photograph of the Study Area*. Dated 1 May 2022.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2024. *Web Soil Survey*. Available online at http://websoilsurvey.nrcs.usda.gov/.

U.S. Army Corps of Engineers (USACE). 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers (USACE). 2008b. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. A Delineation Manual*. Prepared by R. W. Lichvar and S. M. McColley. ERDC/CRREL TR-08-12. Cold Regions Research and Engineering Laboratory.

U.S. Army Corps of Engineers (USACE). 2016a. *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program*. Dated February 10, 2016. Available online at: http://www.spd.usace.army.mil/Missions/Regulatory/Public-Notices-and-References/Article/651327/updated-map-and-drawing-standards/.

U.S. Army Corps of Engineers (USACE). 2016b. *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports*. U.S. Army Corps of Engineers, Sacramento District. Dated January 2016. Available online at: http://www.spk.usace.army.mil/Portals/12/documents/regulatory/jd/minimum-standards/Minimum_Standards_for_Delineation_with_Template-final.pdf.

U.S. Army Corps of Engineers (USACE). 2020. National Wetland Plant List, version 3.5. Available online at http://wetland-plants.usace.army.mil/ U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH

U.S. Department of the Interior, Geological Survey (USGS). 1984. *Hydrologic Unit Map, State of California*. Geological Survey. Reston, Virginia.

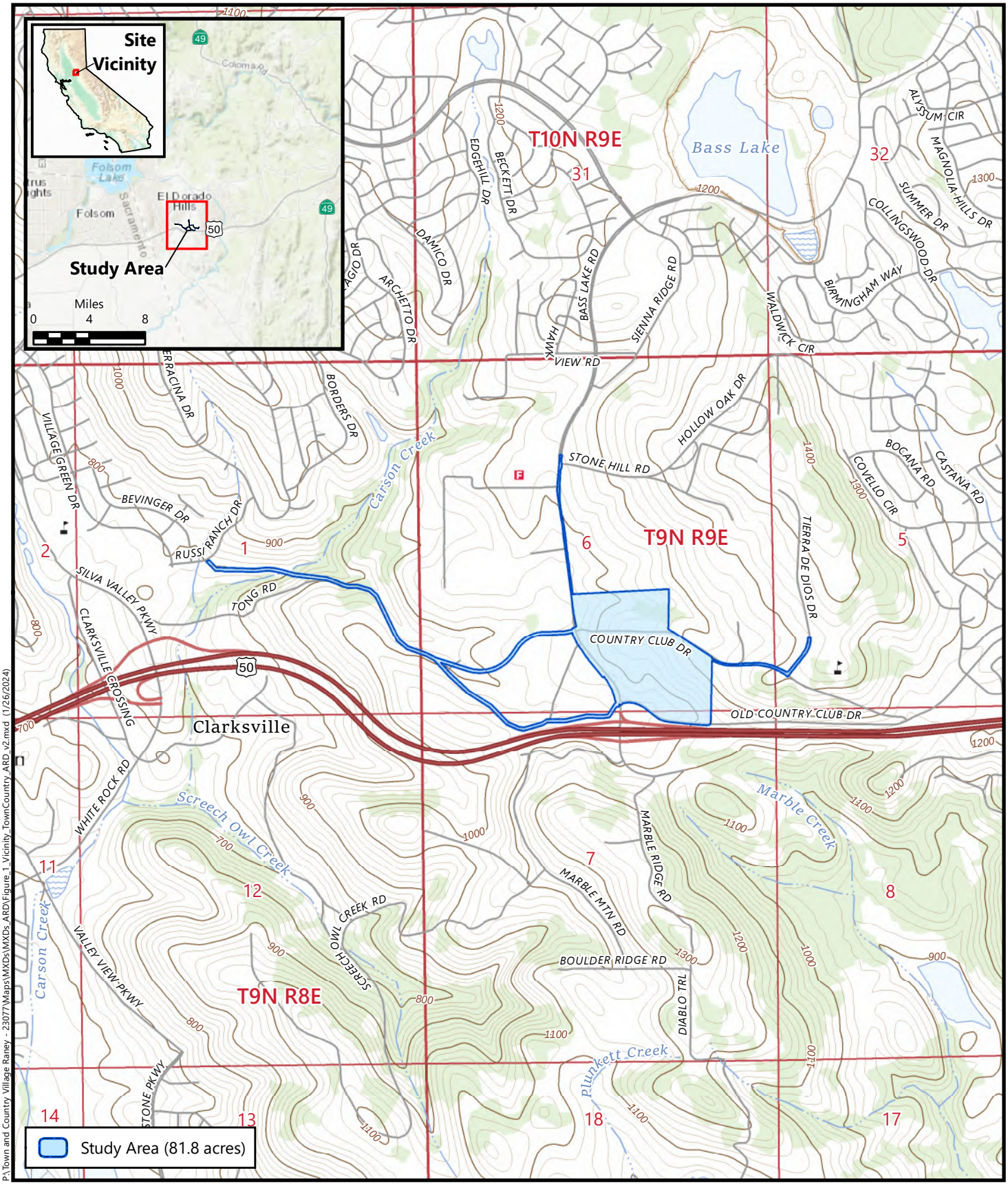
U.S. Department of the Interior, Geological Survey (USGS). 2021. *Clarksville, California* 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

Figures

Figure 1. Vicinity Map

Figure 2. Natural Resources Conservation Service Soils

Figure 3. Aquatic Resources



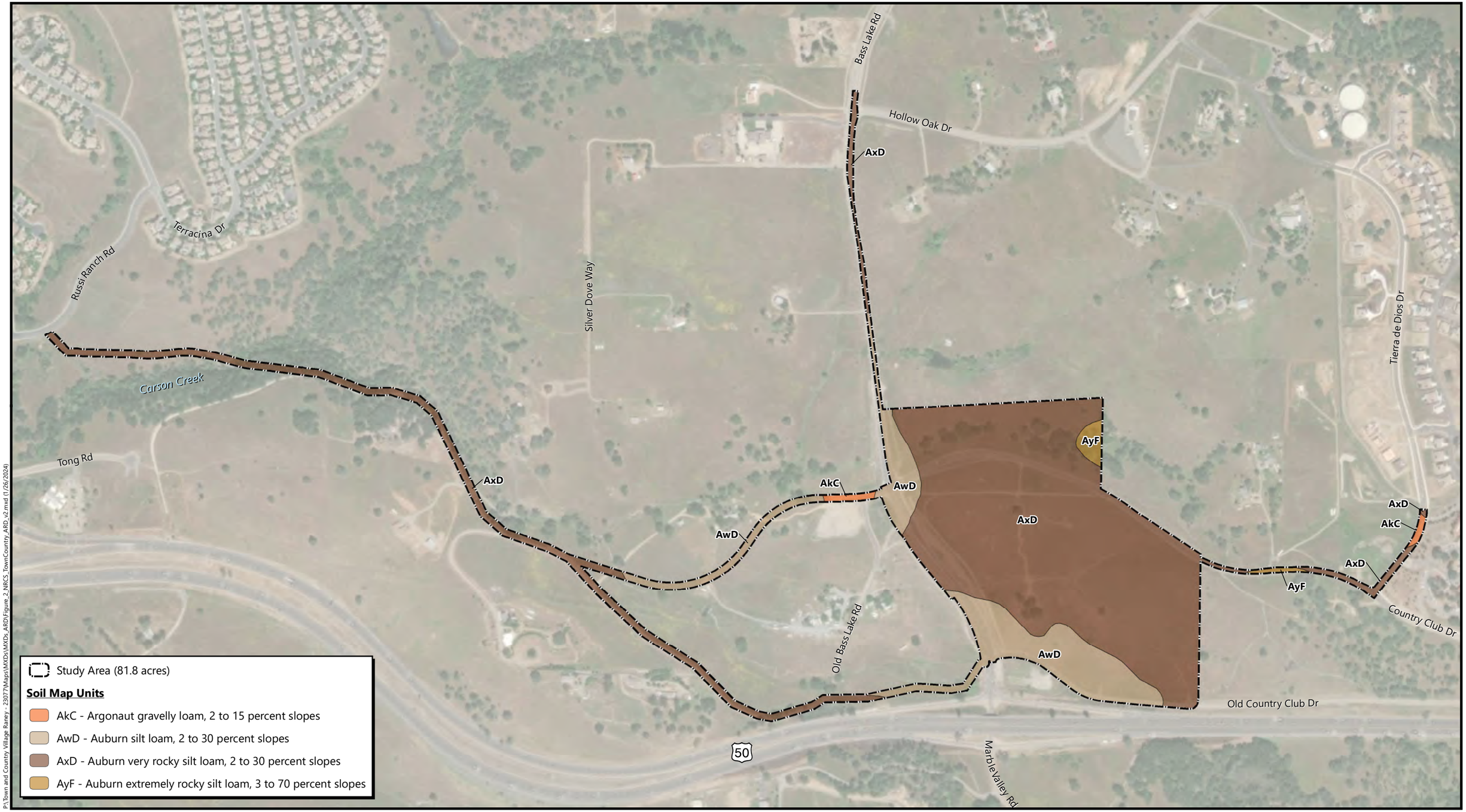
P:\Town and Country Village Raney - 23077\Maps\MXDs\MXDs ARD\Figure_1_Vicinity_TownCountry_ARD_v2.mxd (1/26/2024)

Source: United States Geologic Survey, 2021
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 1, Township 9 North, Range 8 East, MDBM and
Sections 5-7, Township 9 North, Range 9 East, MDBM
Latitude (NAD83): 38.658668°, Longitude (NAD83): -121.029902°

Figure 1
Site and Vicinity

Town and Country Village
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for El Dorado County, California*
Aerial Source: Maxar, 1 May 2022

Figure 2
Natural Resources Conservation Service Soils

Town and Country Village
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



** Small summation errors may occur due to rounding*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022

Figure 3
Aquatic Resources

Town and Country Village
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Arid West Wetland Determination Data Forms

Attachment B. Aquatic Resources Delination Map

Attachment C. Plant Species Observed within the Study Area

Attachment D. JD Request Form

Attachment A

Arid West

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP1
Investigator(s): Daria Snider Section, Township, Range: Section 1, Township 9 North, Range 8 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5-10%
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0505833 Long: 38.66218167 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X** No ____	**Is the Sampled Area within a Wetland?**	**Yes X No** ____
Hydric Soil Present?	Yes **X** No ____		
Wetland Hydrology Present?	Yes **X** No ____		

Remarks:

Representative seep.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Typha latifolia*	30	X	OBL
2. *Epilobium ciliatum*	10	X	FACW
3. *Carduus pycnocephalus*	10	X	UPL
4. *Helminthotheca echioides*	T		FAC
5. *Asclepias fascicularis*	T		FAC
6.			
7.			
8.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 50*	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **2** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**30**	x1 = **30**
FACW species	**10**	x2 = **20**
FAC species	**0**	x3 = **0**
FACU species	**0**	x4 = **0**
UPL species	**10**	x5 = **50**
Column Totals:	**50** (A)	**100** (B)

Prevalence Index = B/A = **2.0**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No** ____

Remarks:

*Thatch present.

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/4	50	7.5YR 4/3	50	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- X Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Shovel refusal at 6 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): surface

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers

Arid West - Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP2
Investigator(s): Daria Snider Section, Township, Range: Section 1, Township 9 North, Range 8 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0505149 Long: 38.66219586 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No **X**	**Is the Sampled Area within a Wetland?**	**Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____ No **X**		
Wetland Hydrology Present?	Yes ____ No **X**		

Remarks:

Upland comparison to DP 1

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Elymus caput-medusae*	50	X	UPL
2. *Carduus pycnocephalus*	20	X	UPL
3. *Avena barbata*	20	X	UPL
4. *Festuca perennis*	10		FAC
5. *Dittrichia graveolens*	T		UPL
6.			
7.			
8.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**10**	x3 =	**30**
FACU species	**0**	x4 =	**0**
UPL species	**90**	x5 =	**450**
Column Totals:	**100** (A)		**480** (B)

Prevalence Index = B/A = **4.8**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

US Army Corps of Engineers Arid West - Version 2.0

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/4	100					clay loam	no redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP3
Investigator(s): Daria Snider Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0383376 Long: 38.65812073 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Representative depressional seasonal wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Navarretia intertexta*	20	X	FACW
2. *Plagiobothrys stipitatus*	15	X	FACW
3. *Polypogon maritimus*	10	X	OBL
4. *Eryngium castrense*	5		OBL
5. *Gratiola ebracteata*	T		OBL
6. *Deschampsia danthanioides*	T		FACW
7. *Hordeum marinum*	T		FAC
8. *Lythrum hyssopilolium*	T		OBL
9. *Croton setiger*	T		UPL
10 *Eleocharis macrostachya*	T		OBL
	50	=Total Cover	
		=Total Cover	
% Bare Ground in Herb Stratum 50	% Cover of Biotic Crust 20		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **3** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**15**	x1 = **15**
FACW species	**35**	x2 = **70**
FAC species	**0**	x3 = **0**
FACU species	**0**	x4 = **0**
UPL species	**0**	x5 = **0**
Column Totals:	**50** (A)	**85** (B)

Prevalence Index = B/A = **1.7**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	2.5YR 5/2	95	7.5YR 4/4	5	C	M	gravelly silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers — Arid West - Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP4
Investigator(s): Daria Snider Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1-3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0382912 Long: 38.65809882 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No **X**	**Is the Sampled Area within a Wetland?**	**Yes** _____ **No** **X**
Hydric Soil Present?	Yes _____ No **X**		
Wetland Hydrology Present?	Yes _____ No **X**		

Remarks:

Upland comparison to DP 3

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Elymus caput-medusae*	40	X	UPL
2. *Bromus hordeaceus*	30	X	FACU
3. *Holocarpha virgata*	10		UPL
4. *Bromus diandrus*	10		UPL
5. *Silene gallica*	T		UPL
6.			
7.			
8.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 10	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**0** x1 =	**0**
FACW species	**0** x2 =	**0**
FAC species	**0** x3 =	**0**
FACU species	**30** x4 =	**120**
UPL species	**60** x5 =	**300**
Column Totals:	**90** (A)	**420** (B)

Prevalence Index = B/A = **4.7**

Hydrophytic Vegetation Indicators:
_____ Dominance Test is >50%
_____ Prevalence Index is ≤3.0[1]
_____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5YR 4/3	100					sandy silt loam	no redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

Refusal at 6". No hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc CA Sampling Point: DP5
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0278307 Long: 38.6562025 Datum: NAD83
Soil Map Unit Name: AwD - Auburn silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Seasonal wetland located in tire ruts at the base of hill that slopes to a roadside drainage.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5. *Navarettia intertexta*			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Hordeum marinum*	20	X	FAC
2. *Croton setiger*	15	X	UPL
3. *Navarettia intertexta*	15	X	FACW
4. *Leontodon saxatilis*	5		FACU
5. *Lythrum hyssopifolium*	4		OBL
6. *Dittrichia graveolens*	3		UPL
7. *Polypogon monspeliensis*	2		FACW
8. *Holocarpha virgata*	1		UPL
9. *Galium parisiense*	1		UPL
Woody Vine Stratum (Plot size: ____)	66	=Total Cover	
1.			
2.			
	____	=Total Cover	
% Bare Ground in Herb Stratum 39	% Cover of Biotic Crust 20		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **2** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **67%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**4** x1 =	**4**
FACW species	**17** x2 =	**34**
FAC species	**20** x3 =	**60**
FACU species	**5** x4 =	**20**
UPL species	**18** x5 =	**90**
Column Totals:	**64** (A)	**208** (B)

Prevalence Index = B/A = **3.3**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

Marginal hydrophytic vegetation.

SOIL

Sampling Point: DP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5YR 4/4	68	5YR 4/2	30	RM	M	clay loam	
			5YR 2.5/1	2	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- X Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP6
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0278377 Long: 38.65618779 Datum: NAD83
Soil Map Unit Name: AwD - Auburn silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No **X**	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** **X**
Hydric Soil Present?	Yes _____	No **X**	
Wetland Hydrology Present?	Yes _____	No **X**	

Remarks:

Paired upland point on small berm downslope of DP5.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Carduus pycnocephalus*	40	X	UPL
2. *Elymus caput-medusae*	20	X	UPL
3. *Leontodon saxatilis*	10		FACU
4. *Amsinckia intermedia*	5		UPL
5. *Galium sp.*	5		UPL
6.			
7.			
8.			
	80	=Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 20	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**0**	x3 =	**0**
FACU species	**10**	x4 =	**40**
UPL species	**65**	x5 =	**325**
Column Totals:	**75** (A)		**365** (B)

Prevalence Index = B/A = **4.9**

Hydrophytic Vegetation Indicators:
_____ Dominance Test is >50%
_____ Prevalence Index is ≤3.0[1]
_____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** **X**

Remarks:

SOIL

Sampling Point: DP6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5YR 4/4	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP7
Investigator(s): Bonnie Peterson Section, Township, Range: Section 7, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): flat Slope (%): 3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0266484 Long: 38.65605898 Datum: NAD83
Soil Map Unit Name: AwD - Auburn silt loam, 2 to 30 percent slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area within a Wetland?**	**Yes** **No X**
Hydric Soil Present?	Yes No X		
Wetland Hydrology Present?	Yes No X		

Remarks:

Representative sloped seasonal wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Juncus xiphioides*	40	X	OBL
2. *Polypogon monspeliensis*	40	X	FACW
3. *Acmispon americanus*	15		UPL
4. *Juncus balticus*	5		OBL
5.			
6.			
7.			
8.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **2** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**45**	x1 =	**45**
FACW species	**40**	x2 =	**80**
FAC species	**0**	x3 =	**0**
FACU species	**0**	x4 =	**0**
UPL species	**15**	x5 =	**75**
Column Totals:	**100** (A)		**200** (B)

Prevalence Index = B/A = **2.0**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks:

SOIL

Sampling Point: DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 4/2	90	5YR 4/4	5	C	PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP8
Investigator(s): Bonnie Peterson Section, Township, Range: Section 7, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0266268 Long: 38.65607059 Datum: NAD83
Soil Map Unit Name: AwD - Auburn silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

Remarks:

Upland comparison to DP 7.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Acmispon americanus*	80	X	UPL
2. *Carduus pycnocephalus*	10		UPL
3. *Juncus xiphioides*	10		OBL
4.			
5.			
6.			
7.			
8.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**10**	x1 =	**10**
FACW species	**0**	x2 =	**0**
FAC species	**0**	x3 =	**0**
FACU species	**0**	x4 =	**0**
UPL species	**90**	x5 =	**450**
Column Totals:	**100** (A)		**460** (B)

Prevalence Index = B/A = **4.6**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: DP8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5 YR 4/3	100					clay loam	no redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP9
Investigator(s): Bonnie Peterson Section, Township, Range: Section 7, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0264348 Long: 38.65615871 Datum: NAD83
Soil Map Unit Name: AwD - Auburn silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes X** **No ____**
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Seasonal wetland swale - DP located in upper portion.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Juncus xiphioides*	40	X	OBL
2. *Acmispon americanus*	10		UPL
3. *Rumex crispus*	5		FAC
4. *Polypogon monspeliensis*	5		FACW
5.			
6.			
7.			
8.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**40** x1 =	**40**
FACW species	**5** x2 =	**10**
FAC species	**5** x3 =	**15**
FACU species	**10** x4 =	**40**
UPL species	____ x5 =	**0**
Column Totals:	**60** (A)	**105** (B)

Prevalence Index = B/A = **1.8**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks:

SOIL

Sampling Point: DP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5YR 4/2	95	2.5YR 4/8	5	C	M/PL	clay loam	rock at 8 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 09/27/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP10
Investigator(s): Bonnie Peterson Section, Township, Range: Section 7, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0263914 Long: 38.65616465 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No **X**	**Is the Sampled Area within a Wetland?**	**Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____ No **X**		
Wetland Hydrology Present?	Yes ____ No **X**		

Remarks:

Upland comparison to DP 9.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 meter^2)			
1. *Acmispon americanus*	40	X	UPL
2. *Carduus pycnocephalus*	30	X	UPL
3. *Festuca perennis*	20	X	FAC
4.			
5.			
6.			
7.			
8.			
	90	=Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **33%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**20**	x3 =	**60**
FACU species	**0**	x4 =	**0**
UPL species	**70**	x5 =	**350**
Column Totals:	**90** (A)		**410** (B)

Prevalence Index = B/A = **4.6**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: DP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5YR 4/4	100					clay loam	rock at 8 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Erosion has occurred in this location, but no hydrology indicators are present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP11
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0299037 Long: 38.65775732 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

Remarks:

Located in slight depression downslope from a mowed fire break. Suspect due to topography and green color on aerials. None of the wetland criteria are satisfied in this location.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Bromus hordeaceus*	80	X	FACU
2. *Festuca perennis*	15		FAC
3. *Holocarpha virgata*	5		UPL
4.			
5.			
6.			
7.			
8.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 0	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**15**	x3 =	**45**
FACU species	**80**	x4 =	**320**
UPL species	**5**	x5 =	**25**
Column Totals:	**100** (A)		**390** (B)

Prevalence Index = B/A = **3.9**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: DP11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	100					clay loam	rock at 8 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP12
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0277883 Long: 38.65793268 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X** No ____	**Is the Sampled Area within a Wetland?**	**Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____ No **X**		
Wetland Hydrology Present?	Yes ____ No **X**		

Remarks:

Located in an erosional feature upslope of a mowed fire break. This is an erosional feature, and no OHWM is present, and it does not meet all 3 wetland criteria.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Festuca perennis*	30	X	FAC
2. *Holocarpha virgata*	10		UPL
3. *Bromus hordeaceus*	5		FACU
4. *Avena barbata*	5		UPL
5. *Briza minor*	5		FAC
6.			
7.			
8.			
	55	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 45	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**35**	x3 =	**105**
FACU species	**5**	x4 =	**20**
UPL species	**15**	x5 =	**75**
Column Totals:	**55** (A)		**200** (B)

Prevalence Index = B/A = **3.6**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** ____

Remarks:

SOIL

Sampling Point: DP12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	100					clay loam	rock at 8 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
Water Table Present? Yes _____ No X Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Although erosion is evident in this location, and OHWM is not present. No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP13
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0272672 Long: 38.65831687 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes **X**	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

Remarks:

Located upslope of a berm. Location sampled due to dominance of hydrophytic vegetation; however the other two wetland criteria are not met in this location, and it is therefore not a wetland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter^2)			
1. *Festuca perennis*	50	X	FAC
2. *Elymus-caput medusae*	10		UPL
3. *Bromus hordeaceus*	5		FACU
4. *Avena barbata*	5		UPL
5. *Briza minor*	5		FAC
6. *Holocarpha virgata*	1		UPL
7.			
8.			
	76	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____	=Total Cover	
% Bare Ground in Herb Stratum 76	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**0**	x1 = **0**
FACW species	**0**	x2 = **0**
FAC species	**55**	x3 = **165**
FACU species	**5**	x4 = **20**
UPL species	**16**	x5 = **80**
Column Totals:	**76** (A)	**265** (B)

Prevalence Index = B/A = **3.5**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** ____

Remarks:

SOIL

Sampling Point: DP13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/3	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Town and Country Village City/County: El Dorado Sampling Date: 10/06/23
Applicant/Owner: Raney Planning & Management, Inc State: CA Sampling Point: DP14
Investigator(s): Bonnie Peterson Section, Township, Range: Section 6, Township 9 North, Range 9 East
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): flat Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: -121.0267312 Long: 38.65913396 Datum: NAD83
Soil Map Unit Name: AxD - Auburn very rocky silt loam, 2 to 30 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No **X**	**Is the Sampled Area within a Wetland?**	**Yes** ____ **No** **X**
Hydric Soil Present?	Yes ____ No **X**		
Wetland Hydrology Present?	Yes ____ No **X**		

Remarks:

Suspect location due to presence of a fair amount of *Navarretia intertexta*. None of the wetland criteria are satisfied in this location.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 meter^2)			
1. *Bromus diandrus*	50	X	UPL
2. *Erodium botrys*	20	X	FACU
3. *Navarretia intertexta*	15		FACW
4. *Elymus caput-medusae*	10		UPL
5. *Avena barbata*	10		UPL
6. *Bromus hordeaceus*	5		FACU
7.			
8.			
	110	=Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 78 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**15**	x2 =	**30**
FAC species	**0**	x3 =	**0**
FACU species	**25**	x4 =	**100**
UPL species	**70**	x5 =	**350**
Column Totals:	**110** (A)		**480** (B)

Prevalence Index = B/A = **4.4**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** **X**

Remarks:

SOIL

Sampling Point: DP14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/8	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** **X**

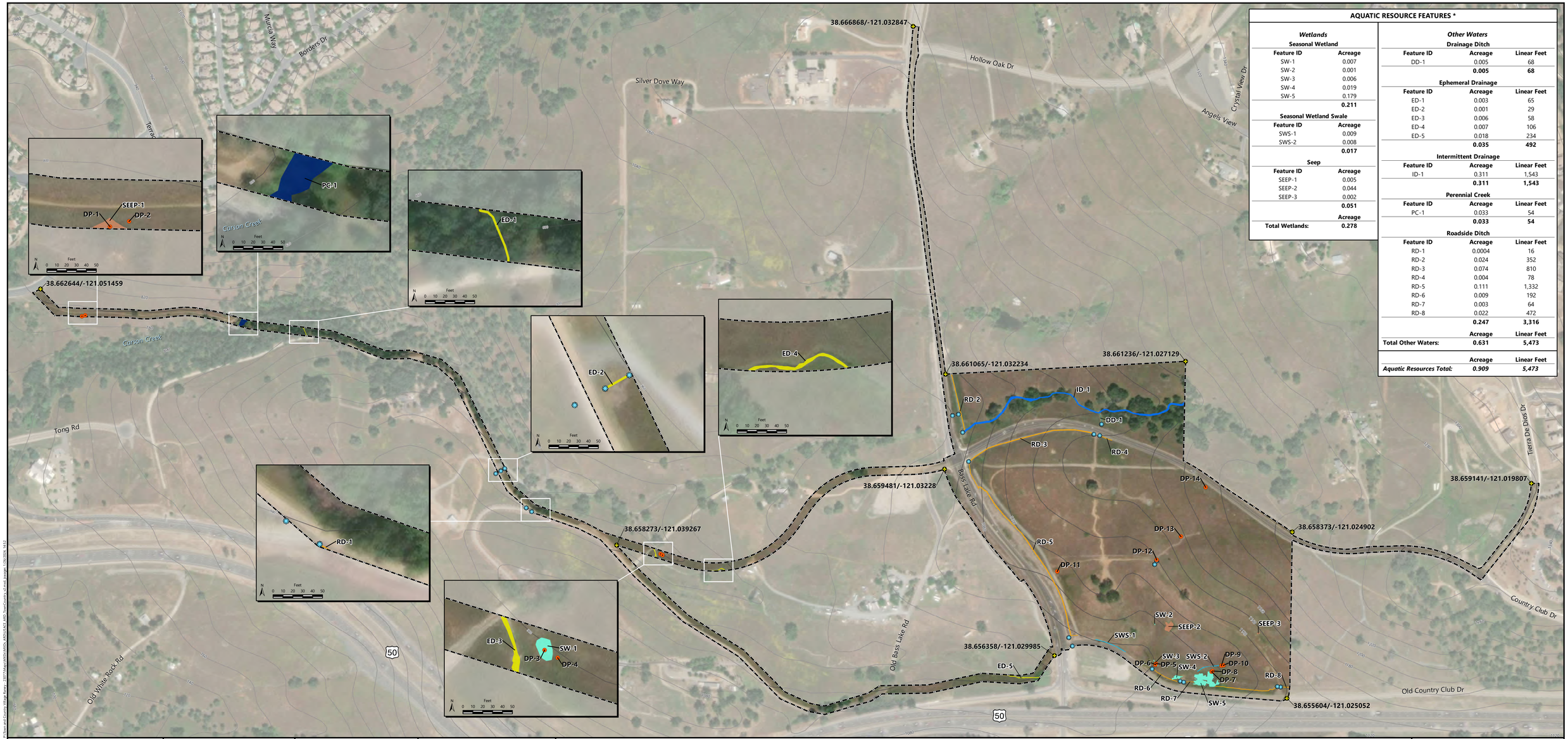
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology. Slightly damp soil but no saturation.

Attachment B

Aquatic Resources Delineation Map



AQUATIC RESOURCE FEATURES *

Wetlands

Seasonal Wetland

Feature ID	Acreage
SW-1	0.007
SW-2	0.001
SW-3	0.006
SW-4	0.019
SW-5	0.179
	0.211

Seasonal Wetland Swale

Feature ID	Acreage
SWS-1	0.009
SWS-2	0.008
	0.017

Seep

Feature ID	Acreage
SEEP-1	0.005
SEEP-2	0.044
SEEP-3	0.002
	0.051

	Acreage
Total Wetlands:	**0.278**

Other Waters

Drainage Ditch

Feature ID	Acreage	Linear Feet
DD-1	0.005	68
	0.005	**68**

Ephemeral Drainage

Feature ID	Acreage	Linear Feet
ED-1	0.003	65
ED-2	0.001	29
ED-3	0.006	58
ED-4	0.007	106
ED-5	0.018	234
	0.035	**492**

Intermittent Drainage

Feature ID	Acreage	Linear Feet
ID-1	0.311	1,543
	0.311	**1,543**

Perennial Creek

Feature ID	Acreage	Linear Feet
PC-1	0.033	54
	0.033	**54**

Roadside Ditch

Feature ID	Acreage	Linear Feet
RD-1	0.0004	16
RD-2	0.024	352
RD-3	0.074	810
RD-4	0.004	78
RD-5	0.111	1,332
RD-6	0.009	192
RD-7	0.003	64
RD-8	0.022	472
	0.247	**3,316**

	Acreage	Linear Feet
Total Other Waters:	**0.631**	**5,473**

	Acreage	Linear Feet
Aquatic Resources Total:	***0.909***	***5,473***

Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying
Topographic Contours: USGS 1/3 ArcSecond

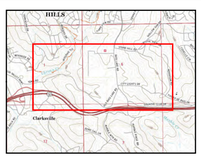
Delineation Performed by: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 26 January 2024

Made in accordance with the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program,* as amended on February 10, 2016

** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



- Study Area (81.8 acres)
- Culvert
- Data Point
- Reference Coordinate (NAD83)
- 20' Contour (NAVD88 U.S. Feet)

Aquatic Resources (0.909 acre) *

Wetlands (0.278 acre)
- Seasonal Wetland (0.211 acre)
- Seasonal Wetland Swale (0.017 acre)
- Seep (0.051 acre)

Other Waters (0.631 acre)
- Drainage Ditch (0.005 acre)
- Ephemeral Drainage (0.035 acre)
- Intermittent Drainage (0.311 acre)
- Perennial Creek (0.033 acre)
- Roadside Ditch (0.247 acre)

Aquatic Resources Delineation
Town and Country Village
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

Attachment C

Plant Species Observed within the Study Area

Plant Species Observed within the Town and Country Village Study Area 13 April 2022, and 27 September and 6 October 2023

Species Name	Common Name	Wetland Indicator Status
Achillea millefolium	Yarrow	FACU
Acmispon americanus	Spanish lotus	UPL
Acmispon micranthus	Small flowered lotus	UPL
Adiantum jordanii	California maidenhair	FAC
Aegilops triuncialis	Barbed goat grass	UPL
Aesculus californica	California buckeye	UPL
Aira caryophyllea	Silver hair grass	FACU
Allium hyalinum	Glassy onion	FACU
Amsinckia intermedia	Common fiddleneck	UPL
Amsinckia menziesii	Fiddleneck	UPL
Anthriscus caucalis	Bur-chervil	UPL
Aphanes occidentalis	Ladie's mantle	UPL
Apocynum cannabinum	Hemp dogbane	FAC
Artemisia douglasiana	Mugwort	FAC
Asclepias fascicularis	Narrow-leaf milkweed	FAC
Avena barbata	Slender wild oat	UPL
Baccharis pilularis subsp. pilularis	Coyote brush	UPL
Bidens frondosa	Sticktight	FACW
Brachypodium distachyon	Purple false brome	UPL
Brassica nigra	Black mustard	UPL
Briza minor	Annual quaking grass	FAC
Brodiaea elegans	Harvest brodiaea	UPL
Bromus diandrus	Ripgut grass	UPL
Bromus hordeaceus	Soft chess	FACU
Bromus madritensis spp. *rubens*	Red brome	UPL
Bromus sitchensis var. carinatus	California brome	UPL
Bromus sterilis	Sterile brome	UPL
Calandrinia menziesii	Red maids	FACU
Cardamine oligosperma	Little western bittercress	FAC
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	UPL
Carex praegracilis	Common sedge	FACW
Castilleja attenuata	Valley tassels	UPL
Cephalanthus occidentalis	California button willow	OBL
Cerastium glomeratum	Sticky mouse-ear chickweed	UPL
Chlorogalum pomeridianum var. pomeridianum	Common soap plant	UPL
Clarkia gracilis subsp. gracilis	Graceful clarkia	UPL

Clarkia purpurea subsp. quadrivulnera	Purple clarkia	UPL
Croton setiger	Turkey-mullein	UPL
Cynosurus echinatus	Bristly dogtail grass	UPL
Cyperus eragrostis	Tall nutsedge	FACW
Datura wrightii	Jimsonweed	UPL
Daucus pusillus	Wild carrot	UPL
Deschampsia danthonioides	Annual hair grass	FACW
Dichelostemma volubile	Twining brodiaea	UPL
Dipterostemon capitatus	Blue dicks	UPL
Dittrichia graveolens	Stinkwort	UPL
Eleocharis macrostachya	Creeping spikerush	OBL
Elymus caput-medusae	Medusa head	UPL
Elymus ponticus	Tall wheat grass	UPL
Epilobium brachycarpum	Willowherb	FAC
Epilobium ciliatum	Slender willow herb	FACW
Epilobium torreyi	Torrey's willowherb	FACW
Erigeron canadensis	Horseweed	FACU
Erodium botrys	Filaree	FACU
Erodium cicutarium	Redstem filaree	UPL
Eryngium castrense	Great Valley coyote-thistle	OBL
Erythranthe guttata	Seep monkeyflower	FAC
Erythranthe microphylla	Small leaved monkeyflower	OBL
Euthamia occidentalis	Western goldenrod	FACW
Festuca bromoides	Brome fescue	FACU
Festuca microstachys	Small fescue	UPL
Festuca myuros	Rattail sixweeks grass	FACU
Festuca perennis	Rye grass	FAC
Ficus carica	Edible fig	FACU
Frangula californica subsp. tomentella	Hoary coffeeberry	UPL
Galium aparine	Goose grass	FACU
Galium parisiense	Wall bedstraw	UPL
Geranium dissectum	Cut-leaf geranium	UPL
Geranium molle	Soft geranium	UPL
Gratiola ebracteata	Bractless hedge-hyssop	OBL
Helminthotheca echioides	Bristly ox-tongue	FAC
Heteromeles arbutifolia	Toyon	UPL
Holocarpha virgata	Narrow tarplant	UPL
Hordeum marinum subsp. gussoneanum	Mediterranean barley	FAC
Hordeum murinum	Wall barley	FACU
Horkelia californica var. elata	California horkelia	UPL
Hypericum perforatum subsp. perforatum	Klamathweed	FACU
Juncus acuminatus	Tapered rush	OBL
Juncus balticus subsp. ater	Baltic rush	FACW

Juncus bufonius	Toad rush	FACW
Juncus xiphioides	Iris-leaved rush	OBL
Lactuca serriola	Prickly lettuce	FACU
Leersia oryzoides	Rice cutgrass	OBL
Leontodon saxatilis	Hairy hawkbit	FACU
Limnanthes alba subsp. versicolor	White meadowfoam	FACU
Linum bienne	Flax	UPL
Lithophragma heterophyllum	Woodland star	UPL
Logfia gallica	Daggerleaf cottonrose	UPL
Lonicera interrupta	Chaparral honeysuckle	UPL
Lupinus bicolor	Miniature lupine	UPL
Lysimachia arvensis	Scarlet pimpernel	FAC
Lythrum hyssopifolia	Hyssop loosestrife	OBL
Madia gracilis	Gumweed	UPL
Marah fabacea	California man-root	UPL
Mentha pulegium	Pennyroyal	OBL
Micropus californicus	Q-tips	FACU
Muhlenbergia rigens	Deer grass	FAC
Navarretia intertexta	Needle-leaf navarretia	FACW
Oxalis micrantha	Dwarf wood-sorrel	UPL
Bellardia viscosa	Yellow parentucellia	FAC
Pentagramma triangularis	Goldback fern	UPL
Perideridia kelloggii	Yampah	UPL
Persicaria hydropiperoides	False waterpepper	OBL
Persicaria maculosa	Lady's thumb	FACW
Phacelia cicutaria var. cicutaria	Caterpillar phacelia	UPL
Phoradendron leucarpum subsp. tomentosum	Oak mistletoe	UPL
Pinus sabiniana	Gray pine	UPL
Plagiobothrys nothofulvus	Rusty popcornflower	FAC
Plagiobothrys stipitatus	Great valley popcornflower	FACW
Plantago erecta	California plantain	UPL
Poa bulbosa	Bulbous blue grass	FACU
Polypodium calirhiza	Licorice fern	UPL
Polypogon maritimus	Mediterranean beard grass	OBL
Polypogon monspeliensis	Annual rabbitfoot grass	FACW
Quercus douglasii	Blue oak	UPL
Quercus lobata	Valley oak	FACU
Quercus wislizeni	Interior live oak	UPL
Raphanus sativus	Wild radish	UPL
Rumex crispus	Curly dock	FAC
Rumex pulcher	Fiddle dock	FAC
Salix gooddingii	Goodding's black willow	FACW
Salix laevigata	Red willow	FACW

Salix lasiandra	Pacific willow	FACW
Sanicula bipinnatifida	Purple sanicle, shoe buttons	UPL
Sanicula crassicaulis	Pacific sanicle	UPL
Schinus molle	Pepper tree	FACU
Senecio vulgaris	Common groundsel	FACU
Sherardia arvensis	Field madder	UPL
Silene gallica	Small-flower catchfly	UPL
Silybum marianum	Milk thistle	UPL
Sonchus oleraceus	Common sow thistle	UPL
Spergularia rubra	Red sand-spurrey	FAC
Stachys stricta	Sonoma hedge nettle	OBL
Stellaria media	Common chickweed	FACU
Thysanocarpus curvipes	Common fringe pod	UPL
Torilis arvensis	Tall sock-destroyer	UPL
Toxicodendron diversilobum	Western poison oak	FACU
Trichostema lanceolatum	Vinegar weed	FACU
Trifolium bifidum var. bifidum	Pinole clover	UPL
Trifolium ciliolatum	Foothill clover	UPL
Trifolium depauperatum	Dwarf sack clover	FAC
Trifolium dubium	Little hop clover	UPL
Trifolium glomeratum	Clustered clover	UPL
Trifolium hirtum	Rose clover	UPL
Trifolium incarnatum	Crimson clover	UPL
Trifolium microcephalum	Small-head clover	FAC
Trifolium subterraneum	Subterranean clover	UPL
Trifolium variegatum	Variegated clover	FAC
Triteleia hyacinthina	White brodiaea	FAC
Triteleia laxa	Ithuriel's spear	UPL
Typha angustifolia	Narrow-leaved cattail	OBL
Typha latifolia	Broad-leaved cattail	OBL
Vicia sativa	Spring vetch	FACU
Vicia villosa subsp. varia	Winter vetch	UPL

Attachment D

JD Request Form

U.S. Army Corps of Engineers (USACE)

REQUEST FOR JURISDICTIONAL DETERMINATION (JD)

For use of this form, see Sec 404 CWA, Sec 10 RHA, Sec 103 MPRSA; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0024 Expires 2024-04-30

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the review area that are or that may be subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice or FOIA request as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in any approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure Submission of requested information is voluntary, however, if the information is not provided there may be some delay in processing your request. Failure to provide this information will not result in an adverse action.
System of Record Notice (SORN): The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website:
http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. To (*District Name*): Sacramento District

2. I am requesting a JD on property located at (*Street Address*): 2120 Country Club Drive

City/Township/Parish: El Dorado Hills County: El Dorado State: California

Acreage of Parcel/Review Area for JD: 81.8

Section: Sections 1, 5, 6, and 7 Township: 9 North Range: 8 and 9 East

Latitude (*decimal degrees*): 38.658668 ° Longitude (*decimal degrees*): -121.02990 °

(*For linear projects, please include the center point of the proposed alignment.*)

3. Please attach a survey/plat map and vicinity map identifying location and review area for the JD.

4. ☒ I currently own this property. ☐ I plan to purchase this property.

☐ I am an agent/consultant acting on behalf of the requester.

☐ Other (*please explain*):

5. Reason for request: (*check as many as applicable*)

- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- ☐ I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- ☒ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- ☐ I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- ☐ I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- ☐ A Corps JD is required in order to obtain my local/state authorization.
- ☐ I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- ☐ I believe that the site may be comprised entirely of dry land.
- ☐ Other:

6. Type of determination being requested:

- ☒ I am requesting an approved JD.
- ☐ I am requesting a preliminary JD.
- ☐ I am requesting a "no permit required" letter as I believe my proposed activity is not regulated.
- ☐ I am unclear as to which JD I would like to request and require additional information to inform my decision.

7. Typed or Printed Name: Moe Mohanna Daytime Phone No.: 916-870-7236

Company Name: M.H. Mohanna & Co. Email Address: moe@mohannadevelopment.com

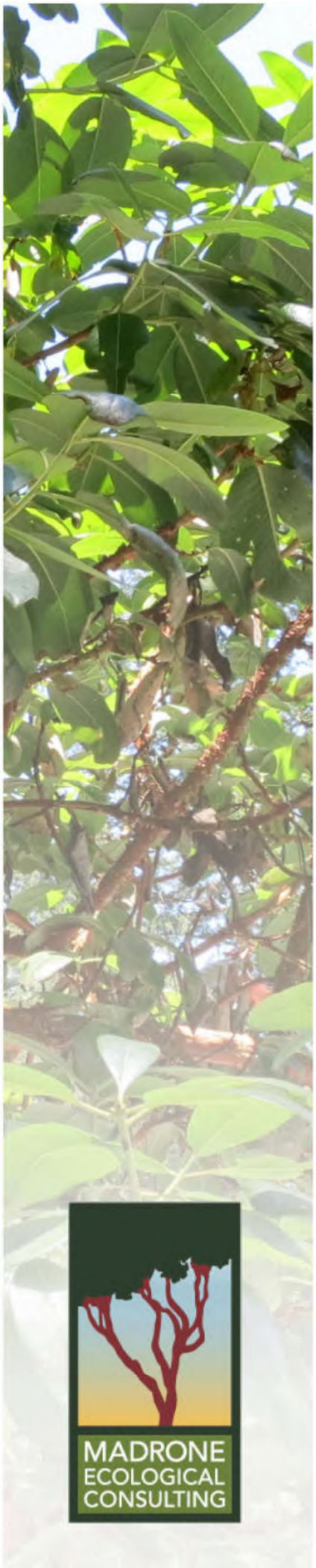
Address: 1025 9th Street, 2nd Floor
Sacramento, CA 95814

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the JD. Your signature shall be an affirmation that you possess the requisite property rights to request a JD on the subject property.

Signature: Moe Mohanna Date: Feb 6, 2024

Attachment G

Oak Resources Technical Report for Town & Country Village El Dorado



Oak Resources Technical Report

Town & Country Village
El Dorado

El Dorado County, California
June 2024

MADRONE ECOLOGICAL CONSULTING

Prepared for:

Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Recommended Citation:

Madrone Ecological Consulting, LLC (Madrone). 2024. *Oak Resources Technical Report for Town & Country Village El Dorado*. Prepared for Raney Planning & Management, Inc. Published on 17 June 2024.

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Town & Country Village El Dorado

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1.0 INTRODUCTION

This report summarizes the Oak Resources present within the Town & Country Village El Dorado Study Area (Study Area). This report has been prepared to comply with El Dorado County's *Oak Resources Management Plan* (ORMP) (EDC 2017) and the associated *Oak Resources Technical Report Checklist* (Checklist).

The Study Area is located north of Interstate Highway 50, largely south of Stone Hill Road, east of Silva Valley Parkway, and largely west of Morrison Road in western El Dorado County, California (**Figure 1**). The Development Area is located generally north of Country Club Drive and east of Bass Lake Road. The approximately 81.8-acre Study Area is located in portions of Section 1, Township 9 North, Range 8 East and Sections 5-7, Township 9 North, Range 9 East (MDBM) of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) Certified Arborist Daria Snider (#WE 8666A) mapped the oak woodlands within the Project Area and conducted an inventory of the following native oak trees within the Study Area or with driplines overhanging the Study Area on 27 September and 6 October 2023:

- All native oak trees outside of mapped oak woodlands that have a single trunk 6" in Diameter at Breast Height (DBH) or greater or multiple trunks with an aggregate of 10" DBH or greater
- All native oak trees within mapped oak woodlands that were 24" DBH or greater

For each tree inventoried, Ms. Snider nailed aluminum tags with a unique identification number into the trunk (for those that did not already have a tag), recorded the tree identification number, tree species, DBH, approximate dripline radius, and general health and structure. Health and structure rating criteria are listed in **Table 1**, below. The location of each tree was recorded with a GPS unit capable of sub-meter accuracy (Arrow 100).

Table 1. Health and Structure Rating Criteria

Rating	Health Criteria	Structure Criteria
Excellent	Foliage is vigorous with virtually no dead branches	No cavities are present, major branch attachments have no included bark and have ideal attachment angles, and general structure is appropriate for the species.
Good	Foliage is vigorous with few dead branch tips	One or two small cavities may be present, or one or two major branch attachments may not be ideal, but none of these compromise the longevity of the tree. General structure is appropriate for the species.

Table 1. Health and Structure Rating Criteria

Rating	Health Criteria	Structure Criteria
Fair	Foliage is acceptable, but there may be a few dead branches, and some foliage may be discolored.	Several cavities may be present, several branch attachments may have included bark or attachment angles could make them prone to failure, and/or the tree may be inappropriately branched for the species. All of these issues could be rectified with treatment.
Poor	Tree is obviously in decline with extensive dead areas, some conks may be present, and foliage is extremely sparse.	Large, decaying cavities may be present within the main trunk of the tree, large portions of the tree may have fallen off, destabilizing the remainder of the tree, or other structural problem that cannot be treated.
Dead	No live foliage present when foliage is present on other trees.	

Note that the health and structure ratings recorded during the course of this survey may be used for general planning purposes but shall not be considered to be a hazard assessment for public safety purposes.

The Town & Country Village El Dorado Project (Project) includes work proposed onsite within the Project Development Area as well as off-site infrastructure, comprised of water and sewer lines (collectively, the Project Area). At the present time, two alternatives have been identified for both the off-site sewer line and the off-site water line; the impacts analysis presented in **Section 4.0** presents impact estimates for each scenario. The Site Plan is included as **Attachment A**, and a Project Components map that shows the different areas is included as **Figure 2**. Please note that no oak resources occur within the Program Study Area shown on **Figure 2**, and no impacts within that area are currently proposed, so this report only discusses oak resources and impacts within the Project Area, as defined above.

3.0 EXISTING CONDITIONS AND OAK RESOURCES

The Study Area is largely comprised of ungrazed Annual Brome Grasslands with widely scattered oak trees. Oak Woodlands occur in the vicinity of the intermittent drainage and perennial Carson Creek. The intermittent drainage is located in the northern portion of the Study Area, and Carson Creek is in the western portion. Carson Creek runs over bedrock, and the adjacent slopes are quite steep, restricting the extent of riparian vegetation, which consists of a narrow band of Arroyo Willow Riparian Scrub. The Oak Woodland south of the creek has a dense, closed canopy, as is typical for north-facing slopes in the region. Bass Lake Road cuts from north to south through the Study Area, and Country Club Drive runs from west to east. Portions of Old Bass Lake Road and Old Country Club Drive also occur within portions of the Study Area. Several seasonal wetlands and two seasonal wetland swales occur just north of Old Country Club Drive, and one seasonal wetland occurs near an ephemeral drainage in the western portion of the Study Area. A few seeps occur on slopes in the Annual Brome Grasslands. Roadside ditches run along the edges of a number of roadways within the Study Area, and three portions of ephemeral drainages occur within infrastructure-related portions of the Study Area. Inclusions of unvegetated areas are scattered throughout the Study

Area along farm roads. The terrain within the Study Area is gently rolling, and generally slopes from the east down towards the west. Elevations range from approximately 1,320 feet above mean sea level (MSL) at the eastern edge of the Study Area to approximately 800 feet at the western extent along Carson Creek and Russi Ranch Drive (**Figure 1**).

Surrounding properties are similar to those within the Study Area. They are largely comprised of ungrazed Annual Brome Grasslands, scattered Oak Woodlands, and rural residences. The western and eastern ends of the Study Area abut urban residential areas, and the Study Area is bordered by Interstate Highway 50 to the south.

3.1 Oak Resources

A total of 6.2 acres of Oak Woodland is present within the 81.8-acre Project Area. An additional 17 individual native oak trees greater than 6" DBH occur outside of the Oak Woodlands in the Study Area. 72 native oak trees were inventoried, including 17 individual native oaks outside of Oak Woodlands, 27 native oaks between 24" and 25" within Oak Woodlands, and 28 Heritage oaks (equal to or greater than 36" DBH) within Oak Woodlands (**Table 2**) (**Attachment B**).

Table 2. Oak Trees Inventoried within the Study Area

			Number of Trees (DBH)			
			Blue Oak	**Interior Live Oak**	**Valley Oak**	**Total**
Within Oak Woodlands	**Fair to Good**	24-35" DBH	4 (114.6)	16 (468.1)	1 (24.8)	21 (607.5)
		≥36" DBH	0	24 (1,148.9)	2 (78.3)	26 (1,227.2)
	Poor Condition	24-35" DBH	0	6 (170.7)	0	6 (170.7)
		≥36" DBH	0	2 (81.7)	0	2 (81.7)
Subtotal						55 (2,079.1)
Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	3 (71.0)	0	6 (165.6)	9 (236.6)
		≥36" DBH	2 (83.8)	0	2 (79.7)	4 (163.5)
	Poor Condition	6-35" DBH	0	2 (50.0)	1 (15.7)	3 (65.7)
		≥36" DBH	0	0	1 (37.1)	1 (37.1)
Subtotal						17 (502.9)
Total			9 (269.4)	50 (1,911.4)	13 (401.2)	72 (2,582.0)

4.0 IMPACTS TO OAK RESOURCES

In accordance with the El Dorado County Oak Resources Conservation Ordinance, impacts to oak resources are calculated differently for Oak Woodland areas and non-Oak Woodland areas. Within mapped Oak Woodlands, impacts are calculated based on impact to oak canopy, plus impacts to any individual native oak trees within the woodland that are 36" of greater DBH. Outside of mapped Oak Woodlands, impacts are calculated based on impacts to each native oak tree that is 6" or greater DBH. Mitigation is only required

for trees that are in Fair or better condition[1], and as a result, impacts have been broken out below based on condition. Note that trees were considered permanently impacted if the trunk fell within either the permanent or temporary impact boundary, or if greater than approximately 30% of the tree's dripline area would be permanently impacted. Impacted and avoided Oak Woodlands and oak trees are shown on **Attachment C**.

4.1 Project Development Area Impacts

A total of 0.3 acres of Oak Woodland will be permanently impacted within the Project Development Area, and 0.2 acre of Oak Woodland will be temporarily impacted within the Project Development Area. Within this area, a total of seven native oak trees with a DBH of 36" or greater will be impacted (six of which are in fair to good condition) (**Table 3**).

In addition, one individual native oak tree with a DBH of 6" or greater outside of Oak Woodlands will be permanently impacted within the Project Development Area, but this tree is in poor condition (**Table 3**).

In summary, a total of 0.5 acres of Oak Woodland and six individual trees in fair to good condition (with a cumulative DBH of 264.3 inches) would be subject to mitigation as a result of impacts within the Project Development Area (**Table 3**).

Table 3. Oak Tree Impacts within the Project Development Area

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair or Better**		0	6 (264.3)	0	6 (264.3)
	Poor Condition		0	1 (38.4)	0	1 (38.4)
Subtotal						7 (302.7)
Trees Outside of Oak Woodlands	**Fair or Better**	6-35" DBH	0	0	0	0
		≥36" DBH	0	0	0	0
	Poor Condition	6-35" DBH	0	1 (23.4)	0	1 (23.4)
		≥36" DBH	0	0	0	0
Subtotal						1 (23.4)
Total Trees in Fair to Good Condition			0	6 (264.3)	0	6 (264.3)
TOTAL			0	8 (326.1)	0	8 (326.1)

[1] Dead, dying and diseased trees are exempted from mitigation requirements in Section 2.1.9 of the ORMP.

4.2 Sewer Alternative Impacts

4.2.1 Sewer Alternative 1

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 1, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 1. Within this area, two native oak trees with a DBH of 36" of greater will be impacted (both of which are in fair to good condition) (**Table 4**).

In addition, a total of four individual native oak trees with a DBH of 6" of greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 1 (three of which are in fair to good condition) (**Table 4**). Of those three trees in fair to good condition that may be impacted, one has a DBH of 36" of greater. In summary, a total of 2.2 acres of Oak Woodland and five individual trees in fair to good condition (with a cumulative DBH of 200 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 1 (**Table 4**).

Table 4. Oak Tree Impacts within Sewer Alternative 1

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	2 (41.0)	0	0	2 (41.0)
		≥36" DBH	0	0	1 (43.1)	1 (43.1)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						4 (110.7)
Total Trees in Fair to Good Condition			2 (41.0)	2 (115.9)	1 (43.1)	5 (200.0)
TOTAL			2 (41.0)	3 (142.5)	1 (43.1)	6 (226.6)

4.2.2 Sewer Alternative 2

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 2, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 2. Within this area, two native oak trees with a DBH of 36" of greater will be impacted (both of which are in fair to good condition) (**Table 5**). In addition, a total of three individual native oak trees with a DBH of 6" of greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 2 (two of which are in fair to good condition) (**Table 5**). Of those two trees in fair to good condition that may be impacted, one has a DBH of 36" of greater. In summary, a total of 2.2 acres of Oak Woodland and four individual trees in fair to good condition (with a cumulative DBH of 189.4 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 2 (**Table 5**).

Table 5. Oak Tree Impacts within Sewer Alternative 2

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	0	0	1 (35.0)	1 (35.0)
		≥36" DBH	1 (38.5)	0	0	1 (38.5)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						3 (100.1)
Total Trees in Fair to Good Condition			1 (38.5)	2 (115.9)	1 (35.0)	4 (189.4)
TOTAL			1 (38.5)	3 (142.5)	1 (35.0)	5 (216.0)

4.3 Overall Project Impacts

The Project combined with the sewer line would permanently impact 1.5 acres of Oak Woodland, and temporarily impact 1.2 acres of Oak Woodland. Within the Oak Woodlands, the Project combined with the sewer line would impact nine native oak trees with a DBH of 36" or greater (eight of which are in fair to good condition).

In addition, a total of 3 - 4 individual native oak trees with a DBH of 6" or greater outside of Oak Woodlands would be permanently impacted by the Project combined with the sewer line (2 - 3 of which are in fair to good condition). Of the 2 - 3 trees in fair to good condition that may be impacted, 2 have a DBH of 36" or greater (one along each sewer alternative).

Of these impacts, a cumulative total of 2.7 acres of Oak Woodland and 11-12 individual trees in fair to good condition (with a cumulative DBH of 453.7 - 464.3) would be subject to mitigation. The ranges above represent the full range of cumulative impacts, with the lower end assuming the least impactful sewer alternative, and the upper end assuming the most impactful sewer alternative. Where impacts are the same for both sewer alternative, no range is presented. A summary data sheet of oak resources impacts for the Project plus Sewer Alternative 1 is included as **Attachment D**, and a summary data sheet of oak resources impacts for the Project plus Sewer Alternative 2 is included as **Attachment E**.

The Project will avoid indirect impacts to Oak Resources outside of the impact area by implementing the tree avoidance and minimization measures outlined in **Attachment F**.

5.0 MITIGATION

The total cost to mitigate impacts to oak resources associated with the Project if accomplished via in-lieu fee ranges from $552,102.75 to $555,132.15, depending on which Sewer Alternative is implemented. Mitigation calculations are detailed below. We have attached the completed Checklist in **Attachment G**. As noted above, separate *Planning and Building Department Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits* have completed for the Project including Sewer Alternative 1 and the Project including Sewer Alternative 2. These are included as **Attachments D and E**, respectively.

5.1 Oak Woodland

The Project intends to mitigate for impacts to oak woodlands through payment of in-lieu fees to the County's Oak Woodland Conservation Fund. The Project as proposed would impact 0.5 acres of the 4.0 acres of Oak Woodland mapped within the Project Development Area. Implementation of either sewer alternative would result in impacts to 2.2 acres of Oak Woodland. This is a cumulative total of 2.7 acres (44%) of impact of the total 6.2 acres of Oak Woodland mapped within the Project Area[2]. In accordance with the ORMP, the Project proponent would be required to mitigate at a ratio of 1:1 for impacts to 0-50% of the Oak Woodland within the Project Area. Based on this ratio, the Project would require 2.7 acres of Oak Woodland mitigation. Based on the current fee of $8,285, payment of the in-lieu fee for this impact would cost a total of $22,369.50.

5.2 Individual and Heritage Oak Trees

Mitigation estimates are broken down by sewer alternative below. Per the ORMP, the mitigation may be accomplished via replacement planting on or off-site, via payment of an in-lieu fee, or via a combination of the two. Replacement planting on or off-site would require that the planting area be placed under a conservation easement; tree replacement sizes and inch for inch equivalency are provided in **Table 6**, below. If replacement planting is selected, a replacement planting plan must be prepared as detailed in the ORMP, and the planting density may be no greater than 200 trees per acre. The current in-lieu fee is $153 per DBH inch.

Table 6. Oak Tree Replacement Equivalencies

Replacement Tree Size	Number of Replacement Trees Required per DBH Inch of Mitigation
Acorn	3
1-gallon/TreePot 4	2
5-gallon	1.5
15-gallon	1

[2] The 2.2 acres of oak woodland that will be impacted by the sewer alternatives is a tiny portion of the oak woodland in that area; however, as the Project Proponent does not control that area, they cannot place a conservation easement over it. Therefore, impacts must be analyzed for the Project Area in isolation.

5.2.1 Project Plus Sewer Alternative 1

If Sewer Alternative 1 is selected, the cumulative oak tree impacts for the Project plus the sewer alternative would be two individual oak trees (41.0 DBH inches) and nine Heritage oak trees (423.3 DBH inches). The ORMP requires mitigation of individual oak trees at a 1:1 ratio, and mitigation of Heritage oak trees at a 3:1 ratio. Based on these ratios, the Project plus the Sewer Alternative 1 would require 1,310.9 DBH inches of mitigation. If this is accomplished via in-lieu fee, then based on the current in-lieu fee of $153 per DBH inch, this would cost $200,567.70. If this were accomplished entirely via replacement planting, it would require planting 1,311 15-gallon trees on a property no smaller than 6.6 acres.

5.2.2 Project Plus Sewer Alternative 2

If Sewer Alternative 2 is selected, the cumulative oak tree impacts for the Project plus the sewer alternative would be one individual oak tree (35.0 DBH inches) and nine Heritage oak trees (418.7 DBH inches). The ORMP requires mitigation of individual oak trees at a 1:1 ratio, and mitigation of Heritage oak trees at a 3:1 ratio. Based on these ratios, the Project plus the Sewer Alternative 2 would require 1,291.1 DBH inches of mitigation. If this is accomplished via in-lieu fee, then based on the current in-lieu fee of $153 per DBH inch, this would cost $197,538.30. If this were accomplished entirely via replacement planting, it would require planting 1,292 15-gallon trees on a property no smaller than 6.5 acres.

6.0 REFERENCES

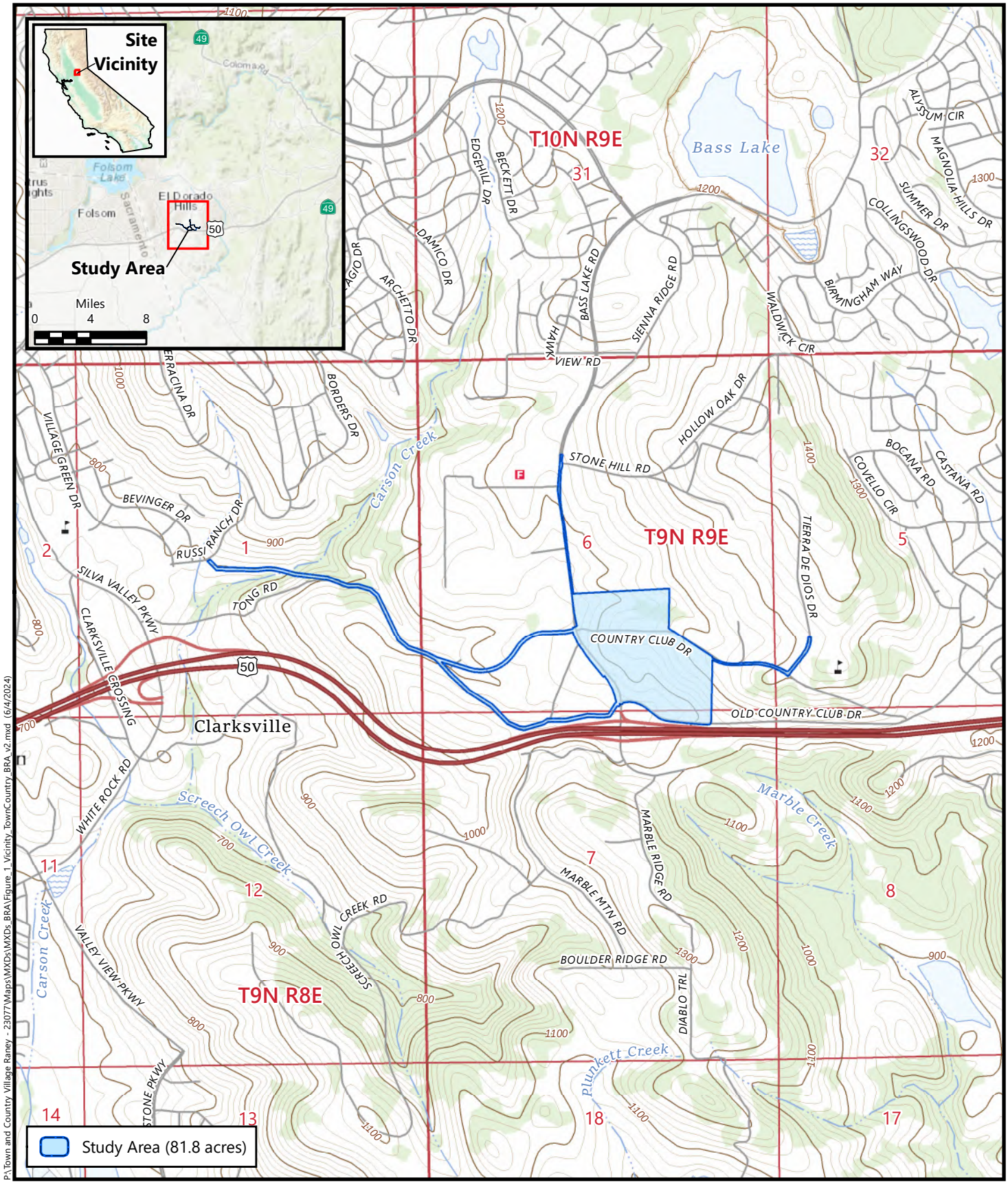
El Dorado County (EDC). 2017. *El Dorado County Oak Resources Management Plan*. Published by El Dorado County Community Development Agency, Long Range Planning Division. Dated September 2017.

U.S. Department of the Interior, Geological Survey (USGS). 2021. *Clarksville, California* 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

Figures

Figure 1. Site and Vicinity

Figure 2. Project Components



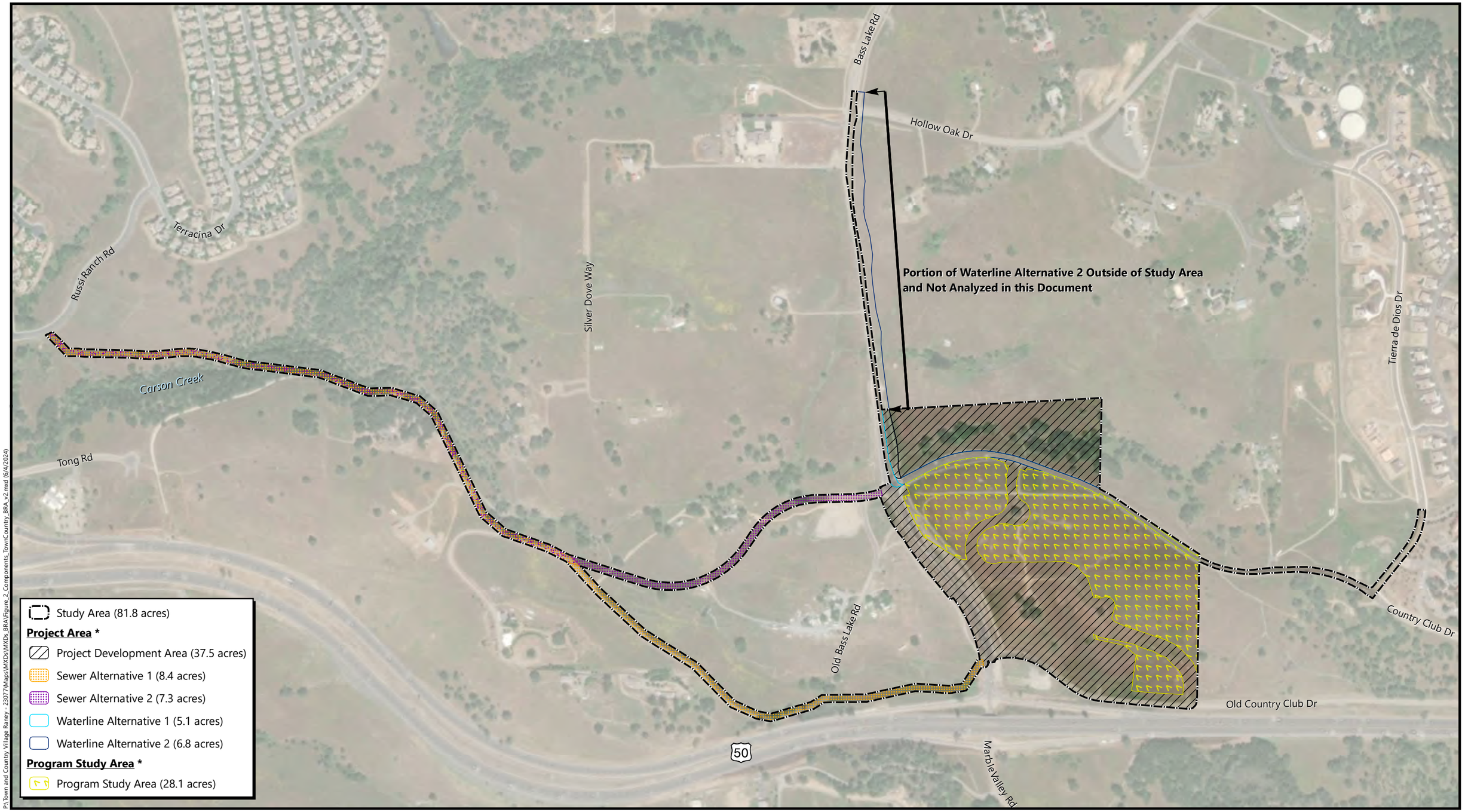
P:\Town and Country Village Raney - 23077\Maps\MXDs\MXDs_BRA\Figure_1_Vicinity_TownCountry_BRA_v2.mxd (6/4/2024)

Source: United States Geologic Survey, 2021
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 1, Township 9 North, Range 8 East, MDBM and
Sections 5-7, Township 9 North, Range 9 East, MDBM
Latitude (NAD83): 38.658668°, Longitude (NAD83): -121.029902°

Figure 1
Site and Vicinity

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



** Component acreages do not sum to the Study Area acreage due to overlapping alternatives*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022

Figure 2
Project Components

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Site Plan

Attachment B. Tree Inventory Data

Attachment C. Map of Impacts to Oak Resources

Attachment D. Summary Data Sheet of Oak Resources Impacts for the Project Plus Sewer Alternative 1

Attachment E. Summary Data Sheet of Oak Resources Impacts for the Project Plus Sewer Alternative 2

Attachment F. Avoidance and Minimization Measures

Attachment G. Oak Resources Technical Report Checklist

Attachment A

Site Plan

TOWN & COUNTRY VILLAGE EL DORADO

OVERALL SITE PLAN

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=100' MARCH, 2024

APPLICANT

JOSH PANE
1123 J STREET, 3RD FLOOR
SACRAMENTO, CA 95814

OWNER

MOHAMMAD MOHANNA
CAP FUNDING
1025 9th STREET, SUITE 205
SACRAMENTO, CA 95814

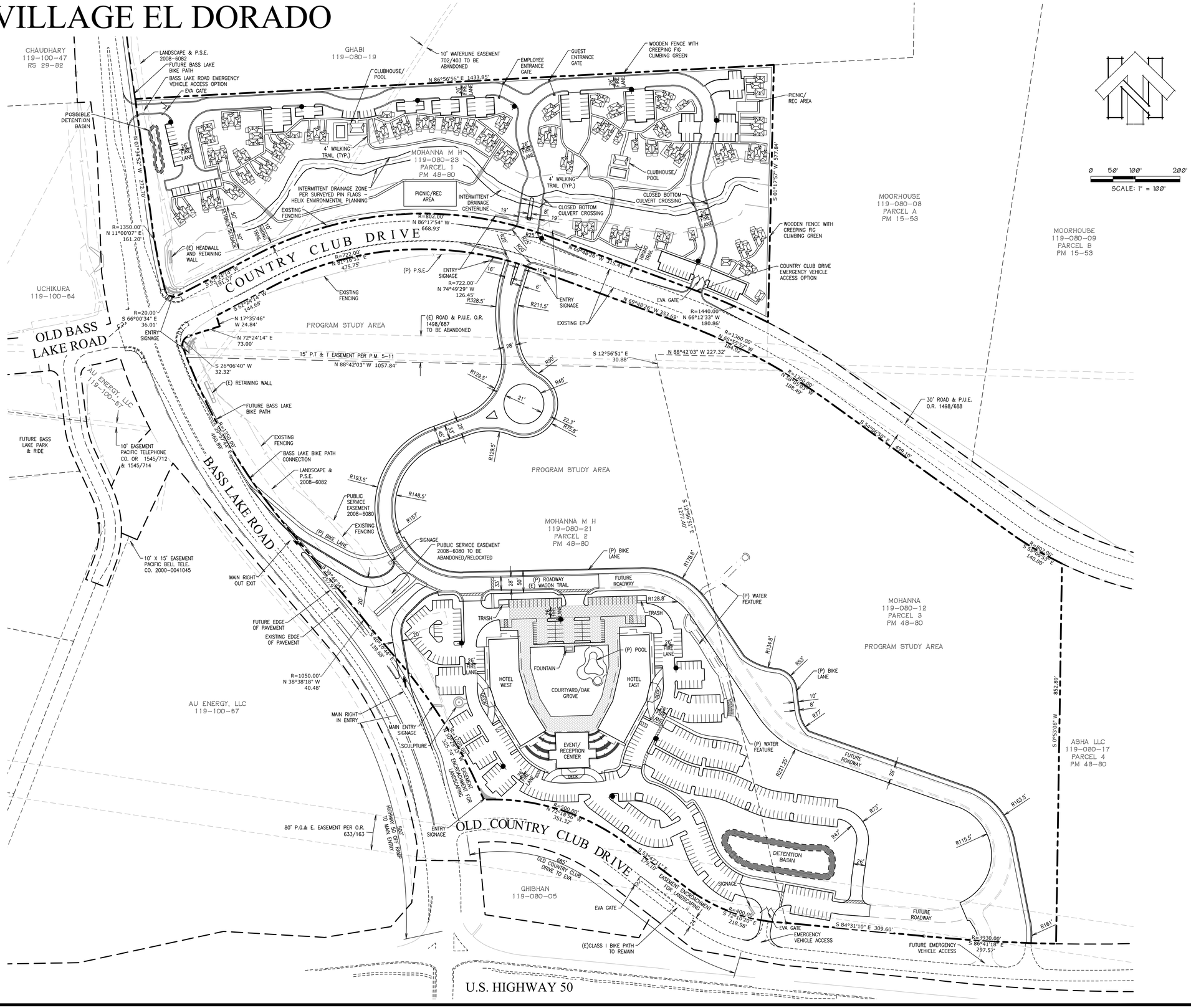
ENGINEER

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PROPOSED BUILDINGS	GROSS SQUARE FOOTAGE (FOOTPRINT)
HOTELS	16,000
EVENT CENTER	7,000
COTTAGES	280
CLUBHOUSES	600

LEGEND

- PROJECT BOUNDARY
- (E) LOT BOUNDARY
- (E) RIGHT OF WAY
- (E) EASEMENT
- (E) EDGE OF PAVEMENT
- (E) FENCE
- GRASS PAVERS
- LANDSCAPE PAVERS
- FIRE DEPARTMENT PATH OF TRAVEL TURNING RADII INSIDE RADIUS=35' OUTSIDE RADIUS=55'
- FIRE HYDRANT



Attachment B

Tree Inventory Data

Oak Tree Inventory for Town and Country Village

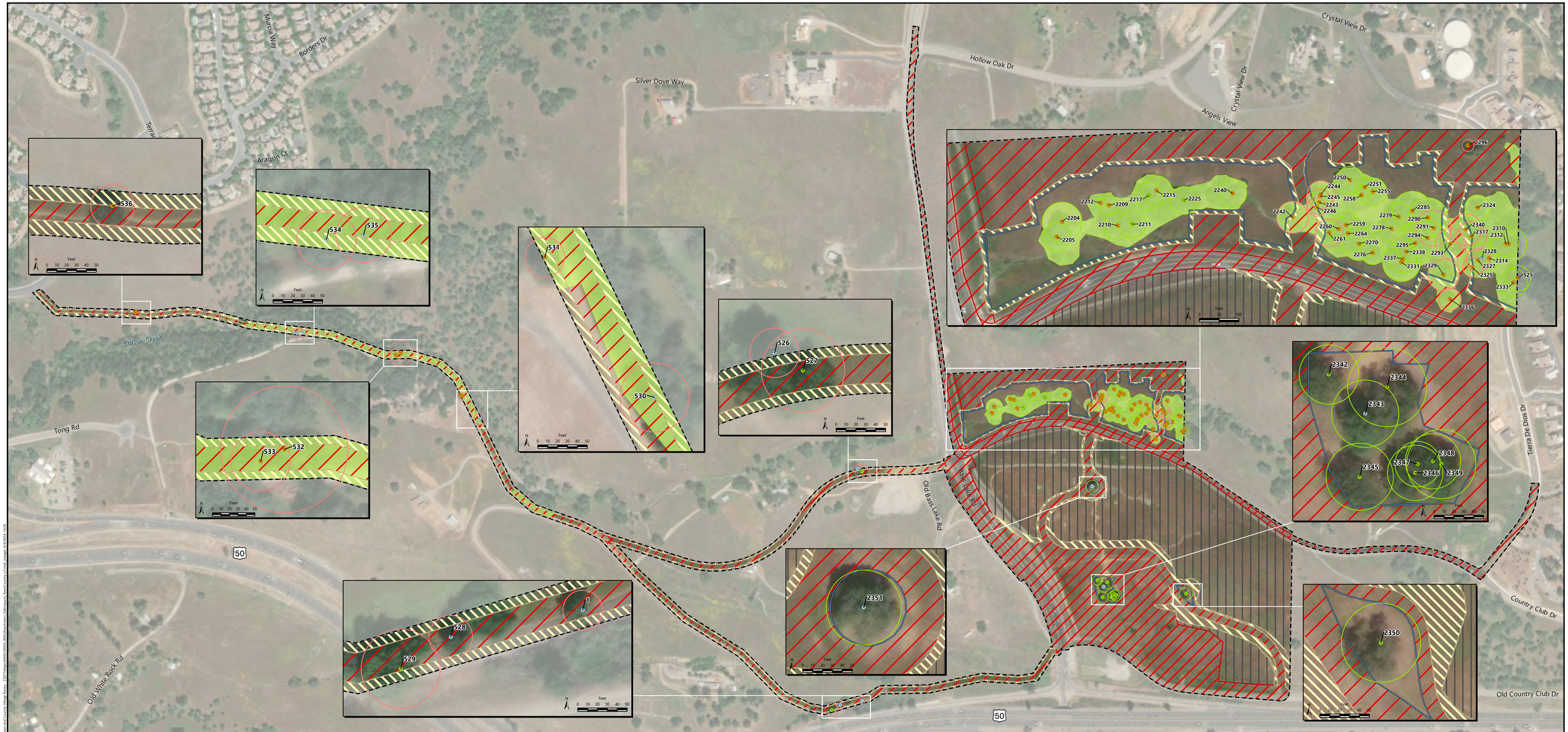
Tree #	Common Name	Scientific Name	DBH (in)	Dripline Radius (ft)	Condition	MultiStem DBH	Notes	Woodland Classification
1	Blue Oak	*Quercus douglasii*	24.0	20	Fair to Good	12, 12	Health and structure fair. No tag and DBH estimated due to poison oak. Evidence of past mistletoe infestation, but currently minimal. Included bark at 2 main trunk unions	Not Oak Woodland
525	Interior Live Oak	*Quercus wislizenii*	25.5	32	Fair to Good		Health and Structure Fair	Oak Woodland
526	Blue Oak	*Quercus douglasii*	38.5	25	Fair to Good		Health and Structure Good	Not Oak Woodland
527	Valley Oak	*Quercus lobata*	35.0	42	Fair to Good		Health and Structure Excellent	Not Oak Woodland
528	Blue Oak	*Quercus douglasii*	17.0	22	Fair to Good		Health fair, structure good	Not Oak Woodland
529	Valley Oak	*Quercus lobata*	43.1	40	Fair to Good		Health and Structure Excellent	Not Oak Woodland
530	Blue Oak	*Quercus douglasii*	31.4	35	Fair to Good		Health good, structure fair. Large cavity at base that appears to be healing, no evidence of decay	Oak Woodland
531	Interior Live Oak	*Quercus wislizenii*	58.2	20	Fair to Good	13.7, 21.9, 6.1, 16.5	Health and Structure Good	Oak Woodland
532	Interior Live Oak	*Quercus wislizenii*	57.7	75	Fair to Good	12.8, 13.7, 19.6, 11.6	Health fair, Structure fair to poor. Tree has a very substantial uphill lean. Would not be acceptable in an urban setting, but does not indicate increased potential for the trees premature mortality.	Oak Woodland
533	Interior Live Oak	*Quercus wislizenii*	26.5	35	Fair to Good		Health and Structure Fair	Oak Woodland
534	Blue Oak	*Quercus douglasii*	24.5	30	Fair to Good		Health and Structure Good	Oak Woodland
535	Blue Oak	*Quercus douglasii*	28.9	28	Fair to Good		Health fair, structure good	Oak Woodland
536	Interior Live Oak	*Quercus wislizenii*	26.6	22	Poor		Health and structure poor. Fair amount of branch die off, mistletoe growing out of trunk, cavity under the trunk	Not Oak Woodland
2204	Interior Live Oak	*Quercus wislizenii*	43.7	50	Fair to Good		Health and Structure Fair. DBH measured at 3 ft due to branching.	Oak Woodland
2205	Interior Live Oak	*Quercus wislizenii*	48.0	35	Fair to Good	22.0, 26.0	Health and Structure Fair. Numerous branches have fallen off recently, so few that are dead remain.	Oak Woodland
2209	Interior Live Oak	*Quercus wislizenii*	25.4	25	Poor		Health poor, structure fair	Oak Woodland
2210	Interior Live Oak	*Quercus wislizenii*	37.8	35	Fair to Good		Health and Structure Fair	Oak Woodland
2211	Valley Oak	*Quercus lobata*	40.3	35	Fair to Good		Health fair, structure good	Oak Woodland
2212	Interior Live Oak	*Quercus wislizenii*	31.7	12.5	Fair to Good	18.5, 13.2	Health and Structure Fair	Oak Woodland
2215	Interior Live Oak	*Quercus wislizenii*	29.0	38	Poor	14.9, 14.1	Health fair, structure poor. Cavities below trunk	Oak Woodland
2217	Valley Oak	*Quercus lobata*	38.0	35	Fair to Good		Health and structure good. DBH estimated due to poison oak	Oak Woodland
2225	Valley Oak	*Quercus lobata*	24.8	35	Fair to Good		Health and Structure Good	Oak Woodland
2240	Interior Live Oak	*Quercus wislizenii*	43.3	35	Poor	26.2, 17.1	Health and structure poor. One of main trunks has been girdled - no bark all the way around.	Oak Woodland
2242	Interior Live Oak	*Quercus wislizenii*	57.1	40	Fair to Good	16.6, 11.0, 29.5	Health good, structure fair. Several cavities and one main branch rests on ground. DBH of biggest trunk measured at 2 ft due to branching.	Oak Woodland
2243	Interior Live Oak	*Quercus wislizenii*	26.1	32	Poor		Health and structure poor. Extensive branch tip die back. Polypore mushrooms growing out of cavity in trunk.	Oak Woodland
2244	Interior Live Oak	*Quercus wislizenii*	38.4	35	Poor	15.9, 22.5	Health fair, structure poor. Numerous cavities with active decay	Oak Woodland
2245	Interior Live Oak	*Quercus wislizenii*	24.0	20	Fair to Good	16.0, 8.0	Health and Structure Fair	Oak Woodland
2246	Interior Live Oak	*Quercus wislizenii*	28.9	24	Poor	9.5, 11.0, 8.4	Health and structure poor. Numerous extensive cavities with decay	Oak Woodland
2250	Interior Live Oak	*Quercus wislizenii*	36.7	35	Fair to Good		Health good, structure fair. One good sized cavity with decay, remainder of tree looks good.	Oak Woodland
2251	Interior Live Oak	*Quercus wislizenii*	46.2	25	Fair to Good	4.8, 8.2, 17.2, 16.0	Health good, structure fair.	Oak Woodland
2255	Interior Live Oak	*Quercus wislizenii*	33.4	35	Fair to Good	18.7, 5.4, 9.3	Health good, structure fair to poor. 1 branch with numerous cavities, some small healing cavities in main trunk	Oak Woodland
2258	Interior Live Oak	*Quercus wislizenii*	30.5	22	Poor	11.4, 10.5, 8.6	Health and structure poor. 2 of 3 branches are dead and the third appears to be dying.	Oak Woodland
2259	Interior Live Oak	*Quercus wislizenii*	39.6	35	Fair to Good	15.4, 13.2, 11.0	Health good, structure fair. DBH estimated due to poison oak	Oak Woodland
2260	Interior Live Oak	*Quercus wislizenii*	29.1	28	Fair to Good	25.0, 4.1	Health good, structure fair.	Oak Woodland
2261	Interior Live Oak	*Quercus wislizenii*	46.4	35	Fair to Good	22.1, 7.8, 16.5	Health and structure fair. DBH estimated due to poison oak.	Oak Woodland
2264	Interior Live Oak	*Quercus wislizenii*	36.2	45	Fair to Good	15.6, 20.6	Health good, structure fair.	Oak Woodland
2270	Interior Live Oak	*Quercus wislizenii*	41.1	42	Fair to Good	20.2, 20.9	Health and Structure Good	Oak Woodland

Oak Tree Inventory for Town and Country Village

Tree #	Common Name	Scientific Name	DBH (in)	Dripline Radius (ft)	Condition	MultiStem DBH	Notes	Woodland Classification
2276	Interior Live Oak	*Quercus wislizenii*	64.9	30	Fair to Good	17.2, 23.8, 14.9, 9.0	Health good, structure fair.	Oak Woodland
2278	Interior Live Oak	*Quercus wislizenii*	26.6	32	Fair to Good		Health and structure fair. an additional stem 19.4 dbh is almost dead and not included in size Calc	Oak Woodland
2279	Interior Live Oak	*Quercus wislizenii*	54.8	35	Fair to Good	21.9, 21.4, 11.5	Health fair and Structure fair to poor. Several cavities.	Oak Woodland
2285	Interior Live Oak	*Quercus wislizenii*	29.9	50	Fair to Good		Health and Structure Fair	Oak Woodland
2290	Interior Live Oak	*Quercus wislizenii*	59.4	50	Fair to Good	14.4, 20.0, 25.0	Health good, structure fair	Oak Woodland
2291	Interior Live Oak	*Quercus wislizenii*	40.1	45	Fair to Good	29.8, 10.3	Health and Structure Fair	Oak Woodland
2293	Interior Live Oak	*Quercus wislizenii*	39.2	38	Fair to Good	30.5, 8.7	Health and Structure Fair	Oak Woodland
2294	Interior Live Oak	*Quercus wislizenii*	31.1	45	Fair to Good	11.2, 19.9	Health and Structure Fair	Oak Woodland
2295	Interior Live Oak	*Quercus wislizenii*	48.2	50	Fair to Good	11.8, 32.9, 3.5	Health good, structure fair	Oak Woodland
2296	Interior Live Oak	*Quercus wislizenii*	23.4	15	Poor	9.8, 4.7, 8.9	Health poor, structure fair	Not Oak Woodland
2310	Interior Live Oak	*Quercus wislizenii*	44.9	45	Fair to Good	13.0, 10.7, 21.2	Health and Structure Fair	Oak Woodland
2312	Interior Live Oak	*Quercus wislizenii*	30.8	32	Poor	17.0, 13.8	Health fair, structure poor. Very large basal cavity.	Oak Woodland
2314	Interior Live Oak	*Quercus wislizenii*	27.0	25	Fair to Good	9.5, 17.5	Health and Structure Fair	Oak Woodland
2317	Interior Live Oak	*Quercus wislizenii*	25.2	38	Fair to Good	17.0, 8.2	Health and Structure Fair	Oak Woodland
2324	Interior Live Oak	*Quercus wislizenii*	49.2	32	Fair to Good	15.3, 11.7, 13.5, 8.7	Health and Structure Fair	Oak Woodland
2325	Interior Live Oak	*Quercus wislizenii*	34.0	25	Fair to Good	21.8, 12.2	Health and Structure Fair	Oak Woodland
2327	Interior Live Oak	*Quercus wislizenii*	33.8	30	Fair to Good	9.5, 9.4, 14.9	Health and Structure Fair	Oak Woodland
2328	Blue Oak	*Quercus douglasii*	29.8	40	Fair to Good		Health and Structure Good	Oak Woodland
2329	Interior Live Oak	*Quercus wislizenii*	37.3	40	Fair to Good		Health and structure good. DBH measured at 18" due to branching	Oak Woodland
2331	Interior Live Oak	*Quercus wislizenii*	71.1	48	Fair to Good	16.0, 16.7, 38.4	Health and Structure Good	Oak Woodland
2333	Interior Live Oak	*Quercus wislizenii*	46.9	35	Fair to Good	14.2, 15.0, 17.7	Health and Structure Fair	Oak Woodland
2336	Interior Live Oak	*Quercus wislizenii*	31.5	28	Fair to Good		Health good, structure fair	Oak Woodland
2337	Interior Live Oak	*Quercus wislizenii*	29.4	35	Fair to Good	17.9, 7.6, 3.9	Health and Structure Fair	Oak Woodland
2338	Interior Live Oak	*Quercus wislizenii*	29.4	24	Fair to Good	11.8, 17.6	Health and Structure Fair	Oak Woodland
2340	Interior Live Oak	*Quercus wislizenii*	44.2	40	Fair to Good	11.5, 13.1, 19.6	Health and Structure Fair	Oak Woodland
2342	Valley Oak	*Quercus lobata*	30.0	30	Fair to Good		Health and Structure Good	Not Oak Woodland
2343	Blue Oak	*Quercus douglasii*	30.0	34	Fair to Good		Health and Structure Good	Not Oak Woodland
2344	Valley Oak	*Quercus lobata*	33.3	40	Fair to Good		Health and Structure Fair	Not Oak Woodland
2345	Valley Oak	*Quercus lobata*	37.1	34	Poor		Health good, structure poor. Large cavity under uphill side of tree. Some major roots gone, and root flare is getting undermined. With almost all foliage on downhill side of tree, this tree could fail during strong easterly	Not Oak Woodland
2346	Valley Oak	*Quercus lobata*	25.2	28	Fair to Good		Health and Structure Good	Not Oak Woodland
2347	Valley Oak	*Quercus lobata*	15.7	23	Poor		Health fair, structure poor. Large cavity in the base of the trunk; unhealed, extensive decay	Not Oak Woodland
2348	Valley Oak	*Quercus lobata*	16.3	28	Fair to Good		Health and Structure Good	Not Oak Woodland
2349	Valley Oak	*Quercus lobata*	25.8	35	Fair to Good		Health and Structure Good	Not Oak Woodland
2350	Valley Oak	*Quercus lobata*	36.6	40	Fair to Good		Health good, structure fair to poor. Large unhealed cavity on uphill side of trunk and strange sinuous branch growth.	Not Oak Woodland
2351	Blue Oak	*Quercus douglasii*	45.3	38	Fair to Good		Health good, structure fair to poor	Not Oak Woodland

Attachment C

Map of Impacts to Oak Resources



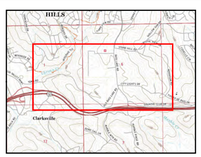
Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying

Biologist: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 4 June 2024
** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



Study Area (81.8 acres)

Project Impact and Avoidance Areas *
- Permanent Impact (37.8 acres)
- Temporary Impact (8.9 acres)
- Program Level (28.1 acres)
- Avoided (7.0 acres)

Oak Resources
- Blue Oak (9)
- Interior Live Oak (50)
- Valley Oak (13)
- Oak Woodland (6.2 acres)

Oak Dripline
- Avoided Tree (46)
- Permanently Impacted Tree (26)

Impacts to Oak Resources
Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

Attachment D

Summary Data Sheet of
Oak Resources Impacts for the
Project Plus Sewer Alternative 1

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT
2850 Fairlane Court, Placerville, CA 95667
Phone: (530) 621-5355 www.edcgov.us/Planning/

Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits

Description		Blue (*Quercus douglasii*)	California Black (*Quercus kelloggii*)	Canyon Live (*Quercus chrysolepis*)	Interior Live (*Quercus wislizeni*)	Oregon White (*Quercus garryana*)	Valley (*Quercus loabata*)	Oracle (hybrid) (*Quercus x morehus*)
Individual Native Oak Trees								
Quantity (number of trees) of individual native oak trees to be removed, by species (6-23.9")		1	0	0	0	0	0	0
Quantity (number of trees) of individual native oak trees to be removed, greater than 24 inches and less than 36 inches (dbh), by species (outside of oak woodland)		1	0	0	0	0	0	0
Total trunk diameter inches (dbh) to be removed*	41.0							
Heritage Trees								
Quantity (number of trees) of Heritage Trees to be removed, by species		0	0	0	8	0	1	0
Total trunk diameter inches (dbh) to be removed*	423.3							
Oak Woodlands								
Total Acreage of existing oak woodlands**	6.2							
Acreage of existing oak woodlands to be removed	2.7							
Percentage of existing oak woodlands to be removed*	44%							

**** Information used for purposes of calculating in-lieu mitigation fee payment.***
***** If Heritage Trees occur within oak woodlands, the area of impacted Heritage Tree(s) should be included in oak woodland acreage calculations.***

Revised 11/22/2017

Attachment E

Summary Data Sheet of
Oak Resources Impacts for the
Project Plus Sewer Alternative 2

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT
2850 Fairlane Court, Placerville, CA 95667
Phone: (530) 621-5355 www.edcgov.us/Planning/

Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits

Description		Blue (*Quercus douglasii*)	California Black (*Quercus kelloggii*)	Canyon Live (*Quercus chrysolepis*)	Interior Live (*Quercus wislizeni*)	Oregon White (*Quercus garryana*)	Valley (*Quercus loabata*)	Oracle (hybrid) (*Quercus x morehus*)
Individual Native Oak Trees								
Quantity (number of trees) of individual native oak trees to be removed, by species (6-23.9")		0	0	0	0	0	0	0
Quantity (number of trees) of individual native oak trees to be removed, greater than 24 inches and less than 36 inches (dbh), by species (outside of oak woodland)		0	0	0	0	0	1	0
Total trunk diameter inches (dbh) to be removed*	35.0							
Heritage Trees								
Quantity (number of trees) of Heritage Trees to be removed, by species		1	0	0	8	0	0	0
Total trunk diameter inches (dbh) to be removed*	418.7							
Oak Woodlands								
Total Acreage of existing oak woodlands**	6.2							
Acreage of existing oak woodlands to be removed	2.7							
Percentage of existing oak woodlands to be removed*	44%							

**** Information used for purposes of calculating in-lieu mitigation fee payment.***
***** If Heritage Trees occur within oak woodlands, the area of impacted Heritage Tree(s) should be included in oak woodland acreage calculations.***

Revised 11/22/2017

Attachment F

Avoidance and Minimization Measures

Measures to Avoid and Minimize Impacts to Retained Oak Resources

Pre-construction

- The limits of project disturbance within 50 feet of all oak trees shall be clearly defined with bright colored flagging or orange construction fencing prior to construction. Flagging and/or the fence shall remain in place until construction is complete. No construction activities shall occur outside the construction limits. Flagging or fencing shall be removed and cleared from the Project area upon completion of the project to prevent wildlife entrapment in refuse left onsite.
- There shall be no driving, parking, or storage of supplies or equipment outside the flagged/fenced project limits.
- Limb pruning of any retained trees should be conducted by an arborist or tree worker that is ISA certified and licensed by the State of California for tree service. Pruning shall be conducted in accordance with American National Standard Institute (ANSI) A300 Pruning Standard and adhere to the most recent edition of ANSI Z133.1.
- Canopy thinning or additional pruning shall not occur outside the flagged/fenced project limits. It is more beneficial for a tree to have the most amount of foliage possible in order to promote new root growth.

During Vegetation Clearing

- Trees shall be felled inside the flagged/fenced project limits

Attachment G

Oak Resources

Technical Report Checklist

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT
2850 Fairlane Court, Placerville, CA 95667
Phone: (530) 621-5355 www.edcgov.us/Planning/

OAK RESOURCES TECHNICAL REPORT CHECKLIST

The following information is required for all Oak Resources Technical Reports consistent with Section 2.5 (Oak Resources Technical Reports) of the Oak Resources Management Plan (ORMP):

FORMS AND MAPS REQUIRED

Place a check (√) on the "Applicant" lines for those items completed. The planner receiving the application will check (√) the "County" line.

Check (√) Applicant	County		
[X]	[ ]	1)	Identify, locate, and quantify all oak resources on the property, as applicable:

Attachment C

a) Oak woodlands shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates;

Attachment B

b) Data collected for individual native oak trees and Heritage Trees shall include: location, species, trunk diameter (dbh), height, canopy radius, and general health and structural condition.

[X]	[ ]	2)	Identify and quantify project-related impacts to oak resources Section 4.0
[X]	[ ]	3)	Measures identifying how specific trees and woodlands (or retained portions thereof) shall be protected during development and related work

Attachment F

Revised 11/22/2017

Check (√) Applicant	Check (√) County		
[X]	[ ]	4)	Proposed actions to mitigate impacts to oak resources, consistent with the requirements included in the ORMP: Section 5.0
			a) For replacement planting, the report shall provide detail regarding the quantity, location, planting density, replacement tree size(s), and acorn/seedling source consistent with the definition of Replacement Planting included in the ORMP;
			b) For conservation easement placement/acquisition and/or land acquisition in fee title, the report shall provide documentation of easement placement on-site and/or documentation of easement or land acquisition off-site to the satisfaction of the County;
			c) For in-lieu fee payment, the report shall document the quantity of impacts (acreage of oak woodlands and/or total diameter inches of individual native oak trees/Heritage Trees) and the total in-lieu fee payment necessary (presented separately for oak woodlands, individual native oak trees, and Heritage Trees, where applicable).
[ ]	[ ]	5)	Identification of responsible parties N/A
[ ]	[ ]	6)	Identification of maintenance, monitoring, and reporting requirements N/A
[ ]	[ ]	7)	Analysis of non-PCA conservation easement areas, where applicable N/A
[X]	[ ]	8)	Site map(s) depicting:
			a) location of all oak woodlands, individual native oak trees, and Heritage Trees; Attachment C
			b) location of all proposed project-related improvements (including, but not limited to, the limits of grading, fuel modification/defensible space areas, and above- and below-ground infrastructure); Attachment A
			c) Site map(s) shall also clearly identify impacted oak resources. Attachment C
[X]	[ ]	9)	Planning and Building Department Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits. Attachments D and E

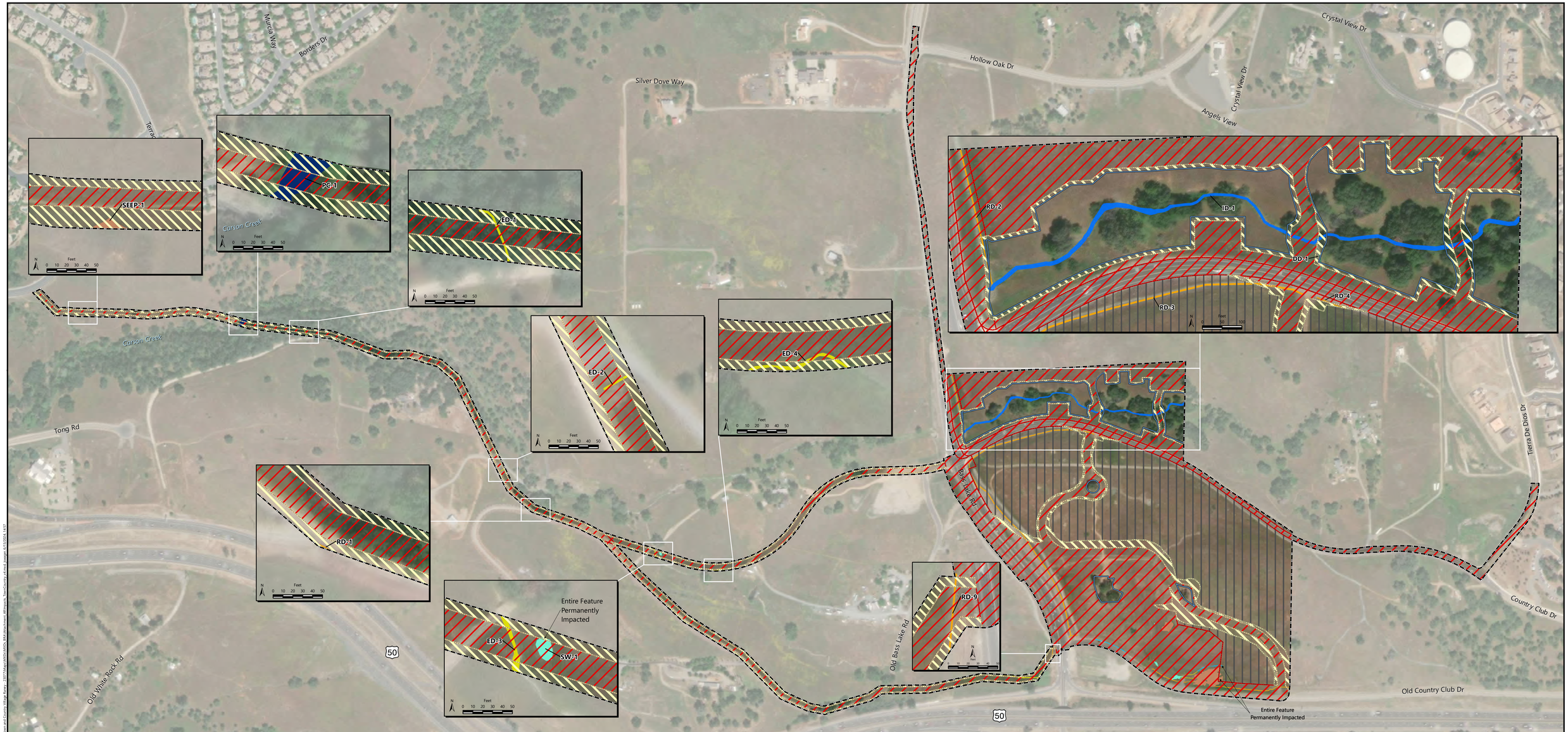
SUPPLEMENTAL DATA FOR INDIVIDUAL NATIVE OAK TREES WITHIN OAK WOODLANDS:

The ORMP and Oak Resources Conservation Ordinance (No. 5061) was adopted on October 24, 2017 and the Board of Supervisors will review implementation within 12 months after adoption. The Board requested the following supplemental information:

[X]	[ ]	10)	Provide an inventory (species and size) of impacted Individual Native Oak Trees greater than 24 inches and less than 36 inches (dbh) in oak woodlands. Attachment B

Attachment H

Impacts to Aquatic Resources



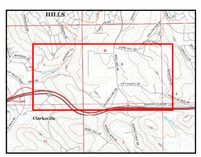
Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying

Biologist: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 13 June 2024
** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



Study Area (81.8 acres)

Project Impact and Avoidance Areas *
- Permanent Impact (37.8 acres)
- Temporary Impact (8.9 acres)
- Program Level (28.1 acres)
- Avoided (7.0 acres)

Aquatic Resources (1.059 acre) *

Wetlands (0.423 acre)
- Seasonal Wetland (0.031 acre)
- Seasonal Wetland Swale (0.017 acre)
- Seep (0.375 acre)

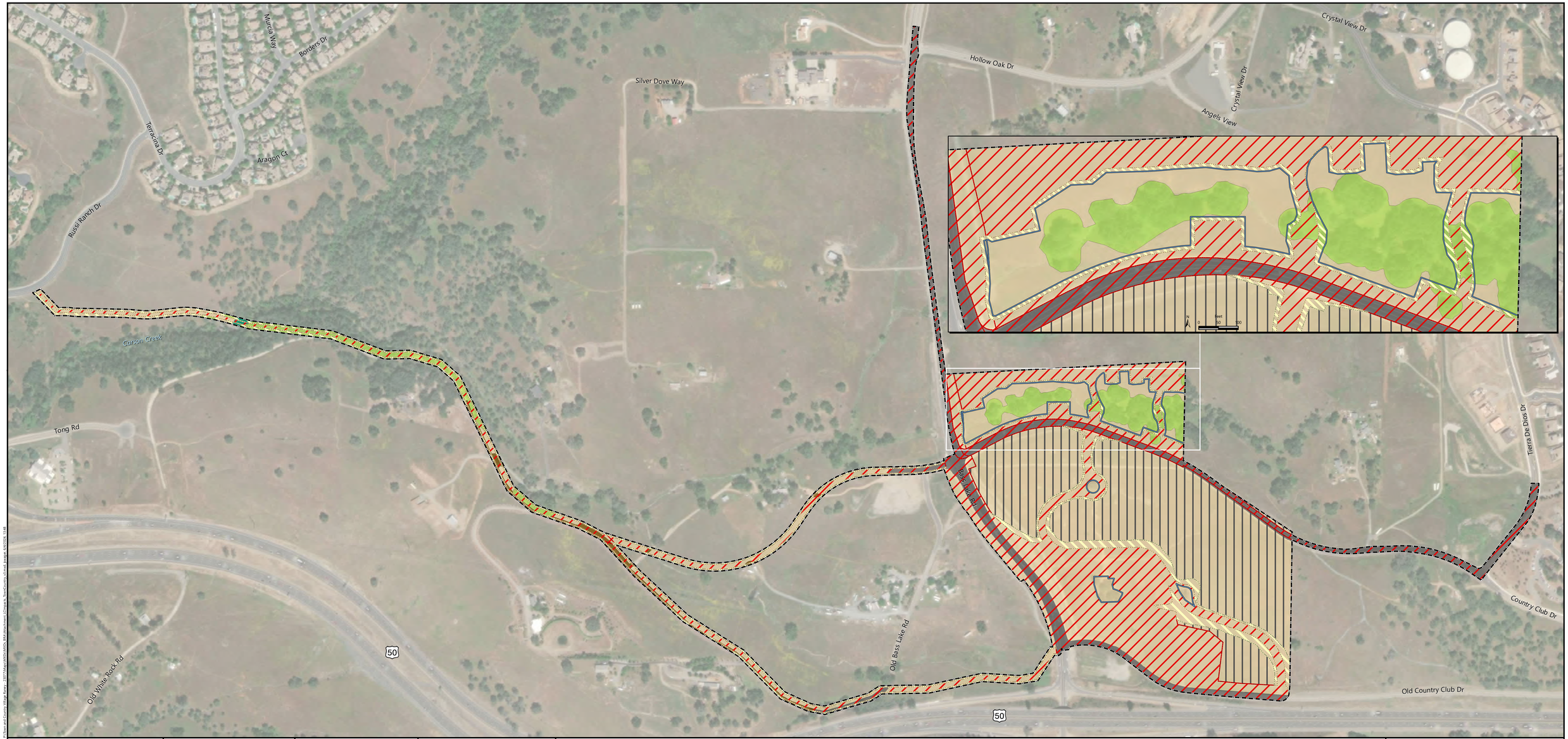
Other Waters (0.637 acre)
- Drainage Ditch (0.005 acre)
- Ephemeral Drainage (0.038 acre)
- Intermittent Drainage (0.311 acre)
- Perennial Creek (0.033 acre)
- Roadside Ditch (0.250 acre)

Impacts to Aquatic Resources
Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

Attachment I

Impacts to Vegetation Communities



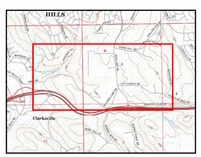
Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying

Biologist: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 4 June 2024
** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



Study Area (81.8 acres)

Project Impact and Avoidance Areas *
- Permanent Impact (37.8 acres)
- Temporary Impact (8.9 acres)
- Program Level (28.1 acres)
- Avoided (7.0 acres)

Terrestrial Vegetation Communities *
- Annual Brome Grassland (64.9 acres)
- Arroyo Willow Riparian (0.1 acres)
- Dirt Road (1.5 acres)
- Oak Woodland (6.2 acres)
- Paved Road (9.1 acres)

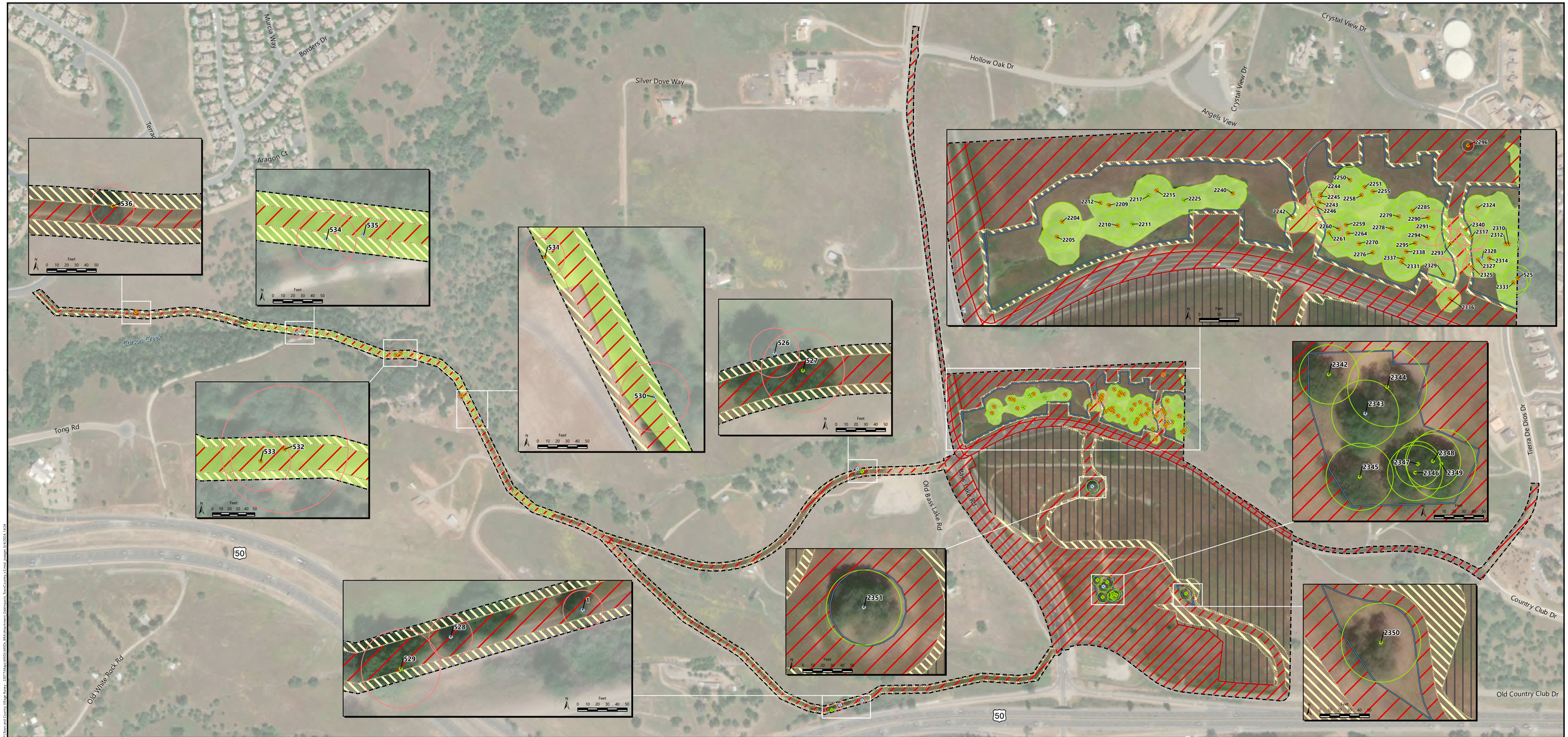
Impacts to Vegetation Communities
Town and Country Village El Dorado

El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneco.com

Attachment J

Impacts to Oak Resources



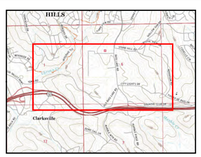
Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying

Biologist: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 4 June 2024
** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



Study Area (81.8 acres)

Project Impact and Avoidance Areas *
- Permanent Impact (37.8 acres)
- Temporary Impact (8.9 acres)
- Program Level (28.1 acres)
- Avoided (7.0 acres)

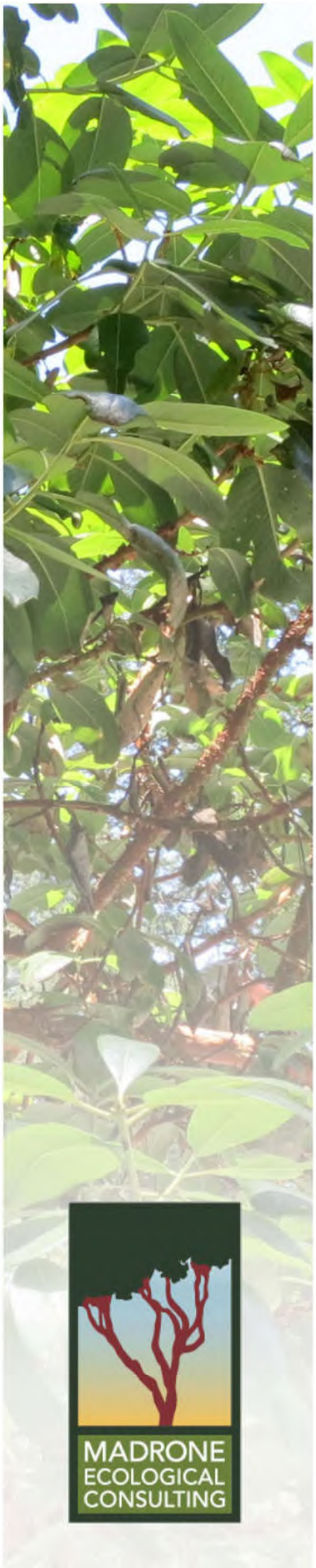
Oak Resources
- Blue Oak (9)
- Interior Live Oak (50)
- Valley Oak (13)
- Oak Woodland (6.2 acres)

Oak Dripline
- Avoided Tree (46)
- Permanently Impacted Tree (26)

Impacts to Oak Resources
Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

APPENDIX F



Oak Resources Technical Report

Town & Country Village
El Dorado

El Dorado County, California
June 2024

MADRONE ECOLOGICAL CONSULTING

Prepared for:

Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Recommended Citation:

Madrone Ecological Consulting, LLC (Madrone). 2024. *Oak Resources Technical Report for Town & Country Village El Dorado*. Prepared for Raney Planning & Management, Inc. Published on 17 June 2024.

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Town & Country Village El Dorado

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Attachment F. Avoidance and Minimization Measures
Attachment G. Oak Resources Technical Report Checklist

1.0 INTRODUCTION

This report summarizes the Oak Resources present within the Town & Country Village El Dorado Study Area (Study Area). This report has been prepared to comply with El Dorado County's *Oak Resources Management Plan* (ORMP) (EDC 2017) and the associated *Oak Resources Technical Report Checklist* (Checklist).

The Study Area is located north of Interstate Highway 50, largely south of Stone Hill Road, east of Silva Valley Parkway, and largely west of Morrison Road in western El Dorado County, California (**Figure 1**). The Development Area is located generally north of Country Club Drive and east of Bass Lake Road. The approximately 81.8-acre Study Area is located in portions of Section 1, Township 9 North, Range 8 East and Sections 5-7, Township 9 North, Range 9 East (MDBM) of the "Clarksville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) Certified Arborist Daria Snider (#WE 8666A) mapped the oak woodlands within the Project Area and conducted an inventory of the following native oak trees within the Study Area or with driplines overhanging the Study Area on 27 September and 6 October 2023:

- All native oak trees outside of mapped oak woodlands that have a single trunk 6" in Diameter at Breast Height (DBH) or greater or multiple trunks with an aggregate of 10" DBH or greater
- All native oak trees within mapped oak woodlands that were 24" DBH or greater

For each tree inventoried, Ms. Snider nailed aluminum tags with a unique identification number into the trunk (for those that did not already have a tag), recorded the tree identification number, tree species, DBH, approximate dripline radius, and general health and structure. Health and structure rating criteria are listed in **Table 1**, below. The location of each tree was recorded with a GPS unit capable of sub-meter accuracy (Arrow 100).

Table 1. Health and Structure Rating Criteria

Rating	Health Criteria	Structure Criteria
Excellent	Foliage is vigorous with virtually no dead branches	No cavities are present, major branch attachments have no included bark and have ideal attachment angles, and general structure is appropriate for the species.
Good	Foliage is vigorous with few dead branch tips	One or two small cavities may be present, or one or two major branch attachments may not be ideal, but none of these compromise the longevity of the tree. General structure is appropriate for the species.

Table 1. Health and Structure Rating Criteria

Rating	Health Criteria	Structure Criteria
Fair	Foliage is acceptable, but there may be a few dead branches, and some foliage may be discolored.	Several cavities may be present, several branch attachments may have included bark or attachment angles could make them prone to failure, and/or the tree may be inappropriately branched for the species. All of these issues could be rectified with treatment.
Poor	Tree is obviously in decline with extensive dead areas, some conks may be present, and foliage is extremely sparse.	Large, decaying cavities may be present within the main trunk of the tree, large portions of the tree may have fallen off, destabilizing the remainder of the tree, or other structural problem that cannot be treated.
Dead	No live foliage present when foliage is present on other trees.	

Note that the health and structure ratings recorded during the course of this survey may be used for general planning purposes but shall not be considered to be a hazard assessment for public safety purposes.

The Town & Country Village El Dorado Project (Project) includes work proposed onsite within the Project Development Area as well as off-site infrastructure, comprised of water and sewer lines (collectively, the Project Area). At the present time, two alternatives have been identified for both the off-site sewer line and the off-site water line; the impacts analysis presented in **Section 4.0** presents impact estimates for each scenario. The Site Plan is included as **Attachment A**, and a Project Components map that shows the different areas is included as **Figure 2**. Please note that no oak resources occur within the Program Study Area shown on **Figure 2**, and no impacts within that area are currently proposed, so this report only discusses oak resources and impacts within the Project Area, as defined above.

3.0 EXISTING CONDITIONS AND OAK RESOURCES

The Study Area is largely comprised of ungrazed Annual Brome Grasslands with widely scattered oak trees. Oak Woodlands occur in the vicinity of the intermittent drainage and perennial Carson Creek. The intermittent drainage is located in the northern portion of the Study Area, and Carson Creek is in the western portion. Carson Creek runs over bedrock, and the adjacent slopes are quite steep, restricting the extent of riparian vegetation, which consists of a narrow band of Arroyo Willow Riparian Scrub. The Oak Woodland south of the creek has a dense, closed canopy, as is typical for north-facing slopes in the region. Bass Lake Road cuts from north to south through the Study Area, and Country Club Drive runs from west to east. Portions of Old Bass Lake Road and Old Country Club Drive also occur within portions of the Study Area. Several seasonal wetlands and two seasonal wetland swales occur just north of Old Country Club Drive, and one seasonal wetland occurs near an ephemeral drainage in the western portion of the Study Area. A few seeps occur on slopes in the Annual Brome Grasslands. Roadside ditches run along the edges of a number of roadways within the Study Area, and three portions of ephemeral drainages occur within infrastructure-related portions of the Study Area. Inclusions of unvegetated areas are scattered throughout the Study

Area along farm roads. The terrain within the Study Area is gently rolling, and generally slopes from the east down towards the west. Elevations range from approximately 1,320 feet above mean sea level (MSL) at the eastern edge of the Study Area to approximately 800 feet at the western extent along Carson Creek and Russi Ranch Drive (**Figure 1**).

Surrounding properties are similar to those within the Study Area. They are largely comprised of ungrazed Annual Brome Grasslands, scattered Oak Woodlands, and rural residences. The western and eastern ends of the Study Area abut urban residential areas, and the Study Area is bordered by Interstate Highway 50 to the south.

3.1 Oak Resources

A total of 6.2 acres of Oak Woodland is present within the 81.8-acre Project Area. An additional 17 individual native oak trees greater than 6" DBH occur outside of the Oak Woodlands in the Study Area. 72 native oak trees were inventoried, including 17 individual native oaks outside of Oak Woodlands, 27 native oaks between 24" and 25" within Oak Woodlands, and 28 Heritage oaks (equal to or greater than 36" DBH) within Oak Woodlands (**Table 2**) (**Attachment B**).

Table 2. Oak Trees Inventoried within the Study Area

			Number of Trees (DBH)			
			Blue Oak	**Interior Live Oak**	**Valley Oak**	**Total**
Within Oak Woodlands	**Fair to Good**	24-35" DBH	4 (114.6)	16 (468.1)	1 (24.8)	21 (607.5)
		≥36" DBH	0	24 (1,148.9)	2 (78.3)	26 (1,227.2)
	Poor Condition	24-35" DBH	0	6 (170.7)	0	6 (170.7)
		≥36" DBH	0	2 (81.7)	0	2 (81.7)
Subtotal						55 (2,079.1)
Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	3 (71.0)	0	6 (165.6)	9 (236.6)
		≥36" DBH	2 (83.8)	0	2 (79.7)	4 (163.5)
	Poor Condition	6-35" DBH	0	2 (50.0)	1 (15.7)	3 (65.7)
		≥36" DBH	0	0	1 (37.1)	1 (37.1)
Subtotal						17 (502.9)
Total			9 (269.4)	50 (1,911.4)	13 (401.2)	72 (2,582.0)

4.0 IMPACTS TO OAK RESOURCES

In accordance with the El Dorado County Oak Resources Conservation Ordinance, impacts to oak resources are calculated differently for Oak Woodland areas and non-Oak Woodland areas. Within mapped Oak Woodlands, impacts are calculated based on impact to oak canopy, plus impacts to any individual native oak trees within the woodland that are 36" of greater DBH. Outside of mapped Oak Woodlands, impacts are calculated based on impacts to each native oak tree that is 6" or greater DBH. Mitigation is only required

for trees that are in Fair or better condition[1], and as a result, impacts have been broken out below based on condition. Note that trees were considered permanently impacted if the trunk fell within either the permanent or temporary impact boundary, or if greater than approximately 30% of the tree's dripline area would be permanently impacted. Impacted and avoided Oak Woodlands and oak trees are shown on **Attachment C**.

4.1 Project Development Area Impacts

A total of 0.3 acres of Oak Woodland will be permanently impacted within the Project Development Area, and 0.2 acre of Oak Woodland will be temporarily impacted within the Project Development Area. Within this area, a total of seven native oak trees with a DBH of 36" or greater will be impacted (six of which are in fair to good condition) (**Table 3**).

In addition, one individual native oak tree with a DBH of 6" or greater outside of Oak Woodlands will be permanently impacted within the Project Development Area, but this tree is in poor condition (**Table 3**).

In summary, a total of 0.5 acres of Oak Woodland and six individual trees in fair to good condition (with a cumulative DBH of 264.3 inches) would be subject to mitigation as a result of impacts within the Project Development Area (**Table 3**).

Table 3. Oak Tree Impacts within the Project Development Area

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair or Better**		0	6 (264.3)	0	6 (264.3)
	Poor Condition		0	1 (38.4)	0	1 (38.4)
Subtotal						7 (302.7)
Trees Outside of Oak Woodlands	**Fair or Better**	6-35" DBH	0	0	0	0
		≥36" DBH	0	0	0	0
	Poor Condition	6-35" DBH	0	1 (23.4)	0	1 (23.4)
		≥36" DBH	0	0	0	0
Subtotal						1 (23.4)
Total Trees in Fair to Good Condition			0	6 (264.3)	0	6 (264.3)
TOTAL			0	8 (326.1)	0	8 (326.1)

[1] Dead, dying and diseased trees are exempted from mitigation requirements in Section 2.1.9 of the ORMP.

4.2 Sewer Alternative Impacts

4.2.1 Sewer Alternative 1

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 1, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 1. Within this area, two native oak trees with a DBH of 36" of greater will be impacted (both of which are in fair to good condition) (**Table 4**).

In addition, a total of four individual native oak trees with a DBH of 6" of greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 1 (three of which are in fair to good condition) (**Table 4**). Of those three trees in fair to good condition that may be impacted, one has a DBH of 36" of greater. In summary, a total of 2.2 acres of Oak Woodland and five individual trees in fair to good condition (with a cumulative DBH of 200 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 1 (**Table 4**).

Table 4. Oak Tree Impacts within Sewer Alternative 1

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	2 (41.0)	0	0	2 (41.0)
		≥36" DBH	0	0	1 (43.1)	1 (43.1)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						4 (110.7)
Total Trees in Fair to Good Condition			2 (41.0)	2 (115.9)	1 (43.1)	5 (200.0)
TOTAL			2 (41.0)	3 (142.5)	1 (43.1)	6 (226.6)

4.2.2 Sewer Alternative 2

A total of 1.2 acres of Oak Woodland would be permanently impacted by Sewer Alternative 2, and 1.0 acre of Oak Woodland would be temporarily impacted by Sewer Alternative 2. Within this area, two native oak trees with a DBH of 36" of greater will be impacted (both of which are in fair to good condition) (**Table 5**). In addition, a total of three individual native oak trees with a DBH of 6" of greater outside of Oak Woodlands would be permanently impacted by Sewer Alternative 2 (two of which are in fair to good condition) (**Table 5**). Of those two trees in fair to good condition that may be impacted, one has a DBH of 36" of greater. In summary, a total of 2.2 acres of Oak Woodland and four individual trees in fair to good condition (with a cumulative DBH of 189.4 inches) would be subject to mitigation as a result of impacts within Sewer Alternative 2 (**Table 5**).

Table 5. Oak Tree Impacts within Sewer Alternative 2

			Number of Impacted Trees (DBH)			
			Blue Oak	Interior Live Oak	Valley Oak	Total
Trees ≥36" DBH Within Oak Woodlands	**Fair to Good**		0	2 (115.9)	0	2 (115.9)
	Poor Condition		0	0	0	0
Subtotal						2 (115.9)
Trees Outside of Oak Woodlands	**Fair to Good**	6-35" DBH	0	0	1 (35.0)	1 (35.0)
		≥36" DBH	1 (38.5)	0	0	1 (38.5)
	Poor Condition	6-35" DBH	0	1 (26.6)	0	1 (26.6)
		≥36" DBH	0	0	0	0
Subtotal						3 (100.1)
Total Trees in Fair to Good Condition			1 (38.5)	2 (115.9)	1 (35.0)	4 (189.4)
TOTAL			1 (38.5)	3 (142.5)	1 (35.0)	5 (216.0)

4.3 Overall Project Impacts

The Project combined with the sewer line would permanently impact 1.5 acres of Oak Woodland, and temporarily impact 1.2 acres of Oak Woodland. Within the Oak Woodlands, the Project combined with the sewer line would impact nine native oak trees with a DBH of 36" or greater (eight of which are in fair to good condition).

In addition, a total of 3 - 4 individual native oak trees with a DBH of 6" or greater outside of Oak Woodlands would be permanently impacted by the Project combined with the sewer line (2 - 3 of which are in fair to good condition). Of the 2 - 3 trees in fair to good condition that may be impacted, 2 have a DBH of 36" or greater (one along each sewer alternative).

Of these impacts, a cumulative total of 2.7 acres of Oak Woodland and 11-12 individual trees in fair to good condition (with a cumulative DBH of 453.7 - 464.3) would be subject to mitigation. The ranges above represent the full range of cumulative impacts, with the lower end assuming the least impactful sewer alternative, and the upper end assuming the most impactful sewer alternative. Where impacts are the same for both sewer alternative, no range is presented. A summary data sheet of oak resources impacts for the Project plus Sewer Alternative 1 is included as **Attachment D**, and a summary data sheet of oak resources impacts for the Project plus Sewer Alternative 2 is included as **Attachment E**.

The Project will avoid indirect impacts to Oak Resources outside of the impact area by implementing the tree avoidance and minimization measures outlined in **Attachment F**.

5.0 MITIGATION

The total cost to mitigate impacts to oak resources associated with the Project if accomplished via in-lieu fee ranges from $552,102.75 to $555,132.15, depending on which Sewer Alternative is implemented. Mitigation calculations are detailed below. We have attached the completed Checklist in **Attachment G**. As noted above, separate *Planning and Building Department Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits* have completed for the Project including Sewer Alternative 1 and the Project including Sewer Alternative 2. These are included as **Attachments D and E**, respectively.

5.1 Oak Woodland

The Project intends to mitigate for impacts to oak woodlands through payment of in-lieu fees to the County's Oak Woodland Conservation Fund. The Project as proposed would impact 0.5 acres of the 4.0 acres of Oak Woodland mapped within the Project Development Area. Implementation of either sewer alternative would result in impacts to 2.2 acres of Oak Woodland. This is a cumulative total of 2.7 acres (44%) of impact of the total 6.2 acres of Oak Woodland mapped within the Project Area[2]. In accordance with the ORMP, the Project proponent would be required to mitigate at a ratio of 1:1 for impacts to 0-50% of the Oak Woodland within the Project Area. Based on this ratio, the Project would require 2.7 acres of Oak Woodland mitigation. Based on the current fee of $8,285, payment of the in-lieu fee for this impact would cost a total of $22,369.50.

5.2 Individual and Heritage Oak Trees

Mitigation estimates are broken down by sewer alternative below. Per the ORMP, the mitigation may be accomplished via replacement planting on or off-site, via payment of an in-lieu fee, or via a combination of the two. Replacement planting on or off-site would require that the planting area be placed under a conservation easement; tree replacement sizes and inch for inch equivalency are provided in **Table 6**, below. If replacement planting is selected, a replacement planting plan must be prepared as detailed in the ORMP, and the planting density may be no greater than 200 trees per acre. The current in-lieu fee is $153 per DBH inch.

Table 6. Oak Tree Replacement Equivalencies

Replacement Tree Size	Number of Replacement Trees Required per DBH Inch of Mitigation
Acorn	3
1-gallon/TreePot 4	2
5-gallon	1.5
15-gallon	1

[2] The 2.2 acres of oak woodland that will be impacted by the sewer alternatives is a tiny portion of the oak woodland in that area; however, as the Project Proponent does not control that area, they cannot place a conservation easement over it. Therefore, impacts must be analyzed for the Project Area in isolation.

5.2.1 Project Plus Sewer Alternative 1

If Sewer Alternative 1 is selected, the cumulative oak tree impacts for the Project plus the sewer alternative would be two individual oak trees (41.0 DBH inches) and nine Heritage oak trees (423.3 DBH inches). The ORMP requires mitigation of individual oak trees at a 1:1 ratio, and mitigation of Heritage oak trees at a 3:1 ratio. Based on these ratios, the Project plus the Sewer Alternative 1 would require 1,310.9 DBH inches of mitigation. If this is accomplished via in-lieu fee, then based on the current in-lieu fee of $153 per DBH inch, this would cost $200,567.70. If this were accomplished entirely via replacement planting, it would require planting 1,311 15-gallon trees on a property no smaller than 6.6 acres.

5.2.2 Project Plus Sewer Alternative 2

If Sewer Alternative 2 is selected, the cumulative oak tree impacts for the Project plus the sewer alternative would be one individual oak tree (35.0 DBH inches) and nine Heritage oak trees (418.7 DBH inches). The ORMP requires mitigation of individual oak trees at a 1:1 ratio, and mitigation of Heritage oak trees at a 3:1 ratio. Based on these ratios, the Project plus the Sewer Alternative 2 would require 1,291.1 DBH inches of mitigation. If this is accomplished via in-lieu fee, then based on the current in-lieu fee of $153 per DBH inch, this would cost $197,538.30. If this were accomplished entirely via replacement planting, it would require planting 1,292 15-gallon trees on a property no smaller than 6.5 acres.

6.0 REFERENCES

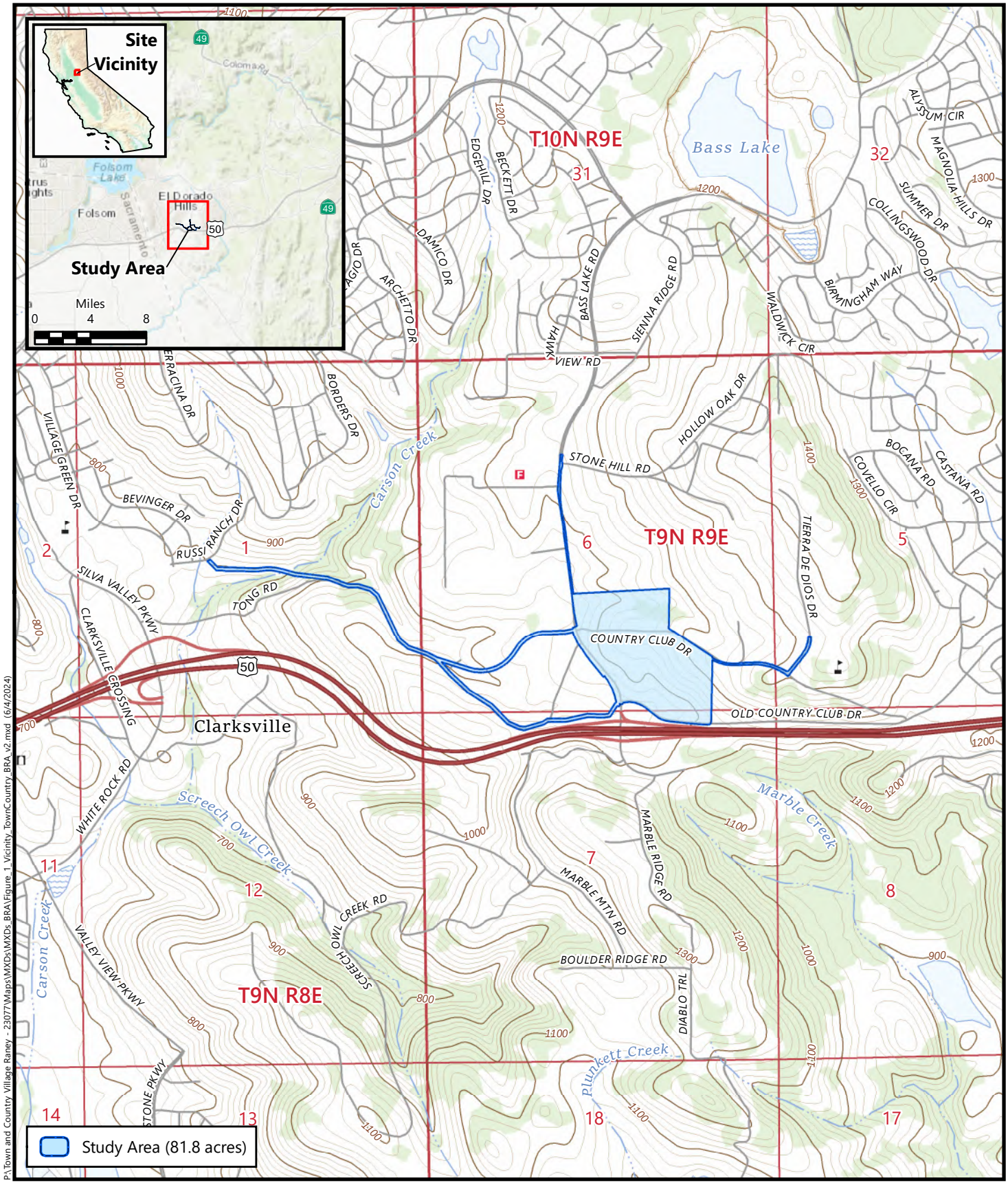
El Dorado County (EDC). 2017. *El Dorado County Oak Resources Management Plan*. Published by El Dorado County Community Development Agency, Long Range Planning Division. Dated September 2017.

U.S. Department of the Interior, Geological Survey (USGS). 2021. *Clarksville, California* 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

Figures

Figure 1. Site and Vicinity

Figure 2. Project Components



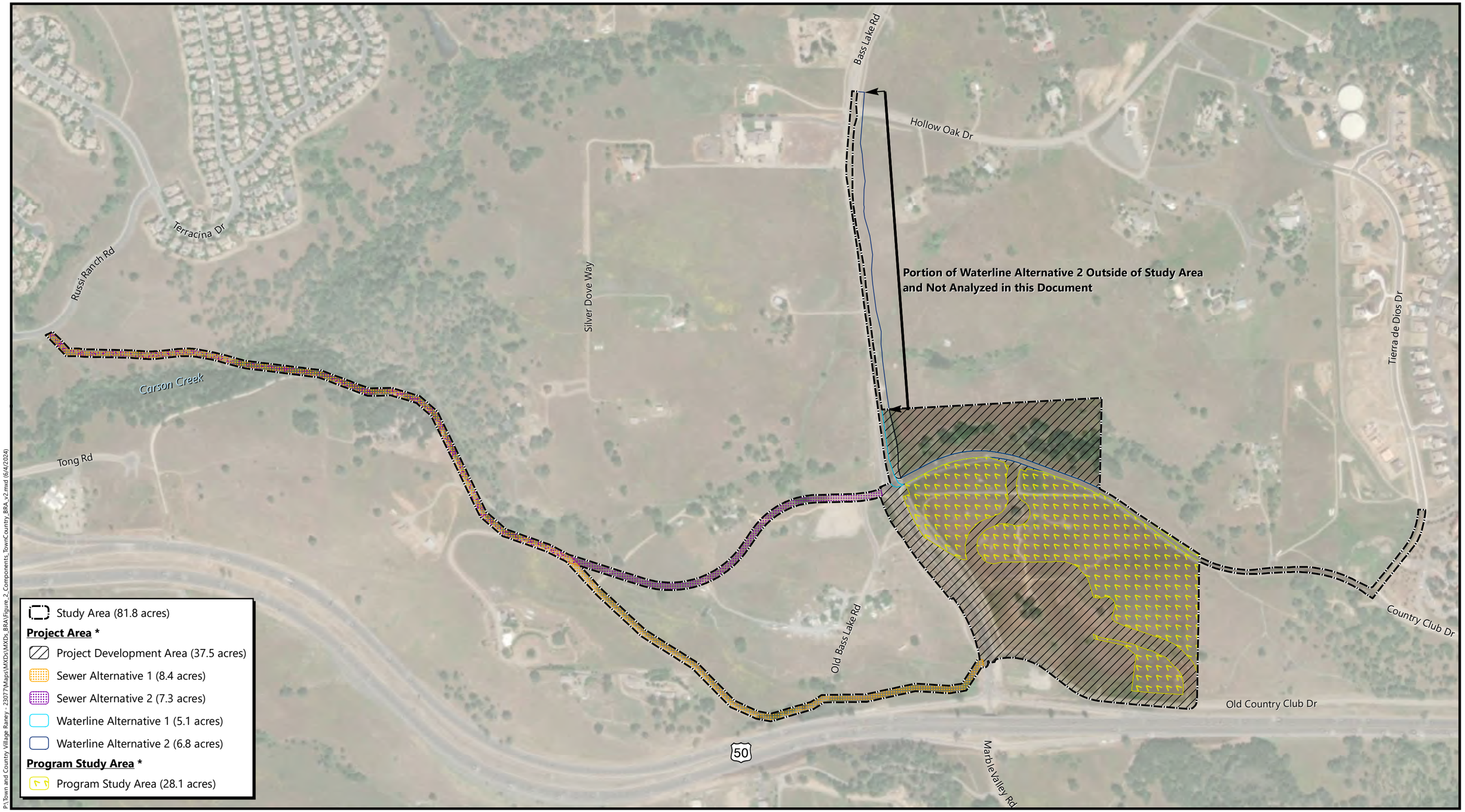
P:\Town and Country Village Raney - 23077\Maps\MXDs\MXDs_BRA\Figure_1_Vicinity_TownCountry_BRA_v2.mxd (6/4/2024)

Source: United States Geologic Survey, 2021
"Clarksville, California" 7.5-Minute Topographic Quadrangle
Section 1, Township 9 North, Range 8 East, MDBM and
Sections 5-7, Township 9 North, Range 9 East, MDBM
Latitude (NAD83): 38.658668°, Longitude (NAD83): -121.029902°

Figure 1
Site and Vicinity

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING



N
Feet
0
600

** Component acreages do not sum to the Study Area acreage due to overlapping alternatives*

Boundary Source: CTA Engineering & Surveying
Aerial Source: Maxar, 1 May 2022

Figure 2
Project Components

Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Site Plan

Attachment B. Tree Inventory Data

Attachment C. Map of Impacts to Oak Resources

Attachment D. Summary Data Sheet of Oak Resources Impacts for the Project Plus Sewer Alternative 1

Attachment E. Summary Data Sheet of Oak Resources Impacts for the Project Plus Sewer Alternative 2

Attachment F. Avoidance and Minimization Measures

Attachment G. Oak Resources Technical Report Checklist

Attachment A

Site Plan

TOWN & COUNTRY VILLAGE EL DORADO

OVERALL SITE PLAN

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=100' MARCH, 2024

APPLICANT

JOSH PANE
1123 J STREET, 3RD FLOOR
SACRAMENTO, CA 95814

OWNER

MOHAMMAD MOHANNA
CAP FUNDING
1025 9th STREET, SUITE 205
SACRAMENTO, CA 95814

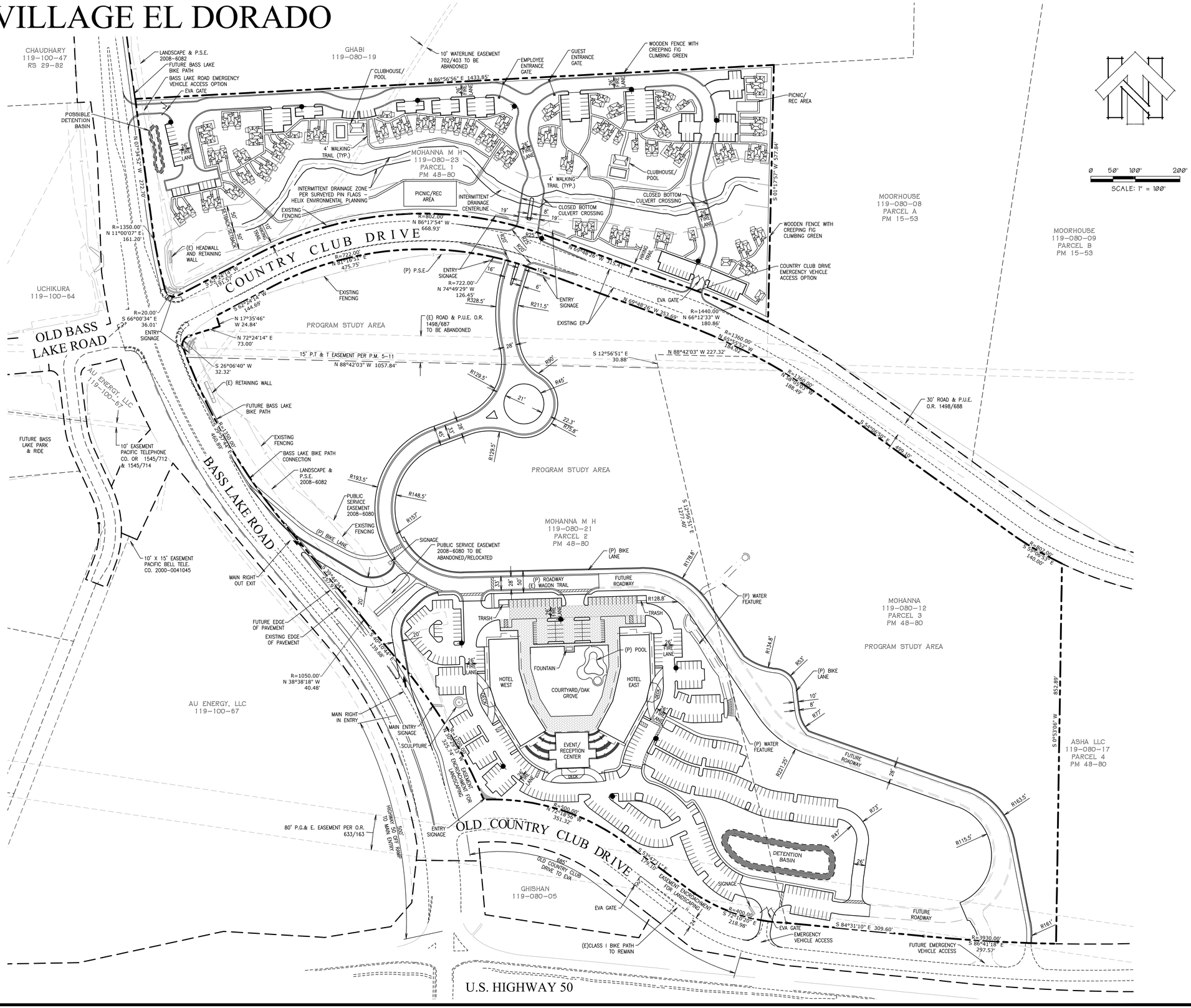
ENGINEER

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

PROPOSED BUILDINGS	GROSS SQUARE FOOTAGE (FOOTPRINT)
HOTELS	16,000
EVENT CENTER	7,000
COTTAGES	280
CLUBHOUSES	600

LEGEND

- PROJECT BOUNDARY
- (E) LOT BOUNDARY
- (E) RIGHT OF WAY
- (E) EASEMENT
- (E) EDGE OF PAVEMENT
- (E) FENCE
- GRASS PAVERS
- LANDSCAPE PAVERS
- FIRE DEPARTMENT PATH OF TRAVEL TURNING RADII INSIDE RADIUS=35' OUTSIDE RADIUS=55'
- FIRE HYDRANT


CHAUDHARY 119-100-47 RS 29-82
GHABI 119-080-19
UCHIKURA 119-100-64
AU ENERGY, LLC 119-100-57
AU ENERGY, LLC 119-100-67
MOHANNA M H 119-080-23 PARCEL 1 PM 48-80
MOHANNA M H 119-080-21 PARCEL 2 PM 48-80
MOHANNA 119-080-12 PARCEL 3 PM 48-80
GHISHAN 119-080-05
ASHA LLC 119-080-17 PARCEL 4 PM 48-80
MOORHOUSE 119-080-08 PARCEL A PM 15-53
MOORHOUSE 119-080-09 PARCEL B PM 15-53
COUNTRY CLUB DRIVE
OLD BASS LAKE ROAD
BASS LAKE ROAD
OLD COUNTRY CLUB DRIVE
U.S. HIGHWAY 50
PROGRAM STUDY AREA
LANDSCAPE & P.S.E. 2008-6082
FUTURE BASS LAKE BIKE PATH
BASS LAKE ROAD EMERGENCY VEHICLE ACCESS OPTION
EVA GATE
POSSIBLE DETENTION BASIN
10' WATERLINE EASEMENT 702/403 TO BE ABANDONED
CLUBHOUSE/ POOL
EMPLOYEE ENTRANCE GATE
GUEST ENTRANCE GATE
WOODEN FENCE WITH CREEPING FIG CLIMBING GREEN
PICNIC/ REC AREA
4' WALKING TRAIL (TYP.)
INTERMITTENT DRAINAGE ZONE PER SURVEYED PIN FLAGS - HELIX ENVIRONMENTAL PLANNING
INTERMITTENT DRAINAGE CENTERLINE
CLOSED BOTTOM CULVERT CROSSING
EXISTING FENCING
(E) HEADWALL AND RETAINING WALL
(P) P.S.E.
ENTRY SIGNAGE
EXISTING EP
COUNTRY CLUB DRIVE EMERGENCY VEHICLE ACCESS OPTION
(E) ROAD & P.U.E. O.R. 1498/687 TO BE ABANDONED
15' P.T & T EASEMENT PER P.M. 5-11
(E) RETAINING WALL
10' EASEMENT PACIFIC TELEPHONE CO. OR 1545/712 & 1545/714
10' X 15' EASEMENT PACIFIC BELL TELE. CO. 2000-0041045
30' ROAD & P.U.E. O.R. 1498/688
FUTURE BASS LAKE PARK & RIDE
BASS LAKE BIKE PATH CONNECTION
PUBLIC SERVICE EASEMENT 2008-6080
SIGNAGE
PUBLIC SERVICE EASEMENT 2008-6080 TO BE ABANDONED/RELOCATED
(P) BIKE LANE
(P) ROADWAY (E) WAGON TRAIL
FUTURE ROADWAY
(P) WATER FEATURE
MAIN RIGHT OUT EXIT
FUTURE EDGE OF PAVEMENT
EXISTING EDGE OF PAVEMENT
MAIN RIGHT IN ENTRY
MAIN ENTRY SIGNAGE
SCULPTURE
HIGHWAY 50 OFF RAMP TO MAIN ENTRY
80' P.G.& E. EASEMENT PER O.R. 633/163
TRASH
(P) POOL
FOUNTAIN
HOTEL WEST
HOTEL EAST
COURTYARD/OAK GROVE
EVENT/ RECEPTION CENTER
DECK
DETENTION BASIN
OLD COUNTRY CLUB DRIVE TO EVA
EASEMENT ENCROACHMENT FOR LANDSCAPING
(E)CLASS I BIKE PATH TO REMAIN
EMERGENCY VEHICLE ACCESS
FUTURE EMERGENCY VEHICLE ACCESS
N 86°56'56" E 1433.85'
N 07°35'52" W 212.70'
R=1350.00' N 11°00'07" E 161.20'
R=722.00' N 86°17'54" W 668.93'
R=802.00' N 86°17'54" W 475.75'
S 64°24'14" W 144.69'
S 66°24'14" W 181.67'
N 17°35'46" W 24.84'
N 72°24'14" E 73.00'
S 26°06'40" W 32.32'
N 88°42'03" W 1057.84'
N 88°42'03" W 227.32'
S 12°56'51" E 30.88'
S 01°41'57" W 577.84'
N 69°48'26" W 353.69'
R=722.00' N 74°49'29" W 126.45'
R=1440.00' N 66°12'33" W 180.86'
R=1360.00' N 65°55'52" W 184.03'
R=1450.00' N 58°05'00" W 186.49'
S 54°05'00" E 499.10'
S 35°55'00" E 140.00'
S 85°05'00" W 85.28'
S 12°56'51" E 1377.40'
S 35°44'14" E 179.57'
S 66°24'14" E 139.68'
S 72°24'14" E 351.32'
S 72°24'14" E 175.14'
S 72°24'14" E 218.98'
S 84°31'10" E 309.60'
S 86°41'18" E 297.57'
R=20.00' S 66°00'34" E 36.01'
R=1150.00' S 32°57'37" E 400.89'
R=1050.00' N 38°38'18" W 40.48'
R=500.00' N 72°24'14" W 351.32'
R=400.00' S 72°24'14" E 218.98'
R=3930.00' S 86°41'18" E 297.57'
R=802.00' S 35°55'00" E 140.00'
R=1360.00' N 65°55'52" W 184.03'
R=1450.00' N 58°05'00" W 186.49'
R=722.00' N 74°49'29" W 126.45'
R=1440.00' N 66°12'33" W 180.86'
R=722.00' N 86°17'54" W 475.75'
R=1350.00' N 11°00'07" E 161.20'
R=1050.00' N 38°38'18" W 40.48'
R=1150.00' S 32°57'37" E 400.89

Attachment B

Tree Inventory Data

Oak Tree Inventory for Town and Country Village

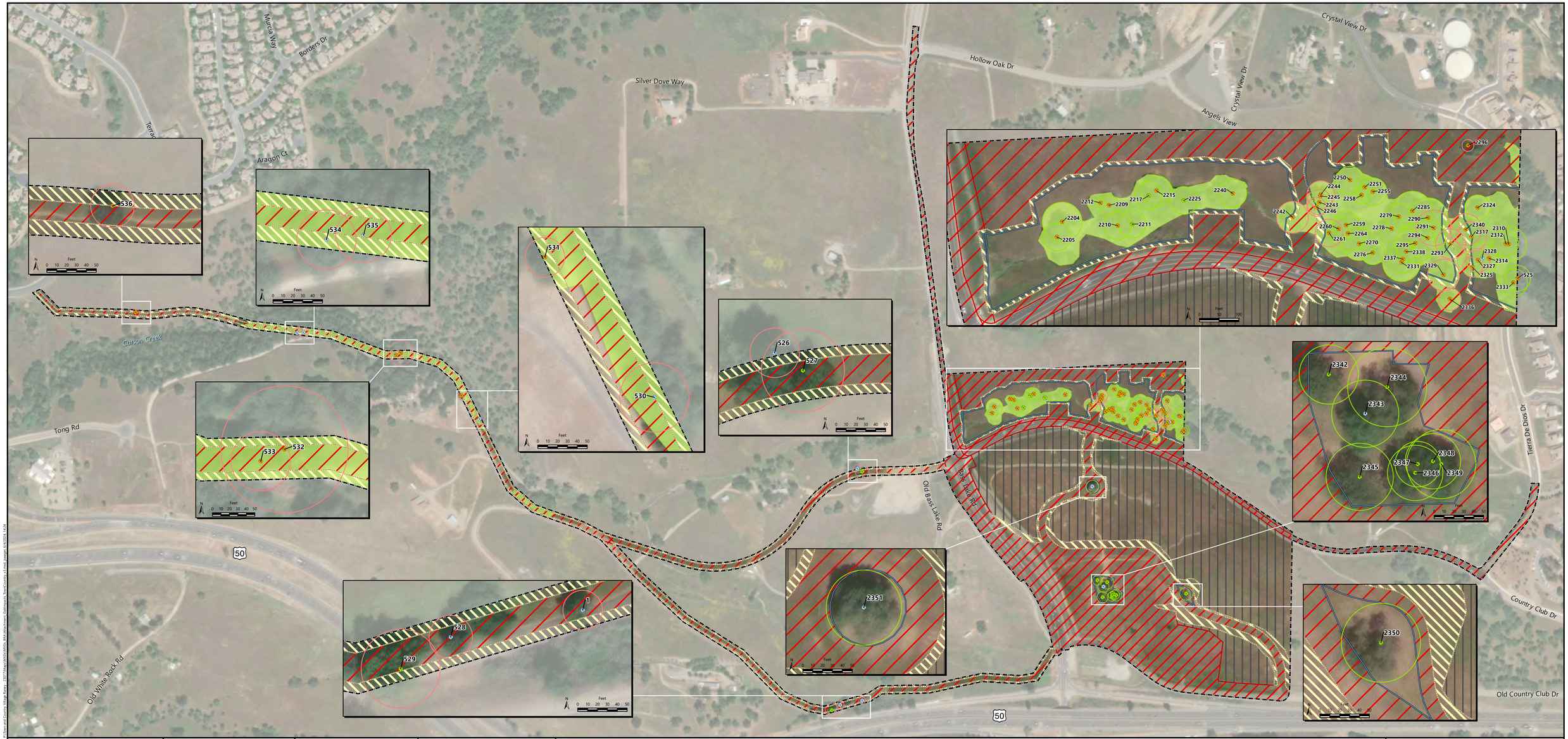
Tree #	Common Name	Scientific Name	DBH (in)	Dripline Radius (ft)	Condition	MultiStem DBH	Notes	Woodland Classification
1	Blue Oak	*Quercus douglasii*	24.0	20	Fair to Good	12, 12	Health and structure fair. No tag and DBH estimated due to poison oak. Evidence of past mistletoe infestation, but currently minimal. Included bark at 2 main trunk unions	Not Oak Woodland
525	Interior Live Oak	*Quercus wislizenii*	25.5	32	Fair to Good		Health and Structure Fair	Oak Woodland
526	Blue Oak	*Quercus douglasii*	38.5	25	Fair to Good		Health and Structure Good	Not Oak Woodland
527	Valley Oak	*Quercus lobata*	35.0	42	Fair to Good		Health and Structure Excellent	Not Oak Woodland
528	Blue Oak	*Quercus douglasii*	17.0	22	Fair to Good		Health fair, structure good	Not Oak Woodland
529	Valley Oak	*Quercus lobata*	43.1	40	Fair to Good		Health and Structure Excellent	Not Oak Woodland
530	Blue Oak	*Quercus douglasii*	31.4	35	Fair to Good		Health good, structure fair. Large cavity at base that appears to be healing, no evidence of decay	Oak Woodland
531	Interior Live Oak	*Quercus wislizenii*	58.2	20	Fair to Good	13.7, 21.9, 6.1, 16.5	Health and Structure Good	Oak Woodland
532	Interior Live Oak	*Quercus wislizenii*	57.7	75	Fair to Good	12.8, 13.7, 19.6, 11.6	Health fair, Structure fair to poor. Tree has a very substantial uphill lean. Would not be acceptable in an urban setting, but does not indicate increased potential for the trees premature mortality.	Oak Woodland
533	Interior Live Oak	*Quercus wislizenii*	26.5	35	Fair to Good		Health and Structure Fair	Oak Woodland
534	Blue Oak	*Quercus douglasii*	24.5	30	Fair to Good		Health and Structure Good	Oak Woodland
535	Blue Oak	*Quercus douglasii*	28.9	28	Fair to Good		Health fair, structure good	Oak Woodland
536	Interior Live Oak	*Quercus wislizenii*	26.6	22	Poor		Health and structure poor. Fair amount of branch die off, mistletoe growing out of trunk, cavity under the trunk	Not Oak Woodland
2204	Interior Live Oak	*Quercus wislizenii*	43.7	50	Fair to Good		Health and Structure Fair. DBH measured at 3 ft due to branching.	Oak Woodland
2205	Interior Live Oak	*Quercus wislizenii*	48.0	35	Fair to Good	22.0, 26.0	Health and Structure Fair. Numerous branches have fallen off recently, so few that are dead remain.	Oak Woodland
2209	Interior Live Oak	*Quercus wislizenii*	25.4	25	Poor		Health poor, structure fair	Oak Woodland
2210	Interior Live Oak	*Quercus wislizenii*	37.8	35	Fair to Good		Health and Structure Fair	Oak Woodland
2211	Valley Oak	*Quercus lobata*	40.3	35	Fair to Good		Health fair, structure good	Oak Woodland
2212	Interior Live Oak	*Quercus wislizenii*	31.7	12.5	Fair to Good	18.5, 13.2	Health and Structure Fair	Oak Woodland
2215	Interior Live Oak	*Quercus wislizenii*	29.0	38	Poor	14.9, 14.1	Health fair, structure poor. Cavities below trunk	Oak Woodland
2217	Valley Oak	*Quercus lobata*	38.0	35	Fair to Good		Health and structure good. DBH estimated due to poison oak	Oak Woodland
2225	Valley Oak	*Quercus lobata*	24.8	35	Fair to Good		Health and Structure Good	Oak Woodland
2240	Interior Live Oak	*Quercus wislizenii*	43.3	35	Poor	26.2, 17.1	Health and structure poor. One of main trunks has been girdled - no bark all the way around.	Oak Woodland
2242	Interior Live Oak	*Quercus wislizenii*	57.1	40	Fair to Good	16.6, 11.0, 29.5	Health good, structure fair. Several cavities and one main branch rests on ground. DBH of biggest trunk measured at 2 ft due to branching.	Oak Woodland
2243	Interior Live Oak	*Quercus wislizenii*	26.1	32	Poor		Health and structure poor. Extensive branch tip die back. Polypore mushrooms growing out of cavity in trunk.	Oak Woodland
2244	Interior Live Oak	*Quercus wislizenii*	38.4	35	Poor	15.9, 22.5	Health fair, structure poor. Numerous cavities with active decay	Oak Woodland
2245	Interior Live Oak	*Quercus wislizenii*	24.0	20	Fair to Good	16.0, 8.0	Health and Structure Fair	Oak Woodland
2246	Interior Live Oak	*Quercus wislizenii*	28.9	24	Poor	9.5, 11.0, 8.4	Health and structure poor. Numerous extensive cavities with decay	Oak Woodland
2250	Interior Live Oak	*Quercus wislizenii*	36.7	35	Fair to Good		Health good, structure fair. One good sized cavity with decay, remainder of tree looks good.	Oak Woodland
2251	Interior Live Oak	*Quercus wislizenii*	46.2	25	Fair to Good	4.8, 8.2, 17.2, 16.0	Health good, structure fair.	Oak Woodland
2255	Interior Live Oak	*Quercus wislizenii*	33.4	35	Fair to Good	18.7, 5.4, 9.3	Health good, structure fair to poor. 1 branch with numerous cavities, some small healing cavities in main trunk	Oak Woodland
2258	Interior Live Oak	*Quercus wislizenii*	30.5	22	Poor	11.4, 10.5, 8.6	Health and structure poor. 2 of 3 branches are dead and the third appears to be dying.	Oak Woodland
2259	Interior Live Oak	*Quercus wislizenii*	39.6	35	Fair to Good	15.4, 13.2, 11.0	Health good, structure fair. DBH estimated due to poison oak	Oak Woodland
2260	Interior Live Oak	*Quercus wislizenii*	29.1	28	Fair to Good	25.0, 4.1	Health good, structure fair.	Oak Woodland
2261	Interior Live Oak	*Quercus wislizenii*	46.4	35	Fair to Good	22.1, 7.8, 16.5	Health and structure fair. DBH estimated due to poison oak.	Oak Woodland
2264	Interior Live Oak	*Quercus wislizenii*	36.2	45	Fair to Good	15.6, 20.6	Health good, structure fair.	Oak Woodland
2270	Interior Live Oak	*Quercus wislizenii*	41.1	42	Fair to Good	20.2, 20.9	Health and Structure Good	Oak Woodland

Oak Tree Inventory for Town and Country Village

Tree #	Common Name	Scientific Name	DBH (in)	Dripline Radius (ft)	Condition	MultiStem DBH	Notes	Woodland Classification
2276	Interior Live Oak	*Quercus wislizenii*	64.9	30	Fair to Good	17.2, 23.8, 14.9, 9.0	Health good, structure fair.	Oak Woodland
2278	Interior Live Oak	*Quercus wislizenii*	26.6	32	Fair to Good		Health and structure fair. an additional stem 19.4 dbh is almost dead and not included in size Calc	Oak Woodland
2279	Interior Live Oak	*Quercus wislizenii*	54.8	35	Fair to Good	21.9, 21.4, 11.5	Health fair and Structure fair to poor. Several cavities.	Oak Woodland
2285	Interior Live Oak	*Quercus wislizenii*	29.9	50	Fair to Good		Health and Structure Fair	Oak Woodland
2290	Interior Live Oak	*Quercus wislizenii*	59.4	50	Fair to Good	14.4, 20.0, 25.0	Health good, structure fair	Oak Woodland
2291	Interior Live Oak	*Quercus wislizenii*	40.1	45	Fair to Good	29.8, 10.3	Health and Structure Fair	Oak Woodland
2293	Interior Live Oak	*Quercus wislizenii*	39.2	38	Fair to Good	30.5, 8.7	Health and Structure Fair	Oak Woodland
2294	Interior Live Oak	*Quercus wislizenii*	31.1	45	Fair to Good	11.2, 19.9	Health and Structure Fair	Oak Woodland
2295	Interior Live Oak	*Quercus wislizenii*	48.2	50	Fair to Good	11.8, 32.9, 3.5	Health good, structure fair	Oak Woodland
2296	Interior Live Oak	*Quercus wislizenii*	23.4	15	Poor	9.8, 4.7, 8.9	Health poor, structure fair	Not Oak Woodland
2310	Interior Live Oak	*Quercus wislizenii*	44.9	45	Fair to Good	13.0, 10.7, 21.2	Health and Structure Fair	Oak Woodland
2312	Interior Live Oak	*Quercus wislizenii*	30.8	32	Poor	17.0, 13.8	Health fair, structure poor. Very large basal cavity.	Oak Woodland
2314	Interior Live Oak	*Quercus wislizenii*	27.0	25	Fair to Good	9.5, 17.5	Health and Structure Fair	Oak Woodland
2317	Interior Live Oak	*Quercus wislizenii*	25.2	38	Fair to Good	17.0, 8.2	Health and Structure Fair	Oak Woodland
2324	Interior Live Oak	*Quercus wislizenii*	49.2	32	Fair to Good	15.3, 11.7, 13.5, 8.7	Health and Structure Fair	Oak Woodland
2325	Interior Live Oak	*Quercus wislizenii*	34.0	25	Fair to Good	21.8, 12.2	Health and Structure Fair	Oak Woodland
2327	Interior Live Oak	*Quercus wislizenii*	33.8	30	Fair to Good	9.5, 9.4, 14.9	Health and Structure Fair	Oak Woodland
2328	Blue Oak	*Quercus douglasii*	29.8	40	Fair to Good		Health and Structure Good	Oak Woodland
2329	Interior Live Oak	*Quercus wislizenii*	37.3	40	Fair to Good		Health and structure good. DBH measured at 18" due to branching	Oak Woodland
2331	Interior Live Oak	*Quercus wislizenii*	71.1	48	Fair to Good	16.0, 16.7, 38.4	Health and Structure Good	Oak Woodland
2333	Interior Live Oak	*Quercus wislizenii*	46.9	35	Fair to Good	14.2, 15.0, 17.7	Health and Structure Fair	Oak Woodland
2336	Interior Live Oak	*Quercus wislizenii*	31.5	28	Fair to Good		Health good, structure fair	Oak Woodland
2337	Interior Live Oak	*Quercus wislizenii*	29.4	35	Fair to Good	17.9, 7.6, 3.9	Health and Structure Fair	Oak Woodland
2338	Interior Live Oak	*Quercus wislizenii*	29.4	24	Fair to Good	11.8, 17.6	Health and Structure Fair	Oak Woodland
2340	Interior Live Oak	*Quercus wislizenii*	44.2	40	Fair to Good	11.5, 13.1, 19.6	Health and Structure Fair	Oak Woodland
2342	Valley Oak	*Quercus lobata*	30.0	30	Fair to Good		Health and Structure Good	Not Oak Woodland
2343	Blue Oak	*Quercus douglasii*	30.0	34	Fair to Good		Health and Structure Good	Not Oak Woodland
2344	Valley Oak	*Quercus lobata*	33.3	40	Fair to Good		Health and Structure Fair	Not Oak Woodland
2345	Valley Oak	*Quercus lobata*	37.1	34	Poor		Health good, structure poor. Large cavity under uphill side of tree. Some major roots gone, and root flare is getting undermined. With almost all foliage on downhill side of tree, this tree could fail during strong easterly	Not Oak Woodland
2346	Valley Oak	*Quercus lobata*	25.2	28	Fair to Good		Health and Structure Good	Not Oak Woodland
2347	Valley Oak	*Quercus lobata*	15.7	23	Poor		Health fair, structure poor. Large cavity in the base of the trunk; unhealed, extensive decay	Not Oak Woodland
2348	Valley Oak	*Quercus lobata*	16.3	28	Fair to Good		Health and Structure Good	Not Oak Woodland
2349	Valley Oak	*Quercus lobata*	25.8	35	Fair to Good		Health and Structure Good	Not Oak Woodland
2350	Valley Oak	*Quercus lobata*	36.6	40	Fair to Good		Health good, structure fair to poor. Large unhealed cavity on uphill side of trunk and strange sinuous branch growth.	Not Oak Woodland
2351	Blue Oak	*Quercus douglasii*	45.3	38	Fair to Good		Health good, structure fair to poor	Not Oak Woodland

Attachment C

Map of Impacts to Oak Resources



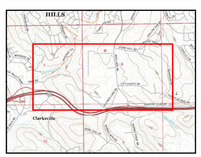
Prepared For:
Raney Planning & Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834

Sources
Aerial: Maxar, 1 May 2022
Boundary : CTA Engineering & Surveying

Biologist: D.Snider
Map Prepared by: J.Swager
Date Map Prepared: 4 June 2024
** Small summation errors may occur due to rounding*

N
Feet
0 100 200 300 600

Main Map Scale:
1 inch = 300 feet (at 18"x33")
Coordinate System
NAD 1983 State Plane California II (U.S. Feet)



Study Area (81.8 acres)

Project Impact and Avoidance Areas *
- Permanent Impact (37.8 acres)
- Temporary Impact (8.9 acres)
- Program Level (28.1 acres)
- Avoided (7.0 acres)

Oak Resources
- Blue Oak (9)
- Interior Live Oak (50)
- Valley Oak (13)
- Oak Woodland (6.2 acres)

Oak Dripline
- Avoided Tree (46)
- Permanently Impacted Tree (26)

Impacts to Oak Resources
Town and Country Village El Dorado
El Dorado County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3230 | www.madroneeco.com

Attachment D

Summary Data Sheet of
Oak Resources Impacts for the
Project Plus Sewer Alternative 1

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT

2850 Fairlane Court, Placerville, CA 95667

Phone: (530) 621-5355 www.edcgov.us/Planning/

Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits

Description		Blue (*Quercus douglasii*)	California Black (*Quercus kelloggii*)	Canyon Live (*Quercus chrysolepis*)	Interior Live (*Quercus wislizeni*)	Oregon White (*Quercus garryana*)	Valley (*Quercus loabata*)	Oracle (hybrid) (*Quercus x morehus*)
Individual Native Oak Trees								
Quantity (number of trees) of individual native oak trees to be removed, by species (6-23.9")		1	0	0	0	0	0	0
Quantity (number of trees) of individual native oak trees to be removed, greater than 24 inches and less than 36 inches (dbh), by species (outside of oak woodland)		1	0	0	0	0	0	0
Total trunk diameter inches (dbh) to be removed*	41.0							
Heritage Trees								
Quantity (number of trees) of Heritage Trees to be removed, by species		0	0	0	8	0	1	0
Total trunk diameter inches (dbh) to be removed*	423.3							
Oak Woodlands								
Total Acreage of existing oak woodlands**	6.2							
Acreage of existing oak woodlands to be removed	2.7							
Percentage of existing oak woodlands to be removed*	44%							

**** Information used for purposes of calculating in-lieu mitigation fee payment.***
***** If Heritage Trees occur within oak woodlands, the area of impacted Heritage Tree(s) should be included in oak woodland acreage calculations.***

Revised 11/22/2017

Attachment E

Summary Data Sheet of
Oak Resources Impacts for the
Project Plus Sewer Alternative 2

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT

2850 Fairlane Court, Placerville, CA 95667

Phone: (530) 621-5355 www.edcgov.us/Planning/

Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits

Description		Blue (*Quercus douglasii*)	California Black (*Quercus kelloggii*)	Canyon Live (*Quercus chrysolepis*)	Interior Live (*Quercus wislizeni*)	Oregon White (*Quercus garryana*)	Valley (*Quercus loabata*)	Oracle (hybrid) (*Quercus x morehus*)
Individual Native Oak Trees								
Quantity (number of trees) of individual native oak trees to be removed, by species (6-23.9")		0	0	0	0	0	0	0
Quantity (number of trees) of individual native oak trees to be removed, greater than 24 inches and less than 36 inches (dbh), by species (outside of oak woodland)		0	0	0	0	0	1	0
Total trunk diameter inches (dbh) to be removed*	35.0							
Heritage Trees								
Quantity (number of trees) of Heritage Trees to be removed, by species		1	0	0	8	0	0	0
Total trunk diameter inches (dbh) to be removed*	418.7							
Oak Woodlands								
Total Acreage of existing oak woodlands**	6.2							
Acreage of existing oak woodlands to be removed	2.7							
Percentage of existing oak woodlands to be removed*	44%							

**** Information used for purposes of calculating in-lieu mitigation fee payment.***
***** If Heritage Trees occur within oak woodlands, the area of impacted Heritage Tree(s) should be included in oak woodland acreage calculations.***

Revised 11/22/2017

Attachment F

Avoidance and Minimization Measures

Measures to Avoid and Minimize Impacts to Retained Oak Resources

Pre-construction

- The limits of project disturbance within 50 feet of all oak trees shall be clearly defined with bright colored flagging or orange construction fencing prior to construction. Flagging and/or the fence shall remain in place until construction is complete. No construction activities shall occur outside the construction limits. Flagging or fencing shall be removed and cleared from the Project area upon completion of the project to prevent wildlife entrapment in refuse left onsite.
- There shall be no driving, parking, or storage of supplies or equipment outside the flagged/fenced project limits.
- Limb pruning of any retained trees should be conducted by an arborist or tree worker that is ISA certified and licensed by the State of California for tree service. Pruning shall be conducted in accordance with American National Standard Institute (ANSI) A300 Pruning Standard and adhere to the most recent edition of ANSI Z133.1.
- Canopy thinning or additional pruning shall not occur outside the flagged/fenced project limits. It is more beneficial for a tree to have the most amount of foliage possible in order to promote new root growth.

During Vegetation Clearing

- Trees shall be felled inside the flagged/fenced project limits

Attachment G

Oak Resources

Technical Report Checklist

COMMUNITY DEVELOPMENT SERVICES
PLANNING AND BUILDING DEPARTMENT
2850 Fairlane Court, Placerville, CA 95667
Phone: (530) 621-5355 www.edcgov.us/Planning/

OAK RESOURCES TECHNICAL REPORT CHECKLIST

The following information is required for all Oak Resources Technical Reports consistent with Section 2.5 (Oak Resources Technical Reports) of the Oak Resources Management Plan (ORMP):

FORMS AND MAPS REQUIRED

Place a check (√) on the "Applicant" lines for those items completed. The planner receiving the application will check (√) the "County" line.

Check (√) Applicant	County		
[X]	[ ]	1)	Identify, locate, and quantify all oak resources on the property, as applicable:

Attachment C

a) Oak woodlands shall be mapped and assessed in accordance with the CDFG 2009 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* and subsequent updates, and the *List of Vegetation Alliances and Associations* (CDFG 2010) and subsequent updates;

Attachment B

b) Data collected for individual native oak trees and Heritage Trees shall include: location, species, trunk diameter (dbh), height, canopy radius, and general health and structural condition.

[X]	[ ]	2)	Identify and quantify project-related impacts to oak resources Section 4.0
[X]	[ ]	3)	Measures identifying how specific trees and woodlands (or retained portions thereof) shall be protected during development and related work

Attachment F

Revised 11/22/2017

Check (√) Applicant	Check (√) County		
[X]	[ ]	4)	Proposed actions to mitigate impacts to oak resources, consistent with the requirements included in the ORMP: Section 5.0 a) For replacement planting, the report shall provide detail regarding the quantity, location, planting density, replacement tree size(s), and acorn/seedling source consistent with the definition of Replacement Planting included in the ORMP; b) For conservation easement placement/acquisition and/or land acquisition in fee title, the report shall provide documentation of easement placement on-site and/or documentation of easement or land acquisition off-site to the satisfaction of the County; c) For in-lieu fee payment, the report shall document the quantity of impacts (acreage of oak woodlands and/or total diameter inches of individual native oak trees/Heritage Trees) and the total in-lieu fee payment necessary (presented separately for oak woodlands, individual native oak trees, and Heritage Trees, where applicable).
[ ]	[ ]	5)	Identification of responsible parties N/A
[ ]	[ ]	6)	Identification of maintenance, monitoring, and reporting requirements N/A
[ ]	[ ]	7)	Analysis of non-PCA conservation easement areas, where applicable N/A
[X]	[ ]	8)	Site map(s) depicting: Attachment C a) location of all oak woodlands, individual native oak trees, and Heritage Trees; Attachment A b) location of all proposed project-related improvements (including, but not limited to, the limits of grading, fuel modification/defensible space areas, and above- and below-ground infrastructure); Attachment C c) Site map(s) shall also clearly identify impacted oak resources.
[X]	[ ]	9)	Planning and Building Department Summary Data Sheet of Oak Resources Impacts for Oak Tree/Oak Woodland Removal Permits. Attachments D and E

SUPPLEMENTAL DATA FOR INDIVIDUAL NATIVE OAK TREES WITHIN OAK WOODLANDS:

The ORMP and Oak Resources Conservation Ordinance (No. 5061) was adopted on October 24, 2017 and the Board of Supervisors will review implementation within 12 months after adoption. The Board requested the following supplemental information:

[X]	[ ]	10)	Provide an inventory (species and size) of impacted Individual Native Oak Trees greater than 24 inches and less than 36 inches (dbh) in oak woodlands. Attachment B

APPENDIX G

PRELIMINARY GEOTECHNICAL ENGINEERING STUDY
FOR
THE TOWN AND COUNTRY VILLAGE

Bass Lake Road and Country Club Drive
El Dorado Hills, California

Project No. E21526.002
February 2023

YOUNGDAHL
ESTABLISHED 1984

Cap Funding – The Mohanna
1025 9th Street, Suite 205
Sacramento, California 95814

Project No. E21526.002
9 February 2023

Attention: Mr. Josh Pane

Subject: **THE TOWN AND COUNTRY VILLAGE**
Bass Lake Road and Country Club Drive, El Dorado Hills, California
PRELIMINARY GEOTECHNICAL ENGINEERING STUDY

References:
1. Preliminary Onsite Wastewater Treatment Feasibility Study for Town and Country Village, El Dorado, prepared by Youngdahl Consulting Group, Inc., dated 30 December 2021 (Project No. E21526.000).
2. Grading Plan for Town & Country Village El Dorado, prepared by CTA Engineering and Surveying, dated February 2022.
3. Fully Executed Contract and Proposal for The Town and Country Village Preliminary GES, prepared by Youngdahl Consulting Group, Inc., dated 4 January 2023.

Dear Mr. Pane:

In accordance with your authorization of the Reference 3 proposal and contract, Youngdahl Consulting Group, Inc. has prepared this preliminary geotechnical engineering study for the project site located at Bass Lake Road and Country Club Drive in El Dorado Hills, California. The purpose of this study was to prepare a site-specific preliminary geotechnical report that can be incorporated into design of the proposed site. To complete this task, our firm completed a site reconnaissance and prepared this report in accordance with the Reference 3 proposal and contract.

Based upon our observations, the geotechnical aspects of the site appear to be suitable for support of the proposed structure provided the recommendations presented in this report are incorporated into the design and construction. Geotechnical conditions associated with site development are anticipated to include processing existing grades for preparation to receive engineered fills, the placement of engineered fills, improvement for drainage controls, and the construction of foundations.

Due to the non-uniform nature of soils, other geotechnical issues may become more apparent during grading operations which are not listed above. The descriptions, findings, conclusions, and recommendations provided in this report are formulated as a whole; specific conclusions or recommendations should not be derived or used out of context. Please review the limitations and uniformity of conditions section of this report.

This report has been prepared for the exclusive use of the addressee of this report and their consultants, for specific application to this project, in accordance with generally accepted geotechnical engineering practice. Should you have any questions or require additional information, please contact our office at your convenience.

Very truly yours,
Youngdahl Consulting Group, Inc.

Allie Denny
Staff Geologist

Reviewed By:

John Youngdahl, P.E.
Principal Engineer



2-9-23

Distribution: PDF to Client

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PRELIMINARY GEOTECHNICAL ENGINEERING STUDY FOR THE TOWN AND COUNTRY VILLAGE

1.0 INTRODUCTION

This report presents the results of our preliminary geotechnical engineering study performed for the proposed hotel planned to be constructed at Bass Lake Road and Country Club Drive in El Dorado Hills, California. The vicinity map provided on Figure A-1, Appendix A shows the approximate project location.

Project Understanding

We understand that the proposed project will consist of the development of multi-story hotel structures and lodges located at the intersection of Bass Lake Road and Country Club Lane in El Dorado Hills, California. We anticipate the structures will be up to four stories, of wood frame construction, and supported by conventional shallow foundations with slab-on-grade floors.

Background

Youngdahl Consulting Group, Inc. previously prepared the Reference 1 Preliminary Onsite Wastewater Treatment Feasibility Study which included a subsurface exploration consisting of 13 hand auger borings. Percolation testing was also performed by Youngdahl, which included the excavation of five exploratory test pits on 18 January 2022 and five additional test pits on 9 June 2022.

If studies or plans pertaining to the site exist and are not cited as a reference in this report, we should be afforded the opportunity to review and modify our conclusions and recommendations as necessary.

Purpose and Scope

Youngdahl Consulting Group, Inc. has prepared this report to provide geotechnical engineering recommendations and considerations for incorporation into the design and development of the site. The following scope of services were developed and performed for preparation of this report:

- A review of geotechnical and geologic data available to us at the time of our study;
- Performance of a field study consisting of a site reconnaissance;
- Evaluation of the data and information obtained from our field study and literature review for geotechnical conditions;
- Development of preliminary geotechnical recommendations and considerations regarding earthwork construction including, site preparation and grading, engineered fill criteria, seasonal moisture conditions, excavation characteristics, slope configuration and grading, and drainage;
- Preparation of this report summarizing our findings, conclusions, and preliminary recommendations regarding the above-described information.

2.0 SITE CONDITIONS

The following section describes our findings regarding the site conditions that we observed during our site reconnaissance.

Surface Observations

The project site is located at the corner of Bass Lake Road and Country Club Drive in El Dorado Hills, California and is bounded by vacant land to the north and east, Highway 50 to the south, and Bass Lake Road to the west. Topography at the site slopes in various directions with a maximum gradient of approximately 3H:1V (Horizontal:Vertical). At the time of our visit on 30 January 2023, the vegetation at the site consisted of seasonal grasses with scattered trees. Rock outcroppings were observed throughout the site and a paved road is located on the western side of the property.

Subsurface Conditions

Our field study included a site reconnaissance by a representative of our firm conducted on 30 January 2023. A subsurface exploration was not included in our scope of work for this project; however, as part of the Reference 1 report Youngdahl completed the excavation of 13 hand auger borings and 10 test pits on the site. Subsurface soil conditions were consistent at the locations evaluated and generally included silty clays and sandy clays to depths of 1 to 3 feet, underlain by moderately weathered bedrock.

Groundwater Conditions

Due to the shallow depth and low permeability of the underlying rock, perched water is common to the area and could be encountered during grading operations. Perched water was encountered at depths of 1 foot in one of the hand auger borings and at 2 feet in two of the hand auger borings. The presence of perched water can vary because of many factors such as the proximity to rock, topographic elevations, and the presence of utility trenches. Some evidence of past repeated exposure to subsurface water may include black staining, clay deposits, and surface markings indicating previous seepage. Based on our experience in the area, water may be perched on the bedrock horizon found beneath the site and could vary through the year with higher concentrations during or following precipitation.

Soil Expansion Potential

Based on previous subsurface exploration, we anticipate that some plastic materials, such as clay soils, will be encountered on the site. However, we do not anticipate that special design considerations for expansive soils will be necessary for the design or construction of the proposed improvements. If necessary, recommendations can be made based on our observations at the time of construction should expansive soils be encountered at the project site which were not encountered during our study.

3.0 GEOLOGY AND SEISMICITY

The geologic portion of this report includes a review of geologic data pertinent to the site based on an interpretation of our observations of the surface exposures and our observations in our exploratory test pits.

Geologic Conditions

The site is located in El Dorado Hills, California, which is found within the western foothills region of the Sierra Nevada geomorphic province This province is dominated by long belts of metamorphic rock formed by ancient subduction and related volcanism, continental accretion and uplift during the Jurassic and Cretaceous ages (CDMG, 1984, OFR 84-50). According to the Geologic Map of the Sacramento Quadrangle, California (Gutierrez C.I., 2011), the subject property and vicinity are underlain by metavolcanic rock.

Naturally Occurring Asbestos

Asbestos is classified by the EPA as a known human carcinogen. Naturally occurring asbestos (NOA) has been identified as a potential health hazard. The California Geological Survey published a map in 2018 (Bruijn; August 2018: Open File Report 2000-02 2018 Update) that qualitatively indicates the likelihood for NOA in western El Dorado County. Although most of the project site is not in a NOA review zone, the southeast corner of the site has been identified as being within an El Dorado County review area for naturally occurring asbestos, triggering some specific County requirements and additional recommendations for that portion of the property. El Dorado County Air Quality Management District Rule 223-2 regulates grading in asbestos review areas. Rule 223-2 requires that finished grade surface asbestos concentrations be below 0.25% as measured by California Air Resources Board Test Method 435 (ARB TM 435); potentially requiring testing and management for asbestos during grading followed by the testing of finished grades for asbestos. All export soil/rock is required to be tested along with the completion of special documentation to accompany the export. Disclosure is required for properties containing asbestos.

Seismicity

Our evaluation of seismicity for the project site included reviewing existing fault maps and obtaining seismic design parameters from the USGS online calculators and databases. For the purpose of this study, we used a latitude and longitude of 38.659496, -121.029290 to identify the project site.

Alquist-Priolo Regulatory Faults

Based upon the records currently available from the California Department of Conservation, the project site is not located within an Alquist-Priolo Regulatory Review Zone and there are no known faults located at the subject site. We do not anticipate special design or construction requirements for faulting at this project site.

Code Based Seismic Criteria

Based upon the subsurface conditions encountered during previous studies and our experience in the area, the site should be classified as Site Class C. The final choice of design parameters, however, remains the purview of the project structural engineer.

Table 1: Seismic Design Parameters*

Reference		Seismic Parameter	Recommended Value
ASCE 7-16	Table 20.3-1	Site Class	C
	Figure 22-7	Maximum Considered Earthquake Geometric Mean (MCEC) PGA	0.173g
	Table 11.8-1	Site Coefficient F_{PGA}	1.227
	Equation 11.8-1	$PGA_M = F_{PGA}$ PGA	0.212g
2022 CBC	Figure 1613.2.1(1)	Short-Period MCE at 0.2s, S_S	0.405g
	Figure 1613.2.1(2)	1.0s Period MCE, S_1	0.207g
	Table 1613.2.3(1)	Site Coefficient, F_a	1.300
	Table 1613.2.3(2)	Site Coefficient, F_v	1.500
	Equation 16-20	Adjusted MCE Spectral Response Parameters, $S_{MS} = F_a S_s$	0.526g
	Equation 16-21	Adjusted MCE Spectral Response Parameters, $S_{M1} = F_v S_1$	0.310g
	Equation 16-22	Design Spectral Acceleration Parameters, $S_{DS} = S_{MS}$	0.351g
	Equation 16-23	Design Spectral Acceleration Parameters, $S_{D1} = S_{M1}$	0.207g
	Table 1613.2.5(1)	Seismic Design Category (Short Period), Occupancy I to III	C
	Table 1613.2.5(1)	Seismic Design Category (Short Period), Occupancy IV	D
	Table 1613.2.5(2)	Seismic Design Category (1-Sec Period), Occupancy I to IV	D

*Based on the online calculator available at https://earthquake.usgs.gov/ws/designmaps/

Earthquake Induced Liquefaction, Settlement, and Surface Rupture Potential
Liquefaction is the sudden loss of soil shear strength and sudden increase in porewater pressure caused by shear strains, as could result from an earthquake. Research has shown that saturated, loose to medium-dense sands with a silt content less than about 25 percent and located within the top 40 feet are most susceptible to liquefaction and surface rupture/lateral spreading.

Due to the absence of a permanently elevated groundwater table, the relatively low seismicity of the area and the relatively shallow depth to bedrock, the potential for seismically induced damage due to liquefaction, surface ruptures, and settlement is considered low. For the above-mentioned reasons mitigation for these potential hazards is not considered necessary for the development of this project.

Static and Seismically Induced Slope Instability
The existing slopes on the project site were observed to have adequate vegetation on the slope face, appropriate drainage away from the slope face, and no apparent tension cracks or slump blocks in the slope face or at the head of the slope. No other indications of slope instability such as seeps or springs were observed. Additionally, due to the absence of a permanently elevated groundwater table, the relatively low seismicity of the area, and the relatively shallow depth to bedrock, the potential for seismically induced slope instability for the existing slopes is considered low.

4.0 DISCUSSION AND CONCLUSIONS

Based upon the results of our field observations, findings, and analysis described above, it is our opinion that construction of the proposed improvements is feasible from a geotechnical standpoint, provided the recommendations contained in this report are incorporated into the design plans, specifications, and implemented during construction. The native soils, once processed and compacted as recommended below, may be considered “engineered” and suitable for support of the planned improvements.

Geotechnical Considerations for Development
The project site is generally comprised of a thin layer of soils over shallow bedrock, which is considered suitable for support of the proposed improvements. Generally, issues associated with development on similar sites are associated with the excavation of shallow bedrock and the presence of seepage at the soil to rock contact. Sites on slopes, such as those present at the project site, are generally developed by building a larger pad with a slope or supporting retaining wall, or a combination of both methods. Additionally, buildings spanning across transition lines (e.g., bedrock to soil, or native soils to engineered fills) may be more prone to differential settlements compared to sites built on relatively flat lots.

Based on the Reference 2 plans, it appears that the proposed building will likely be supported by native soils, bedrock, and/or engineered fills on the order of 10 feet. For these conditions, we have included the comments below. The preliminary geotechnical recommendations for this project are presented in the following sections.

- This report includes a recommendation for compaction of engineered fills to 95 percent and a minimum of 18 or 24 inches of embedment for foundations to reduce the potential for differential settlement.
- Buildings constructed on naturally sloping terrain and with shallow bedrock conditions may be more subject to seepage and poor drainage. Special attention should be given to configuring the landscaping to drain away from the foundation and how underground utilities are configured to prevent water migrating through the trench becoming impounded against the foundation. The installation of a subdrain and back of wall drains should be used to provide increased protection against unwanted water conditions.

- Due to the strength of bedrock, it may be difficult to excavate utilities. Consideration may be given to pre-excavating utility alignments during the building pad grading when larger equipment could be used and there is more site access. Some sites with similar shallow rock conditions are developed by overexcavating the rock approximately 2 feet from finish grade during grading to improve foundation excavations, landscape performance, and later utility installations.

5.0 SITE GRADING AND EARTHWORK IMPROVEMENTS

Site Preparation

Preparation of the project site should involve site drainage controls, dust control, clearing and stripping, overexcavation and recompaction of loose native soils, and exposed grade compaction considerations. The following paragraphs state our geotechnical comments and recommendations concerning site preparation.

Site Drainage Controls

We recommend that initial site preparation involve intercepting and diverting any potential sources of surface or near-surface water within the construction zones. Because the selection of an appropriate drainage system will depend on the water quantity, season, weather conditions, construction sequence, and methods used by the contractor, final decisions regarding drainage systems are best made in the field at the time of construction. All drainage and/or water diversion performed for the site should be in accordance with the Clean Water Act and applicable Storm Water Pollution Prevention Plan.

Dust Control

Dust control provisions should be provided for as required by the local jurisdiction's grading ordinance (i.e., water truck or other adequate water supply during grading). Dust control is the purview of the grading contractor. Additionally, dust control should adhere to the project's Asbestos Dust Mitigation Plan.

Clearing and Stripping of Organic Materials

Clearing and stripping operations should include the removal of all organic laden materials including trees, bushes, root balls, root systems, and any soft or loose soil generated by the removal operations. Short or mowed dry grasses may be pulverized and lost within fill materials provided no concentrated pockets of organics result. It is the responsibility of the grading contractor to remove excess organics from the fill materials. **No more than 2 percent of organic material, by weight, should be allowed within the fill materials at any given location.** Preserved trees may require tree root protection which should be addressed on an individual basis by a qualified arborist.

A representative of our firm should be present during site clearing operations to identify the location and depth of potential fills or loose soils, some of which may be present at the site. We should also be present to observe removal of deleterious materials, and to identify any existing site conditions which may require mitigation or further recommendations prior to site development.

Expansive Soil Mitigation

If expansive soils are encountered, these soils should be mixed thoroughly with less expansive on-site materials (silts, sands, and gravels) and should not be present in concentration within 5 feet of the building envelope, either vertically or laterally. Proper disposition of clays on site should be documented by a representative of Youngdahl Consulting Group, Inc. Any final determination of mitigation measures should be based on the conditions observed during grading.

Overexcavation and Recompaction of Loose Native Soils

Following general site clearing, all/any existing loose or saturated native soils within the development footprint should be overexcavated down to firm native materials and backfilled with engineered fill as detailed in the engineered fill section below. Any depressions extending below final grade resulting from the removal of fill materials or other deleterious materials should be properly prepared as discussed below and backfilled with engineered fill.

Exposed Grade Compaction

Exposed soil grades following initial site preparation activities and overexcavation operations should be scarified to a minimum depth of 8 inches and compacted to the requirements for engineered fill. Generally, where rock conditions are exposed, no scarification should be necessary; however, these surfaces should be moisture conditioned and compacted to mitigate disturbance resulting from site preparation. Prior to placing fill, the exposed grades should be in a firm and unyielding state. Any localized zones of soft or pumping soils observed within the exposed grade should either be scarified and recompacted or be overexcavated and replaced with engineered fill as detailed in the engineered fill section below.

Soil Moisture Considerations

The compaction of soil to a desired relative compaction is dependent on conditioning the soil to a target range of moisture content. Moisture contents that are excessively dry or wet could limit the ability of the contractor to compact soils to the requirements for engineered fill. When dry, moisture should be added to the soil and the soils blended to improve consistency. Wet soil will need to be dried to become compactable. Generally, this includes blending and working the soil to avoid trapping moisture below a dryer surficial crust. Other options are available to reduce the time involved but typically have higher costs and require more evaluation prior to implementation.

The largest contributor to excessive soil moisture is generally precipitation and seepage during the rainy season. In recognition of this, we suggest that consideration be given to the seasonal limitations and costs of winter grading operations on the site. Special attention should be given regarding the drainage of the project site. If the project is expected to work through the wet season, the contractor should install appropriate temporary drainage systems at the construction site and should minimize traffic over exposed subgrades due to the moisture-sensitive nature of the on-site soils. During wet weather operations, the soil should be graded to drain and should be sealed by rubber tire rolling to minimize water infiltration.

Excavation Characteristics

The uppermost site soils are anticipated to be excavatable with conventional earthwork equipment, such as a backhoe or mini-excavator. Excavations will become increasingly difficult with depth due to the underlying bedrock condition and can limit production of backhoes and smaller dozers. Sites with similar subsurface conditions generally resort to using mid-size excavators and larger dozers with single shank rippers.

Where hard rock cuts in fractured rock are proposed, the orientation and direction of excavation/ripping will likely play a large role in the rippability of the material. Blasting cannot be ruled out in areas of resistant rock. When hard rock is encountered, we should be contacted to provide additional recommendations prior to performing an alternative such as blasting. Water inflow into any excavation approaching the hard rock surface is likely to be experienced in all but the driest summer and fall months.

Site Drainage Controls

We recommend that initial site preparation involve intercepting and diverting any potential sources of surface or near-surface water within the construction zones. Because the selection of an appropriate drainage system will depend on the water quantity, season, weather conditions, construction sequence, and methods used by the contractor, final decisions regarding drainage systems are best made in the field at the time of construction. All drainage and/or water diversion performed for the site should be in accordance with the Clean Water Act and applicable Storm Water Pollution Prevention Plan.

Engineered Fill Criteria

All materials placed as fills on the site should be placed as “Engineered Fill" which is observed, tested, and compacted as described in the following paragraphs.

Suitability of Onsite Materials

We expect that soil generated from excavations on the site, excluding deleterious material, may be used as engineered fill provided the material does not exceed 8 inches in maximum dimension. Any expansive soils should be thoroughly blended with non-expansive material prior to use as engineered fill. The contractor should either dispose of the excess oversized materials to an offsite location or mechanically reduce the rock to less than 8 inches. The soil/rock mixture should be thoroughly mixed so as to preclude nesting or the formation of voids.

Fill Placement and Compaction

Engineered fills should be placed in thin horizontal lifts not to exceed 8 inches in uncompacted thickness. If the contractor can achieve the recommended relative compaction using thicker lifts, the method may be judged acceptable based on field verification by a representative of our firm using standard density testing procedures. Lightweight compaction equipment may require thinner lifts to achieve the recommended relative compaction. Fills should have a maximum particle size of 8 inches unless approved by our firm.

The relative compaction of engineered fills is based on the maximum density and optimum moisture determined through the ASTM D1557 test method. We have considered the potential for differential settlement for this site and recommend that the engineered fills be placed at a relative compaction of 95 percent. Depending on the moisture condition of the soils, the engineered fills may require moisture conditioning to be within a suitable compaction range.

Our firm should be requested for consultation, observation, and testing for the earthwork operations prior to the placement of any fills. Fill soil compaction should be evaluated by means of in-place density tests performed during fill placement so that adequacy of soil compaction efforts may be determined as earthwork progresses. Should conventional testing methods not be achievable due to high rock content within the fill, a method specification should be provided by our firm at the time of construction.

Import Materials

The recommendations presented in this report are based on the assumption that the import materials will be similar to the materials present at the project site. High quality materials are preferred for import; however, these materials can be more dependent on source availability. Import material should be approved by our firm prior to transporting it to the project site.

Material for this project should consist of a material with the geotechnical characteristics presented below. If these requirements are not met, additional testing and evaluation may be necessary to determine the appropriate design parameters for foundations, pavement, and other improvements.

Table 2: Select Import Criteria

Behavior Property	Reference Document	Recommendation
Direct Shear Strength	ASTM D3080	32° when compacted
Plasticity Index	ASTM D4318	< 12
Expansion Index	ASTM D4829	≤ 20
Sieve Analysis	ASTM D1140	Not more than 30% Passing the No. 200 sieve
Maximum Aggregate Size	ASTM D1140	< 6”

Slope Configuration and Grading

The project site is proposed to have cuts and fill with a maximum slope orientation of 2H:1V (Horizontal:Vertical). Generally, a cut slope orientation of 2H:1V is considered stable with the material types encountered on the site. A fill slope constructed at the same orientation is considered stable if compacted to the engineered fill recommendations as stated in the recommendations section of this report. All slopes should have appropriate drainage and vegetation measures to minimize erosion of slope soils.

Placement of Fills on Slopes

Placement of fill material on natural slopes should be stabilized by means of keyways and benches. Where the slope of the original ground equals or exceeds 5H:1V, a keyway should be constructed at the base of the fill. The keyway should consist of a trench excavated to a depth of at least 2 feet into firm, competent materials. The keyway trench should be at least 10 feet wide or as designated by our firm based on the conditions at the time of construction. Benches should be cut into the original slope as the filling operation proceeds. Each bench should consist of a level surface excavated at least 6 feet horizontally into firm soils or 4 feet horizontally into rock. The rise between successive benches should not exceed 36 inches. The need for subdrainage should be evaluated at the time of construction. Refer to Figure B-1 in Appendix B for typical keyway and bench construction.

Slope Face Compaction

All slope fills should be laterally overbuilt and cut back such that the required compaction is achieved at the proposed finish slope face. As a less preferable alternative, the slope face could be track walked or compacted with a wheel. If this second alternative is used, additional slope maintenance may be necessary.

Slope Drainage

Surface drainage should not be allowed to flow uncontrolled over any slope face. Adequate surface drainage control should be designed by the project civil engineer in accordance with the latest applicable edition of the CBC. All slopes should have appropriate drainage and vegetation measures to minimize erosion of slope soils.

6.0 PRELIMINARY DESIGN RECOMMENDATIONS

The contents of this section include recommendations for foundations, slabs-on-grade, retaining walls, pavements, and drainage.

Shallow Conventional Foundations

Shallow conventional foundation systems are considered suitable for construction of the planned improvements, provided that the site is prepared in accordance with the recommendations discussed in Section 5.0 of this report.

The provided values do not constitute a structural design of foundations which should be performed by the structural engineer. In addition to the provided recommendations, foundation design and construction should conform to applicable sections of the 2022 California Building Code.

Foundation Capacities

The preliminary foundation bearing and lateral capacities are presented in the table below. The allowable bearing capacity is for support of dead plus live loads based on the foundation configuration presented in this report. The allowable capacity may be increased by 1/3 for short-term wind and seismic loads. Lateral forces on structures may be resisted by passive pressure acting against the sides of shallow footings and/or friction between the foundation bearing material and the bottom of the footing. Section 1806.3 of the 2022 CBC allows for the combination of the friction factor and passive resistance value to lateral resistance. Consideration should be given to ignoring passive resistance where soils could be disturbed later or within 6 feet horizontally of the slope face.

Table 3: Foundation Capacities

Soil Type	Design Condition	Design Value	Applied Factor of Safety
Engineered Fill or Firm Native Soil	Allowable Bearing Capacity	2,000 psf	3.0
	Allowable Friction Factor*	0.25	1.5
	Allowable Passive Resistance	150 psf/ft	1.5
Bedrock	Allowable Bearing Capacity	4,000 psf	3.0
	Allowable Friction Factor*	0.50	1.5
	Allowable Passive Resistance	400 psf/ft	1.5
* Friction Factor is calculated as tan( )			

Preliminary Foundation Configuration

Conventional shallow foundations should be a minimum of 12 inches wide and founded a minimum of 18 inches below the lowest adjacent soil grade for single-story structures. Foundations should be a minimum of 18 inches wide and founded a minimum of 24 inches below the lowest adjacent soil grade for three- and four-story structures. Isolated pad foundations should be a minimum of 24 inches in plan dimension.

Foundation reinforcement should be provided by the structural engineer. The reinforcement schedule should account for typical construction issues such as load consideration, concrete cracking, and the presence of isolated irregularities. At a minimum, we recommend that continuous footing foundations be reinforced with four No. 4 reinforcing bars, two located near the bottom of the footing and two near the top of the stem wall.

Slab-on-Grade Construction

It is our opinion that soil-supported slab-on-grade floors could be used for the main floor of the structures, contingent on proper subgrade preparation. Often the geotechnical issues regarding the use of slab-on-grade floors include proper soil support and subgrade preparation, proper

transfer of loads through the slab underlayment materials to the subgrade soils, and the anticipated presence or absence of moisture at or above the subgrade level. We offer the following comments and recommendations concerning support of slab-on-grade floors. The slab design (concrete mix design, curing procedures, reinforcement, joint spacing, moisture protection, and underlayment materials) is the purview of the project Structural Engineer.

Slab Subgrade Preparation

All subgrades proposed to support slab-on-grade floors should be prepared and compacted to the requirements of engineered fill as discussed in Section 5.0 of this report.

Slab Underlayment

As a minimum for slab support conditions, the slab should be underlain by a minimum 4-inch-thick crushed rock layer that is covered by a minimum 10-mil thick moisture retarding plastic membrane. The membrane may only be functional when it is above the vapor sources. The bottom of the crushed rock layer should be above the exterior grade to act as a capillary break and not a reservoir, unless it is provided with an underdrain system. The slab design and underlayment should be in accordance with ASTM E1643 and E1745.

An optional 1-inch blotter sand layer placed above the plastic membrane, is sometimes used to aid in curing of the concrete. Although historically common, this blotter layer is not currently included in slabs designed according to the 2022 Green Building Code. When omitted, special wet curing procedures will be necessary. If installed, the blotter layer can become a reservoir for excessive moisture if inclement weather occurs prior to pouring the slab, excessive water collects in it from the concrete pour, or an external source of water enters above or bypasses the membrane.

Our experience has shown that vapor transmission through concrete is controlled through proper concrete mix design. As such, proper control of moisture vapor transmission should be considered in the design of the slab as provided by the project architect, structural or civil engineer. It should be noted that placement of the recommended plastic membrane, proper mix design, and proper slab underlayment and detailing per ASTM E1643 and E1745 will not provide a waterproof condition. If a waterproof condition is desired, we recommend that a waterproofing expert be consulted for slab design.

Slab Thickness and Reinforcement

Geotechnical reports have historically provided minimums for slab thickness and reinforcement for general crack control. The concrete mix design and construction practices can additionally have a large impact on concrete crack control. All concrete should be anticipated to crack. As such, these minimums should not be considered to be standalone items to address crack control, but are suggested to be considered in the slab design methodology.

In order to help control the growth of cracks in interior concrete from becoming significant, we suggest the following minimums. Interior concrete slabs-on-grade not subject to heavy loads, should be a minimum of 4-inches thick and reinforced. A minimum of No. 3 deformed reinforcing bars placed at 24 inches on center both ways, at the center of the structural section is suggested. Joint spacing should be provided by the structural engineer. Troweled joints recovered with paste during finishing or “wet sawn” joints should be considered every 10 feet on center. Expansion joint felt should be provided to separate floating slabs from foundations and at least at every third joint. Cracks will tend to occur at recurrent corners, curved or triangular areas and at points of fixity. Trim bars can be utilized at right angle to the predicted crack extending 40 bar diameters past the predicted crack on each side.

Vertical Deflections

Soil-supported slab-on-grade floors can deflect downward when vertical loads are applied, due to elastic compression of the subgrade. For preliminary design of concrete floors, a modulus of subgrade reaction of k = 150 psi per inch would be applicable for engineered fills.

Exterior Flatwork

Exterior concrete flatwork is recommended to have a 4-inch-thick rock cushion. This could consist of vibroplate compacted crushed rock or compacted -inch aggregate baserock. If exterior flatwork concrete is against the floor slab edge without a moisture separator it may transfer moisture to the floor slab. Expansion joint felt should be provided to separate exterior flatwork from foundations and at least at every third joint. Contraction / groove joints should be provided to a depth of at least 1/4 of the slab thickness and at a spacing of less than 30 times the slab thickness for unreinforced flatwork, dividing the slab into nearly square sections. Cracks will tend to occur at recurrent corners, curved or triangular areas and at points of fixity. Trim bars can be utilized at right angle to the predicted crack extending 40 bar diameters past the predicted crack on each side.

Retaining Walls

Our design recommendations and comments regarding retaining walls for the project site is based on presumptive building code values addressed in Section 1610 of the California Building Code. *Retaining wall foundations should be designed in accordance with the Shallow Conventional Foundations section above.*

Retaining Wall Lateral Pressures

Based on our observations and testing, the retaining wall should be designed to resist lateral pressure exerted from a soil media having an equivalent fluid weight provided in the table below. The values presented below are not factored and are for conditions when firm native soil or engineered fill is used within the zone behind the wall defined as twice the height of the retaining wall. Additionally, the values do not account for the friction of the backfill on the retaining wall which may or may not be present depending on the wall materials and construction.

Table 4: Retaining Wall Pressures

Wall Type	Wall Slope Configuration	Equivalent Fluid Weight (pcf)
Free Cantilever	Flat	45
Restrained	Flat	100

* The surcharge loads should be applied as uniform loads over the full height of the walls as follows: Surcharge Load (psf) = (q) (K), where q = surcharge in psf, and K = coefficient of lateral pressure. Final design is the purview of the project structural engineer.

Wall Drainage

The criteria presented above is based on fully drained conditions as detailed in the attached Figure B-2, Appendix B. For these conditions, we recommend that a blanket of filter material be placed behind all proposed walls. Permeable materials are specified in Section 68 of the California Department of Transportation Standard Specifications, current edition. The filter material should conform to Class 1, Type B permeable material in combination with a filter fabric to separate the open graded gravel/rock from the surrounding soils. Generally, a clean inch crushed rock should be acceptable. Consistent with Caltrans Standards, when Class 2 permeable materials are used, the filter fabric may be omitted unless otherwise designed.

The blanket of filter material should be a minimum of 12-inches thick and should extend from the bottom of the wall to within 12 inches of the ground surface. The top 12 inches of wall backfill should consist of a compacted soil cap. A filter fabric having specifications equal to or greater than those for Mirafi 140N should be placed between the gravel filter material and the surrounding soils to reduce the potential for infiltration of soil into the gravel. A 4-inch diameter drain pipe should be installed near the bottom of the filter blanket with perforations facing down. The drainpipe should be underlain by at least 4 inches of filter-type material. An adequate gradient should be provided along the top of the foundation to discharge water that collects behind the retaining wall to a controlled discharge system.

The configuration of a long retaining wall generally does not allow for a positive drainage gradient within the perforated drain pipe behind the wall since the wall footing is generally flat with no gradient for drainage. Where this condition is present, to maintain a positive drainage behind the walls, we recommend that the wall drains be provided with a discharge to an appropriate non-erosive outlet a maximum of 50 feet on center. **In addition, if the wall drain outlets are temporarily stubbed out in front of the walls for future connection during building construction, it is imperative that the outlets be routed into the tight pipe area drainage system and not buried and rendered ineffective.**

Asphalt Concrete Pavement Design

We understand that asphalt pavements will be used for the associated roadways. The following comments and recommendations are given for pavement design and construction purposes. All pavement construction and materials used should conform to applicable sections of the latest edition of the California Department of Transportation Standard Specifications.

Relative Compaction

The asphalt concrete pavement section should be constructed to achieve the minimum relative compactions specified in Section 5.0 of this report. Deviation from the following values should be reviewed by the governing agency when the pavements are to be constructed within their right-of-way.

Subgrade Stability

All subgrades and aggregate base should be proof-rolled with a full water truck or equivalent immediately before paving, in order to evaluate their condition. If unstable subgrade conditions are observed, these areas should be overexcavated down to firm materials and the resulting excavation backfilled with suitable materials for compaction (i.e., drier native soils or aggregate base). Areas displaying significant instability may require geotextile stabilization fabric within the overexcavated area, followed by placement of aggregate base. Final determination of any required overexcavation depth and stabilization fabric should be based on the conditions observed during subgrade preparation.

Subgrade Resistance Value

Critical features that govern the durability of a pavement section include the stability of the subgrade; the presence or absence of moisture, free water, and organics; the fines content of the subgrade soils; the traffic volume; and the frequency of use by heavy vehicles. Soil conditions can be defined by a soil resistance value, or “R-Value,” and traffic conditions can be defined by a Traffic Index (TI). An R-Value test is not included in our scope of work for this project. Based on our experience in the area, R-values for the region generally range from 10 to 45. For the purposes of this report, we assume an R-Value of 27.

Proper surface and landscape drainage design is integral in performance of adjacent street sections with respect to stability and degradation of the asphalt. Due to the redistribution of materials that occurs during grading operations, we should review pavement subgrades to determine the appropriateness of the provided sections, and provide additional pavement design recommendations as field conditions dictate.

Section Thickness

The recommended design thicknesses presented in the following table were calculated in accordance with the methods presented in the Sixth Edition of the California Department of Transportation Highway Design Manual. A varying range of traffic indices are provided for use by the project Civil Engineer for roadway design.

Table 5: Asphalt Pavement Section Recommendations

Design Traffic Indices	Alternative Pavement Sections (Inches)	
	Asphalt Concrete *	Aggregate Base **
4.0	2.0 2.5	6.0 4.5
4.5	2.5 3.0	6.0 5.0
5.0	2.5 3.0	7.0 6.0
5.5	3.0 3.5	7.5 6.5
6.0	3.0 3.5	9.0 8.0
6.5	3.5 4.0	9.5 8.5
7.0	4.0 4.5	10.5 9.5
7.5	4.5 5.0	11.0 10.0
8.0	4.5 5.0	12.5 11.5

* Asphalt Concrete: must meet specifications for Caltrans Hot Mix Asphalt Concrete

** Aggregate Base: must meet specifications for Caltrans Class II Aggregate Base (R-Value = minimum 78)

Drainage

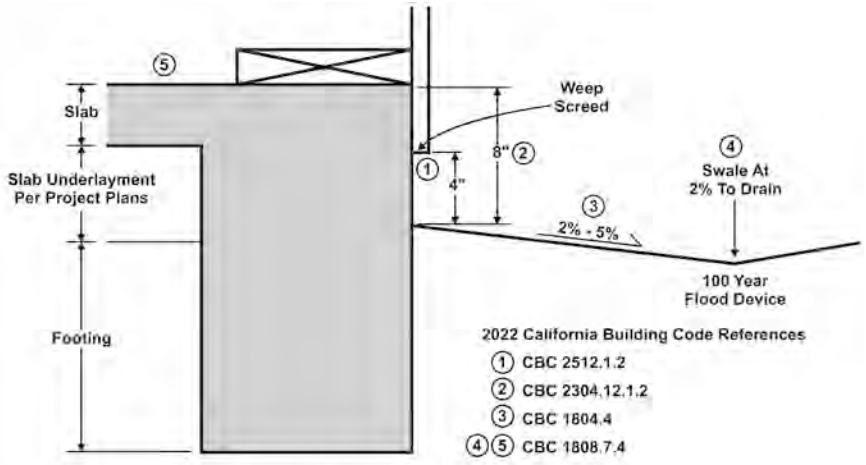
In order to maintain the engineering strength characteristics of the soil presented for use in this report, maintenance of the site will need to be performed. This maintenance generally includes, but is not limited to, proper drainage and control of surface and subsurface water which could affect structural support and fill integrity. A difficulty exists in determining which areas are prone to the negative impacts resulting from high moisture conditions due to the diverse nature of potential sources of water; some of which are outlined in the paragraph below. We suggest that measures be installed to minimize exposure to the adverse effects of moisture, but this will not guarantee that excessive moisture conditions will not affect the structure.

Some of the diverse sources of moisture could include water from landscape irrigation, annual rainfall, offsite construction activities, runoff from impermeable surfaces, collected and channeled water, and water perched in the subsurface soils. Some of these sources can be controlled through drainage features installed either by the owner or contractor. Others may not become evident until they, or the effects of the presence of excessive moisture, are visually observed on the property.

Some measures that can be employed to minimize the buildup of moisture include, but are not limited to proper backfill materials and compaction of utility trenches within the footprint of the proposed structures; grout plugs at foundation penetrations; collection and channeling of drained water from impermeable surfaces (i.e., roofs, concrete or asphalt paved areas); installation of subdrain/cut-off drain provisions; utilization of low flow irrigation systems; proper design and maintenance of landscaping and drainage facilities.

Drainage Adjacent to Buildings

All grades should provide rapid removal of surface water runoff; ponding water should not be allowed on building pads or adjacent to foundations or other structural improvements (during and following construction). All soils placed against foundations during finish grading should be compacted to minimize water infiltration. Finish and landscape grading should include positive drainage away from all foundations. Section 1808.7.4 of the 2022 California Building Code (CBC) states that for graded soil sites, the top of any exterior foundation shall extend above the elevation of the street gutter at the point of discharge or the inlet of an approved drainage device a minimum of 12 inches plus 2 percent. If overland flow is not achieved adjacent to buildings, the drainage device should be designed to accept flows from a 100-year event. Grades directly adjacent to foundations should be no closer than 8 inches from the top of the slab (CBC 2304.12.1.2), and weep screeds are to be placed a minimum of 4 inches clear of soil grades and 2 inches clear of concrete or other hard surfacing (CBC 2512.1.2). From this point, surface grades should slope a minimum of 2 percent away from all foundations for at least 5 feet but preferably 10 feet, and then 2 percent along a drainage swale to the outlet (CBC 1804.4). Downspouts should be tight piped via an area drain network and discharged to an appropriate non-erosive outlet away from all foundations.



Typical 2022 California Building Code Drainage Requirements

The above referenced elements pertaining to drainage of the proposed structures is provided as general acknowledgement of the California Building Code requirements, restated and graphically illustrated for ease of understanding. Surface drainage design is the purview of the Project Architect/Civil Engineer. Review of drainage design and implementation adjacent to the building envelopes is recommended as performance of these improvements is crucial to the performance of the foundation and construction of rigid improvements.

Subdrainage

Reduction of potential moisture related issues could be addressed by the construction of subdrains in addition to the drainage provisions provided in the 2022 CBC. Typical subdrain construction would include a 3 feet deep trench (or depth required to intercept the bottom of utility trenches) constructed as detailed on Figure B-3, Appendix B. The water collected in the subdrain pipe would be directed to an appropriate non-erosive outlet. We recommend that a representative from our firm be present during the subdrain installation procedures to document that the drain is installed in accordance with the observed field conditions, as well as to provide additional consultation as the conditions dictate.

Post Construction

All drainage related issues may not become known until after construction and landscaping are complete. Therefore, some mitigation measures may be necessary following site development. Landscape watering is typically the largest source of water infiltration into the subgrade. Given the soil conditions on site, excessive or even normal landscape watering could contribute to moisture related problems and/or cause distress to foundations and slabs, pavements, and underground utilities, as well as creating a nuisance where seepage occurs.

7.0 DESIGN REVIEW AND CONSTRUCTION MONITORING

To confirm that the assumptions used in this report are applicable, an evaluation of the subsurface conditions exposed at the site should be performed during construction activities. This evaluation would involve logging of the excavated conditions, obtaining representative samples for laboratory testing (if required) and preparation of a final engineering report confirming the preliminary assumptions used are applicable. Any adjustments to our recommendations would be provided at that time.

Construction Monitoring

Construction monitoring is a continuation of geotechnical engineering to confirm or enhance the findings and recommendations provided in this report. It is essential that our representative be involved with all grading activities in order for us to provide supplemental recommendations as field conditions dictate. Youngdahl Consulting Group, Inc. should be notified at least two working days before site clearing or grading operations commence, and should observe the stripping of deleterious material, overexcavation of soft soils and existing fills (if present), and provide consultation, observation, and testing services to the grading contractor in the field. At a minimum, Youngdahl Consulting Group, Inc. should be retained to provide services listed in Table 6 below.

The recommendations included in this report have been based in part on assumptions about strata variations that may be tested only during earthwork. Accordingly, these recommendations should not be applied in the field unless Youngdahl Consulting Group, Inc. is retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method. Youngdahl Consulting Group, Inc. cannot assume responsibility or liability for the adequacy of its recommendations when they are used in the field without Youngdahl Consulting Group, Inc. being retained to observe construction.

Post Construction Drainage Monitoring

Due to the elusive nature of subsurface water, the alteration of water features for development, and the introduction of new water sources, all drainage related issues may not become known until after construction and landscaping are complete. Youngdahl Consulting Group, Inc. can provide consultation services upon request that relate to proper design and installation of drainage features during and following site development.

8.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. This report has been prepared for the exclusive use of the addressee of this report for specific application to this project. The addressee may provide their consultants authorized use of this report. Youngdahl Consulting Group, Inc. has endeavored to comply with generally accepted geotechnical engineering practice common to the local area. Youngdahl Consulting Group, Inc. makes no other warranty, expressed or implied.

2. As of the present date, the findings of this report are valid for the property studied. With the passage of time, changes in the conditions of a property can occur whether they be due to natural processes or to the works of man on this or adjacent properties. Legislation or the broadening of knowledge may result in changes in applicable standards. Changes outside of our control may cause this report to be invalid, wholly or partially. Therefore, this report should not be relied upon after a period of three years without our review nor should it be used or is it applicable for any properties other than those studied.

3. Section [A] 107.3.4 of the 2022 California Building Code states that, in regard to the design professional in responsible charge, the building official shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

   WARNING: Do not apply any of this report's conclusions or recommendations if the nature, design, or location of the facilities is changed. If changes are contemplated, Youngdahl Consulting Group, Inc. must review them to assess their impact on this report's applicability. Also note that Youngdahl Consulting Group, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of this report's subsurface data or engineering analyses without the express written authorization of Youngdahl Consulting Group, Inc.

4. The analyses and recommendations contained in this report are based on limited windows into the subsurface conditions and data obtained from subsurface exploration. The methods used indicate subsurface conditions only at the specific locations where samples were obtained, only at the time they were obtained, and only to the depths penetrated. Samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations. Should any variations or undesirable conditions be encountered during the development of the site, Youngdahl Consulting Group, Inc. will provide supplemental recommendations as dictated by the field conditions.

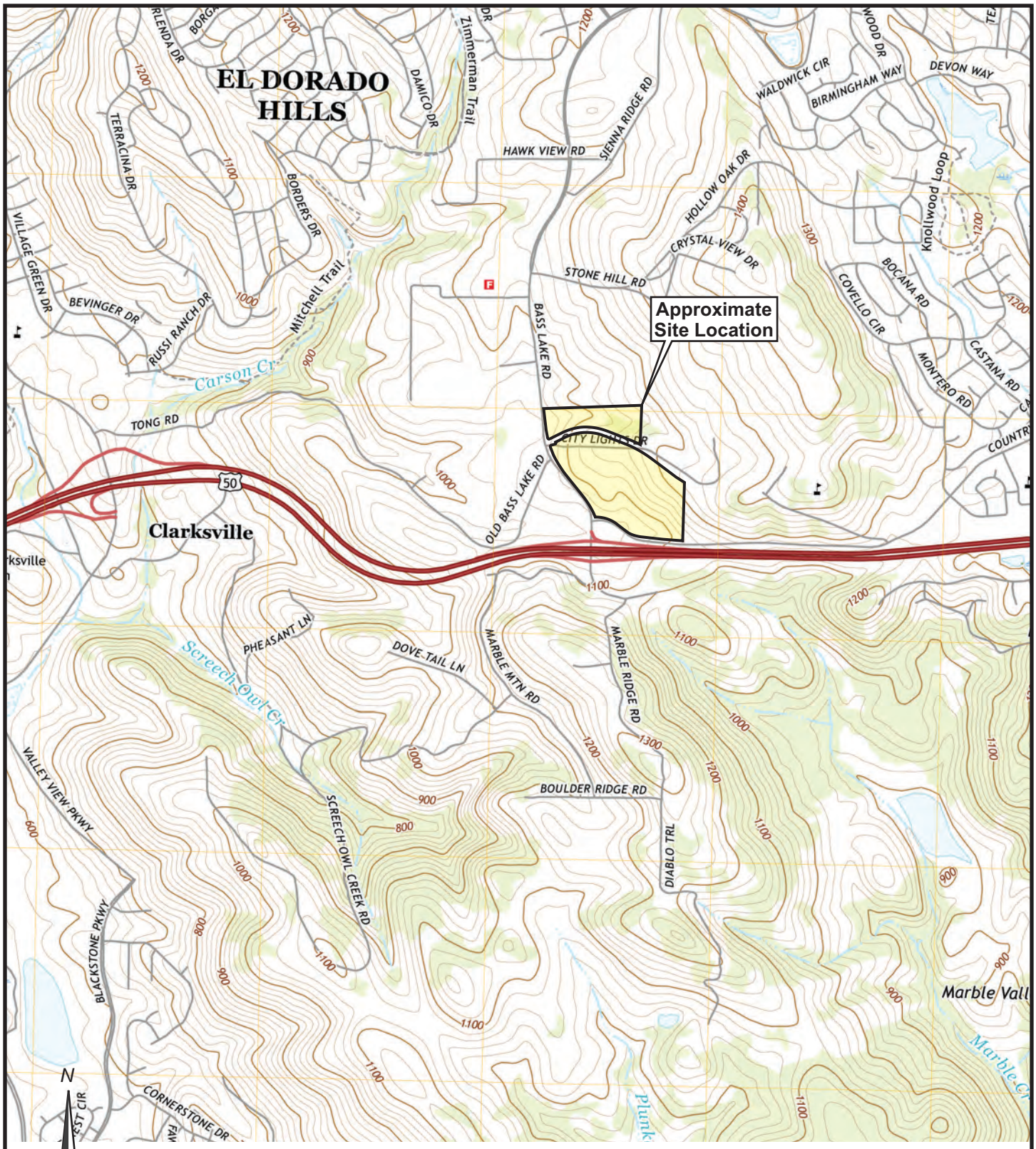
Table 6: Checklist of Recommended Services

Item Description		Recommended	Not Anticipated
1	Provide foundation design parameters	Included	
2	Review grading plans and specifications	✓	
3	Review foundation plans and specifications	✓	
4	Observe and provide recommendations regarding demolition		✓
5	Observe and provide recommendations regarding site stripping	✓	
6	Observe and provide recommendations on moisture conditioning removal, and/or recompaction of unsuitable existing soils	✓	
7	Observe and provide recommendations on the installation of subdrain facilities	✓	
8	Observe and provide testing services on fill areas and/or imported fill materials	✓	
9	Review as-graded plans and provide additional foundation recommendations, if necessary	✓	
10	Observe and provide compaction tests on storm drains, water lines and utility trenches		✓
11	Observe foundation excavations and provide supplemental recommendations, if necessary, prior to placing concrete	✓	
12	Observe and provide moisture conditioning recommendations for foundation areas and slab-on-grade areas prior to placing concrete		✓
13	Provide design parameters for retaining walls	Included	
14	Observe the installation of retaining wall drains	✓	
15	Provide finish grading and drainage recommendations	Included	
16	Provide geologic observations and recommendations for keyway excavations and cut slopes during grading	✓	
17	Excavate and recompact all test pits within structural areas		✓

APPENDIX A

Field Study

Vicinity Map
Site Plan



BASE MAP REFERENCE: *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2018*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.002 **February 2023**	**VICINITY MAP** **Town & Country Village Preliminary GES** El Dorado Hills, California	**FIGURE** **1**

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Project No.: E21526.002

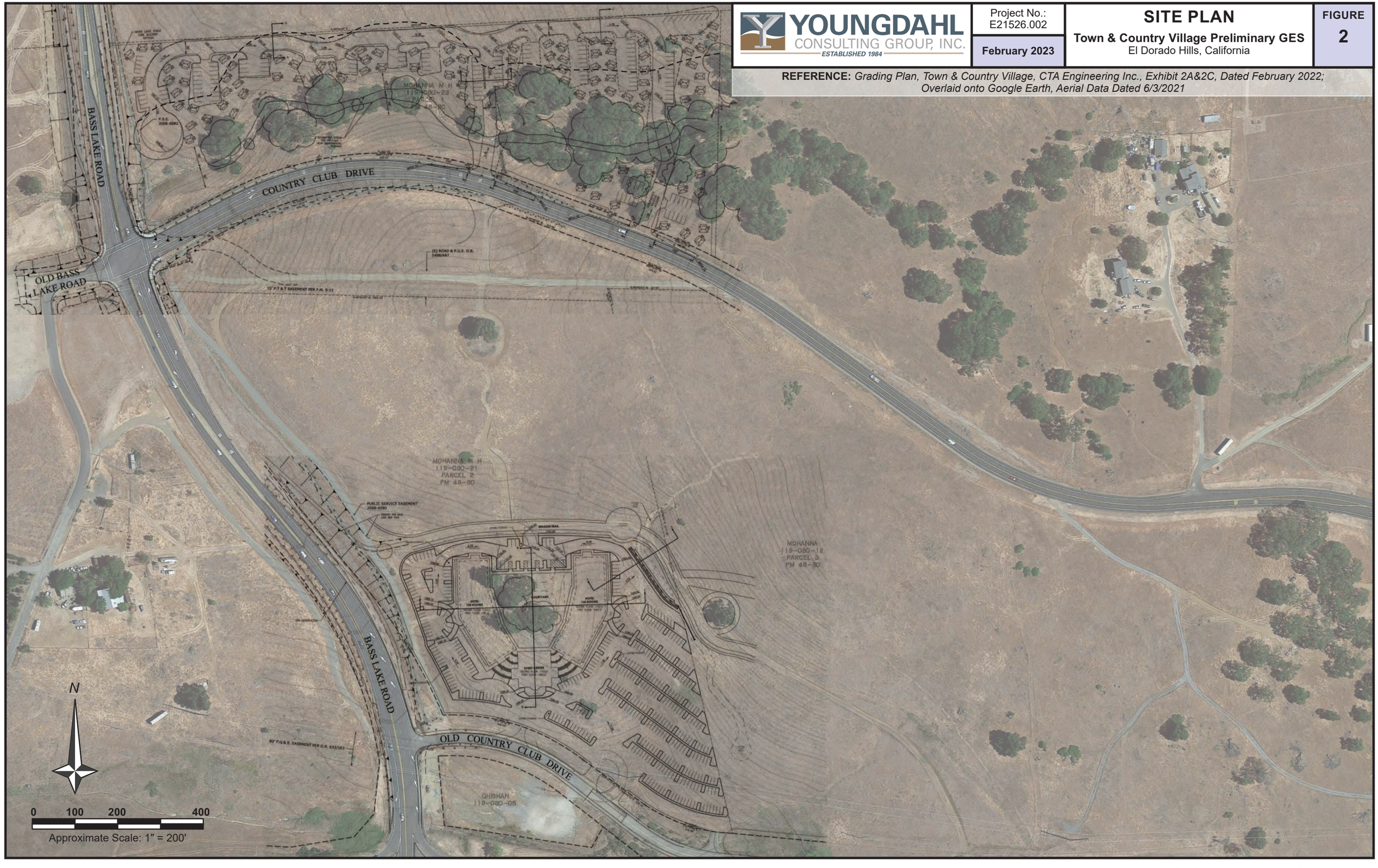
February 2023

SITE PLAN

Town & Country Village Preliminary GES
El Dorado Hills, California

FIGURE 2

REFERENCE: *Grading Plan, Town & Country Village, CTA Engineering Inc., Exhibit 2A&2C, Dated February 2022; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021*



APPENDIX B

Details

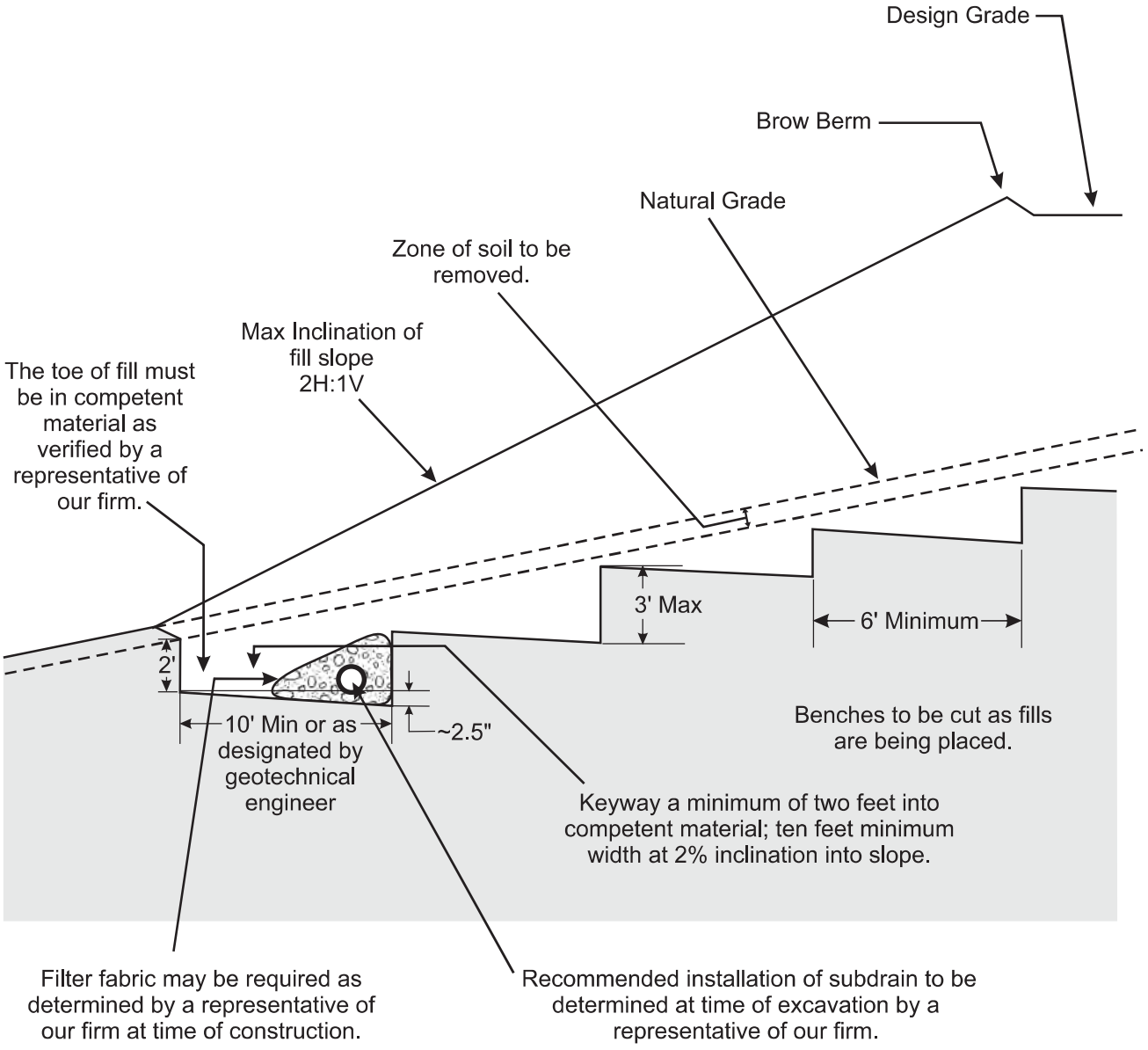
Keyway and Bench with Drain
Site Wall Drainage
Subdrain

PLACEMENT OF FILL ON NATURAL SLOPE

(Typical)

All keyways should be observed and approved prior to placement of fill.

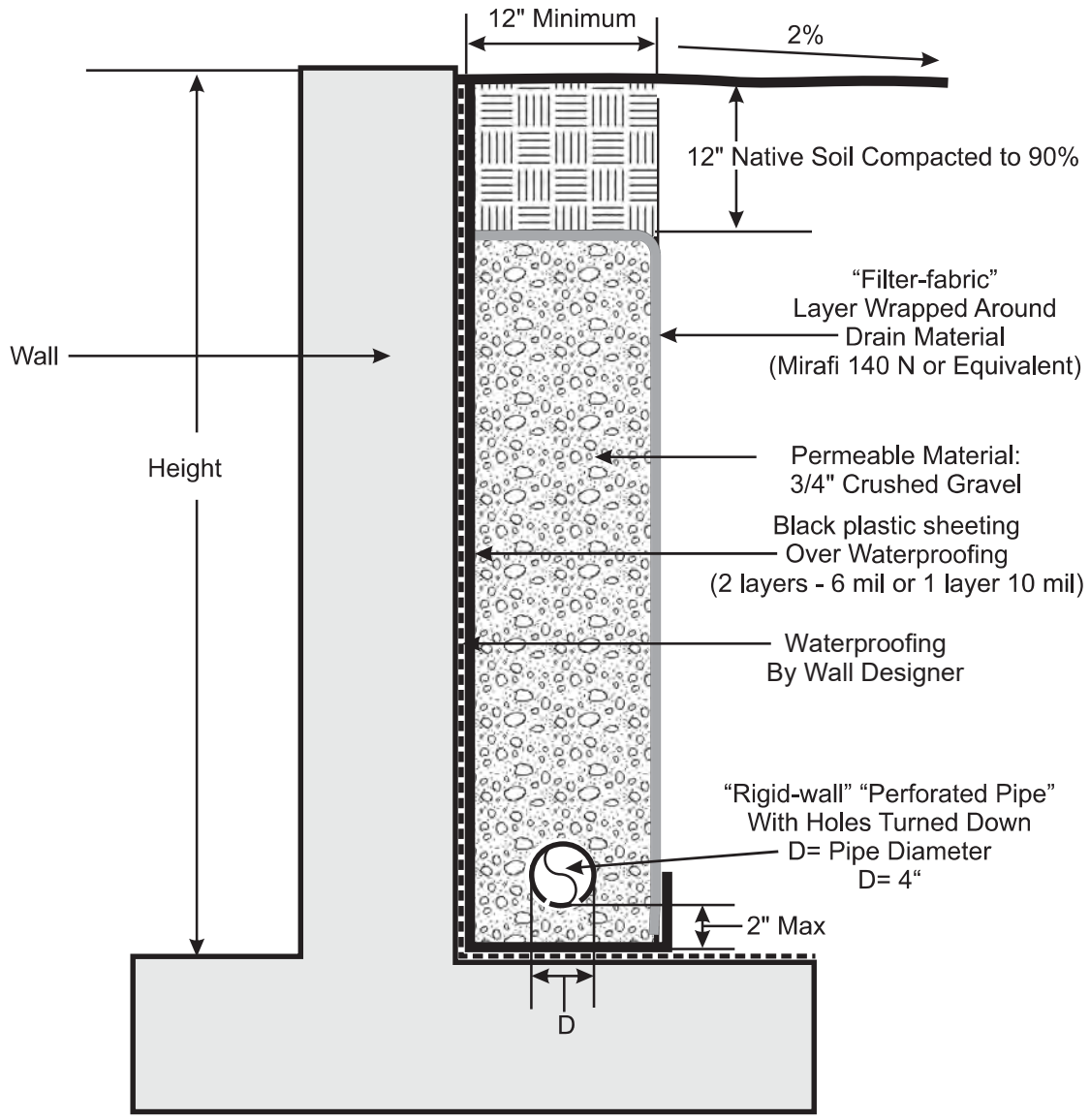
A keyway is required by CBC for fills on natural slopes of 5H:1V or steeper.



YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING	Project No.: E21526.002 **February 2023**	**KEYWAY & BENCH WITH DRAIN** **The Town and Country Village GES** El Dorado Hills, California	**FIGURE** **B-1**

Retaining Wall With "Perforated Pipe Sub-Drain"

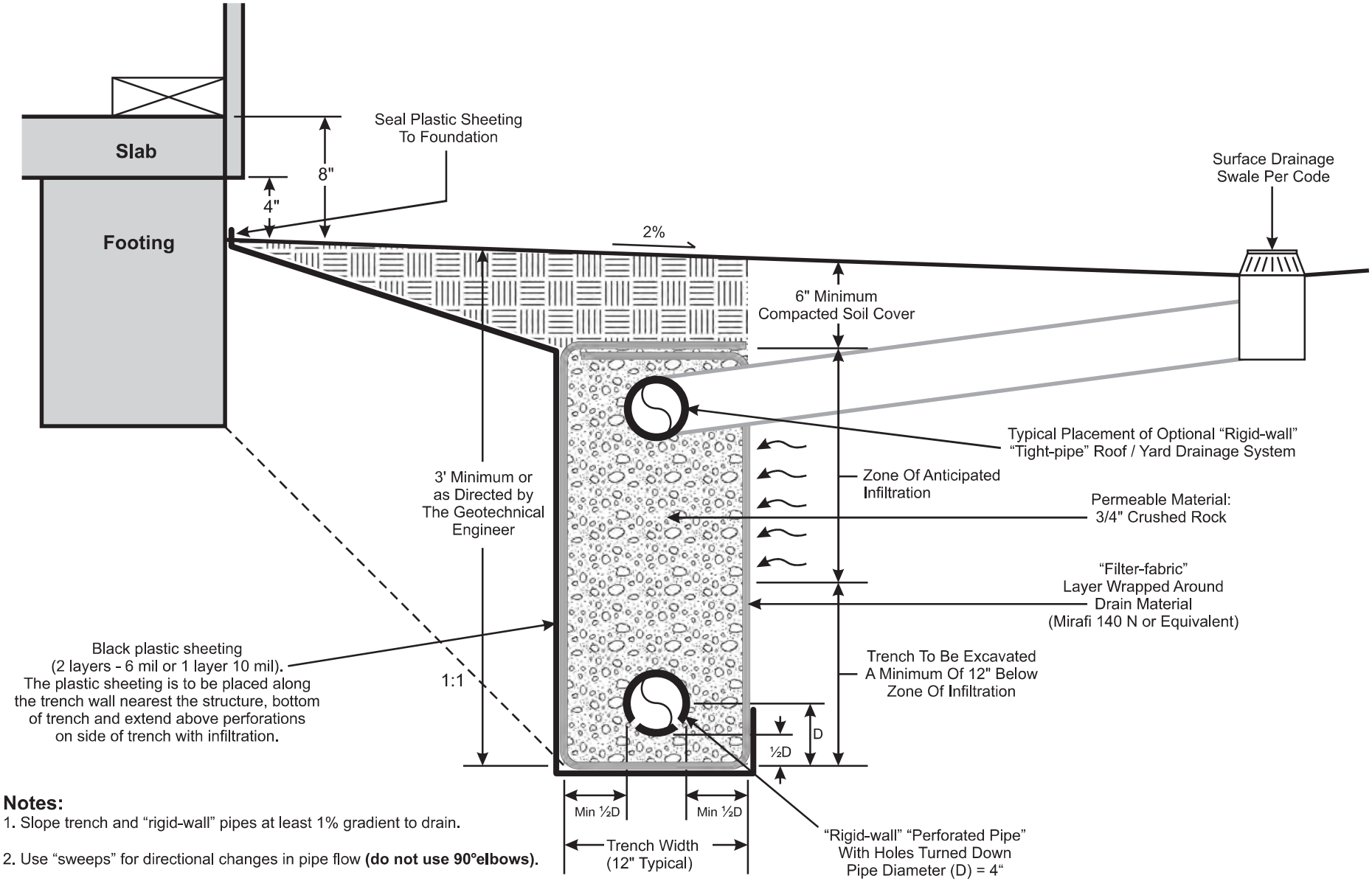
(Typical Cross Section)



Notes:
1. Slope footing and "rigid-wall" pipes along flow line parallel to wall at least 1% gradient to drain to an appropriate outfall area away from residence.
2. Use "sweeps" for directional changes in pipe flow **(do not use 90°elbows)**.
3. Provide periodic "clean-outs".
4. Washed clean permeable material.

Not To Scale

YOUNGDAHL CONSULTING GROUP, INC. GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING	Project No.: E21526.002 **February 2023**	**RETAINING WALL DRAIN DETAIL** **The Town and Country Village GES** El Dorado Hills, California	**FIGURE** **B-2**



Notes:

1. Slope trench and "rigid-wall" pipes at least 1% gradient to drain.
2. Use "sweeps" for directional changes in pipe flow **(do not use 90°elbows).**
3. Provide sweeps to periodic "clean-outs".
4. Washed clean permeable material.

YOUNGDAHL CONSULTING GROUP, INC.
GEOTECHNICAL ▪ ENVIRONMENTAL ▪ MATERIALS TESTING

Project No.: E21526.002

February 2023

SUB-DRAIN DETAIL

The Town and Country Village GES

El Dorado Hills, California

FIGURE

B-3

APPENDIX H

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
1234 Glenhaven Court, El Dorado Hills, CA 95762
4300 Anthony Court, Unit D, Rocklin, CA 95677
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Cap Funding – The Mohanna
1025 9th Street, Ste. 205
Sacramento, CA 95814

Project No. E21526.000
30 December 2021

Attention: Mr. Josh Pane

Subject: **TOWN AND COUNTRY VILLAGE, EL DORADO**
Bass Lake Road and Country Club Drive, El Dorado Hills
Preliminary Onsite Wastewater Treatment Feasibility Study

References:
1) Standards for the Site Evaluation, Design and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), prepared by El Dorado County Department of Environmental Management, dated 13 May 2018.
2) California Plumbing Code, Appendix H Private Sewage Disposal Systems, California Code of Regulations Title 24, Part 5.
3) Contract for the Town and Country Village between Youngdahl Consulting Group, Inc. and Cap Funding – The Mohana, executed 8 December 2021.

Dear Mr. Pane:
With the authorization of Cap Funding – The Mohanna, Youngdahl Consulting Group, Inc. (Youngdahl) has completed a preliminary feasibility study for onsite wastewater disposal for the planned Town and Country, El Dorado Project. Our scope included:

1) A review of preliminary project conceptual plans;
2) A review of existing soils data and topographic plans;
3) Subsurface exploration;
4) Constraints mapping;
5) Wastewater loading estimates;
6) Estimation of application rates based on observed soils;
7) Estimation of required area for onsite wastewater treatment;
8) Identification of potential areas to use of onsite wastewater treatment; and
9) Recommendations for further feasibility assessment.

1.0 EXECUTIVE SUMMARY

The Town & Country Village El Dorado is planned to include two 150-room hotels each with a restaurant, an event center, and up to 97 hotel staff residences and a guest cottages camp. The hotels, restaurants, and events center are estimated to generate approximately 31,900 gallons of wastewater per day. The cottages are estimated to generate approximately 33,950 gallons of wastewater per day. Site exploration conditions using a backhoe were precluded by saturated ground conditions, so an electrically powered auger was used to observe near surface soil types for which an absorption rate of 2½ gallons per day per square-foot was estimated. Significant site constraints such as shallow groundwater, the presence of seasonal drainages and a flowing stream, and rocky outcrops indicative of shallow soil conditions were identified. A minimum of 3.1 acres was estimated to be required for the hotels, restaurants, and events center. A minimum of 1.7 acres was estimated to be required for the cottages. An area 13½ acres in extent on the property might be suitable. We recommend the construction of backhoe test pits and percolation testing when conditions dry sufficiently. Future assessment is likely to result in a substantial increase the sizes of these estimated areas.

2.0 INTRODUCTION

Youngdahl is of the Understanding that Cap Funding – The Mohanna is planning to construct two 150-room hotels with restaurants, an event center, up to 97 hotel staff residences and a guest cottage camp, and other improvements just east of Bass Lake Road, south of Country Club Drive, and north of Old Country Club Drive, in El Dorado Hills, California (Subject Property). Currently, the nearest sewer service capable of handling projected wastewater loadings is approximately 7,000 feet east of the Subject Property. The purpose of this Preliminary Onsite Wastewater Treatment Feasibility Study (Feasibility Study) is to evaluate the feasibility of onsite wastewater treatment for the planned facilities as a temporary solution to managing wastewater until sanitary sewer facilities are constructed closer to the project.

3.0 EXISTING SITE CONDITIONS

The subject properties consist of El Dorado County Assessor Parcel Numbers (APNs) 119-080-021, 119-080-012, and 119-080-023, with the latter parcel traversed west to east by Country Club Drive. The slopes are gently rolling with gradients ranging from nearly flat to a few small areas exceeding 40 percent. The Subject Property is mostly grass covered with several oak trees. There are numerous rock outcrops in the northeastern portion. Seeps were observed. A seasonal creek flows westward through APN 119-080-023, the northernmost property. There are numerous drainage swales present. The Subject Property is accessed through gates on the north and south sides.

According to the Natural Resources Conservation Service Soil Web website, the Subject Property is predominately covered by Auburn very rocky silt loam, 2 to 30 percent slopes, and Auburn silt loam, 2 to 30 percent slopes. Both soils are described as having a soil profile of from 0 to 14 inches as being silt loam and underlain by unweathered bedrock. Both are described as having a capacity to transmit water as being low to moderately low.

4.0 SUBSURFACE EXPLORATION

On 17 December 2021, subsurface conditions were explored using an electrically powered 8-inch diameter soil auger. The use of a backhoe was precluded by saturated soil conditions resulting from recent rains eliminating access. Thirteen borings were constructed. In general soils were found to be either SANDY CLAY LOAM or LOAMY SAND. The depths to auger refusal ranged from 1-foot to 2½ feet. Groundwater was encountered in three borings. These depths are inadequate to explore the vertical constraints for onsite wastewater treatment systems, but are sufficient to allow a classification of near surface soils.

The northern drainage was observed to be flowing, likely due to recent periods of heavy rainfall. Two flowing seeps were observed on APNs 119-080-021and 119-080-012. A wet area was observed on the southern side of APN 119-080-021.

5.0 PRELIMINARY WASTEWATER LOADING ESTIMATES

Wastewater loading for the proposed improvements was estimated using Table 201.1(3) from the 2019 California Plumbing Code (CPC).

<u>150-Room Hotel</u>

The CPC specifies 60 gallons per day of wastewater per bed. If an assumption is made that there are 1 beds per room, the estimated loading is 11,250 gallons per day (gpd) per hotel.

<u>Restaurant</u>

For restaurant waste the CPC specifies 7 gpd per customer with toilet waste and 6 gpd for kitchen waste per customer. If there is a cocktail lounge, the CPC lists 2 gpd per customer. If the

Restaurant has 300 customers per day there would be 3,900 gpd of wastewater. If we assume there is a cocktail lounge handling 150 customers per day, there would an additional 300 gpd bringing the total to 4,200 gpd per restaurant.

Event Center

The CPC doesn't present a loading rate for event centers. The closest is for a church with a kitchen at 7 gpd per seat per day. If we assume an event of 250 people, that would equate to 1,750 gallons per day of wastewater. However, events are usually weighted towards weekend occurrences; weekday loading is generally much less. Flow equalization via storage tanks can be used to distribute the flow more evenly over extended periods of time. Therefore, for this loading estimate, we will use a value of 1,000 gpd.

Hotel Staff Residences and Guest Cottages Camp

Up to 97 small cottages are planned for the northern portion of the property. These are planned to be no more than 450 square feet each in size. These are planned to be managed more as hotel staff residences and a guest cottages camp then as regular residences. The OWTS Manual (Reference No. 1) indicates that non-residential flows are to be estimated using the CPC. The CPC lists a loading rate of 50 gpd per person for camps. If two people per cottage are planned, this would equate to a 9,700 gpd net loading.

6.0 ESTIMATED APPLICATION RATES

The shallow soils exposed by the auger include SANDY CLAY LOAM and LOAMY SAND. The OWTS Manual specifies a maximum absorption capacity of 2½ gpd per ft^2 for these kinds of soils.

We were unable to profile deeper soils and/or the weathered bedrock. The deeper soils may have significantly lower absorption capacity.

7.0 ESTIMATED REQUIRED DISPOSAL AREA

The area required for disposal is a function of the daily volume of wastewater, the characteristics of the treatment area, and the technology used for treatment/disposal. In EL Dorado County commercial properties are required to have 300 percent replacement areas. The hotels, restaurants, events center and hotel staff residences and guest cottage camp are considered to be commercial uses.

The total estimated loading for the hotels, restaurants, events center, and hotel staff residences and guest cottages camp is 41,600 gpd. At a 2½ gpd per ft^2 application rate, 16,640 ft^2 of area would be needed. Typical disposal trenches are 3 feet deep by 3 feet wide. If trenches are filled with rock, the application area is the trench sidewall measured from the invert of the distribution pipe to the trench bottom. This equates to 3 ft^2 of sidewall area per lineal foot of trench. If the trenches are filled with polystyrene pellet bundles, the bottom area of the trench can be used increasing the application area to 6 ft^2 per lineal foot. Under this later scenario, 2,774 lineal feet of trenches would be needed.

Individual disposal trenches can be no longer than 100 feet and can be no closer than 10 feet on centers. In practice, it can be difficult to install numerous trenches on 10-foot centers; 12 or more feet is more realistic. Twenty-eight trenches would be needed. With 12-foot spacings and 10-foot setbacks, a minimum of an area approximately 356 feet by 120 feet (0.98 acres) would be required. The 300 percent replacement system requirement increases this to about 3.9 acres. The system should be dispersed into several smaller areas in order to minimize groundwater mounding.

8.0 POTENTIAL ONSITE WASTEWATER TREATMENT AREAS

Borings identified a few potentially suitable areas and several unsuitable areas. Subsurface exploration identified an area underlain by shallow saturated groundwater conditions on the south side of the property. Large areas contain numerous rock outcrops, indicative of shallow rock. Several drainage swales, two seeps, and a seasonally flowing creek were identified. These are all subject to setbacks ranging from 50 to 100 feet. An area approximately 13½ acres in size was identified on the western portion of the property north of the planned commercial development. Selected areas will still require the excavation of soil profile pits to a depth of at least 8 feet and percolation testing to validate them.

9.0 FINDINGS AND RECOMMENDATIONS

The shallow soils on the property are indicative of potentially suitable areas for onsite wastewater treatment and disposal. Saturated soil conditions prevented the use of excavation equipment that would otherwise be needed to evaluate soil and rock conditions to depths of at least 8 feet. The area on the western side of the property and north of the planned commercial development is the most likely suitable area for onsite wastewater treatment/disposal, pending further assessment.

When conditions dry sufficiently, soil profile test pits should be constructed in planned disposal areas and percolation testing of soils to planned trench depths should be performed. The results of this additional study should be used to refine likely onsite wastewater treatment and disposal options for this project.

This study has been performed following standards of practice common to onsite wastewater feasibility and evaluation at the time and geographic vicinity of our study. This is not a design level study. No warranties are expressed or implied. Please do not hesitate contacting us with any questions.

Very truly yours,
Youngdahl Consulting Group, Inc.



David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist

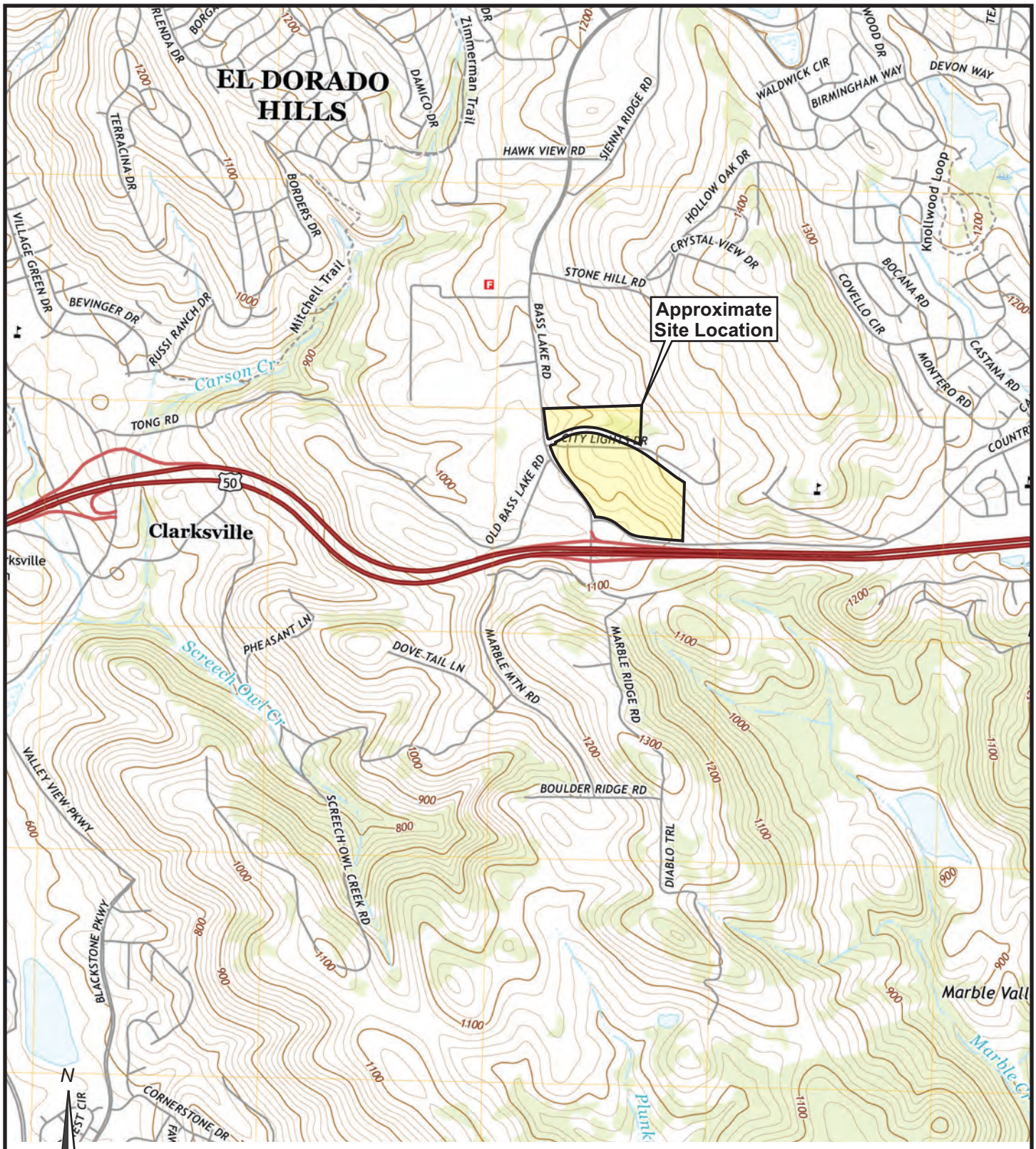
1-6-22

Attachments:
Table 1: Soil Descriptions
Figures 1 – 2

Distribution: One electronic copy to client

Table 1: Soil Descriptions

Boring	Depth	Coordinates (Latitude, Longitude)	Description
TC-1	2’	38.660898, -121.029356	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown
TC-2	1’	38.660958, -121.030608	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown
TC-3	2.5’	38.656232, -121.027046	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown, water at 2’
TC-4	3’	38.656451, -121.027549	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown, water at 2’
TC-5	1.5’	38.656652, -121.028351	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown, less clay content
TC-6	2.5’	38.656822, -121.028842	LOAMY SAND, 7.5YR3/4
TC-7	2’	38.657234, -121.029427	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown
TC-8	1’	38.658192, -121.029478	LOAMY SAND, 7.5YR3/4
TC-9	1’	38.658310, -121.028157	LOAMY SAND, 7.5YR3/4, water at 1’
TC-10	1’	38.657559, -121.026931	LOAMY SAND, 7.5YR3/4, slight clay binder
TC-11	1’	38.657747, -121.025933	LOAMY SAND, 7.5YR3/4, slight clay binder
TC-12	1.5’	38.657177, -121.025674	LOAMY SAND, 7.5YR3/4, slight clay binder
TC-13	2’	38.655968, -121.025479	SANDY CLAY LOAM, 7.5YR3/3 Dark Brown



Scale: 1:24,000

BASE MAP REFERENCE: *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2018*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.000 **December 2021**	**VICINITY MAP** **The Town & Country Village El Dorado** El Dorado Hills, California	**FIGURE** **1**

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984

Project No.: E21526.000

December 2021

SITE PLAN

The Town & Country Village El Dorado
El Dorado Hills, California

FIGURE 2

TC-1 = Approximate Boring Locations = Seeps
= Intermittent Stream = Drainage Swale

REFERENCE: *Slope Map Exhibit, Town & Country Village, CTA Engineering Inc., Dated October 2021; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021*

COLOR LEGEND

COLOR	SLOPE RANGE BEGINNING	SLOPE RANGE END	AREA	PERCENT OF AREA SHOWN
	0%	10%	17.16 A.c.	23.31%
	11%	20%	41.13 A.c.	55.88%
	21%	29%	11.75 A.c.	15.96%
	29%	39%	1.71 A.c.	2.32%
	40%+		1.86 A.c.	2.53%

Potential Disposal Area
Potential Disposal Area
TC-1
TC-2
TC-3
TC-4
TC-5
TC-6
TC-7
TC-8
TC-9
TC-10
TC-11
TC-12
TC-13
WATERLINE EASEMENT 702/403
MOHANNA M H 119-080-23 PARCEL 1 PM 48-80
MOHANNA M H 119-080-21 PARCEL 2 PM 48-80
MOHANNA 119-080-12 PARCEL 3 PM 48-80
GHISHAN 119-080-05
P.S.E. 2008-6082
PUBLIC SERVICE EASEMENT 2008-6080
LANDSCAPE & P.S.E. 2008-6082
10' X 15' EASEMENT PACIFIC BELL TELE. CO. 2000-0041045
Easement for electrical facilities to American River Electric Co. per 62 O.R. 81 may affect this parcel. No exact location given.
(E) ROAD & P.U.E. O.R. 1498/687
15' P.T.& T EASEMENT PER P.M. S-11
15' P.T.& P.M. 5-11
ROAD & P.U.E. O.R. 1498/688
80' P.G.& E. EASEMENT PER O.R. 633/163
Most Likely to Be Suitable
Not Likely to Be Suitable
Less Likely to Be Suitable
Rocky
Wet Area
Shallow Groundwater
Proposed Commercial Property
40' Cut Setback
50'
100'
R=1350.00' N11°00'00"E 161.20'
191.57' S 63°24'14" W
R=272.00' N81°16'51"E 475.75'
R=802.00' N86°17'54"W 668.93'
R=1440.00' N66°12'33"W 180.86'
341.48' N 69°48'26" W
353.89' N 69°48'26" W
144.69' S 82°24'14" W
24.84' N 17°35'46" W
67.75' N 72°24'14" E
N 88°42'03" W 1005.33'
227.81' N 88°42'03" W
30.95' S 12°56'51" E
R=1360.00' N65°55'52"W 184.02'
R=1360.00' S58°05'03"W 188.49'
R=1440.00' N59°21'49"W 163.25'
S01°17'57"W 577.12'
S08°44'25"W
S54°06'50"E 340.85'
S 54°06'50" E 499.10'
S54°06'50"E 158.25'
R=1350.00' N30°27'08"E 437.81'
S 38°44'34" E 257.97'
S 12°56'51" E 177.40'
S37°47'11"E 179.10'
R=400.00' S72°10'20"E 218.98'
S84°31'10"E 309.60'
R=802.00' S59°06'53"E 140.00'
S 00°53'06" W 852.89'
227.70' N80°42'59"E 150.33'
R=1200.00' N26°41'32"W 166.56'
R=1200.00' N72°18'56"W 344.14'
R=393 S89°4 297.57'
N
0 100 200 400
Approximate Scale: 1" = 200'

APPENDIX I

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
1234 Glenhaven Court, El Dorado Hills, CA 95762
4300 Anthony Court, Unit D, Rocklin, CA 95677
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Cap Funding – The Mohanna
1025 9th Street, Ste. 205
Sacramento, CA 95814

Project No. E21526.000
13 March 2022

Attention: Mr. Josh Pane

Subject: **TOWN AND COUNTRY VILLAGE, EL DORADO**
Bass Lake Road and Country Club Drive, El Dorado Hills
Preliminary Onsite Wastewater Percolation and Mantle Testing

References:
1) Standards for the Site Evaluation, Design and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), prepared by El Dorado County Department of Environmental Management, dated 13 May 2018.
2) California Plumbing Code, Appendix H Private Sewage Disposal Systems, California Code of Regulations Title 24, Part 5.
3) Contract for the Town and Country Village between Youngdahl Consulting Group, Inc. and Cap Funding – The Mohana, executed 8 December 2021.
4) Preliminary Onsite Wastewater Treatment Feasibility Study, Town and Country Village, El Dorado, prepared by Youngdahl Consulting Group, Inc. date 30 December 2021.
5) Town and Country Village, El Dorado, Change Order No. 1, dated 10 January 2022.

Dear Mr. Pane:
With the authorization of Cap Funding – The Mohanna, Youngdahl Consulting Group, Inc. (Youngdahl) has completed preliminary percolation and mantle testing for the planned Town and Country, El Dorado Project. Our scope included:

1) The selection of test pit (mantle test) locations for an Underground Services Alert;
2) Subsurface exploration using a mini-excavator;
3) Observations of soil profiles by Youngdahl and a representative of the El Dorado County Environmental Health Department;
4) Percolation testing;
5) Updated estimation of wastewater application rates based on percolation test results and soil profiles;
6) Estimation of the minimum required area for onsite wastewater treatment;
7) Further identification of potential areas for the use of onsite wastewater treatment; and
8) The preparation of this report.

1.0 EXECUTIVE SUMMARY

The Town & Country Village El Dorado is planned to include two 150-room hotels each with a restaurant, an event center, and up to 97 hotel staff residences and a guest cottages camp. The hotels, restaurants, and events center are estimated to generate approximately 31,900 gallons of wastewater per day. The cottages are estimated to generate approximately 9,700 gallons of wastewater per day. A previous study was performed that evaluated shallow soil textures to estimate potential onsite wastewater application rates. However, due to site access being extremely limited due to rainfall saturated soils, the soils were only evaluated to relatively shallow depths and a follow up study was recommended. This follow up study was performed to address full soil profiles and the percolation rates of deeper soils.

Five test pits were excavated in the upper ridge area identified as most likely being suitable for onsite wastewater disposal by the previous study. The upper 2 to 3 feet of soil was composed of silty to sandy clay. This was underlain by highly weathered metavolcanic bedrock to the 4-to-8-

foot total pit depths. Four percolation tests were performed next to each test pit location. Percolation tests at depths of 3 feet generally did not percolate significantly within the 4-hour test timeframe. Shallow percolation test rates were found to be as high as 7 minutes per inch at a depth of 1-foot. An average percolation rate of 109 minutes per inch was estimated.

The previous study estimated loading rates of 41,600 gallons per day. Using trench systems, an estimated two hundred eighteen trenches 100 feet in length would be needed resulting in a minimum of 17.3 acres required for disposal area. Subsurface drip disposal was estimated to require at least 12.7 acres for disposal.

We conclude that the site is significantly constrained by relatively thin soils overlying fractured bedrock. However, onsite treatment and disposal is likely feasible using an advanced treatment system. This report should be provided to a design wastewater engineer to further evaluate the feasibility of onsite treatment and disposal.

2.0 INTRODUCTION

Youngdahl is of the Understanding that Cap Funding – The Mohanna is planning to construct two 150-room hotels with restaurants, an event center, up to 97 hotel staff residences configured as a guest cottage camp, and other improvements, just east of Bass Lake Road, south of Country Club Drive, and north of Old Country Club Drive, in El Dorado Hills, California (Subject Property). Currently, the nearest sewer service capable of handling the projected wastewater loadings is approximately 7,000 feet west of the Subject Property. Youngdahl prepared a Preliminary Onsite Wastewater Treatment Feasibility Study (Feasibility Study) to evaluate the feasibility of onsite wastewater treatment for the planned facilities as a temporary solution to managing wastewater until sanitary sewer facilities are constructed closer to the project. Site conditions were not conducive to accessing the site with subsurface exploration equipment at the time of the study. Subsurface conditions were explored using a portable electric soil auger which proved to be limited to only very near surface shallow soil. A recommendation was made to excavate test pits and to perform percolation testing when site conditions dried sufficiently. This is the report of the results of this follow up effort.

3.0 EXISTING SITE CONDITIONS

The subject properties consist of El Dorado County Assessor Parcel Numbers (APNs) 119-080-021 and 119-080-023, with the latter parcel traversed west to east by Country Club Drive. The slopes are gently rolling with gradients ranging from nearly flat to a few small areas exceeding 40 percent. The Subject Property is mostly grass covered with several oak trees. There are numerous rock outcrops. A seasonal creek flows westward through APN 119-080-023, the northernmost property. There are drainage swales present. The Subject Property is accessed through gates on the north and south sides.

This upper ridge area was identified by the Preliminary Feasibility Study to be the area most likely be suitable for onsite wastewater disposal. Five test locations were selected in this area. The test locations were marked with white stakes on 12 January 2022 and a call was placed with Underground Services Alert Northern California.

4.0 SUBSURFACE EXPLORATION

On 18 January 2022, subsurface conditions were explored using a Takeuchi TB380 excavator equipped with an 18-inch bucket. In general, the soil profiles were found to range from 1 to 1½ feet of brown SILTY CLAY over 0.5 to 1.5 feet of brown SANDY CLAY, over strong brown intensely weathered and highly fractured metavolcanic rock. Test pit (mantle test) total depths ranged from 4 to 8 feet to practical refusal depths. No caving or groundwater was observed. Each

pit was logged using the United States Department of Agriculture soil classification system. Each pit was observed by a representative of the El Dorado County Department of Environmental Health.

5.0 PERCOLATION TESTING

On the 18th of January an 8-inch diameter electric auger was used to advance borings to the depths shown in Table 1. Percolation testing apparatus with pea gravel packing was installed into each boring. Water was than added to a height of 12 inches above the hole bottoms and maintained for a period of 4 hours. On the following day, water was added to a depth of at least 6 inches above the hole bottoms and the rate of drop was measured for 4 hours, with refilling performed as necessary.

Table 1 – Percolation Testing Results

Percolation Test	Depth (feet)	Final Percolation Rate (minutes per inch)
1A	3	DNP*
1B	2.5	300
1C	2	20
1D	2	43
2A	3	DNP
2B	2.5	300
2C	2	100
2D	1.5	50
3A	3	DNP
3B	2.5	19
3C	2	30
3D	1.5	150
4A	3	DNP
4B	2.5	150
4C	3	DNP
4D	1	9
5A	3	300
5B	2.5	300
5C	2	43
5D	1	7

DNP= Did Not Percolate

In general, the shallow soils were found to have good percolation rates and the underlying weathered bedrock did not have significant percolation rates. The bedrock acts as a limiting layer.

6.0 ESTIMATED APPLICATION RATES

The shallow soils are predominately silty to sandy clay. This overlies highly weathered bedrock, which represents a limiting layer. The fact that the deep soils within the bedrock were found to be moist is indicative that there is infiltration in this limiting layer. If the percolation rates from depths of 2½ feet or shallower from Table 1 are averaged, the result is 109 minutes per inch. For trench applications, the Reference No. 1 manual specifies that the application rate would be 0.48 gallons per day per square-foot (gpd/ft^2).

With the shallow restrictive layer, the effluent may be required to be substantially treated. A subsurface drip disposal system might then be considered. For silty clay with a moderate to strong structure, the GeoFlow, Inc. website specifies a disposal rate of 0.3 gpd/ft^2.

7.0 PRELIMINARY WASTEWATER LOADING ESTIMATES

Wastewater loading for the proposed improvements was estimated using Table 201.1(3) from the 2019 California Plumbing Code (CPC).

150-Room Hotel

The CPC specifies 60 gallons per day of wastewater per bed. If an assumption is made that there are 1 beds per room, the estimated loading is 11,250 gallons per day (gpd) per hotel.

Restaurant

For restaurant waste the CPC specifies 7 gpd per customer with toilet waste and 6 gpd for kitchen waste per customer. If there is a cocktail lounge, the CPC lists 2 gpd per customer. If the Restaurant has 300 customers per day there would be 3,900 gpd of wastewater. If we assume there is a cocktail lounge handling 150 customers per day, there would an additional 300 gpd bringing the total to 4,200 gpd per restaurant.

Event Center

The CPC doesn't present a loading rate for event centers. The closest listed facility is for a church with a kitchen at 7 gpd per seat per day. If we assume an event of 250 people, that would equate to 1,750 gallons per day of wastewater. However, events are usually weighted towards weekend occurrences; weekday loading is generally much less. Flow equalization via storage tanks can be used to distribute the flow more evenly over extended periods of time. Therefore, for this loading estimate, we will use a value of 1,000 gpd.

Hotel Staff Residences and Guest Cottages Camp

Up to 97 small cottages are planned for the northern portion of the property. These are planned to be no more than 450 square feet each in size. These are planned to be managed more as hotel staff residences and a guest cottages camp then as regular residences. The OWTS Manual (Reference No. 1) indicates that non-residential flows are to be estimated using the CPC. The CPC lists a loading rate of 50 gpd per person for camps. If two people per cottage are planned, this would equate to a 9,700 gpd net loading.

8.0 ESTIMATED REQUIRED DISPOSAL AREA

The area required for disposal is a function of the daily volume of wastewater, the characteristics of the treatment area, and the technology used for treatment/disposal. In El Dorado County, commercial properties are required to have 300 percent replacement areas. The hotels, restaurants, events center and hotel staff residences and guest cottage camp are considered to be commercial uses.

The total estimated loading for the hotels, restaurants, events center, and hotel staff residences and guest cottages camp is 41,600 gpd. At a 0.48 gpd per ft^2 application rate, 87,000 ft^2 of area would be needed. The 2½ to 3-foot depth of practical soil reduces the feasibility of leaching trenches. Such trenches might have to be 1 to 2 feet deep by 3 feet wide and constructed with a capping fill. If trenches are filled with rock, the application area is the trench sidewall measured from the invert of the distribution pipe to the trench bottom. This equates to 1 ft^2 of sidewall area per lineal foot of trench. If the trenches are filled with polystyrene pellet bundles, the bottom area

of the trench can be used increasing the application area to 4 ft^2 per lineal foot. Under this later scenario, 21,750 lineal feet of trenches would be needed.

Individual disposal trenches can be no longer than 100 feet and can be no closer than 10 feet on centers. In practice, it can be difficult to install numerous trenches on 10-foot centers; 12 or more feet is more realistic. Two hundred eighteen trenches would be needed. With 12-foot spacings and 10-foot setbacks, a minimum area of approximately 2,088 feet by 120 feet (5.8 acres) would be required. The 300 percent replacement system requirement increases this to about 17.3 acres. The system should be dispersed into zones and pressure dosed in order to minimize groundwater mounding.

Alternatively, subsurface drip could be used. These would be installed in large fields approximately 6 to 9 inches below the surface. Using the 0.3 gpd/ft^2 loading rate discussed above, approximately 140,000 square feet of area (approximately 3.2 acres) would be required. Applying the 300 percent replacement area requirement, this would sum up to approximately 12.7 acres, with some additional area required due to the presence of rock outcrops and other constraints. Such a design should implement zones of drip emitters to minimize the potential for groundwater mounding.

9.0 FINDINGS AND RECOMMENDATIONS

The site is significantly constrained by relatively thin soils overlying fractured bedrock. The fractured bedrock represents a limiting layer, however one that still infiltrates water at a slow rate. Onsite waste water disposal using an advanced treatment system is likely feasible. This report should be supplied to a design wastewater engineer to further evaluate the feasibility of onsite wastewater treatment and disposal.

This study has been performed following standards of practice common to onsite wastewater feasibility and evaluation at the time and geographic vicinity of our study. This is not a design level study. No warranties are expressed or implied. Please do not hesitate contacting us with any questions.

Very truly yours,
Youngdahl Consulting Group, Inc.

CERTIFIED ENGINEERING GEOLOGIST
DAVID C. SEDERQUIST
NO. 2133
EXPIRATION DATE
9-20-22
STATE OF CALIFORNIA

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist
3-11-22

Attachments:
Percolation Test Results
Figures 1 – 10

Distribution: One electronic copy to client

Percolation Test Data Sheet

Project No. E21526.000
Test Pit No.
Date: 1/18/2022
Testhole No.: 1A
Sheet No.: 1 of 10
GPS 38.659837 -121.030097 **Testhole Depth:** 3' **Width:** 12"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	11	11	0.00
10:30:00 AM	11:00:00 AM	0:30	11	10.9	0.10
11:00:00 AM	11:30:00 AM	0:30	10.9	10.7	0.20
11:30:00 AM	12:00:00 PM	0:30	10.7	10.7	0.00
12:00:00 AM	12:30:00 AM	0:30	10.7	10.7	0.00
12:30:00 AM	1:00:00 AM	0:30	10.7	10.7	0.00
1:00:00 AM	1:30:00 AM	0:30	10.7	10.5	0.20
1:30:00 AM	2:00:00 AM	0:30	10.5	10.5	0.00

Testhole No.: 1B
GPS 38.659818 -121.030023 **Testhole Depth:** 2.5' **Width:** 12"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	7	6.2	0.80
10:30:00 AM	11:00:00 AM	0:30	6.2	6	0.20
11:00:00 AM	11:30:00 AM	0:30	6	5.9	0.10
11:30:00 AM	12:00:00 PM	0:30	8.5	7.5	1.00
12:00:00 AM	12:30:00 AM	0:30	7.5	7	0.50
12:30:00 AM	1:00:00 AM	0:30	7	6.6	0.40
1:00:00 AM	1:30:00 AM	0:30	6.6	6.3	0.30
1:30:00 AM	2:00:00 AM	0:30	6.3	6.2	0.10

Testhole No.: 5C

GPS 38.659243 -121.03 **Testhole Depth:** 2" **Width:** 12"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:14:00 AM	10:44:00 AM	0:30			0.00
10:44:00 AM	11:14:00 AM	0:30			0.00
11:14:00 AM	11:44:00 AM	0:30			0.00
11:44:00 AM	12:14:00 PM	0:30			0.00
12:14:00 AM	12:44:00 AM	0:30			0.00
12:44:00 AM	1:14:00 AM	0:30			0.00
1:14:00 AM	1:44:00 AM	0:30			0.00
1:44:00 AM	2:14:00 AM	0:30			0.00

Testhole No.: 5D

GPS 38.659205 -121.03 **Testhole Depth:** 1" **Width:** 12"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:14:00 AM	10:44:00 AM	0:30			0.00
10:44:00 AM	11:14:00 AM	0:30			0.00
11:14:00 AM	11:44:00 AM	0:30			0.00
11:44:00 AM	12:14:00 PM	0:30			0.00
12:14:00 AM	12:44:00 AM	0:30			0.00
12:44:00 AM	1:14:00 AM	0:30			0.00
1:14:00 AM	1:44:00 AM	0:30			0.00
1:44:00 AM	2:14:00 AM	0:30			0.00

Percolation Test Data Sheet

Project No. E21526.000
Test Pit No.
Date: 1/18/2022
Testhole No.: 1A **Sheet No.:** 1 of 10
GPS 38.65984 -121.030097 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	11	11	0.00
10:30:00 AM	11:00:00 AM	0:30	11	10.9	0.10
11:00:00 AM	11:30:00 AM	0:30	10.9	10.7	0.20
11:30:00 AM	12:00:00 PM	0:30	10.7	10.7	0.00
12:00:00 AM	12:30:00 AM	0:30	10.7	10.7	0.00
12:30:00 AM	1:00:00 AM	0:30	10.7	10.7	0.00
1:00:00 AM	1:30:00 AM	0:30	10.7	10.5	0.20
1:30:00 AM	2:00:00 AM	0:30	10.5	10.5	0.00

Testhole No.: 1B
GPS 38.659818 -121.030023 **Testhole Depth:** 2.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	7	6.2	0.80
10:30:00 AM	11:00:00 AM	0:30	6.2	6	0.20
11:00:00 AM	11:30:00 AM	0:30	6	5.9	0.10
11:30:00 AM	12:00:00 PM	0:30	8.5	7.5	1.00
12:00:00 AM	12:30:00 AM	0:30	7.5	7	0.50
12:30:00 AM	1:00:00 AM	0:30	7	6.6	0.40
1:00:00 AM	1:30:00 AM	0:30	6.6	6.3	0.30
1:30:00 AM	2:00:00 AM	0:30	6.3	6.2	0.10

Percolation Test Data Sheet

Testhole No.: 1C

GPS 38.65983 -121.030039 **Testhole Depth:** 2' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	7.2	3.8	3.40
10:30:00 AM	11:00:00 AM	0:30	6.5	4.2	2.30
11:00:00 AM	11:30:00 AM	0:30	6.8	4.5	2.30
11:30:00 AM	12:00:00 PM	0:30	6.8	4.4	2.40
12:00:00 AM	12:30:00 AM	0:30	6.9	4.6	2.30
12:30:00 AM	1:00:00 AM	0:30	7	5	2.00
1:00:00 AM	1:30:00 AM	0:30	6.6	4.6	2.00
1:30:00 AM	2:00:00 AM	0:30	7.5	5	1.50

Testhole No.: 1D

GPS 38.65982 -121.029957 **Testhole Depth:** 2' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:00:00 AM	10:30:00 AM	0:30	7.2	5.4	1.80
10:30:00 AM	11:00:00 AM	0:30	7.3	6.1	1.20
11:00:00 AM	11:30:00 AM	0:30	6.1	5.4	0.70
11:30:00 AM	12:00:00 PM	0:30	7.5	6.8	0.70
12:00:00 AM	12:30:00 AM	0:30	6.8	6.1	0.70
12:30:00 AM	1:00:00 AM	0:30	6.1	5.7	0.40
1:00:00 AM	1:30:00 AM	0:30	6.4	5.9	0.50
1:30:00 AM	2:00:00 AM	0:30	6.7	6	0.70

Percolation Test Data Sheet

Testhole No.: 2A

GPS 38.659659 -121.028586 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:05:00 AM	10:35:00 AM	0:30	8	7.5	0.50
10:35:00 AM	11:05:00 AM	0:30	7.5	7.4	0.10
11:05:00 AM	11:35:00 AM	0:30	7.4	7.3	0.10
11:35:00 AM	12:05:00 PM	0:30	7.3	7.2	0.10
12:05:00 AM	12:35:00 AM	0:30	7.2	7.2	0.00
12:35:00 AM	1:05:00 AM	0:30	7.2	7	0.20
1:05:00 AM	1:35:00 AM	0:30	7	7	0.00
1:35:00 AM	2:05:00 AM	0:30	7	7	0.00

Testhole No.: 2B

GPS 38.659699 -121.028543 **Testhole Depth:** 2.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:05:00 AM	10:35:00 AM	0:30	8.9	8.9	0.00
10:35:00 AM	11:05:00 AM	0:30	8.9	8.8	0.10
11:05:00 AM	11:35:00 AM	0:30	8.8	8.8	0.00
11:35:00 AM	12:05:00 PM	0:30	8.8	8.8	0.00
12:05:00 AM	12:35:00 AM	0:30	8.8	8.6	0.20
12:35:00 AM	1:05:00 AM	0:30	8.6	8.6	0.00
1:05:00 AM	1:35:00 AM	0:30	8.6	8.5	0.10
1:35:00 AM	2:05:00 AM	0:30	8.5	8.4	0.10

Percolation Test Data Sheet

Testhole No.: 2C

GPS 38.65969 -121.028507 **Testhole Depth:** 2' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:05:00 AM	10:35:00 AM	0:30	7	7	0.00
10:35:00 AM	11:05:00 AM	0:30	7	6.5	0.50
11:05:00 AM	11:35:00 AM	0:30	6.5	6.2	0.30
11:35:00 AM	12:05:00 PM	0:30	6.2	6	0.20
12:05:00 AM	12:35:00 AM	0:30	6	5.8	0.20
12:35:00 AM	1:05:00 AM	0:30	6.9	6.8	0.10
1:05:00 AM	1:35:00 AM	0:30	6.8	6.4	0.40
1:35:00 AM	2:05:00 AM	0:30	6.4	6.1	0.30

Testhole No.: 2D

GPS 38.659692 -121.028489 **Testhole Depth:** 1.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:05:00 AM	10:35:00 AM	0:30	6.9	4.3	2.60
10:35:00 AM	11:05:00 AM	0:30	7.5	5	2.50
11:05:00 AM	11:35:00 AM	0:30	6.9	5.1	1.80
11:35:00 AM	12:05:00 PM	0:30	6.7	5.1	1.60
12:05:00 AM	12:35:00 AM	0:30	6.7	5.1	1.60
12:35:00 AM	1:05:00 AM	0:30	6.9	5.1	1.80
1:05:00 AM	1:35:00 AM	0:30	6.7	5.1	1.60
1:35:00 AM	2:05:00 AM	0:30	6.6	6	0.60

Percolation Test Data Sheet

Testhole No.: 3A

GPS 38.658833 -121.028628 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:10:00 AM	10:40:00 AM	0:30	10.5	10.4	0.10
10:40:00 AM	11:10:00 AM	0:30	10.4	10.2	0.20
11:10:00 AM	11:40:00 AM	0:30	10.2	10.1	0.10
11:40:00 AM	12:10:00 PM	0:30	10.1	10.1	0.00
12:10:00 AM	12:40:00 AM	0:30	10.1	10.1	0.00
12:40:00 AM	1:10:00 AM	0:30	10.1	10.1	0.00
1:10:00 AM	1:40:00 AM	0:30	10.1	10.1	0.00
1:40:00 AM	2:10:00 AM	0:30	10.1	10.1	0.00

Testhole No.: 3B

GPS 38.658849 -121.028603 **Testhole Depth:** 2.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:10:00 AM	10:40:00 AM	0:30	7	4.3	2.70
10:40:00 AM	11:10:00 AM	0:30	7	5.3	1.70
11:10:00 AM	11:40:00 AM	0:30	8.2	6.3	1.90
11:40:00 AM	12:10:00 PM	0:30	6.3	5	1.30
12:10:00 AM	12:40:00 AM	0:30	6.8	5.8	1.00
12:40:00 AM	1:10:00 AM	0:30	7.7	6.1	1.60
1:10:00 AM	1:40:00 AM	0:30	6.1	5.2	0.90
1:40:00 AM	2:10:00 AM	0:30	8	6.4	1.60

Percolation Test Data Sheet

Testhole No.: 3C

GPS 38.658856 -121.028593 **Testhole Depth:** 2' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:10:00 AM	10:40:00 AM	0:30	7.4	5.4	2.00
10:40:00 AM	11:10:00 AM	0:30	7.2	5.6	1.60
11:10:00 AM	11:40:00 AM	0:30	7	5.9	1.10
11:40:00 AM	12:10:00 PM	0:30	7.1	5.9	1.20
12:10:00 AM	12:40:00 AM	0:30	7	5.8	1.20
12:40:00 AM	1:10:00 AM	0:30	6.9	5.9	1.00
1:10:00 AM	1:40:00 AM	0:30	6.6	5.5	1.10
1:40:00 AM	2:10:00 AM	0:30	6.4	5.4	1.00

Testhole No.: 3D

GPS 38.658788 -121.028598 **Testhole Depth:** 1.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:10:00 AM	10:40:00 AM	0:30	7.4	6.5	0.90
10:40:00 AM	11:10:00 AM	0:30	6.5	6.2	0.30
11:10:00 AM	11:40:00 AM	0:30	6.2	6	0.20
11:40:00 AM	12:10:00 PM	0:30	6	5.7	0.30
12:10:00 AM	12:40:00 AM	0:30	7	6.7	0.30
12:40:00 AM	1:10:00 AM	0:30	6.7	6.4	0.30
1:10:00 AM	1:40:00 AM	0:30	6.4	6	0.40
1:40:00 AM	2:10:00 AM	0:30	6	5.8	0.20

Percolation Test Data Sheet

Testhole No.: 4A

GPS 38.65861 -121.029769 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
2:00:00 PM	2:30:00 PM	0:30	8.4	8.1	0.30
2:30:00 PM	3:00:00 PM	0:30	8.1	8	0.10
3:00:00 PM	3:30:00 PM	0:30	8	7.9	0.10
3:30:00 PM	4:00:00 PM	0:30	7.9	7.9	0.00
4:00:00 PM	4:30:00 PM	0:30	7.9	7.6	0.30
4:30:00 PM	5:00:00 PM	0:30	7.6	7.6	0.00
5:00:00 PM	5:30:00 PM	0:30	7.6	7.6	0.00
5:30:00 PM	6:00:00 PM	0:30	7.6	7.6	0.00

Testhole No.: 4B

GPS 38.658592 -121.029796 **Testhole Depth:** 2.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:02:00 AM	10:32:00 AM	0:30	9.4	9	0.40
10:30:00 AM	11:00:00 AM	0:30	9	8.8	0.20
11:02:00 AM	11:32:00 AM	0:30	8.8	8.4	0.40
11:32:00 AM	12:02:00 PM	0:30	8.4	8.2	0.20
12:02:00 AM	12:32:00 AM	0:30	8.2	8	0.20
12:32:00 AM	1:02:00 AM	0:30	8	7.8	0.20
1:02:00 AM	1:32:00 AM	0:30	7.8	7.6	0.20
1:32:00 AM	2:02:00 AM	0:30	7.6	7.4	0.20

Percolation Test Data Sheet

Testhole No.: 4C

GPS 38.658568 -121.029209 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
2:00:00 PM	2:30:00 PM	0:30	8.4	8.1	0.30
2:30:00 PM	3:00:00 PM	0:30	8.1	8	0.10
3:00:00 PM	3:30:00 PM	0:30	8	7.9	0.10
3:30:00 PM	4:00:00 PM	0:30	7.9	7.9	0.00
4:00:00 PM	4:30:00 PM	0:30	7.9	7.6	0.30
4:30:00 PM	5:00:00 PM	0:30	7.6	7.6	0.00
5:00:00 PM	5:30:00 PM	0:30	7.6	7.6	0.00
5:30:00 PM	6:00:00 PM	0:30	7.6	7.6	0.00

Testhole No.: 4D

GPS 38.658513 -121.029743 **Testhole Depth:** 1' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
2:00:00 PM	2:30:00 PM	0:30	6.2	2.2	4.00
2:30:00 PM	3:00:00 PM	0:30	6.5	3	3.50
3:00:00 PM	3:30:00 PM	0:30	6.2	2.9	3.30
3:30:00 PM	4:00:00 PM	0:30	6.5	3.2	3.30
4:00:00 PM	4:30:00 PM	0:30	6	3.4	2.60
4:30:00 PM	5:00:00 PM	0:30	6	3.1	2.90
5:00:00 PM	5:30:00 PM	0:30	6.1	3.1	3.00
5:30:00 PM	6:00:00 PM	0:30	6.5	3	3.50

Percolation Test Data Sheet

Testhole No.: 5A

GPS 38.659236 -121.030322 **Testhole Depth:** 3' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:14:00 AM	10:44:00 AM	0:30	8	7.2	0.80
10:44:00 AM	11:14:00 AM	0:30	7.2	7	0.20
11:14:00 AM	11:44:00 AM	0:30	7	6.3	0.70
11:44:00 AM	12:14:00 PM	0:30	6.3	6.2	0.10
12:14:00 AM	12:44:00 AM	0:30	6.2	5.4	0.80
12:44:00 AM	1:14:00 AM	0:30	5.4	5.4	0.00
1:14:00 AM	1:44:00 AM	0:30	5.4	5.4	0.00
1:44:00 AM	2:14:00 AM	0:30	5.4	5.3	0.10

Testhole No.: 5B

GPS 38.659243 -121.030311 **Testhole Depth:** 2.5' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
10:14:00 AM	10:44:00 AM	0:30	8.5	7.8	0.70
10:44:00 AM	11:14:00 AM	0:30	7.8	7.8	0.00
11:14:00 AM	11:44:00 AM	0:30	7.8	7.8	0.00
11:44:00 AM	12:14:00 PM	0:30	7.8	7.5	0.30
12:14:00 AM	12:44:00 AM	0:30	7.5	7.4	0.10
12:44:00 AM	1:14:00 AM	0:30	7.4	7.1	0.30
1:14:00 AM	1:44:00 AM	0:30	7.4	6.9	0.50
1:44:00 AM	2:14:00 AM	0:30	6.9	6.8	0.10

Percolation Test Data Sheet

Testhole No.: 5C

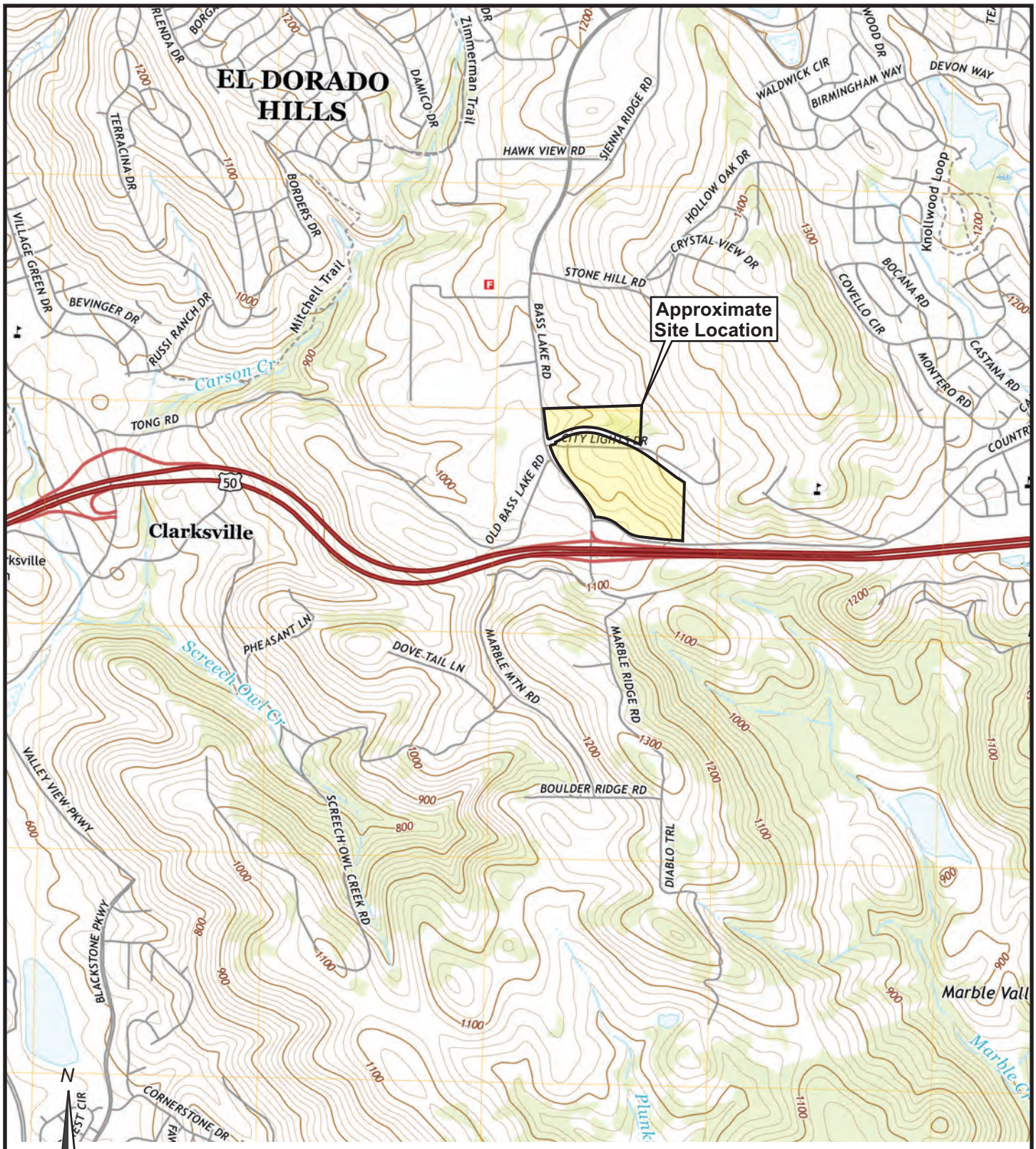
GPS 38.659243 -121.030283 **Testhole Depth:** 2' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
2:10:00 PM	2:40:00 PM	0:30	6.7	5.8	0.90
2:40:00 PM	3:10:00 PM	0:30	6.3	5.8	0.50
3:10:00 PM	3:40:00 PM	0:30	6.5	5.8	0.70
3:40:00 PM	4:10:00 PM	0:30	6.9	6.4	0.50
4:10:00 PM	4:40:00 PM	0:30	6.4	5.8	0.60
4:40:00 PM	5:10:00 PM	0:30	6.5	6.1	0.40
5:10:00 PM	5:40:00 PM	0:30	6.1	5.8	0.30
5:40:00 PM	6:10:00 PM	0:30	7.1	6.4	0.70

Testhole No.: 5D

GPS 38.659205 -121.03025 **Testhole Depth:** 1' **Width:** 8"

Start Time	End Time	Elapsed Time	Water-level Start (inches)	Water-level End (inches)	Difference in Water Level (inches)
2:10:00 PM	2:40:00 PM	0:30	6.3	1.1	5.20
2:40:00 PM	3:10:00 PM	0:30	6.4	1.3	5.10
3:10:00 PM	3:40:00 PM	0:30	6.5	1.6	4.90
3:40:00 PM	4:10:00 PM	0:30	6.3	1.8	4.50
4:10:00 PM	4:40:00 PM	0:30	7	2	5.00
4:40:00 PM	5:10:00 PM	0:30	6.5	2.1	4.40
5:10:00 PM	5:40:00 PM	0:30	6.4	2.1	4.30
5:40:00 PM	6:10:00 PM	0:30	6.5	2	4.50



Scale: 1:24,000

BASE MAP REFERENCE: *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2018*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.000 **February 2022**	**VICINITY MAP** **The Town & Country Village El Dorado Onsite Wastewater Disposal** El Dorado Hills, California	**FIGURE 1**

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984

Project No.: E21526.000

February 2022

SITE PLAN
The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 2

TP-1 = Approximate Test Pit Locations
1a = Approximate Percolation Test Locations
= Intermittent Stream = Drainage Swale = Seeps

REFERENCE: *Slope Map Exhibit, Town & Country Village, CTA Engineering Inc., Dated October 2021; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021*

Potential Disposal Area
Potential Disposal Area
WATERLINE EASEMENT 702/403
MOHANNA M H 119-080-23 PARCEL 1 PM 48-80
100'
P.S.E. 2008-6082
R=802.00' N86°17'54"W 668.93'
R=1350.00' N11°00'00"E 161.20'
191.57' S 63°24'14" W
R=272.00' N81°16'51"E 475.75'
TP-1 1a 1b 1c 1d
144.69' S 82°24'14" W
24.84' N 17°35'46" W
67.75' N 72°24'14" E
15' P.T.& T EASEMENT PER P.M. 5-11
N 88°42'03" W 1005.33'
(E) ROAD & P.U.E. O.R. 1498/687
353.69' N 69°48'26" W
TP-2 2a 2b 2c 2d
341.48' N 69°48'26" W
R=1440.00' N66°12'33"W 180.86'
R=1360.00' N65°55'52"W 184.02'
227.81' N 88°42'03" W
30.95' S 12°56'51" E
Most Likely to Be Suitable
R=1350.00' N30°27'08"E 437.81'
TP-5 5a 5b 5c 5d
TP-3 3a 3b 3c 3d
TP-4 4a 4b 4c 4d
LANDSCAPE & P.S.E. 2008-6082
40' Cut Setback
10' X 15' EASEMENT PACIFIC BELL TELE. CO. 2000-0041045
PUBLIC SERVICE EASEMENT 2008-6080
MOHANNA M H 119-080-21 PARCEL 2 PM 48-80
American River Electric Co. per 62 O.R. 81 may affect this parcel. No exact location given.
S 01°17'57" W 577.12'
S 08°44'25" W
R=1440.00' N59°21'49"W 163.25'
R=1360.00' S58°05'03"W 188.49'
Rocky
15' P.T.& T. P.M. 5-11
S 54°06'50" E 340.85'
S 54°06'50" E 499.10'
S54°06'50"E 158.25'
ROAD & P.U.E. O.R. 1498/688
Not Likely to Be Suitable
Rocky
R=802.00' S59°06'53"E 140.00'
S 12°56'51" E 277.40'
MOHANNA 119-080-12 PARCEL 3 PM 48-80
40' Cut Setback
S 00°53'06" W 852.89'
50'
50'
R=1200.00' N26°41'32"W 166.56'
Less Likely to Be Suitable
100'
R=500.00' N72°18'56"W 344.14'
50'
100'
100'
50'
Proposed Commercial Property
S23°47'11"W 179.10'
R=400.00' S72°10'20"E 218.98'
80' S.G.& E. EASEMENT PER O.R. 633/163
Wet Area
S84°31'10"E 309.60'
R=3930.00' S89°41'18"E 297.57'
GHISHAN 119-080-05
Shallow Groundwater
227.70' N80°42'59"E 150.33'
PROP LLC -21

COLOR LEGEND

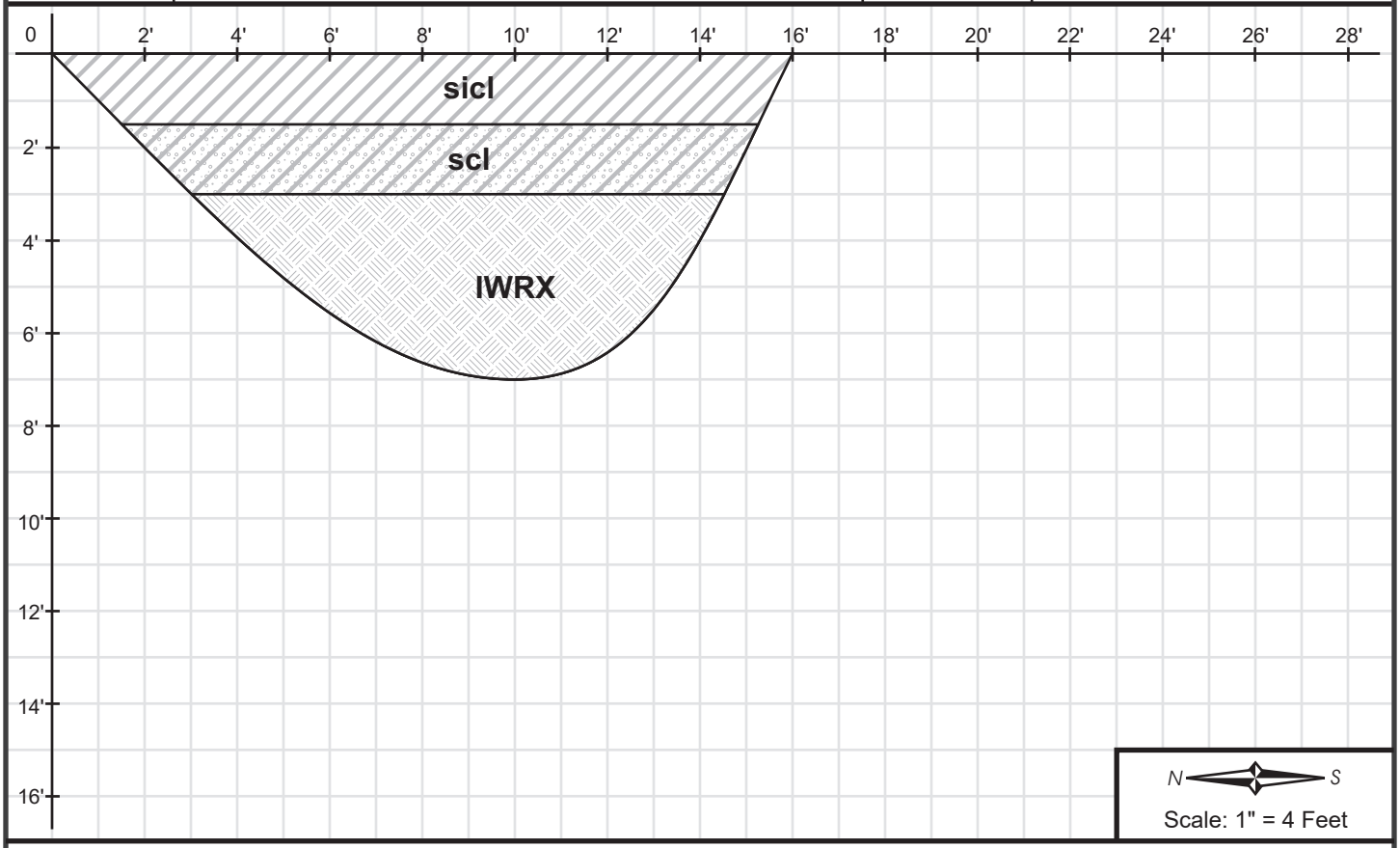
COLOR	SLOPE RANGE BEGINNING	SLOPE RANGE END	AREA	PERCENT OF AREA SHOWN
	0%	10%	17.16 A.c.	23.31%
	11%	20%	41.13 A.c.	55.88%
	21%	29%	11.75 A.c.	15.96%
	29%	39%	1.71 A.c.	2.32%
	40%+		1.86 A.c.	2.53%

N

0 100 200 400
Approximate Scale: 1" = 200'

Logged By: **DCS**	Date: **18 January 2022**	Lat / Lon: **N 35.659800° / W 121.029992°**	Pit No. **TP-1**
Equipment: **Takeuchi with 18" Bucket**		Pit Orientation: **186°** Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1.5'	Brown (7.5 YR 4/3) **SILTY CLAY**, 10% gravel, no redoximorphic features, finely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1.5' - 3'	Brown (7.5 YR 5/4) **SANDY CLAY**, 10% gravel, 10% stone, many redoximorphic concentrations (7.5 YR 6/4) and depletions (Gley 5/5B), massive granular, few fine interstitial soil pores, very friable, moderately plastic, slightly sticky, no roots, clear irregular boundary, moist		
@ 3' - 7'	Strong brown (7.5 YR 6/4) intensely weathered metavolcanic rock, 60% stone, few redoximorphic concentrations (7.5 YR 6/4), massive, few tubular soil pores, friable, slightly plastic, slightly sticky, no roots, moist		
	Test pit terminated at 7' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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Project No.: E21526.000

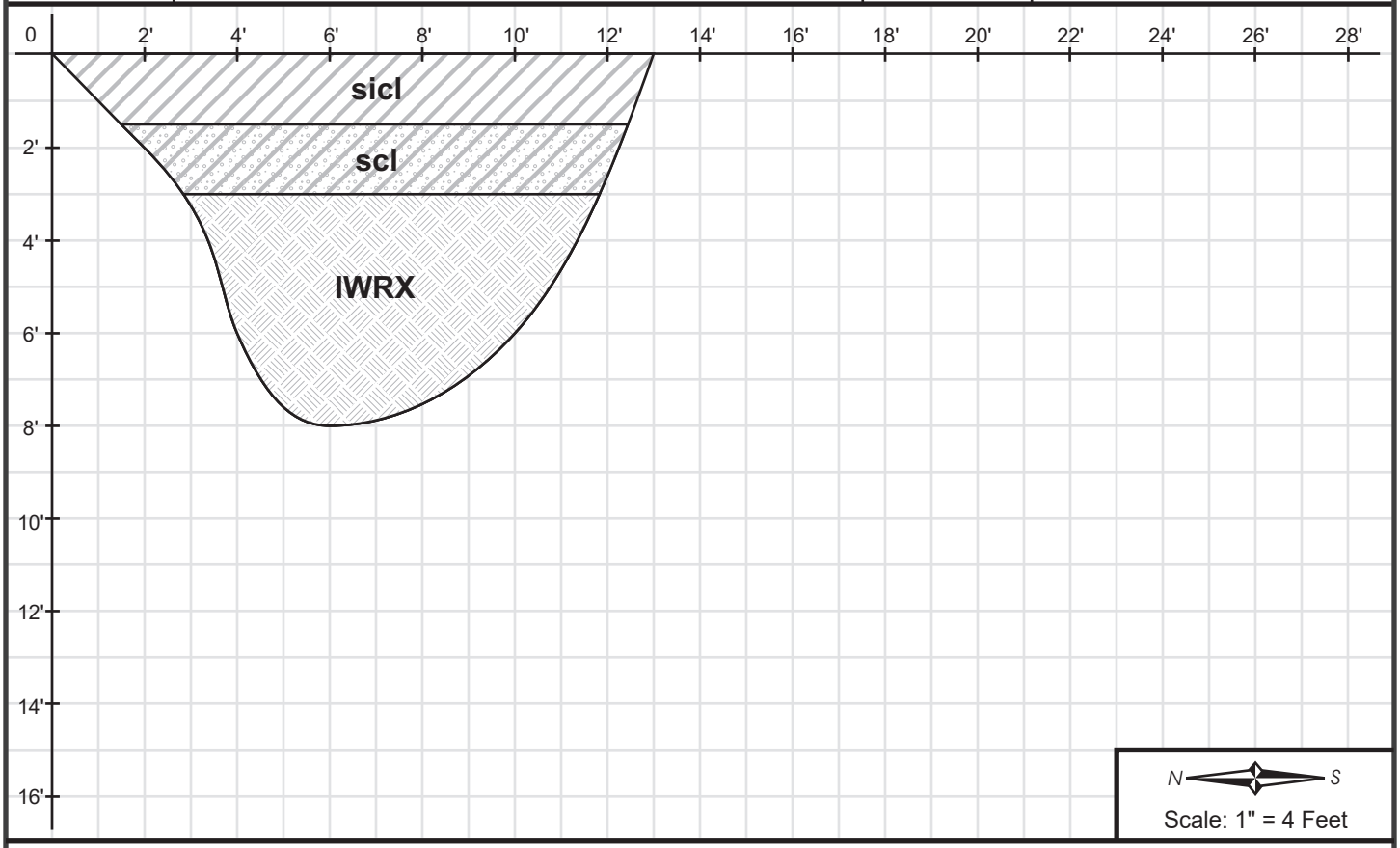
February 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 3

Logged By: **DCS**	Date: **18 January 2022**	Lat / Lon: **N 35.659720° / W 121.020520°**	Pit No. **TP-2**
Equipment: **Takeuchi with 18" Bucket**		Pit Orientation: **180°** Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1.5'	Brown (7.5 YR 4/3) **SILTY CLAY**, 10% gravel, no redoximorphic features, finely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1.5' - 3'	Brown (7.5 YR 5/4) **SANDY CLAY**, 10% gravel, 10% stone, many redoximorphic concentrations (7.5 YR 6/4) and depletions (Gley 5/5B), massive granular, few fine interstitial soil pores, very friable, moderately plastic, slightly sticky, no roots, clear irregular boundary, moist		
@ 3' - 8'	Strong brown (7.5 YR 6/4) intensely weathered metavolcanic rock, 60% stone, few redoximorphic concentrations (7.5 YR 6/4), massive, few tubular soil pores, friable, slightly plastic, slightly sticky, no roots, moist		
	Test pit terminated at 8' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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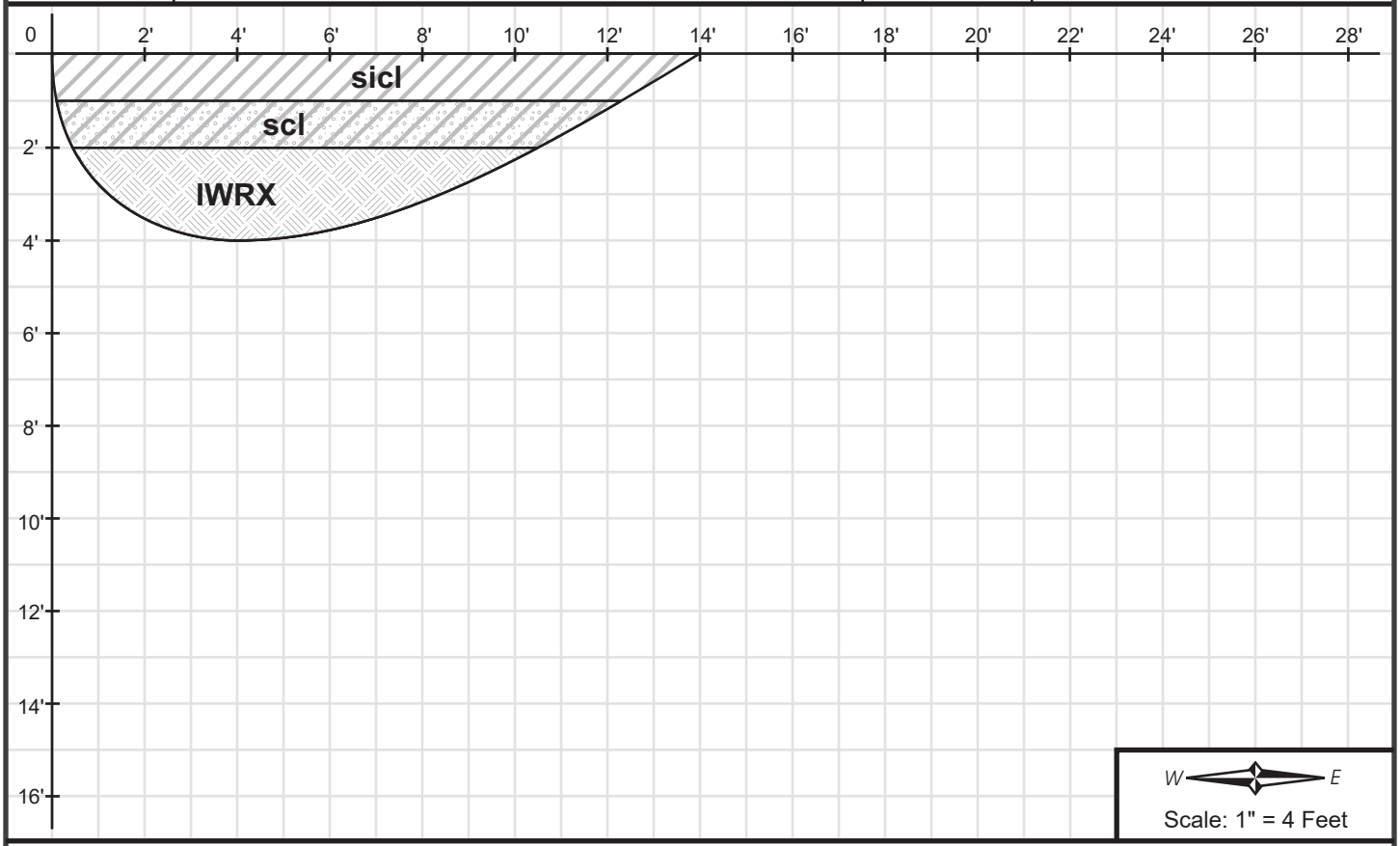
February 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 4

Logged By: **DCS**	Date: **18 January 2022**	Lat / Lon: **N 35.658890° / W 121.028620°**	Pit No. **TP-3**
Equipment: **Takeuchi with 18" Bucket**		Pit Orientation: **260°**	Elevation: **~**

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/3) **SILTY CLAY**, 10% gravel, no redoximorphic features, finely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1' - 2'	Brown (7.5 YR 5/4) **SANDY CLAY**, 10% gravel, 10% stone, many redoximorphic concentrations (7.5 YR 6/4) and depletions (Gley 5/5B), massive granular, few fine interstitial soil pores, very friable, moderately plastic, slightly sticky, no roots, clear irregular boundary, moist		
@ 2' - 4'	Strong brown (7.5 YR 6/4) intensely weathered metavolcanic rock, 60% stone, few redoximorphic concentrations (7.5 YR 6/4), massive, few tubular soil pores, friable, slightly plastic, slightly sticky, no roots, moist		
	Test pit terminated at 4' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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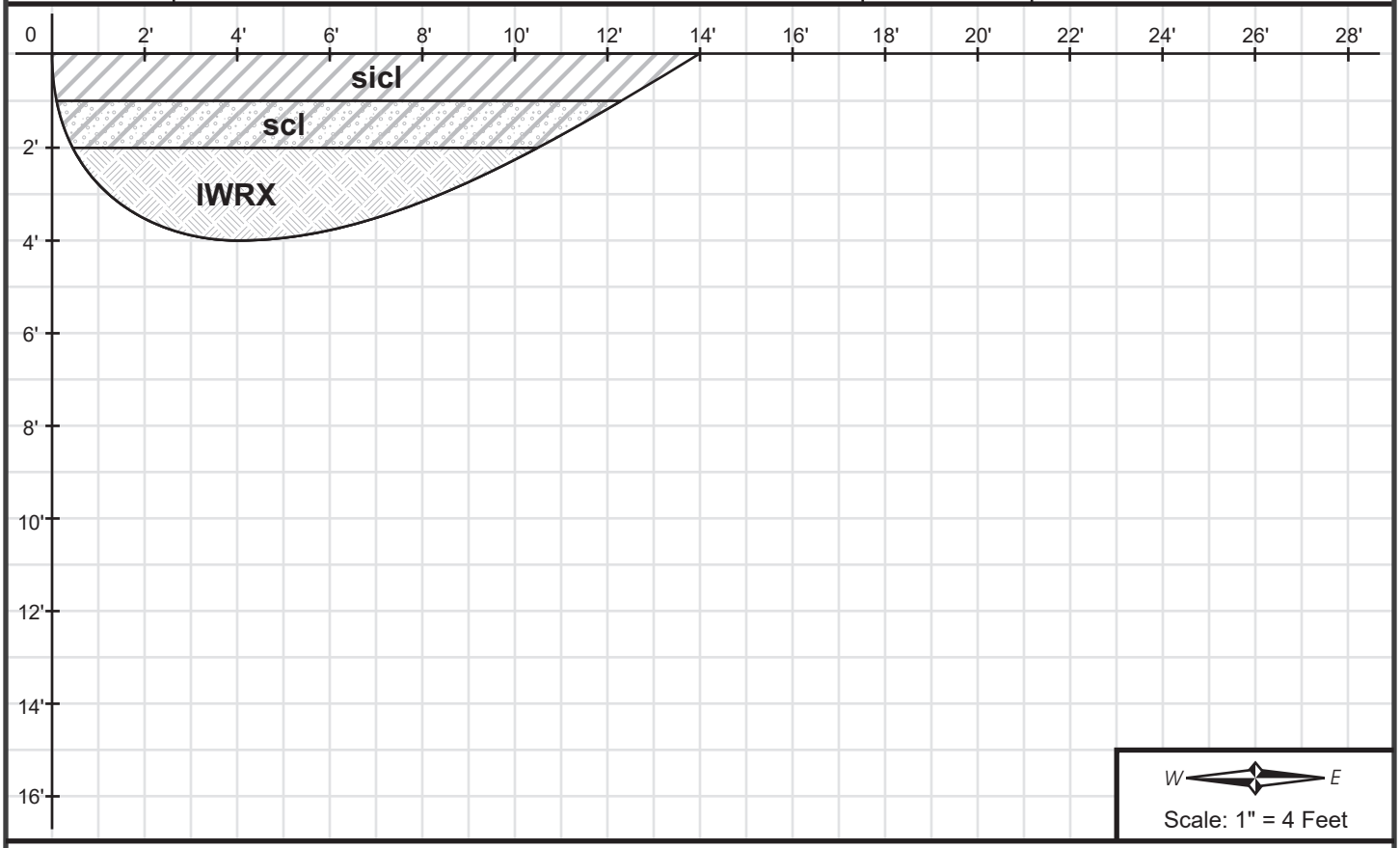
February 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 5

Logged By: **DCS**	Date: **18 January 2022**	Lat / Lon: **N 35.658550° / W 121.029800°**		Pit No. **TP-4**
Equipment: **Takeuchi with 18" Bucket**		Pit Orientation: **100°**	Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1.5'	Brown (7.5 YR 4/3) **SILTY CLAY**, 10% gravel, no redoximorphic features, finely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1.5' - 2'	Brown (7.5 YR 5/4) **SANDY CLAY**, 10% gravel, 10% stone, many redoximorphic concentrations (7.5 YR 6/4) and depletions (Gley 5/5B), massive granular, few fine interstitial soil pores, very friable, moderately plastic, slightly sticky, no roots, clear irregular boundary, moist		
@ 2' - 4'	Strong brown (7.5 YR 6/4) intensely weathered metavolcanic rock, 60% stone, few redoximorphic concentrations (7.5 YR 6/4), massive, few tubular soil pores, friable, slightly plastic, slightly sticky, no roots, moist		
	Test pit terminated at 4' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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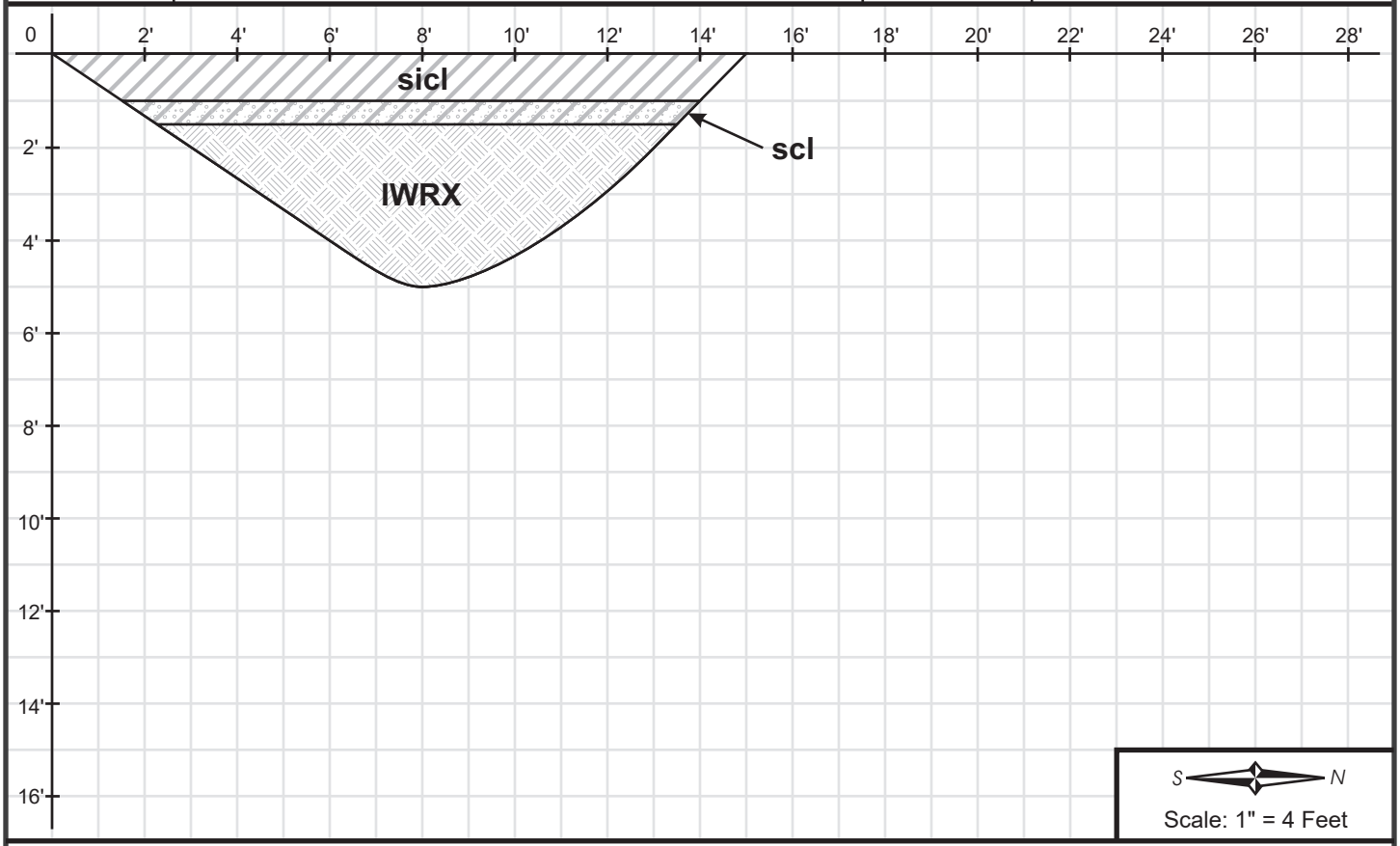
February 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 6

Logged By: **DCS**	Date: **18 January 2022**	Lat / Lon: **N 35.659160° / W 121.030330°**	Pit No. **TP-5**
Equipment: **Takeuchi with 18" Bucket**		Pit Orientation: **5°** Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/3) **SILTY CLAY**, 10% gravel, no redoximorphic features, finely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1' - 1.5'	Brown (7.5 YR 5/4) **SANDY CLAY**, 10% gravel, 10% stone, many redoximorphic concentrations (7.5 YR 6/4) and depletions (Gley 5/5B), massive granular, few fine interstitial soil pores, very friable, moderately plastic, slightly sticky, no roots, clear irregular boundary, moist		
@ 1.5' - 5'	Strong brown (7.5 YR 6/4) intensely weathered metavolcanic rock, 60% stone, few redoximorphic concentrations (7.5 YR 6/4), massive, few tubular soil pores, friable, slightly plastic, slightly sticky, no roots, moist		
	Test pit terminated at 4' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 7

Consultant: **YCG**	Date: **18 January 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 1 **1ST Horizon Depth:** 0' **to** 1.5'
Slope: 9 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism [f] m c single grain [massive]
Soil Pores: none few common [many] f [m] c inters tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: none [few] common many vf f [m] c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

2nd Horizon Depth: 1.5' **to** 3'
Texture: s ls sl sc [scl] l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 5/4
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES:
Same as SOIL PIT # **Horizon #**

3rd Horizon Depth: 3' **to** 7'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: 7.5 YR 5/6
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l vfr [fr] f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

4th Horizon Depth: ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

SOIL PIT # 2 **1ST Horizon Depth:** 0' **to** 1.5'
Slope: 7 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 5 % cobble ~ % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism [f] m c single grain [massive]
Soil Pores: none few common [many] f [m] c inters tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: none [few] common many vf f [m] c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 1

2nd Horizon Depth: 1.5' **to** 3'
Texture: s ls sl sc [scl] l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone 100 %
Color: 7.5 YR 5/4
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 2

3rd Horizon Depth: 3' **to** 8'
~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: 7.5 YR 5/6
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l vfr [fr] f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 3

4th Horizon Depth: ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984

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EXPLORATORY SOIL PIT LOG

The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 8

Consultant: **YCG**	Date: **18 January 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 3 **1ST Horizon Depth:** 0' **to** 1.5'
Slope: 9 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism [f] m c single grain [massive]
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: none [few] common many vf f [m] c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 1

2nd Horizon Depth: 1.5' **to** 3'
Texture: s ls sl sc [scl] l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 5/4
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES:
Same as SOIL PIT # 1 **Horizon #** 2

3rd Horizon Depth: 3' **to** 7'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: 7.5 YR 5/6
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l vfr [fr] f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 3

4th Horizon Depth: ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

SOIL PIT # 4 **1ST Horizon Depth:** 0' **to** 1.5'
Slope: 7 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 5 % cobble ~ % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism [f] m c single grain [massive]
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: none [few] common many vf f [m] c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 1

2nd Horizon Depth: 1.5' **to** 3'
Texture: s ls sl sc [scl] l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone 100 %
Color: 7.5 YR 5/4
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 2

3rd Horizon Depth: 3' **to** 8'
~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: 7.5 YR 5/6
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l vfr [fr] f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon #** 3

4th Horizon Depth: ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984

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February 2022

EXPLORATORY SOIL PIT LOG

The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 9

Consultant: **YCG**	Date: **18 January 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 5 **1ST Horizon Depth:** 0' to 1.5'
Slope: 9 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism [f] m c single grain [massive]
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: none [few] common many vf f [m] c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon # 1**

SOIL PIT # **1ST Horizon Depth:** _____ to _____
Slope: _____ **% Aspect:** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

2nd Horizon Depth: 1.5' to 3'
Texture: s ls sl sc [scl] l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble ~ % stone ~ %
Color: 7.5 YR 5/4
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: dry [moist] wet saturated
NOTES:
Same as SOIL PIT # 1 **Horizon # 2**

2nd Horizon Depth: _____ to _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone 100 %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon # 2**

3rd Horizon Depth: 3' to 7'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: 7.5 YR 5/6
Redoxymorphic Features: none [few] common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain [massive]
Soil Pores: none few common many [f] m c inters [tubular]
Moist Consistence: l vfr [fr] f vf ef
Plasticity: np [sp] mp vp **Stickiness:** ns [ss] ms vs
Roots: [none] few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry [moist] wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon # 3**

3rd Horizon Depth: _____ to _____
~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # 1 **Horizon # 3**

4th Horizon Depth: ~ to ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

4th Horizon Depth: ~ to ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # **Horizon #**

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984

Project No.: E21526.000

February 2022

EXPLORATORY SOIL PIT LOG

The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 10

APPENDIX J

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
1234 Glenhaven Court, El Dorado Hills, CA 95762
4300 Anthony Court, Unit D, Rocklin, CA 95677
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Cap Funding – The Mohanna
1025 9th Street, Ste. 205
Sacramento, CA 95814

Project No. E21526.000
30 June 2022

Attention: Mr. Josh Pane

Subject: **TOWN AND COUNTRY VILLAGE, EL DORADO**
Bass Lake Road and Country Club Drive, El Dorado Hills
Preliminary Onsite Wastewater Percolation and Mantle Testing

References:
1) Standards for the Site Evaluation, Design and Construction of Onsite Wastewater Treatment Systems (OWTS Manual), prepared by El Dorado County Department of Environmental Management, dated 13 May 2018.
2) California Plumbing Code, Appendix H Private Sewage Disposal Systems, California Code of Regulations Title 24, Part 5.
3) Contract for the Town and Country Village between Youngdahl Consulting Group, Inc. and Cap Funding – The Mohana, executed 8 December 2021.
4) Preliminary Onsite Wastewater Treatment Feasibility Study, Town and Country Village, El Dorado, prepared by Youngdahl Consulting Group, Inc. date 30 December 2021.
5) Town and Country Village, El Dorado, Change Order No. 1, dated 10 January 2022.
6) Town and Country Village, El Dorado, Preliminary Onsite Wastewater Percolation and Mantle Testing, prepared by Youngdahl Consulting Group, Inc., dated 13 March 2022.
7) Town and Country Village, El Dorado, Change Order No. 2, dated 20 May 2022.

Dear Mr. Pane:
With the authorization of Cap Funding – The Mohanna, Youngdahl Consulting Group, Inc. (Youngdahl) has completed additional preliminary percolation and mantle testing for the planned Town and Country, El Dorado Project. Our scope included:

1) The selection of five additional test pit (mantle test) locations for an Underground Services Alert;
2) Subsurface exploration using a rubber-tired backhoe;
3) Observations of soil profiles by Youngdahl and a representative of the El Dorado County Environmental Health Department;
4) Percolation testing;
5) Updated estimation of wastewater application rates for the additional area tested based on percolation test results and soil profiles; and
6) The preparation of this report.

1.0 EXECUTIVE SUMMARY

The Town & Country Village El Dorado is planned to include improvements that will result in approximately 41,600 gallons of wastewater flow per day. An initial study was performed that evaluated shallow soil textures to estimate potential onsite wastewater application rates. However, due to site access being extremely limited due to rainfall saturated soils, the soils were only evaluated to relatively shallow depths and a follow up study was recommended.

A follow up study was completed in March of 2022 where five (5) test pits were excavated for soil profiles that were observed by Youngdahl and by a representative of El Dorado County Environmental Management. Percolation tests resulted in an average percolation rate of 109 minutes per inch. The study concluded that the site is significantly constrained by relatively thin soils overlying fractured bedrock.

Youngdahl is of the understanding that the area tested in March was not sufficient in extent for the planned wastewater flows and that additional area is needed to identify a sufficient area for onsite wastewater disposal to meet the project requirements. On 9 June 2022, Youngdahl advanced an additional five (5) test pits to the east of the area of original test pits (Figure 2). The soil profiles in these pits were observed by a representative of El Dorado County Environmental Management. Four percolations tests were performed in the vicinity of each test pit. The average percolation test rates were estimated to be 19.1 minutes per inch in this follow up study.

This report should be provided to a design wastewater engineer to further evaluate the feasibility of onsite treatment and disposal.

2.0 INTRODUCTION

Youngdahl is of the Understanding that Cap Funding – The Mohanna is planning to construct two 150-room hotels with restaurants, an event center, up to 97 hotel staff residences configured as a guest cottage camp, and other improvements, just east of Bass Lake Road, south of Country Club Drive, and north of Old Country Club Drive, in El Dorado Hills, California (Subject Property) and will generate approximately 41,600 gallons per day of wastewater flow. Currently, the nearest sewer service capable of handling the projected wastewater loadings is approximately 7,000 feet west of the Subject Property. Youngdahl initially prepared a Preliminary Onsite Wastewater Treatment Feasibility Study (Feasibility Study) to evaluate the feasibility of onsite wastewater treatment for the planned facilities as a temporary solution to managing wastewater until sanitary sewer facilities are constructed closer to the project. Site conditions were not conducive to accessing the site with subsurface exploration equipment at the time of the initial study (December 2021). Subsurface conditions were explored using a portable electric soil auger which proved to be limited to only very near surface shallow soils. A recommendation was made to excavate test pits and to perform percolation testing when site conditions dried sufficiently.

A subsequent study resulted in the excavation of five test pits in the northwestern portion of the property on 18 January 2022 (Figure 2). Each soil profile was observed by a representative of El Dorado County Environmental Management. Four percolation tests were performed in the vicinity of each test pit. The upper 2 to 3 feet of soil was composed of silty to sandy clay. This was underlain by highly weathered metavolcanic bedrock to the 4-to-8-foot total pit depths. Four percolation tests were performed next to each test pit location. An average percolation rate of 109 minutes per inch was estimated in this study. The study concluded that the site is significantly constrained by relatively thin soils overlying fractured bedrock.

The initial studies did not identify an area of sufficient areal extent to support the planned project. An additional five test pits were excavated on 9 June 2022 along with the performance of four percolation tests per test pit, finding an average percolation rate of 19.1 minutes per inch for this study.

3.0 EXISTING SITE CONDITIONS

The subject properties consist of El Dorado County Assessor Parcel Numbers (APNs) 119-080-021 and 119-080-023, with the latter parcel traversed west to east by Country Club Drive. The slopes are gently rolling with gradients ranging from nearly flat to a few small areas exceeding 40 percent. The Subject Property is mostly grass covered with several oak trees present. There are numerous rock outcrops. A seasonal creek flows westward through APN 119-080-023, the northernmost property. There are drainage swales present. Two wells have recently been installed. The Subject Property is accessed through gates on the north and south sides.

The western part of the upper ridge area was previously identified by the Preliminary Feasibility Study to be the area most likely be suitable for onsite wastewater disposal. The first five (5) test pits and percolation tests were performed in this area.

Youngdahl is of the understanding that the area tested by the first 5 pits and 5 sets of percolation tests is insufficient in size to support the planned onsite wastewater disposal system; additional area is needed. On 27 May 2022, Youngdahl marked an additional five (5) test pit locations in the northeastern portion of the subject property and activated an Underground Services Alert.

4.0 SUBSURFACE EXPLORATION

On 9 June 2022, subsurface conditions were explored using a rubber-tired Deere 410 backhoe equipped with a 24-inch bucket. In general, the soil profiles were found to range from 1-foot of brown to reddish brown SILTY CLAY over 2 to 7 feet gray brown to gray green intensely to moderately weathered bedrock. Test pit (mantle test) total depths ranged from 2½ to 8 feet to practical refusal depths. No caving or groundwater was observed. Each pit was logged using the United States Department of Agriculture soil classification system. Each pit was observed by a representative of the El Dorado County Department of Environmental Health.

5.0 PERCOLATION TESTING

On the 9th of June an 8-inch diameter electric auger was used to advance borings to the depths shown in Table 1. Percolation testing apparatus with pea gravel packing was installed into each boring. Water was then added to a height of 12 inches above the hole bottoms and maintained for a period of 4 hours. On the following day, water was added to a depth of at least 6 inches above the hole bottoms and the rate of drop was measured for 4 hours, with refilling performed as necessary.

Table 1 – Percolation Testing Results

Percolation Test	Depth (feet)	Final Percolation Rate (minutes per inch)
6A	1	18.8
6B	1	6.7
6C	1.5	15.8
6D	1.5	37.5
7A	3	50.0
7B	2.5	21.4
7C	2	16.7
7D	1.5	7.3
8A	2.5	DNP
8B	1.5	6.7
8C	1	10.3
8D	2	5.5
9A	1.5	9.1
9B	2	5.5
9C	2.5	33.3
9D	1.5	33.3
10A	1.5	1.6
10B	1	37.5
10C	2	33.3
10D	2	13.6

DNP= Did Not Percolate

6.0 ESTIMATED APPLICATION RATES

The shallow soils are predominately silty to sandy clay. This overlies highly weathered bedrock, which represents a limiting layer. If the percolation rates, excluding percolation test 8A from Table 1 are averaged, the result is 19.1 minutes per inch. For trench applications, the Reference No. 1 manual specifies that the application rate would be 1.14 gallons per day per square-foot (gpd/ft^2).

With the presence of the shallow restrictive layer, the effluent may be required to be substantially treated. A subsurface drip disposal system might then be considered. For silty clay with a moderate to strong structure, the GeoFlow, Inc. website specifies a disposal rate of 0.3 gpd/ft^2.

9.0 FINDINGS AND RECOMMENDATIONS

The site is significantly constrained by relatively thin soils overlying fractured bedrock. The fractured bedrock represents a limiting layer, however, one that still infiltrates water at a slow rate. Onsite waste water disposal using an advanced treatment system is likely feasible. This report should be supplied to a design wastewater engineer to further evaluate the feasibility of onsite wastewater treatment and disposal.

This study has been performed following standards of practice common to onsite wastewater feasibility and evaluation at the time and geographic vicinity of our study. This is not a design level study. No warranties are expressed or implied. Please do not hesitate contacting us with any questions.

Very truly yours,
Youngdahl Consulting Group, Inc.

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist



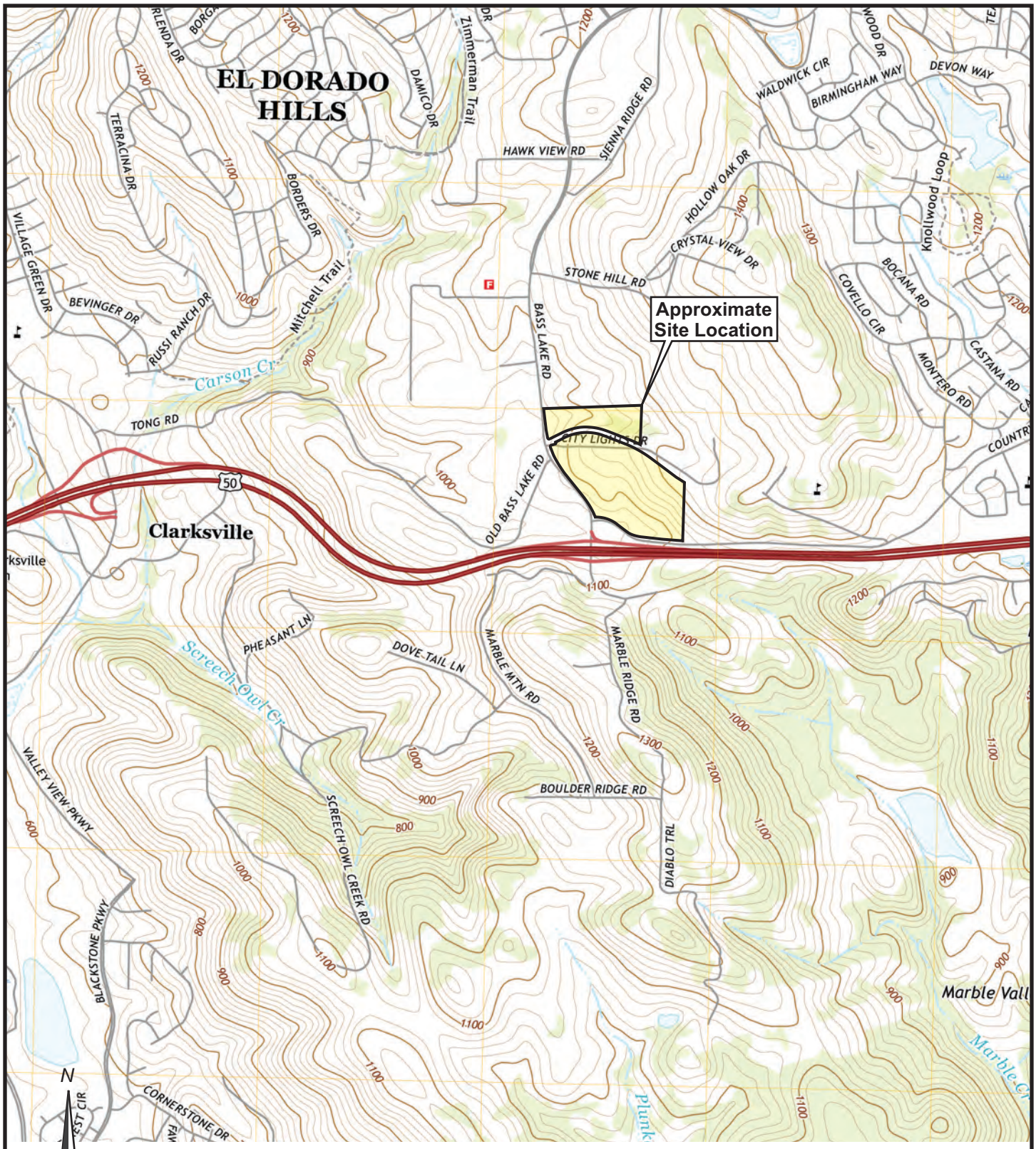
7-5-22



7-5-22

Attachments:
Percolation Test Results
Figures 1 – 10

Distribution: One electronic copy to client



Scale: 1:24,000

BASE MAP REFERENCE: *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2018*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.000	**VICINITY MAP** **The Town & Country Village El Dorado Onsite Wastewater Disposal** El Dorado Hills, California	**FIGURE 1**
	July 2022		

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984

Project No.: E21526.000

July 2022

SITE PLAN
The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 2

TP(1-5) = Approximate Test Pit Locations (January 2022)
TP(6-10) = Approximate Test Pit Locations (June 2022)
1a = Approximate Percolation Test Locations
= Intermittent Stream = Drainage Swale = Seeps

REFERENCE: *Slope Map Exhibit, Town & Country Village, CTA Engineering Inc., Dated October 2021; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021*

COLOR LEGEND

COLOR	SLOPE RANGE BEGINNING	SLOPE RANGE END	AREA	PERCENT OF AREA SHOWN
	0%	10%	17.16 A.c.	23.31%
	11%	20%	41.13 A.c.	55.88%
	21%	29%	11.75 A.c.	15.96%
	29%	39%	1.71 A.c.	2.32%
	40%+		1.86 A.c.	2.53%

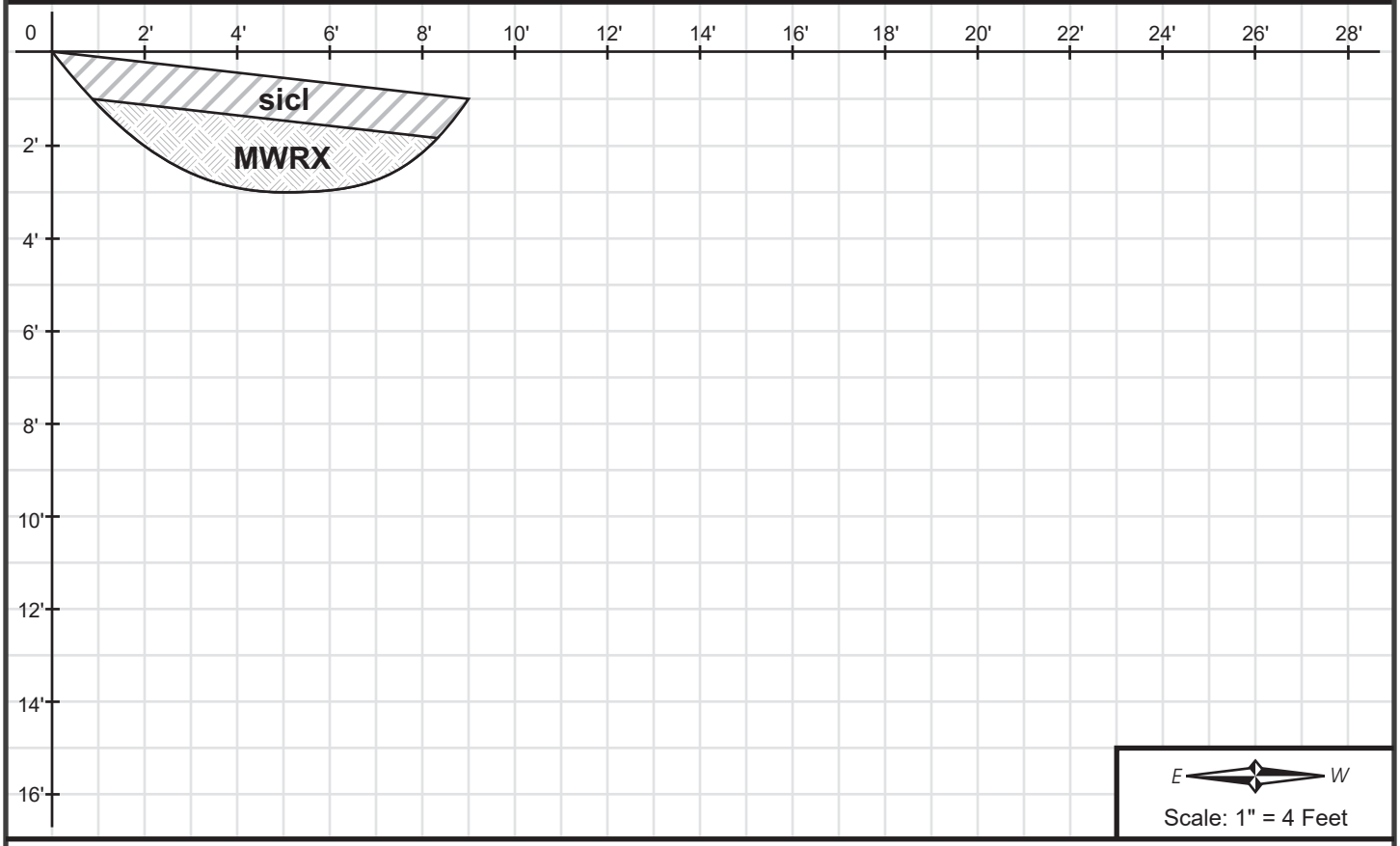
Potential Disposal Area
Potential Disposal Area
WATERLINE EASEMENT 702/403
MOHANNA M H 119-080-23 PARCEL 1 PM 48-80
P.S.E. 2008-6082
100'
Most Likely to Be Suitable
Rocky
Well #1
Well #2
100'
40' Cut Setback
10' X 15' EASEMENT PACIFIC BELL TELE. CO. 2000-0041045
LANDSCAPE & P.S.E. 2008-6082
PUBLIC SERVICE EASEMENT 2008-6080
MOHANNA M H 119-080-21 PARCEL 2 PM 48-80
MOHANNA 119-080-12 PARCEL 3 PM 48-80
GHISHAN 119-080-05
Less Likely to Be Suitable
Proposed Commercial Property
Shallow Groundwater
Wet Area
50'
(E) ROAD & P.U.E. O.R. 1498/687
ROAD & P.U.E. O.R. 1498/688
15' P.T.& T EASEMENT PER P.M. S-11
15' P.T.& P.M. 5-11
American River Electric Co. per 62 O.R. 81 may affect this parcel. No exact location given.
80' P.G.& E. EASEMENT PER O.R. 633/163
TP-1 TP-2 TP-3 TP-4 TP-5 TP-6 TP-7 TP-8 TP-9 TP-10
1a 1b 1c 1d 2a 2b 2c 2d 3a 3b 3c 3d 4a 4b 4c 4d 5b 5c 5d 6a 6b 6c 6d 7a 7b 7c 7d 8a 8b 8c 8d 9a 9c 9d 10a 10b 10c 10d

N

0 100 200 400
Approximate Scale: 1" = 200'

Logged By: **DCS**	Date: **9 June 2022**	Lat / Lon: **N 35.659040° / W 121.027360°**		Pit No. **TP-6**
Equipment: **John Deree 410 with 24" Bucket**		Pit Orientation: **267°**	Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/2) **SILTY CLAY**, 30% gravel, no redoximorphic features, coarsely granular, many medium interstitial and tubular pores, very friable, moderately plastic, slightly sticky, common fine roots, clear irregular boundary, dry.		
@ 1' - 3'	Gray Brown moderately weathered rock		
	Test pit terminated at 3' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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Project No.: E21526.000

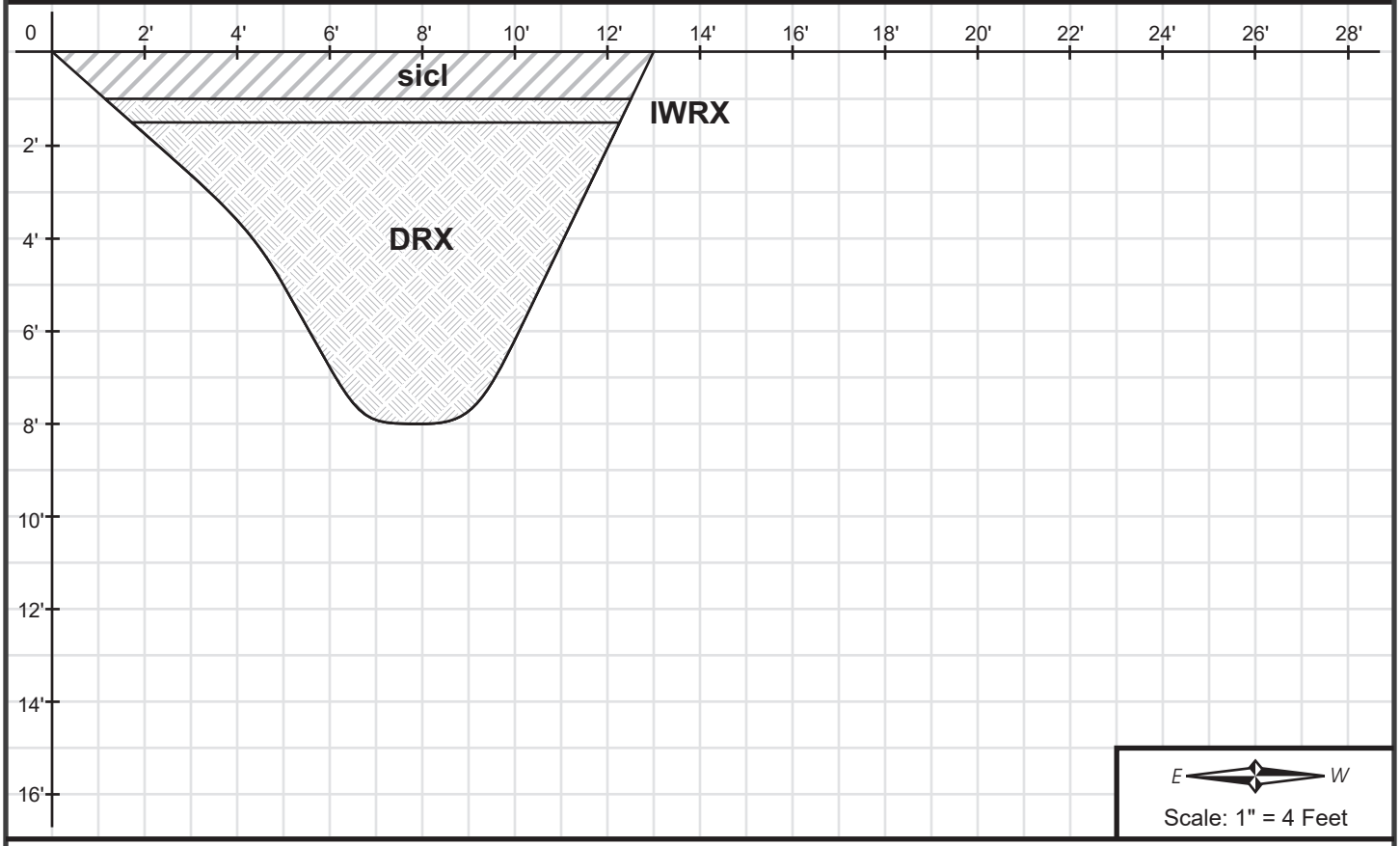
July 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 3

Logged By: **MAP**	Date: **9 June 2022**	Lat / Lon: **N 35.658420° / W 121.027070°**		Pit No. **TP-7**
Equipment: **John Deree 410 with 24" Bucket**		Pit Orientation: **73°**	Elevation: **~**	

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/2) **SILTY CLAY**, 10% gravel, no redoximorphic features, coarsely granular, many medium interstitial and tubular pores, very friable, moderately plastic, slightly sticky, common fine roots, clear irregular boundary, dry		
@ 1' - 1.5'	Gray intensely weathered rock		
@ 1.5' - 8'	Gray bedrock		
	Test pit terminated at 8' No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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Project No.: E21526.000

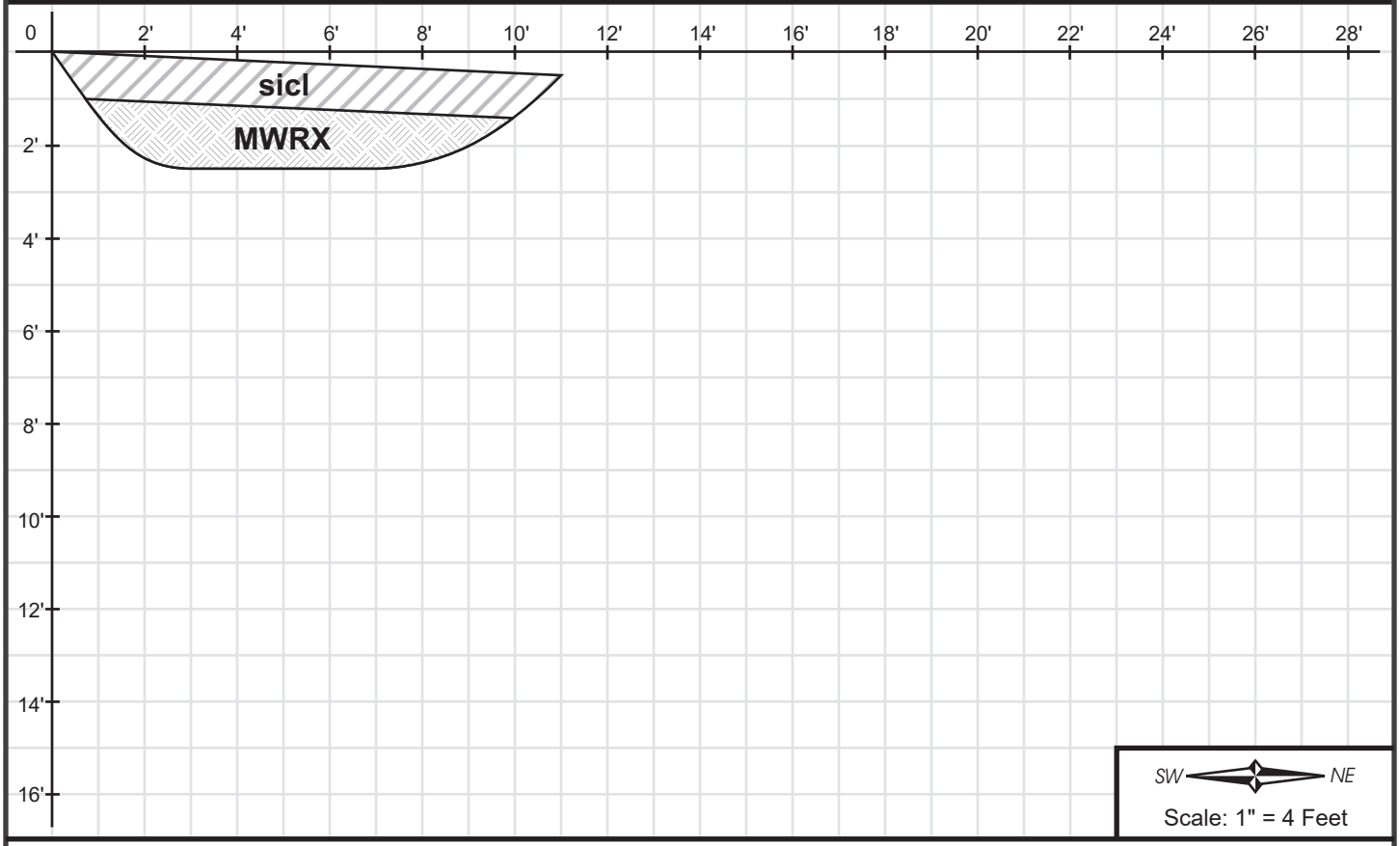
July 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 4

Logged By: **DCS**	Date: **9 June 2022**	Lat / Lon: **N 35.658340° / W 121.026110°**	Pit No. **TP-8**
Equipment: **John Deree 410 with 24" Bucket**		Pit Orientation: **60°**	Elevation: **~**

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/3) **SILTY CLAY**, 20% gravel, no redoximorphic features, coarsely granular, many medium interstitial and tubular pores, very friable, slightly plastic, non-sticky, few fine roots, diffuse irregular boundary, moist		
@ 1' - 2.5'	Gray moderately weathered bedrock		
	Test pit terminated at 2.5' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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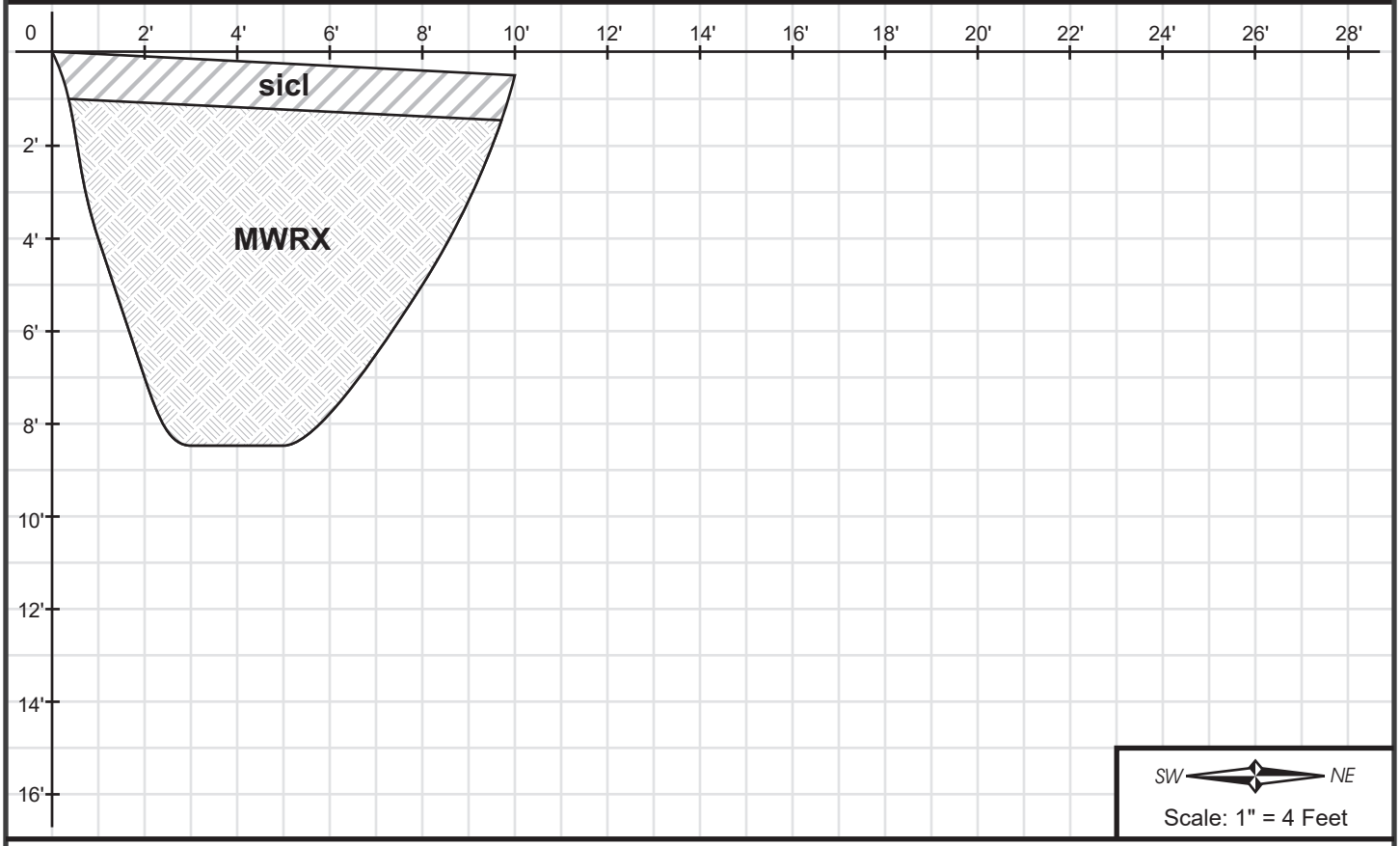
July 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 5

Logged By: **DCS**	Date: **9 June 2022**	Lat / Lon: **N 35.657560° / W 121.026210°**	Pit No. **TP-9**
Equipment: **John Deree 410 with 24" Bucket**		Pit Orientation: **60°**	Elevation: **~**

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Brown (7.5 YR 4/3) **SILTY CLAY**, 20% gravel, no redoximorphic features, coarsely granular, many medium interstitial and tubular pores, very friable, slightly plastic, non-sticky, few fine roots, diffuse irregular boundary, moist		
@ 1' - 8.5'	Gray moderately weathered bedrock		
	Test pit terminated at 8.5' No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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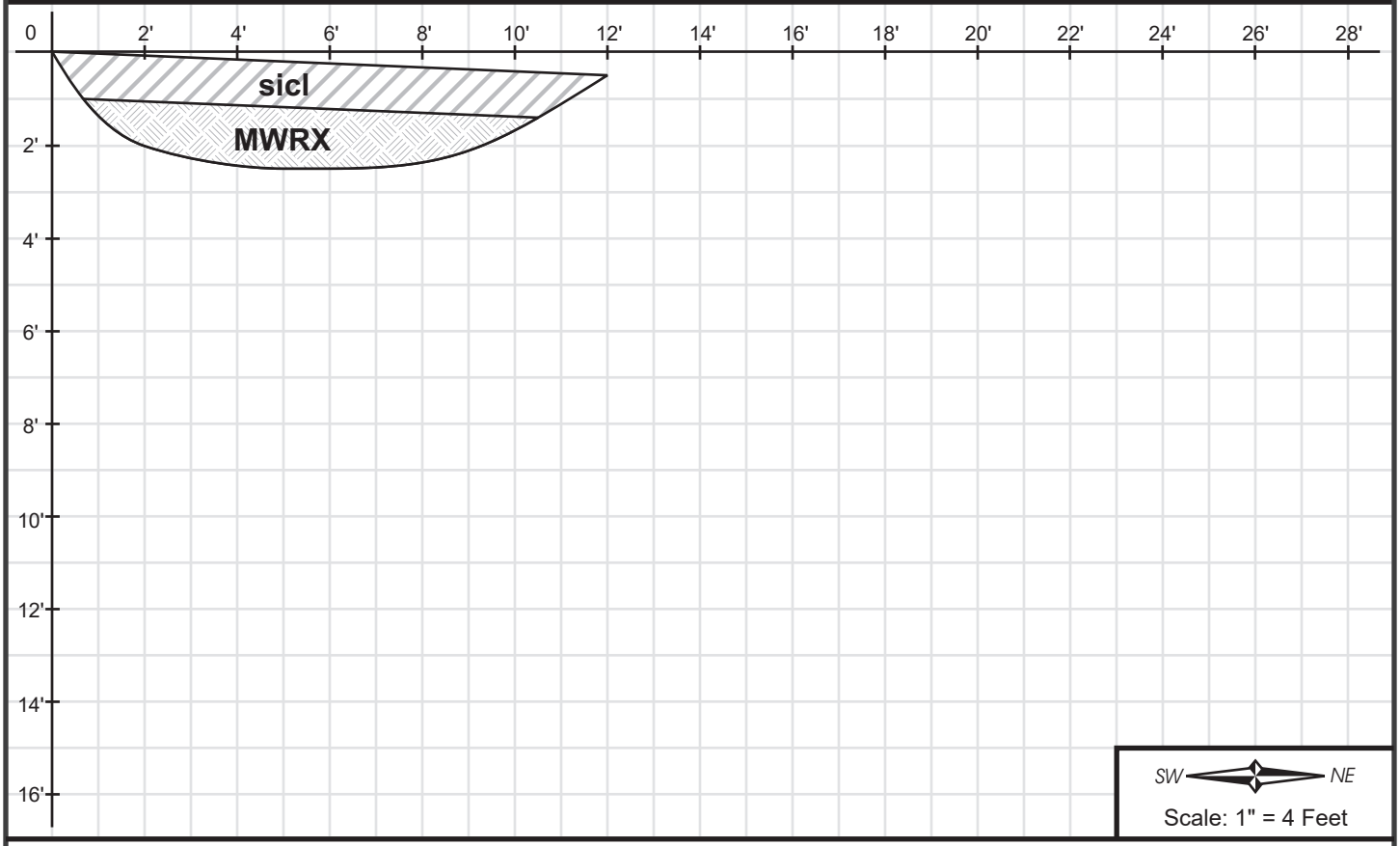
July 2022

EXPLORATORY TEST PIT LOG
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 6

Logged By: **DCS**	Date: **9 June 2022**	Lat / Lon: **N 35.658000° / W 121.025420°**	Pit No. **TP-10**
Equipment: **John Deree 410 with 24" Bucket**		Pit Orientation: **45°**	Elevation: **~**

Depth (Feet)	Geotechnical Description & Unified Soil Classification	Sample	Tests & Comments
@ 0' - 1'	Reddish brown (5 YR 4/3) **SILTY CLAY**, 20% gravel, 10% cobbles, no redoximorphic features, coarsely granular, many medium interstitial and tubular pores, very friable, slightly plastic, slightly sticky, few fine roots, diffuse irregular boundary, moist		
@ 1' - 2.5'	Gray green moderately weathered rock		
	Test pit terminated at 2.5' (practical refusal) No free groundwater encountered No caving noted		



Note: The test pit log indicates subsurface conditions only at the specific location and time noted. Subsurface conditions, including groundwater levels, at other locations of the subject site may differ significantly from conditions which, in the opinion of Youngdahl Consulting Group, Inc., exist at the sampling locations, Note, too, that the passage of time may affect conditions at the sampling locations.

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El Dorado Hills, California

FIGURE 7

Consultant: **YCG**	Date: **9 June 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 6 ***1ST Horizon*** **Depth:** 0' **to** 1'
Slope: 4.5 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 30 % cobble ~ % stone ~ %
Color: 7.5 YR 4/2
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism f m [c] single grain massive
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: none few [common] many vf [f] m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: [dry] moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

SOIL PIT # 7 ***1ST Horizon*** **Depth:** 0' **to** 1'
Slope: 4 **% Aspect:** CONCAVE
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble 10 % stone ~ %
Color: 7.5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism f m [c] single grain massive
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np sp [mp] vp **Stickiness:** ns [ss] ms vs
Roots: none few [common] many vf [f] m c
Boundary Distinctness: a [c] g d **Topography:** s w [i] b
Moisture: [dry] moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

2nd Horizon **Depth:** 1' **to** 3'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX [MWRX] DG
Rock Fragments: gravel ~ % cobble ~ % stone 90 %
Color:
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES:
Same as SOIL PIT # ***Horizon #*** _____

2nd Horizon **Depth:** 1' **to** 1.5'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX [IWRX] MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: Grey
Redoxymorphic Features: none few [common] many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

3rd Horizon **Depth:** _____ **to** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

3rd Horizon **Depth:** 1.5' **to** 8'
~
Texture: s ls sl sc scl l c cl sic sicl sil si [DRX] IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone 100 %
Color: Grey
Redoxymorphic Features: none [few common] many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

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The Town & Country Village El Dorado
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El Dorado Hills, California

FIGURE 8

Consultant: **YCG**	Date: **9 June 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 8 ***1ST Horizon*** **Depth:** 0' **to** 1'
Slope: 9 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 20 % cobble ~ % stone ~ %
Color: 5 YR 4/3
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism f m [c] single grain massive
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** [ns] ss ms vs
Roots: none [few] common many vf [f] m c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: [dry] moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

2nd Horizon **Depth:** 1' **to** 2.5'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX [MWRX] DG
Rock Fragments: gravel ~ % cobble ~ % stone 90 %
Color: _____
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: _____
Same as SOIL PIT # ***Horizon #*** _____

3rd Horizon **Depth:** _____ **to** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: _____
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: _____
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

SOIL PIT # 9 ***1ST Horizon*** **Depth:** 0' **to** 1'
Slope: 5 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel 10 % cobble 10 % stone ~ %
Color: _____
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # 8 ***Horizon #*** 1

2nd Horizon **Depth:** 1' **to** 2.5'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: Grey
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # 8 ***Horizon #*** 2

3rd Horizon **Depth:** _____ **to** _____
~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone _____ %
Color: Grey
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: _____
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

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EXPLORATORY SOIL PIT LOG

The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California

FIGURE 9

Consultant: **YCG**	Date: **9 June 2022**	Parent Rock Type: [V] G MS A Other

SOIL PIT # 10 ***1ST Horizon*** **Depth:** 0' **to** 1'
Slope: 5 **% Aspect:** FLAT
Texture: s ls sl sc scl l c cl sic [sicl] sil si DRX IWRX MWRX DG
Rock Fragments: gravel 20 % cobble ~ % stone ~ %
Color: 5 YR 4/2
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: [gran] platy block prism f m [c] single grain massive
Soil Pores: none few common [many] f [m] c [inters] tubular
Moist Consistence: l [vfr] fr f vf ef
Plasticity: np [sp] mp vp **Stickiness:** [ns] ss ms vs
Roots: none [few] common many vf [f] m c
Boundary Distinctness: [a] c g d **Topography:** s w [i] b
Moisture: [dry] moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

SOIL PIT # ***1ST Horizon*** **Depth:** _____ **to** _____
Slope: _____ **% Aspect:** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

2nd Horizon **Depth:** 1' **to** 2.5'
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX [MWRX] DG
Rock Fragments: gravel ~ % cobble ~ % stone 100 %
Color: Grey green
Redoxymorphic Features: [none] few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES:
Same as SOIL PIT # ***Horizon #*** _____

2nd Horizon **Depth:** _____ **to** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color: Grey
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

3rd Horizon **Depth:** _____ **to** _____
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

3rd Horizon **Depth:** _____ **to** _____
~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone % %
Color: Grey
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

4th Horizon **Depth:** ~ **to** ~
Texture: s ls sl sc scl l c cl sic sicl sil si DRX IWRX MWRX DG
Rock Fragments: gravel ~ % cobble ~ % stone ~ %
Color:
Redoxymorphic Features: none few common many
RC color ~ RD color ~ RM color ~
Structure: gran platy block prism f m c single grain massive
Soil Pores: none few common many f m c inters tubular
Moist Consistence: l vfr fr f vf ef
Plasticity: np sp mp vp **Stickiness:** ns ss ms vs
Roots: none few common many vf f m c
Boundary Distinctness: a c g d **Topography:** s w i b
Moisture: dry moist wet saturated
NOTES: ~
Same as SOIL PIT # ***Horizon #*** _____

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FIGURE 10

Soil Test-Pit Log: Key to Terms and Abbreviations

Slope as measured in percent.

Parent Rock Type: V = Volcanic; G = Granite; MS = Metasedimentary; A = Alluvium

Effective Soil Depth is defined as: "the depth of soil material from ground surface that effectively provides filtration of effluent. Effective soil excludes soil layers that meet the criteria for 'Soil With Rapid Permeability' and 'Conditions Associated With Saturation' and' Limiting Layers'." Soil With Rapid Permeability is defined as: "soil with: (A) percolation rates less than six (6) minutes per inch, or (B) soil texture classes of sand or loamy sand, or (C) soils containing more than 50% rock fragments greater than 2 mm in diameter, or (D) soils with stones, cobbles, gravel and rock fragments with too little soil material to fill interstices larger than one (1) mm in diameter." Conditions Associated With Saturation are defined as: "(A) reddish brown or brown oxidized soil horizons with dull gray zones of redox depletions (chromas of 2 or less), and red or yellowish red zones of redox concentrations; or (B) reduced, or iron depleted, horizons of gray, blue, or olive colors (chromas of 2 or less) with dull red, yellowish red, or brown zones of redox concentrations; or (C) organic soils and dark-colored soils very high in organic matter. Limiting Layer is defined as: "a layer that impedes the movement of water, air or the growth of plant roots. For example: hardpan, claypan, fragipan, bedrock, and expansive clay."

Depth of soil horizon from top to bottom of horizon as measured from grade.

Texture:

s = sand	ls = loamy sand	sl = sandy loam
sc = sandy clay	scl = sandy clay loam	l = loam
c = clay	cl = clay loam	sic = silty clay
sicl = silty clay loam	sil = silt loam	si = silt

DRX = bedrock MWRX = moderately weathered rock
IWRX = intensely weathered rock DG = decomposed granite

Rock Fragments: gravel (avg. diameter: 0.078 inches [2 mm] to 3 inches)
cobbles (avg. diameter: 3 inches to 10 inches)
stones and boulders (avg. diameter: >10 inches)

Color of a moist soil matrix, broken ped face, using Munsell Soil Color Chart or other standard soil color books.

Redoxymorphic Features: few <2% common 2-20% many >20%
RC = Redox concentrations; note color of moist soil using Munsell chart or other standard soil color books.
RD = Redox depletions; note color of moist soil using Munsell chart or other standard soil color books.
RM = Reduced matrices; note color of moist soil using Munsell chart or other standard soil color books.

Structure:	granular/platy	blocky/prismatic
fine	<1/8 inch (<2 mm)	<3/8 inch (10 mm)
medium	1/8-3/16 in (2-5 mm)	3/8-3/4 in (10-20 mm)
coarse	>3/16 inch (>5 mm)	>3/4 inch (>20 mm)

Soil Pores: fine <1/8 inch (2 mm)
medium 1/8-3/16 inch (2-5 mm)
coarse >3/16 inch (>5 mm)
inters = interstitial
tubular = tubular

Consistence: l = loose
vfr = very friable
fr = friable
f = firm
vf = very firm
ef = extremely firm

Plasticity: np = non-plastic
sp = slightly plastic
mp = moderately plastic
vp = very plastic

Stickiness: ns = non-sticky
ss = slightly sticky
ms = moderately sticky
vs = very sticky

Roots: vf = very fine <1/16 inch (1 mm)
f = fine 1/16-1/8 inch (1-2 mm)
m = medium 1/8-3/16 inch (2-5 mm)
c = coarse >3/16 inch (>5 mm)

Boundary:

Distinctness:	a = abrupt	< 1 inch
	c = clear	1 to 2 inches
	g = gradual	2 to 6 inches
	d = diffuse	> 6 inches
Topography:	s = smooth	
	w = wavy	
	i = irregular	
	b = broken	

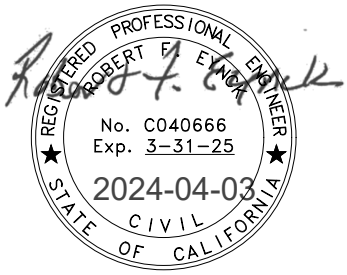
APPENDIX K

PRELIMINARY SANITARY SEWER FEASIBILITY STUDY

For

Town and Country
El Dorado Hills, CA

April 3, 2024



Prepared by,
CWE
2260 Douglas Blvd., Suite 160
Roseville, CA 95661
Ph 916-772-7800
CWE Project No. R22022

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B. EXISTING SITE CONDITIONS..... 4

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APPENDIX B .....PRELIMINARY SEPTIC DISPERSAL AREAS AND LAYOUT

APPENDIX C.....PERCOLATION TEST RESULTS AND TEST LOCATIONS

APPENDIX D.....SEPTIC FLOWS

APPENDIX E .....ORENCO ADVANTEX TREATMENT SYSTEM

A. PROJECT LOCATION

This project is located at the northeast corner of US 50 and Bass Lake Road in El Dorado Hills. The project site is composed of APNs 119-080- 021, 119-080-012 and 119-080-023, with the latter parcel traversed west to east by Country Club Drive. The project's location is shown on the Vicinity Map in Appendix A and a Site Plan is located in Appendix B. The project falls within the El Dorado County jurisdiction.

B. EXISTING SITE CONDITIONS

The project site is currently a vacant lot with hilly terrain and grasses with several oak trees. See attached topographic survey with google map image. There are numerous rock outcroppings on the site. A seasonal drainage flows westward through APN 119-080-023, the northernmost property.

C. PROJECT DESCRIPTION

The proposed project includes two 150 room hotels, a convention center with two restaurants and retail and a 112 unit staff housing and hotel daily rentals complex to support the hotel and convention center.

See Appendix D, Sewage Flows

Summary of Sewage Effluent Flows

Convention Center, Retail Space and Two Restaurants	**9,400 gpd**
Staff Housing and Hotel Daily Rental Cottages	**11,200 gpd**
Hotel 1	**11,250 gpd**
Hotel 2	**11,250 gpd**
Total	**43,100 gpd**

The goal of the project is to evaluate an on-site sewage septic system that would support the proposed development.

Project Feasibility

The basis for design utilized the Youngdahl Consulting Group, Inc. Percolation and Mantle Testing study dated June 30, 2022 (Project No. E21526.000) on APN 119-080-012. The soils were evaluated to shallow depths (from 2 ½ foot to 8 foot below ground surface). See attached Appendix C.

In general, the one to two foot shallow soils were found to have good percolation rates. Depths of more than 2.5 feet found that the soils did not percolate well and should not be used for disposal.

The average percolation rate for the area within APN 119-080-12 was 19.1 minutes per inch.

The type of effluent is also an important consideration for this evaluation. The two restaurants will generate grease waste and it is recommended a separate grease waste collection system be used for those operations.

In addition, the use of laundry facilities to support the hotel operations will have an effluent make up that will require additional pre-treatment.

Per the Onsite Wastewater Treatment Systems (OWTS) manual a minimum effective soil depth of 5 feet below the design depth is required. The 2 to 3-foot depth of practical soil eliminates the feasibility of using traditional leaching trenches thus a Special Design OWTS system would be required.

This option would adhere to the current El Dorado County OWTS Manual and falls under the OWTS Tier 2 category. Since this project will exceed 10,000 gallons per day, the project will be required to go through the California State Water Resources board.

The special design septic system proposed is an Orenco AdvanTex Commercial Treatment System. It is comprised of a Standard AdvanTex system with a 4 stage treatment configuration. This method includes both primary and secondary treatment. In the field percolation tests, groundwater was not encountered with depths of 3 foot to 8 foot deep. With the use of this system, the treated effluent would do no harm to the groundwater in the unlikely event that effluent would penetrate to the groundwater. The configuration would include primary treatment, Pre-anoxic treatment, Standard AdvanTex Treatment, and a Pre-Anoxic Return line. This type of treatment would be ideal for a hotel and convention center application. This system would typically achieve treatment levels of < 10 mg/L for BOD_5, and total suspended solids (TSS) (based on 30-day average or 30-day arithmetic mean) and they would typically provide reduction of total nitrogen(TN) >60% and removal of ammonia of 95%. See Exhibit E, page 8 of 37. If higher levels of effluent treatment are required, modifications could be provided to the final treatment design.

An alarm system is included with each system. The alarms are placed in the septic tanks. The alarm monitors the septic system to warn you when the water level within the septic tank has risen too high or too low in the tank. This alarm will allow the operator to mitigate any issues with the septic system.

Capping Field or Mound System

It is proposed to consider a capping fill or mound system septic disposal system. Since these disposal areas would be uphill of the septic tanks, these systems would be pressure systems and in general would be comprised of a septic tank, pump tank, and dispersal field. Such trenches would have to be 1 to 2 feet deep by 3 feet wide and constructed with a minimum 12″ of capping fill. See capping fill detail in Appendix B, sheet C1.

Residential Sewage Disposal Area

From the Youngdahl report dated June 30, 2022 report and Per Table 5 of the OWTS, a **109 minute per inch percolation rate translates to an application rate of 0.48 gpd/sf on APN 119-080-21.** Using a typical trench dimension of 2 feet deep by 3 feet wide.

Use of this system would require approximately 5,833 lineal feet of leach lines. See detail and exhibit map in Appendix B. This would equate to a minimum primary disposal area of approximately 70,000 SF or 1.61 acres. The County requires a 300 percent replacement area (or 3 times the primary disposal area) in the event the primary leach field fails. Including the 300 percent replacement system the total would be approximately 6.43 acres (Primary and Replacement Area). The system would be dispersed into separate zones and pressure dosed. An EZ Flow system (styrofoam bundles in trenches) could be used at a rate of 4 SF/LF.

Effluent for the Residential (Staff Housing) would be disposed on a portion of APN 11-080-21.

Hotels, Restaurants, Retail and Convention Center Sewage Disposal Area

From the Youngdahl report dated June 30, 2022 report and Per Table 5 of the OWTS, a **19.1 minute per inch percolation rate translates to an application rate of 1.14 gpd/sf on APN 119-080-12.** Using a typical trench dimension of 2 feet deep by 3 feet wide. Since the area available on APN 119-080-12 is roughly 7.7 acres **All sewage flows** could be disposed on this site including the required reserve area. An EZ Flow system (styrofoam bundles in trenches) could be used at a rate of 4 SF/LF.

Use of this system would require approximately 6,996 lineal feet of leach lines. See detail and exhibit map in Appendix B, sheet C1. This would equate to a minimum primary disposal area of approximately 83,947 SF or 1.93 acres. The County requires a 300 percent replacement area (or 3 times the primary disposal area) in the event the leach field system in the primary field fails. Including the 300 percent replacement system the total would be approximately 7.7 acres (Primary and Replacement Area). The system would be dispersed into separate zones and pressure dosed.

Effluent for the Hotels, Restaurants, Retail and Convention Center would be disposed on a portion of APN 11-080-12. See Appendix B, sheet C1.

Below are the recommended specifications for the capping field:

Staff Housing (1 system)

Lift Station and Pump Parameters:

- Septic Tank and Treatment: 10,000 gallon septic tank with Orenco biotube duplex pump package
- Flow: 5,600 GPD

- Type of pump: Duplex submersible pumps
- Pump capacity: 30 gpm design flow; 50 gpm peak flow
- TDH head: 103.7′
- Emergency operation: Alarm system for high water elevation

1. Dosing Tank and Pump required for cap and fill distribution.

2. Electrical equipment and controls located in enclosed areas meets National Electrical Code for hazardous conditions.

3. Pumps, motors, and other mechanical and electrical equipment to be easily removed without entering the wet well.

4. Shut-off valves are located on discharge lines of each pump between the pump and the valve.

5. Check valves are located on discharge lines of each pump.

Force Main Parameters:

1. Diameter of force main: 2″ discharge piping from septic/pump tank to Dosing Tank at leach field

2. Length of force main: 1,220 feet

3. Force main material: PVC, Schedule 80

4. Leakage tests on the force main are as required by El Dorado County.

Dispersal Trench:

1. EZ Flow System Trench and Cap: 5,052 LF

Gravity Sanitary Sewer from structures to pump station: 2,000 LF.

Convention Center, Retail and Two Restaurants (1 system)

System: Lift Station and Pump Parameters:

- Septic Tank and Treatment: 10,000 gallon septic tank with Orenco biotube duplex pump package
- Grease Interceptor for Restaurant Grease: 10,000 gallon
- Flow: 9,400 GPD
- Type of pump: Duplex submersible pumps
- Pump capacity: 30 gpm design flow; 50 gpm peak flow
- TDH head: 104′

- Emergency operation: Alarm system for high water elevation

1. Dosing Tank and Pump required for cap and fill distribution.

2. Electrical equipment and controls located in enclosed areas meets National Electrical Code for hazardous conditions.

3. Pumps, motors, and other mechanical and electrical equipment to be easily removed without entering the wet well.

4. Shut-off valves are located on discharge lines of each pump between the pump and the valve.

5. Check valves are located on discharge lines of each pump.

Force Main Parameters:

1. Diameter of force main: 2" discharge piping from septic/pump tank to Dosing Tank at leach field

2. Length of force main: 818 feet

3. Force main material: PVC, Schedule 80

4. Leakage tests on the force main are as required by El Dorado County.

Dispersal Trench:

1. EZ Flow System Trench and Cap: 2,061 LF

Gravity Sanitary Sewer from structure to pump station: 312 LF.

Two Hotels (3 systems)

Lift Station and Pump Parameters:

- Septic Tank and Treatment: 10,000 gallon septic tank with Orenco biotube duplex pump package
- Flow: 10,000 GPD Maximum between 3 systems totaling 22,500
- Type of pump: Duplex submersible pumps
- Pump capacity: 30 gpm design flow; 50 gpm peak flow
- TDH head: 105.1'
- Emergency operation: Alarm system for high water elevation

1. Dosing Tank and Pump required for cap and fill distribution.

2. Electrical equipment and controls located in enclosed areas meets National Electrical Code for hazardous conditions.

3. Pumps, motors, and other mechanical and electrical equipment to be easily removed without entering the wet well.

4. Shut-off valves are located on discharge lines of each pump between the pump and the valve.

5. Check valves are located on discharge lines of each pump.

Force Main Parameters:

1. Diameter of force main: 2" discharge piping from septic/pump tank to Dosing Tank at leach field

2. Length of force main: 2,145 LF for the two hotels, restaurants, retail, and convention center

3. Force main material: PVC, Schedule 80

4. Leakage tests on the force main are as required by El Dorado County.

Dispersal Trench:

1. EZ Flow System Trench and Cap: 4,935 LF for the two hotels

Gravity Sanitary Sewer from structures to pump station total for the two hotels: 2,100 LF.

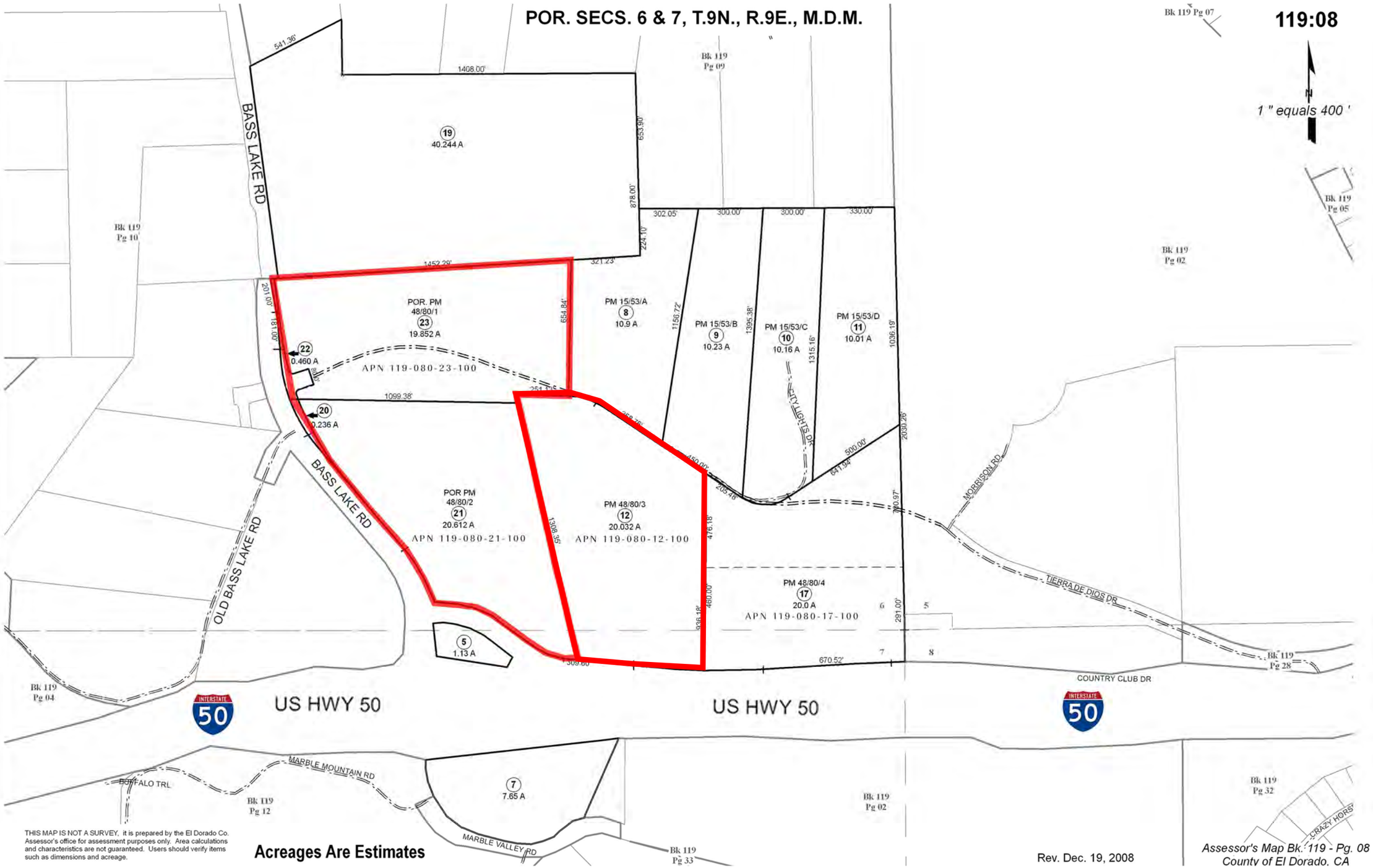
Preliminary Cost Estimate:

Refer to cost sheet under separate cover.

Conclusion:

A total of six (6) septic systems will be constructed to accommodate the development. One system will be required for the staff housing, one for the convention center, restaurants, and retail and three systems will be required for the two hotels.

APPENDIX A
LOCATION MAP



TOWN & COUNTRY VILLAGE
EL DORADO

MOHANNA DEVELOPMENT CO.

PANFINO General Partnership

cta Engineering & Surveying

HRGA ARCHITECTS

GLABE + TAYLOR ARCHITECTS

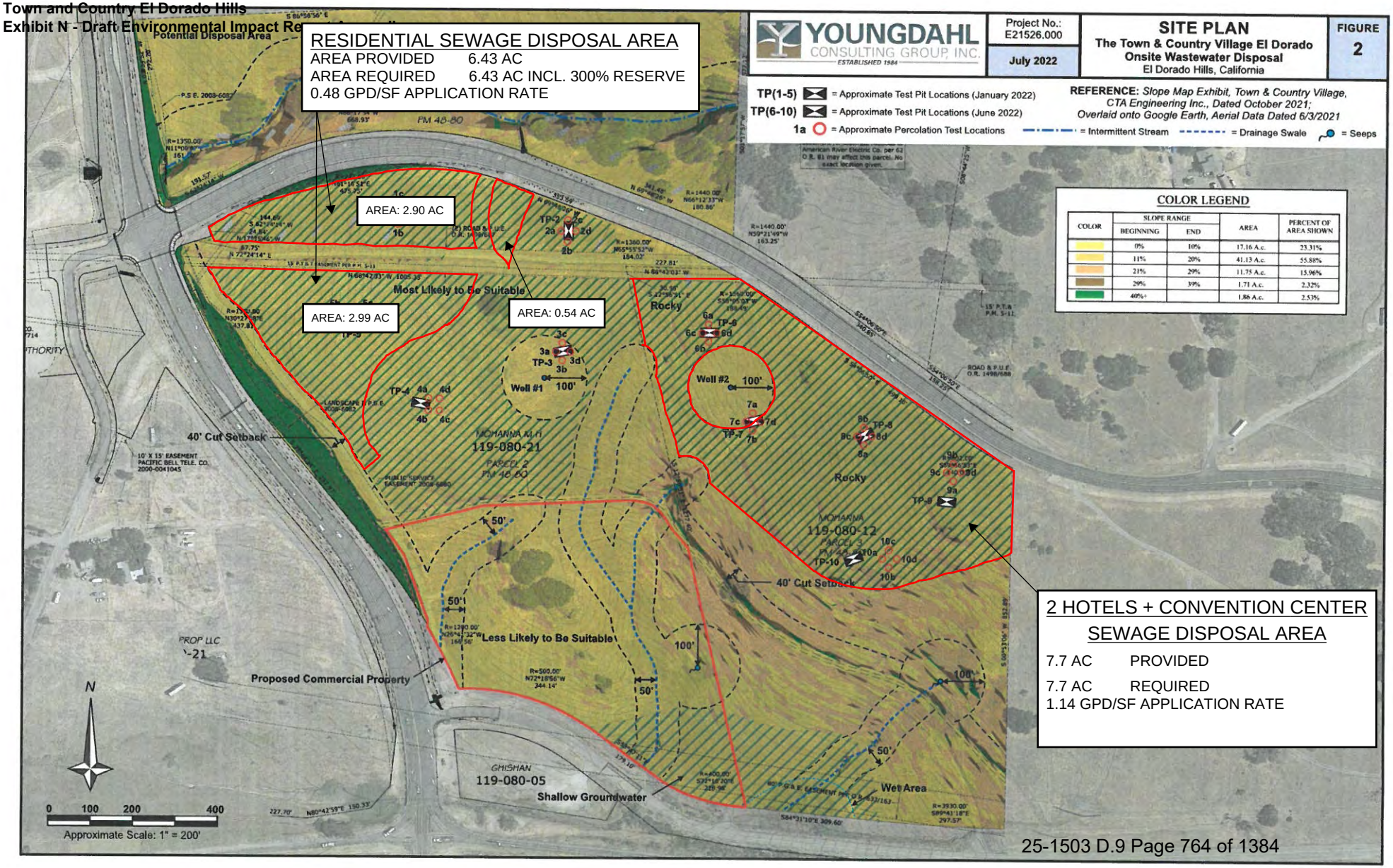
YOUNGDAHL CONSULTING GROUP, INC.

DRAWING TITLE:
Assessor's Parcel Map

DATE:

SHEET NUMBER:
PD-Exhibit 1

APPENDIX B
PRELIMINARY SEPTIC DISPERSAL AREAS AND LAYOUT


RESIDENTIAL SEWAGE DISPOSAL AREA
AREA PROVIDED 6.43 AC
AREA REQUIRED 6.43 AC INCL. 300% RESERVE
0.48 GPD/SF APPLICATION RATE
YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
Project No.: E21526.000
July 2022
SITE PLAN
The Town & Country Village El Dorado
Onsite Wastewater Disposal
El Dorado Hills, California
FIGURE 2
TP(1-5) = Approximate Test Pit Locations (January 2022)
TP(6-10) = Approximate Test Pit Locations (June 2022)
1a = Approximate Percolation Test Locations
= Intermittent Stream
= Drainage Swale
= Seeps
REFERENCE: Slope Map Exhibit, Town & Country Village, CTA Engineering Inc., Dated October 2021; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021
COLOR LEGEND
COLOR
SLOPE RANGE
BEGINNING
END
AREA
PERCENT OF AREA SHOWN
0% 10% 17.16 A.c. 23.31%
11% 20% 41.13 A.c. 55.88%
21% 29% 11.75 A.c. 15.96%
29% 39% 1.71 A.c. 2.32%
40%+ 1.86 A.c. 2.53%
AREA: 2.90 AC
AREA: 2.99 AC
AREA: 0.54 AC
Most Likely to Be Suitable
Less Likely to Be Suitable
Shallow Groundwater
Wet Area
Rocky
Well #1
Well #2
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
TP-10
40' Cut Setback
50'
100'
MOHANNA M H
119-080-21
PARCEL 2
FM 48-80
MOHANNA
119-080-12
PARCEL 3
GHISHAN
119-080-05
Proposed Commercial Property
2 HOTELS + CONVENTION CENTER
SEWAGE DISPOSAL AREA
7.7 AC PROVIDED
7.7 AC REQUIRED
1.14 GPD/SF APPLICATION RATE
N
0 100 200 400
Approximate Scale: 1" = 200'

MOHANNA
119-080-23
PARCEL 1 PM 48-80

UCHIKURA
119-100-57

RESIDENTIAL AREA

SSFM TO DISPOSAL

SSFM

MOORHOUSE
119-080-08
PARCEL
A PM 15-53

MOORHOUSE
119-080-09
PARCEL
B PM 15-53

WYCKOFF
119-080-10
PARCEL
C PM 15-53

DENSE TREES

DENSE TREES

DENSE TREES

POST

SUPPLY LINE

GEOFLOW EMITTERS

12 ' SPACING, TYP.

SUPPLY LINE

FLUSH RETURN LINE

Leach Line (typ)

SUPPLY LINE

FLUSH RETURN LINE

EL DORADO COUNTY
TRANSIT AUTHORITY
2018-0012749

100' WELL
SETBACK

MOHANNA
119-080-21
PARCEL 2
PM 48-80

SUPPLY LINE

GEOFLOW EMITTERS

12 ' SPACING, TYP.

FLUSH RETURN LINE

100' WELL
SETBACK

Leach Line (typ)

RESIDENTIAL SEWAGE DISPOSAL AREA

AREA PROVIDED	6.43 AC	
AREA REQUIRED	6.43 AC	(INCL. 300% DISPOSAL AREA)

1 system

2 HOTELS + 2 RESTAURANTS CONVENTION SEWAGE DISPOSAL AREA

AREA PROVIDED	7.7 AC
AREA REQUIRED	7.7AC

4 systems

MOHANNA
119-080-12
PARCEL 3
PM 48-80

SUPPLY LINE

FLUSH RETURN LINE

M.B.

RUIN

RUIN

TRAILER

PILES

TRAILER

BASS LAKE
PROP LLC
119-100-21

HOTEL

HOTEL

CONVENTION
CENTER

SS

SS

SS

SSFM

SSFM TO SEWAGE
DISPOSAL AREA

GRAVITY SANITARY SEWER
FROM CONVENTION CENTER

1 system

GRAVITY SANITARY
SEWER FROM 2 HOTELS

3 systems

AN
119-080-05

BRUSH

HEAVY BRUSH

BRUSH

ASPH.

ASPH.

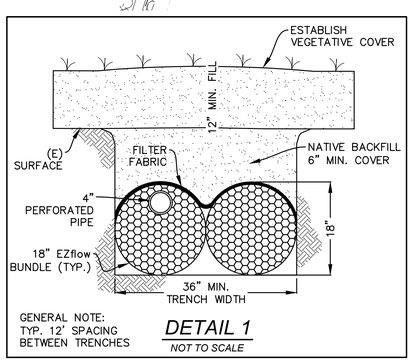
ASPH.

ASHA LLC
119-080-17
PARCEL 4
PM 48-80

N

100 0 100 200

1 INCH = 100 FEET



GENERAL NOTE:
TYP. 12' SPACING
BETWEEN TRENCHES

DETAIL 1
NOT TO SCALE

LEGEND:

- *SEPTIC TANK DUPLEX W/ GRINDER PUMPS*
- SS — *SANITARY SEWER GRAVITY LINE*
- SSFM — *SANITARY SEWER FORCE MAIN*
- *SEWAGE DISPOSAL AREA- 2 HOTELS, 2 RESTAURANTS, & CONVENTION CENTER*
- *SEWAGE DISPOSAL AREA- RESIDENTIAL*

NO.	REVISION	DATE	BY	APPRV'D

NOT FOR CONSTRUCTION

	BY	CHECK
DESIGN	AEB	RFE
DRAWN	AEB	RFE
QUANT.		

0 1 2
ORIGINAL SCALE IS IN INCHES

REGISTERED PROFESSIONAL ENGINEER
ROBERT F. EYNON
No. C040566
*PRELIMINARY
NOT FOR
CONSTRUCTION*
OF CALIF.

CWE
2260 Douglas Blvd., Suite 160, Roseville, CA 95661
Ph: 916-772-7080 Fax: 916-772-7088
www.cwecorp.com

CAP FUNDING
MH MOHANNA & CO.
1025 9TH STREET, SUITE 205
SACRAMENTO, CA 95814
CONTACT: MOE MOHANNA
PH: (916) 835-3036

TOWN & COUNTRY
BASS LAKE ROAD
EL DORADO HILLS, CA 95762
PRELIMINARY SEPTIC LAYOUT

Sheet
C1
1 of 1
3/20/2024

APPENDIX C
PERCOLATION TEST RESULTS AND TEST LOCATIONS

pit was logged using the United States Department of Agriculture soil classification system. Each pit was observed by a representative of the El Dorado County Department of Environmental Health.

5.0 PERCOLATION TESTING

On the 18th of January an 8-inch diameter electric auger was used to advance borings to the depths shown in Table 1. Percolation testing apparatus with pea gravel packing was installed into each boring. Water was than added to a height of 12 inches above the hole bottoms and maintained for a period of 4 hours. On the following day, water was added to a depth of at least 6 inches above the hole bottoms and the rate of drop was measured for 4 hours, with refilling performed as necessary.

Table 1 – Percolation Testing Results

Percolation Test	Depth (feet)	Final Percolation Rate (minutes per inch)
1A	3	DNP*
1B	2.5	300
1C	2	20
1D	2	43
2A	3	DNP
2B	2.5	300
2C	2	100
2D	1.5	50
3A	3	DNP
3B	2.5	19
3C	2	30
3D	1.5	150
4A	3	DNP
4B	2.5	150
4C	3	DNP
4D	1	9
5A	3	300
5B	2.5	300
5C	2	43
5D	1	7

DNP= Did Not Percolate

In general, the shallow soils were found to have good percolation rates and the underlying weathered bedrock did not have significant percolation rates. The bedrock acts as a limiting layer.

6.0 ESTIMATED APPLICATION RATES

The shallow soils are predominately silty to sandy clay. This overlies highly weathered bedrock, which represents a limiting layer. The fact that the deep soils within the bedrock were found to be moist is indicative that there is infiltration in this limiting layer. If the percolation rates from depths of 2½ feet or shallower from Table 1 are averaged, the result is 109 minutes per inch. For trench applications, the Reference No. 1 manual specifies that the application rate would be 0.48 gallons per day per square-foot (gpd/ft^2).

The western part of the upper ridge area was previously identified by the Preliminary Feasibility Study to be the area most likely be suitable for onsite wastewater disposal. The first five (5) test pits and percolation tests were performed in this area.

Youngdahl is of the understanding that the area tested by the first 5 pits and 5 sets of percolation tests is insufficient in size to support the planned onsite wastewater disposal system; additional area is needed. On 27 May 2022, Youngdahl marked an additional five (5) test pit locations in the northeastern portion of the subject property and activated an Underground Services Alert.

4.0 SUBSURFACE EXPLORATION

On 9 June 2022, subsurface conditions were explored using a rubber-tired Deere 410 backhoe equipped with a 24-inch bucket. In general, the soil profiles were found to range from 1-foot of brown to reddish brown SILTY CLAY over 2 to 7 feet gray brown to gray green intensely to moderately weathered bedrock. Test pit (mantle test) total depths ranged from 2½ to 8 feet to practical refusal depths. No caving or groundwater was observed. Each pit was logged using the United States Department of Agriculture soil classification system. Each pit was observed by a representative of the El Dorado County Department of Environmental Health.

5.0 PERCOLATION TESTING

On the 9th of June an 8-inch diameter electric auger was used to advance borings to the depths shown in Table 1. Percolation testing apparatus with pea gravel packing was installed into each boring. Water was then added to a height of 12 inches above the hole bottoms and maintained for a period of 4 hours. On the following day, water was added to a depth of at least 6 inches above the hole bottoms and the rate of drop was measured for 4 hours, with refilling performed as necessary.

Table 1 – Percolation Testing Results

Percolation Test	Depth (feet)	Final Percolation Rate (minutes per inch)
6A	1	18.8
6B	1	6.7
6C	1.5	15.8
6D	1.5	37.5
7A	3	50.0
7B	2.5	21.4
7C	2	16.7
7D	1.5	7.3
8A	2.5	DNP
8B	1.5	6.7
8C	1	10.3
8D	2	5.5
9A	1.5	9.1
9B	2	5.5
9C	2.5	33.3
9D	1.5	33.3
10A	1.5	1.6
10B	1	37.5
10C	2	33.3
10D	2	13.6

DNP= Did Not Percolate

6.0 ESTIMATED APPLICATION RATES

The shallow soils are predominately silty to sandy clay. This overlies highly weathered bedrock, which represents a limiting layer. If the percolation rates, excluding percolation test 8A from Table 1 are averaged, the result is 19.1 minutes per inch. For trench applications, the Reference No. 1 manual specifies that the application rate would be 1.14 gallons per day per square-foot (gpd/ft^2).

With the presence of the shallow restrictive layer, the effluent may be required to be substantially treated. A subsurface drip disposal system might then be considered. For silty clay with a moderate to strong structure, the GeoFlow, Inc. website specifies a disposal rate of 0.3 gpd/ft^2.

9.0 FINDINGS AND RECOMMENDATIONS

The site is significantly constrained by relatively thin soils overlying fractured bedrock. The fractured bedrock represents a limiting layer, however, one that still infiltrates water at a slow rate. Onsite waste water disposal using an advanced treatment system is likely feasible. This report should be supplied to a design wastewater engineer to further evaluate the feasibility of onsite wastewater treatment and disposal.

This study has been performed following standards of practice common to onsite wastewater feasibility and evaluation at the time and geographic vicinity of our study. This is not a design level study. No warranties are expressed or implied. Please do not hesitate contacting us with any questions.

Very truly yours,
Youngdahl Consulting Group, Inc.

David C. Sederquist

David C. Sederquist, C.E.G., C.HG.
Senior Engineering Geologist/Hydrogeologist



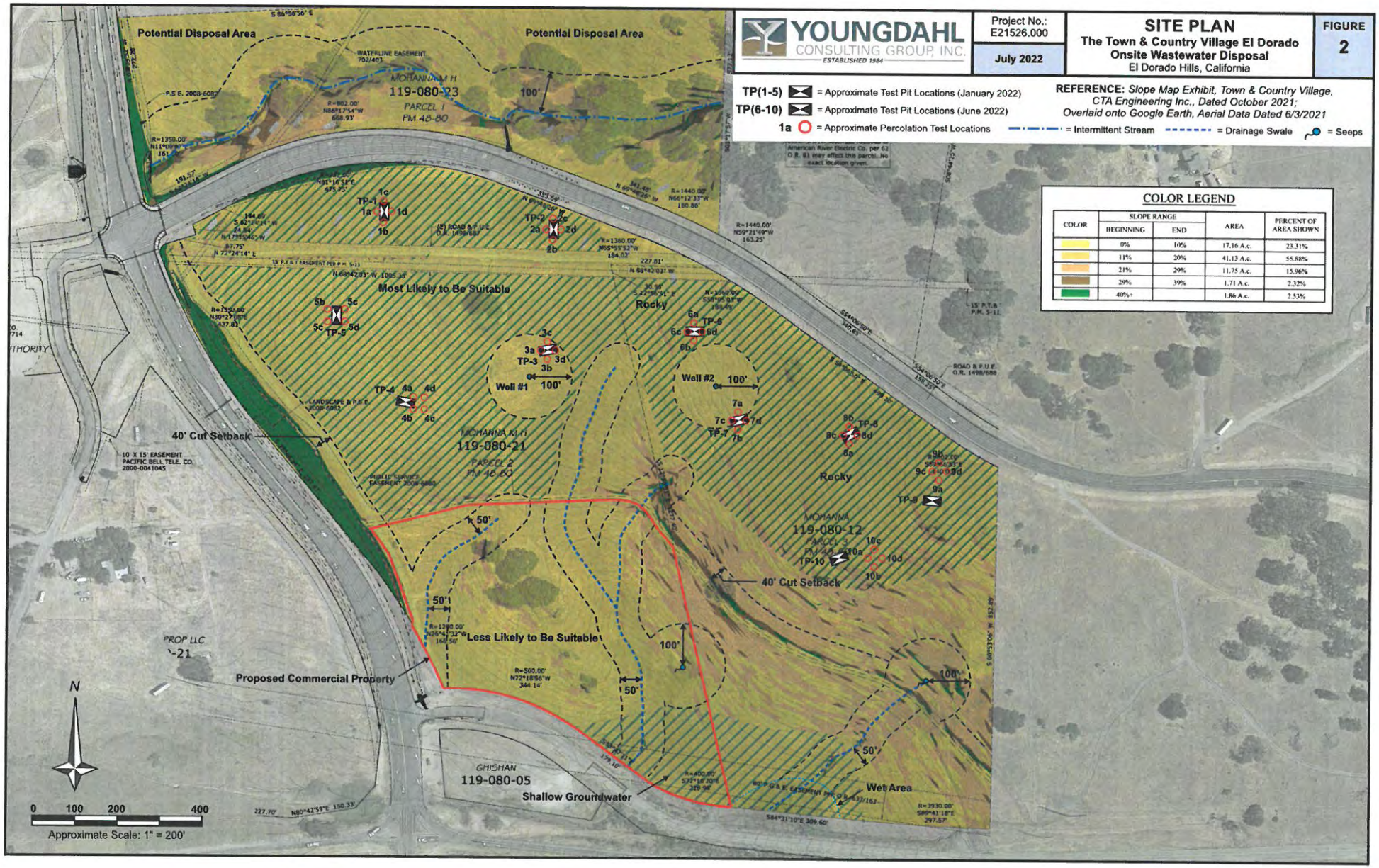
7-5-22



7-5-22

Attachments:
Percolation Test Results
Figures 1 – 10

Distribution: One electronic copy to client


YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
Project No.: E21526.000
July 2022
SITE PLAN
The Town & Country Village El Dorado Onsite Wastewater Disposal
El Dorado Hills, California
FIGURE 2
TP(1-5) = Approximate Test Pit Locations (January 2022)
TP(6-10) = Approximate Test Pit Locations (June 2022)
1a = Approximate Percolation Test Locations
= Intermittent Stream
= Drainage Swale
= Seeps
REFERENCE: Slope Map Exhibit, Town & Country Village, CTA Engineering Inc., Dated October 2021; Overlaid onto Google Earth, Aerial Data Dated 6/3/2021
COLOR LEGEND
COLOR | SLOPE RANGE BEGINNING | SLOPE RANGE END | AREA | PERCENT OF AREA SHOWN
0% | 10% | 17.16 A.c. | 23.31%
11% | 20% | 41.13 A.c. | 55.88%
21% | 29% | 11.75 A.c. | 15.96%
29% | 39% | 1.71 A.c. | 2.32%
40%+ | | 1.86 A.c. | 2.53%
Potential Disposal Area
Potential Disposal Area
MOHANNA M H
119-080-23
PARCEL 1
PM 48-80
Most Likely to Be Suitable
Rocky
Well #1
Well #2
100'
MOHANNA M H
119-080-21
PARCEL 2
PM 48-80
40' Cut Setback
50'
Less Likely to Be Suitable
Proposed Commercial Property
MOHANNA
119-080-12
PARCEL 3
PM 48-80
GHISHAN
119-080-05
Shallow Groundwater
Wet Area
N
0 100 200 400
Approximate Scale: 1" = 200'

APPENDIX D
SEWER FLOWS

Project	Units	Flow gpd/bed	Beds/Unit	Beds	Persons/Cottage	Flow/Person	Flow/Cottage/Day	Flow gpd*	Flow gpm	Flows/gpd	No. of Systems
Convention Center and Retail Use								1,000	0.69		
Restaurant 1								4,200	2.92		
Restaurant 2								4,200	2.92	**9,400**	**1**
Staff Housing and Hotel Daily Rental Cottages	112				2	50	100	11,200	7.78	**11,200**	**2**
Hotel 1	150	60	1.25	187.5				11,250	7.81		
Hotel 2	150	60	1.25	187.5				11,250	7.81	**22,500**	**3**
Total Flow GPD								**43,100**		**43,100**	
Total Flow GPM									22		
Total Number of Systems											**6**

*Youngdahl Preliminary Onsite Wastewater Percolation and Mantle Testing Study dated March 13, 2022

APPENDIX E
ORENCO ADVANTEX COMMERCIAL TREATMENT SYSTEMS

Orenco WATER

AdvanTex® Commercial Treatment Systems

Design Criteria

ADDRESS
Orenco Systems, Inc.
814 Airway Ave.
Sutherlin, OR 97479 USA

CONTACT
1-800-348-9843
+1 541-459-4449
www.orenco.com

DOCUMENT
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All product and performance assertions are based on proper design, installation, operation, and maintenance according to Orenco's current published documentation.

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Equations and Parameters Frequently Used in This Design Criteria

For recommendations regarding minimum hydraulic retention times, primary tankage, and configurations see Appendix A, Table A.

Determining Mass Load in AdvanTex Systems

(For complete information on how to use these equations, see Appendix B.)

	Mass Load (lbs/day)	Mass Load (kg/day)
	Concentration (mg/L) × (8.34 x 10^{-6}) × Flow (gpd)	Concentration (mg/L) × (0.001) × Flow (m^3/day)

Determining Standard AdvanTex Stage Sizing

(For complete information on how to use these equations, see Performance Requirements and Unit Sizing.)

	Design Avg. (US Units)	Design Max. (US Units)	Design Avg. (SI Units)	Design Max. (SI Units)
Based on Organic Loading Rate (OLR)	0.04lbs BOD_5/ft^2•d	0.08lbs BOD_5/ft^2•d	0.2kg BOD_5/m^2•d	0.4kg BOD_5/m^2•d
Based on Hydraulic Loading Rate (HLR)	25gpd/ft^2	50gpd/ft^2	1m^3/m^2•d	2m^3/m^2•d
Based on Total Nitrogen Loading Rate (TNLR)	0.014lbs TN/ft^2•d	0.028lbs TN/ft^2•d	0.07kg TN/m^2•d	0.14kg TN/m^2•d
Based on Ammonia Loading Rate (ALR)	0.01lbs NH_3-N/ft^2•d	0.02lbs NH_3-N/ft^2•d	0.05kg NH_3-N/m^2•d	0.1kg NH_3-N/m^2•d

Determining Second-Stage AdvanTex Sizing in Two-Stage Systems

(For complete information on how to use these equations, see Performance Requirements and Unit Sizing.)

	Design Avg. (US Units)	Design Max. (US Units)	Design Avg. (SI Units)	Design Max. (SI Units)
Based on Organic Loading Rate (OLR)	0.02lbs BOD_5/ft^2•d	0.04lbs BOD_5/ft^2•d	0.1kg BOD_5/m^2•d	0.2kg BOD_5/m^2•d
Based on Hydraulic Loading Rate (HLR)	75gpd/ft^2	125gpd/ft^2	3m^3/m^2•d	5m^3/m^2•d
Based on Total Nitrogen Loading Rate (TNLR)	0.007lbs TN/ft^2•d	0.014lbs TN/ft^2•d	0.035kg TN/m^2•d	0.07kg TN/m^2•d
Based on Ammonia Loading Rate (ALR)	0.005lbs NH_3-N/ft^2•d	0.01lbs NH_3-N/ft^2•d	0.025kg NH_3-N/m^2•d	0.05kg NH_3-N/m^2•d

Determining Anticipated Treatment Performance from Standard AdvanTex Systems

(For complete information on how to use these equations, see Appendix B.)

Based on BOD_5

$$\mathbf{BOD_{5e} = BOD_{5i} \times (1 - C_{BR})}$$

where: BOD_{5e} = BOD_5 effluent from standard AdvanTex stage
BOD_{5i} = BOD_5 primary-treated effluent value
C_{BR} = coefficient of biological removal, 0.90

Based on TKN or NH_3-N

$$\mathbf{TKN_e = TKN_i \times (1 - C_{NR})}$$

where: TKN_e = TKN effluent from standard AdvanTex stage
TKN_i = TKN primary-treated effluent value
C_{NR} = coefficient of nitrogen removal, 0.95

Based on NO_3

$$\mathbf{NO_{3e} = (TKN_i - TKN_e) \times (1 - C_{DNR})}$$

where: NO_{3e} = NO_3 effluent from standard AdvanTex stage
TKN_i = TKN primary-treated effluent value
TKN_e = TKN effluent
C_{DNR} = coefficient of denitrification, 0.70

Based on TN

$$\mathbf{TN_e = TKN_e + NO_{3e}}$$

where: TN_e = TN effluent from standard AdvanTex stage
TKN_e = TKN effluent from standard AdvanTex stage
NO_{3e} = NO_3 effluent from standard AdvanTex stage

Determining Anticipated Treatment Performance for Total Nitrogen from Post-Anoxic AdvanTex Treatment Stages

(For complete information on how to use these equations, see Appendix B.)

$$\mathbf{TN_{PAe} = TKN_e + NO_{3e} \times (1 - C_{DNR})}$$

where: TN_{PAe} = TN effluent from post-anoxic stage
TKN_e = TKN effluent from standard AdvanTex stage
NO_{3e} = NO_3 effluent from standard AdvanTex stage
C_{DNR} = coefficient of denitrification, 0.70

Introduction

Orenco's AdvanTex Treatment Systems were developed for the long-term processing of domestic- and commercial-strength wastewater to advanced treatment levels. The heart of all AdvanTex systems is a multiple-pass, packed-bed, fixed-film media filter that reliably provides high-quality effluent in a wide range of applications. These systems have undergone numerous national and international testing protocols, as well as multiple third-party field verification programs. This manual provides design information and guidance for commercial applications using an AdvanTex Treatment System. For other applications, contact Orenco or your local Orenco dealer for more information.

AdvanTex Model Descriptions

Three AdvanTex models are typically used in commercial applications. Your choice of model depends on system sizing requirements and site characteristics. All three operate in the manner described in the treatment process description, and all perform similarly. For exact dimensions and specific treatment configurations, see AdvanTex Treatment System drawings.

AdvanTex AX20

Specifications

Length	91in (2311mm)
Width	40in (1016mm)
Height	31in (787mm)
Dry weight	400lbs (181kg)
Treatment surface area	20ft^2 (1.9m^2), nominal
Installation footprint	25ft^2 (2.3m^2), actual
Installation methods	Partial burial or bermed installation; minimum 6in (150mm) above grade, antibuoyancy flanges available for areas with high groundwater
Recirculation-blend tankage	External
Recirculation method	Recirculating splitter valve

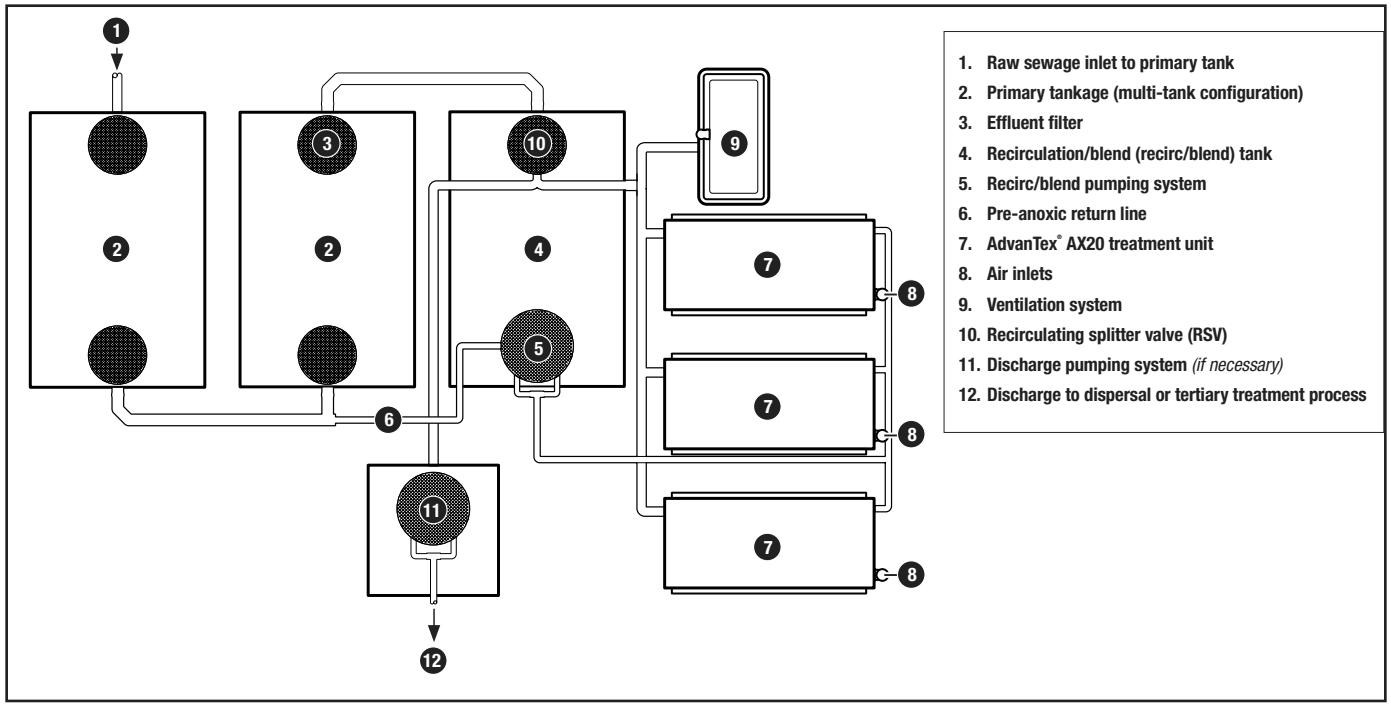


Figure 1. Example of an AdvanTex AX20 Commercial Treatment System

AdvanTex Model Descriptions, cont.

AdvanTex AX100

Specifications

Length	191in (4851mm)
Width	94in (2388mm)
Height	42in (1067mm)
Dry weight	1760lbs (798kg)
Treatment surface area	100ft^2 (9.3m^2), nominal
Installation footprint	128ft^2 (11.9m^2), actual
Installation methods	Partial burial or bermed installation; minimum 6in (150mm) above berm, maximum 9in (230mm) below natural grade
Recirculation-blend tankage	External
Recirculation method	Recirculating splitter valve

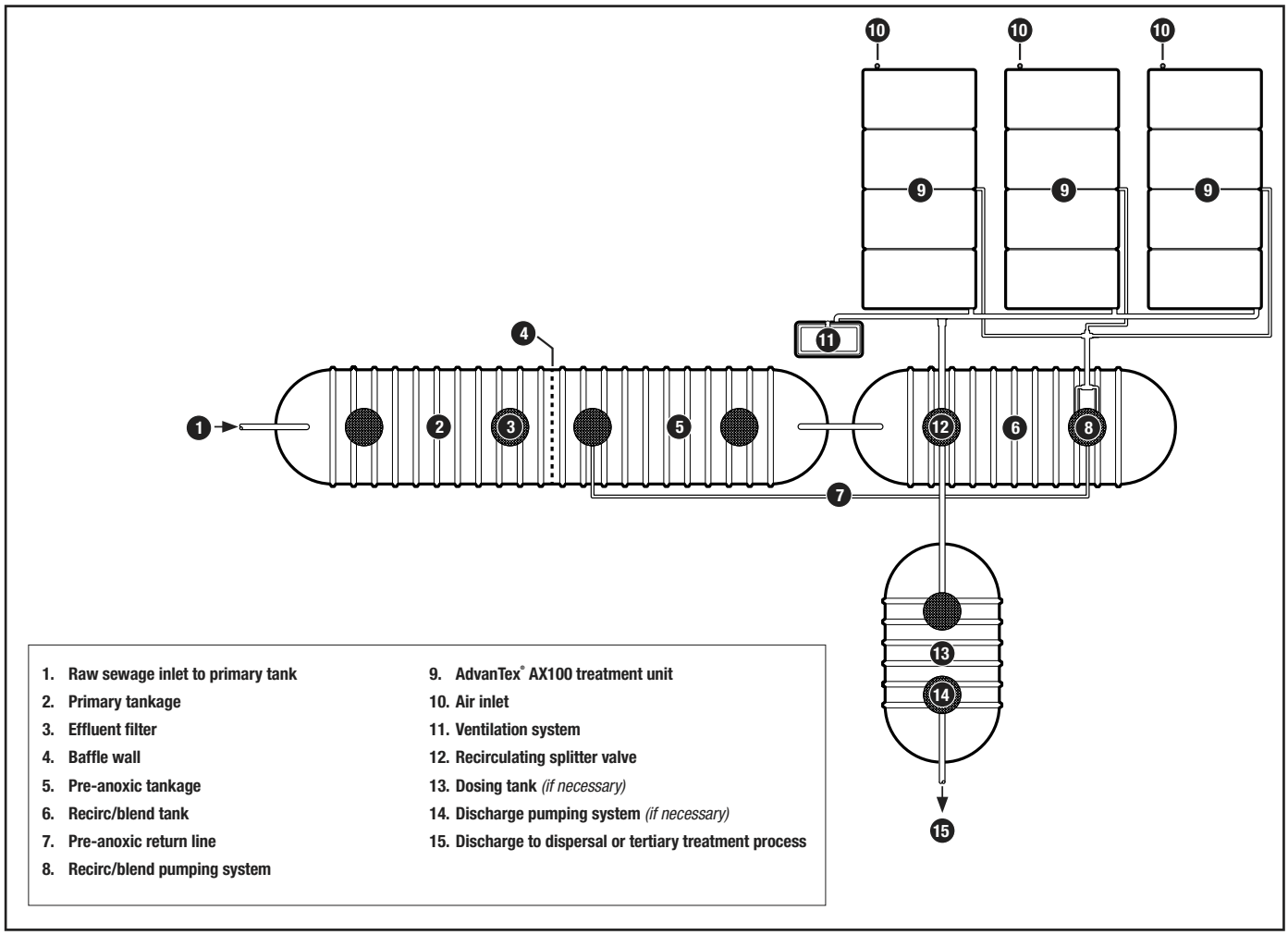


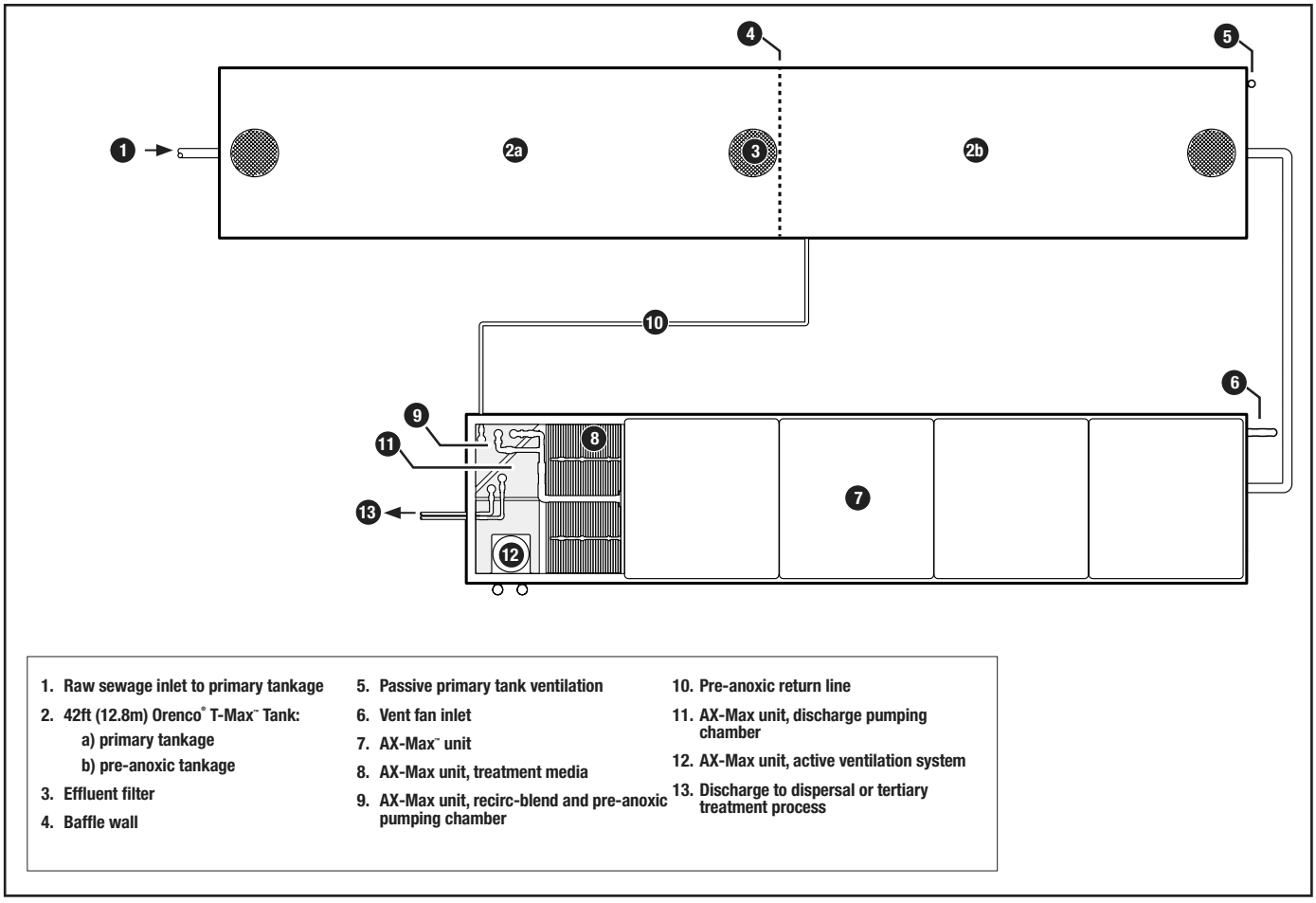
Figure 2. Example of an AdvanTex AX100 Commercial Treatment System

AdvanTex Model Descriptions, cont.

AdvanTex AX-Max

Specifications

Length	14-42ft (4.3-12.8m)
Width	90in (2286mm)
Height	97in (2464mm)
Dry weight	Variable, up to 12,000lbs (5440kg)
Treatment surface area	25-300ft^2 (2.3-27.9m^2), nominal
Installation footprint	112-336ft^2 (10.4-31.2m^2), actual
Installation methods	Partial burial or bermed installation, or free-standing installation; 24-36in (610-910mm) above grade or berm for ease of maintenance; antiflotation available for areas with high groundwater
Recirculation-blend tankage	Included
Recirculation method	Tank baffle wall, recirc-return valve



1. Raw sewage inlet to primary tankage
2. 42ft (12.8m) Orenco® T-Max™ Tank:
   a) primary tankage
   b) pre-anoxic tankage
3. Effluent filter
4. Baffle wall
5. Passive primary tank ventilation
6. Vent fan inlet
7. AX-Max™ unit
8. AX-Max unit, treatment media
9. AX-Max unit, recirc-blend and pre-anoxic pumping chamber
10. Pre-anoxic return line
11. AX-Max unit, discharge pumping chamber
12. AX-Max unit, active ventilation system
13. Discharge to dispersal or tertiary treatment process

Figure 3. Example of an AdvanTex AX-Max Commercial Treatment System

Design Basis

To ensure that the system is designed properly for a given application, it is critical to first determine the design basis. The design basis for any treatment system consists of careful evaluation of the parameters that control the system's design and subsequent performance. Orenco's NFO-ATX-ADM-2, Engineered Project Questionnaire, is available to assist in identifying and characterizing these parameters. It can be downloaded from Orenco's Document Library, under the "resources" tab at www.orenco.com; you can also contact Orenco or your local Orenco dealer for a copy. The questionnaire provides a list of the typical design parameters necessary to determine the suitability of Orenco products to a given project and for forming the system's design basis.

Average Day and Maximum Day Flows

Flows may be defined or calculated differently by application and local regulation; flows as used in this document are defined as follows:

Design Average Day Flow **(Q_A)** is the average of the daily volume to be received for a continuous twelve-month period expressed as a volume per day. For facilities that have critical, seasonal-high hydraulic loading periods (e.g., recreational areas, campgrounds), Design Average is based on the daily average flow during the seasonal period.

Design Maximum Day Flow **(Q_M)** is the largest volume of flow to be received during a continuous 24hr period expressed as a volume per day. The Design Maximum Day Flow is highly dependent on the application and collection technology used. For liquid-only sewer (LOS) or effluent sewer (STEP), grinder sewer, and vacuum sewer, a typical value is two times the Design Average Flow ($2Q_A$).

For gravity sewer applications, a typical value for Q_M is four times the Design Average Flow ($4Q_A$) for new construction and can range to over ten times ($10Q_A\pm$) for existing systems. Make sure to carefully evaluate any existing flow information and regulatory requirements when establishing this design parameter.

Primary-Treated Effluent Wastewater Strength

Organic Constituents in Wastewater

The two primary organic constituents in wastewater used in determining applicability and sizing of AdvanTex Treatment Systems are biochemical oxygen demand (BOD_5) and total suspended solids (TSS). These constituents are typically quantified either in raw wastewater or after the primary treatment stage. In order to determine the waste load to the AdvanTex Treatment System, it is necessary to determine the constituent concentrations after primary treatment. These constituent concentrations in wastewater are referred to as primary-treated effluent throughout this document, and all percent reduction estimates are calculated relative to these concentrations. If these constituents are provided as raw wastewater values, it is the responsibility of the designer to determine the appropriate primary treatment requirements to achieve the primary-treated effluent values used in the design. Industry experts typically estimate that appropriate primary treatment (see Appendix A for primary tank sizing recommendations) will provide 50% reduction of BOD_5 (down to a minimum of 150mg/L) and 90% reduction of TSS (down to a minimum of 50mg/L).

Nitrogen Constituents in Wastewater

The principal forms of nitrogen found in wastewater are Organic Nitrogen (Organic-N), Ammonia Nitrogen (NH_3-N), Ammonium Nitrogen (NH_4-N), Nitrite Nitrogen (NO_2-N), and Nitrate Nitrogen (NO_3-N). These are expressed either individually or as components of the following:

- **Total Kjeldahl Nitrogen (TKN)**, which is the sum of Organic-N + NH_3-N
- **Total Inorganic Nitrogen (TIN)**, which is the sum of NH_3-N + NO_2-N + NO_3-N
- **Total Nitrogen (TN)**, which is the sum of TKN + NO_2-N + NO_3-N

As with the organic constituent concentrations, the nitrogen constituent concentrations must be quantified after the primary treatment stage to determine waste load to the AdvanTex Treatment System and are listed as primary-treated effluent throughout this document. A thorough understanding of the nitrogen cycle and how it works within the wastewater system is important when designing a system to treat for these parameters. A brief description of the processes follows:

<u>Ammonification</u>

Nitrogen is usually introduced into the wastewater system as Organic-N and NH_4-N. Organic-N (including feces, urea, and other animal and vegetable matter) in wastewater is converted into NH_4-N by the process of ammonification. In ammonification, proteins, amino acids, and other nitrogen-containing compounds are biochemically degraded by heterotrophic bacteria. Ammonification typically occurs in primary tankage and transport lines, as well as in the secondary treatment process. Because of this, a raw wastewater ammonia measurement may be significantly lower than the true value. In these instances, TKN is a better measure of overall nitrogen content and should be used when determining waste load to the AdvanTex Treatment System.

Design Basis, cont.

Nitrification and Denitrification

Once primary-treated effluent is introduced into the secondary treatment process, nitrogen removal occurs first by nitrification and then by denitrification. In the first nitrification step, an ammonium-oxidizing autotrophic bacteria, Nitrosomonas, converts ammonium to nitrite. In the second nitrification step, a nitrite-oxidizing bacteria, Nitrobacter, converts nitrite to nitrate. Both steps occur under aerobic conditions. Lastly, denitrification occurs when nitrate is converted to nitrogen gas by heterotrophic bacteria under anoxic conditions (DO < 0.5 mg/L).

Therefore, treatment for NH_3-N and TKN occurs through an aerobic process, while treatment for NO_3-N, TIN, and TN occurs through a combination of aerobic and anoxic processes. For more information about the nitrogen process in wastewater, see Crites & Tchobanoglous' *Small and Decentralized Wastewater Management Systems,* 1st Edition (1998). For information on pH and temperature effects on nitrification and denitrification, see *pH Effect on Nitrification* and *Cold-Weather Considerations*.

Discharge Treatment Levels and Sampling Requirements

Discharge treatment levels and sampling requirements play a significant role in treatment facility design. Secondary treatment (effluent concentrations of BOD_5 and TSS of ≤ 30mg/L based on a 30-day average) is a simple process typically requiring only a single-stage AdvanTex Treatment System. Additionally, advanced secondary treatment (BOD_5 and TSS of ≤ 10mg/L based on a 30-day average) can typically be accomplished in the same manner. However, many permits now require a higher level of nitrogen treatment. They also commonly include a "not to exceed" value in place of a 30-day average or 30-day arithmetic mean. In these instances, a safety factor is typically applied (or additional processes added) so that the discharge parameters are not exceeded, even under maximum-day flow conditions or maximum-day primary-treated effluent concentrations.

Likelihood of System Expansion and Potential Permit Changes

Permits are typically limited in duration, and over the past two decades, treated effluent discharge requirements have become stricter. In fact, many permit renewals are now asking for measurement of various constituents that were not part of the original treatment facility design. When designers are planning for future expansion, or for future modifications to permits, Orenco recommends using incremental engineering to plan for and provide space for potential future treatment upgrades. By understanding the various stages used in AdvanTex Treatment Systems, designers can lay out the treatment facility in a manner that allows for additional stages in the event that a planned build-out or future permit modification requires it. See *Treatment System Configurations* and *Process Stages – AdvanTex Treatment Systems* for more information.

Highly Variable or Seasonal Flow Considerations

Hundreds of AdvanTex systems are installed in parks, campgrounds, resorts, and lodges that experience highly variable flows (or complete shutdowns for long periods) due to seasonal use, and AdvanTex is ideally suited for these applications. Shortly after the system is placed in service, a thin bacterial film develops in the upper portion of the textile media; removal of BOD_5/TSS occurs the first day after being in service. Independent tests show AdvanTex systems are capable of removing > 85% $cBOD_5$ and > 97% TSS within the first few days of operation. Many other technologies (especially suspended-growth technologies) require weeks to treat to this level and struggle during periods of low loading.

The operations and maintenance (O&M) manual provided with each AdvanTex system can help guide the operator on appropriate O&M for systems with highly variable or seasonal flows, including the use of trending to automatically adjust recirculation ratios. For more information on determining which O&M method is best for a particular highly variable or seasonal flow application, contact Orenco.

Water Softener Backwash

Water softener regenerate (backwash) must not be plumbed into any Orenco AdvanTex treatment system. It is a non-organic-based, bacteria-free wastewater. The concentration of sodium and chlorides in water softener backwash alters the settling and general solids-segregating characteristics in wastewater systems, and chlorides are elevated above the 180mg/L toxicity or inhibitory threshold established by EPA for nitrogen removal.

Many jurisdictions prohibit water softener backwash from being discharged to septic systems, advanced treatment systems, and/or sanitary sewer. Instead, there is a provision for constructing a separate, small dispersal area for backwash, as it is essentially a salt/mineral-laden water, free of contaminates, and suitable for ground discharge, as recognized by many states.

Application Types

Applications can typically be classified into one of seven types, each characterized by waste streams and usage. Table 1 lists each application type, examples, the criteria used to establish each type, and associated design notes.

It is important to note that the flow and constituent concentration ranges associated with each application type represent Orenco's observations from similarly classified applications, rather than actual flows and constituent concentrations of the applications at hand. The engineer is responsible for ensuring that a project's wastewater is properly characterized and, whenever possible, waste streams should be sampled and actual values used in the design.

Table 1. Application Types

Application Types	Examples	Characterization Criteria*	Design Notes
Type 1: Domestic Primary-Treated Effluent Quality (Black- and Greywater Waste Blend)	• Apartments • Condominiums • Mobile home parks • Municipal systems • Planned communities • Residential subdivisions • Work camps	• Residential in nature • Black- and greywater • Typical effluent characteristics: – BOD_5 140-250mg/L – TSS 40-140mg/L – TKN 50-80mg/L	Flow contributions may bias some applications toward another application type (for example, communities serving primarily commercial core areas with minimal residential connections, or work camps with commercial kitchens serving meals for workers from other camps).
Type 2: Primarily Blackwater Waste	• Airport facilities • Campgrounds • Fire departments • Golf courses • Manufacturing facilities • Offices • Parks • Public toilets/rest areas • RV parks • Ski resorts • Visitor centers	• Commercial in nature • Primarily blackwater • Typical effluent characteristics: – BOD_5 300-500mg/L – TSS 80-250mg/L – TKN 90-200mg/L	Flow contributions may bias some applications toward another application type (for example, facilities with restaurants, RV parks, or campgrounds with flow contributions from dump stations exceeding 20% of the daily flow).
Type 3: Primarily Blackwater Waste with Surge Flows	• Churches • Schools	• Commercial in nature • Primarily blackwater • Flows and primary-treated effluent quality are heavily dependent on the facilities (for example, schools with cafeterias and shower facilities vary significantly from those without) • Typical effluent characteristics: – BOD_5 300-500mg/L – TSS 80-250mg/L – TKN 90-150mg/L	Due to variations in daily waste volumes, flow equalization tankage should be strongly considered for treatment process optimization in these applications.
Type 4: Primarily Blackwater Waste with Pharmaceuticals or Toxic Inhibitors	• Hospitals • Retirement facilities • Veterinary clinics	• Commercial in nature • Primarily blackwater • Typical effluent characteristics: – BOD_5 300-700mg/L – TSS 100-350mg/L – TKN 70-120mg/L	Antibiotics and other pharmaceutical products may impair microorganism health in the primary tank and the AdvanTex treatment unit. The plan set should note that the wastewater treatment system can be negatively affected by the introduction of these substances; care should be taken to limit their discharge.
Type 5: Blackwater with Restaurant Waste	• Bars/taverns • Casinos • Delis • Gas stations • Hotels/motels • Restaurants • Resorts • Shopping centers • Strip malls	• Commercial in nature • Varies from primarily blackwater with some kitchen sources to primarily kitchen with some blackwater sources • Significant grease and oil (G&O) contributions from raw wastewater • Typical effluent characteristics: – BOD_5 300-1000+mg/L – TSS 80-300mg/L – TKN 90-200+mg/L	Careful evaluation is required to properly size AdvanTex systems for these applications. Waste strength varies significantly depending on hours of business, menu, take-out vs. dine-in eating, dining seat turnover rate, catering and event hosting activities, etc. Restaurant applications require a pre-anoxic return loop. Applications with greater than 50% flow contribution from restaurants and BOD_5 values greater than 800mg/L require pre-aeration and clarification. Recommended grease tank sizes to ensure that G&O contribution to the secondary treatment system does not exceed a maximum of 25mg/L are provided in Appendix A. Commercial dishwashing appliances used in conjunction with AdvanTex treatment must be high-temperature appliances. For systems with existing low-temperature, chemical-type commercial dishwashing appliances, pre-aeration is necessary.
Type 6: Polishing Bioreactors and Greywater Waste	• Organic removal • Ammonia removal • Showers • Sinks	• Typically treated to secondary levels prior to polishing unit • Sized based upon the organic and/or ammonia removal loading rates in this document	Effluent polishing from lagoons or holding ponds requires removal of algae prior to introduction to the polishing bioreactor system. See Appendix F for details on greywater system hydraulic loading and wastewater constituent characteristics. Contact Orenco for support on all high-strength waste projects.
Type 7: High-Strength Process Waste	• Wineries • Breweries • Dairies • Food processing facilities • Slaughterhouses	• Complex waste streams • Careful evaluation is necessary for successful treatment	Chemical cleaning processes used in facilities that produce high-strength process waste should be evaluated for compatibility with AdvanTex biological treatment processes. These applications require a pre-anoxic return loop, pre-aeration, and clarification. Additional treatment processes, such as bioaugmentation (the addition of necessary nutrients required to speed up the rate of degradation of a contaminant), can be necessary in addition to secondary treatment. Contact Orenco for support on all high-strength waste projects.

** The term "Typical effluent characteristics" assumes primary-treated effluent is used.*

Treatment System Configurations

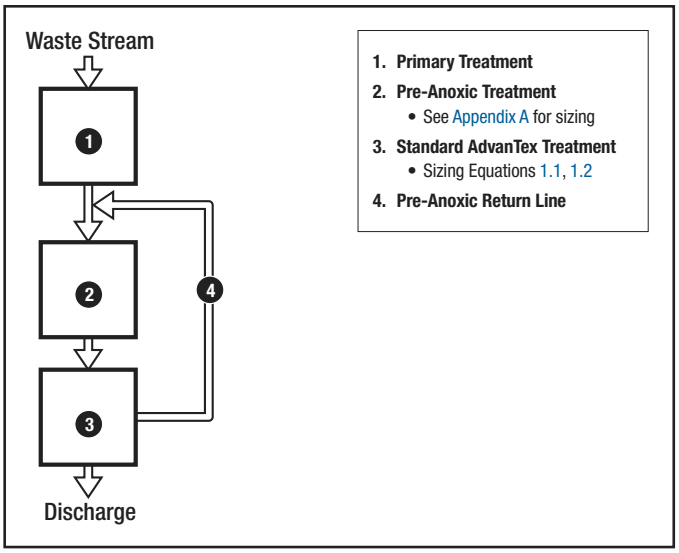


Figure 4. Treatment Diagram for Removal of Organics

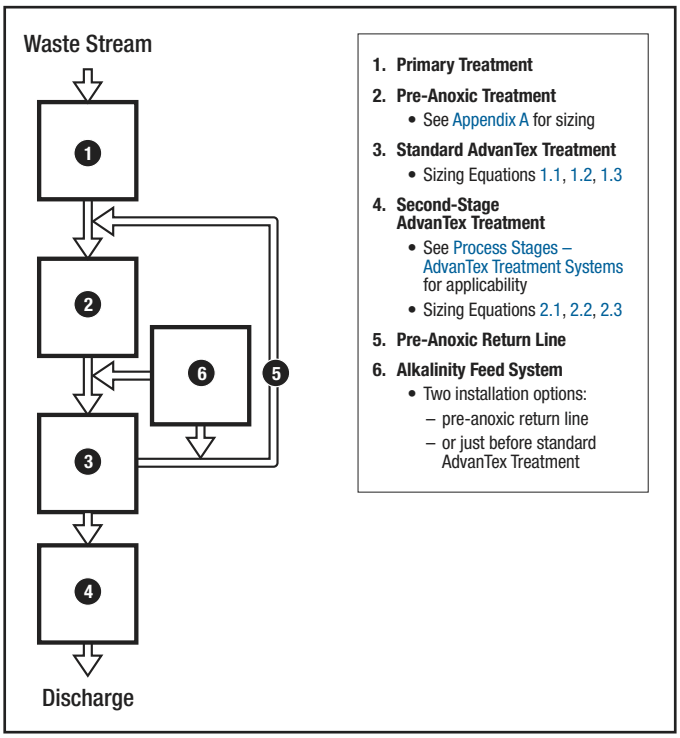


Figure 5. Treatment Diagram for Advanced Removal of Ammonia

This section shows the three most common treatment system configurations using an AdvanTex Treatment System. Determination of the appropriate configuration is based upon flow, primary-treated effluent constituent concentrations, and discharge permit requirements. Each configuration shows the applicable treatment stages used and where to find the information to properly size the systems.

For systems with restaurant waste contributions, adequate grease tankage or similar means are necessary to ensure that the maximum grease contribution to the secondary treatment system does not exceed 25mg/L greases and oils. Levels above 25mg/L will tend to clog the textile sheets prematurely, preventing adequate aeration and uniform delivery of wastewater constituents for effective biological breakdown.

The appropriate sizing equations are referenced in each figure. When multiple equations are referenced, each calculation should be performed and the largest resulting textile surface area must be used in the design. Please contact Orenco or the nearest Orenco dealer for support regarding the appropriate configuration or sizing criteria.

Standard AdvanTex Systems

Use for BOD_5/$cBOD_5$, TSS, and Nitrogen Discharge Limits

Organic removal is the simplest form of advanced treatment, typically requiring only primary and secondary treatment. When loaded at or below the applicable loading rates, standard AdvanTex Treatment Systems typically achieve treatment levels of < 10mg/L BOD_5/$cBOD_5$ and TSS (based on 30-day average or 30-day arithmetic mean), and they typically provide reduction of total nitrogen (TN) > 60% and removal of ammonia (NH_3-N) of 95% (range 90-99%).

Figure 4 shows the typical configuration for discharge limits associated with these constituents. See *Performance Requirements and Unit Sizing* for the sizing equation listed.

A pre-anoxic stage is recommended for all organic-only removal applications and it is required for systems with high-strength, primary-treated effluent (Application Types 5 & 7).

A two-stage AdvanTex system will be necessary for systems with discharge limits of "not to exceed" 10mg/L BOD_5/$cBOD_5$ or for discharge limits of ≤ 5mg/L BOD_5/$cBOD_5$ based on a 30-day average or 30-day arithmetic mean.

AdvanTex Systems for Advanced Ammonia Removal

Use for Systems with Permits Requiring Discharge Limits of > 95% Removal of Ammonia or TKN

For wastewater systems requiring ammonia removal due to restrictive ammonia nitrogen (NH_3-N) or TKN discharge limits (> 95% removal), a second-stage AdvanTex system will be necessary following standard AdvanTex treatment. Figure 5 shows the typical configuration for discharge limits associated with this level of treatment.

The nitrification occurring in the AdvanTex system is heavily influenced by the alkalinity required to buffer the process (7.14mg/L alkalinity per 1mg/L of ammonia-N). For complete nitrification, pH levels of 7.5 to 8.5 are ideal and should be buffered to remain above a pH of 7 for all applications. Immediately preceding the AdvanTex treatment stage, a supplemental alkalinity feeder may be necessary to ensure sufficient alkalinity for nitrification to break down ammonia.

Treatment System Configurations, cont.

Using a pre-anoxic stage helps buffer pH, as denitrification in this stage will return as much as 50% of the alkalinity consumed during nitrification. In addition, readily available BOD is consumed in the pre-anoxic denitrification stage, reducing the BOD load to the secondary treatment unit. Most application types provide adequate carbon in the incoming stream to achieve denitrification and subsequent alkalinity return, but in the design, it is best to ensure that there is enough alkalinity added without relying on this occurrence. As operational data becomes available for the specific treatment system – demonstrating the return of alkalinity through denitrification – alkalinity feed rates can be adjusted downward. See *pH Effect on Nitrification* and Cold-Weather Considerations for more information.

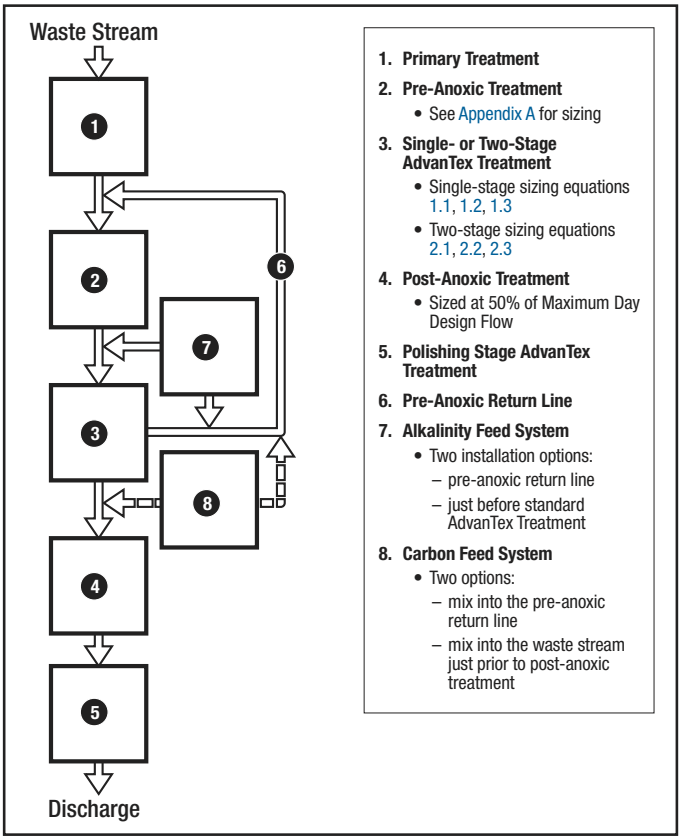


Figure 6. Treatment Diagram for Advanced Removal of Nitrogen

AdvanTex Systems for Advanced Nitrogen Removal

Use for Systems with Permits Requiring Discharge Limits of 60-90% Removal of Total Nitrogen, Total Inorganic Nitrogen, or Nitrate Nitrogen

For wastewater systems with permit limits for TN, TIN, or NO_3-N requiring greater than 60% nitrogen reduction, pre- and post-anoxic treatment stages are needed, as well as possible addition of both supplemental carbon and alkalinity. Figure 6 shows a typical configuration for a system with discharge limits requiring this level of treatment.

The nitrification occurring in the AdvanTex treatment stage is heavily influenced by the alkalinity required to buffer the process (7.14mg/L alkalinity per 1mg/L of ammonia-N). For complete nitrification, pH levels of 7.5 to 8.5 are ideal and should be buffered to remain above a pH of 7 for all applications. The pre-anoxic stage benefits overall operation of the system, since denitrification in this stage returns as much as 50% of the alkalinity consumed during nitrification. A supplemental alkalinity feeder immediately preceding the AdvanTex treatment stage may still be necessary to ensure sufficient alkalinity for nitrification.

Carbon addition should be balanced to the wastewater flows to ensure carbon-to-nitrogen (C:N) ratios are appropriate. C:N ratios from 4:1 to 6:1 are preferable to ensure that near complete denitrification occurs. Carbon is added in the post-anoxic stage to maintain the proper C:N ratio. A post-anoxic tank with carbon addition is generally adequate for applications requiring up to 80% removal of nitrogen. For applications requiring greater than 80% removal of nitrogen, a moving bed bioreactor (MBBR) is typically necessary. See *Post-Anoxic Treatment Stage* for more information.

Depending on permit requirements, a one-, two-, or three-stage configuration is used. When there are stringent organic removal requirements (effluent BOD_5/$cBOD_5$ < 20mg/L), a two- or three-stage configuration (final stage as polishing) is often used to remove excess carbon ($cBOD_5$) prior to discharge.

For TN, TIN, and NO_3-N discharge requirements of <10mg/L, or for applications with primary-treated effluent TN values of >150mg/L and >80% nitrogen removal requirements, it will be necessary to integrate a two-stage AdvanTex system, followed by a denitrifying moving bed bioreactor (MBBRd), denitrification upflow filter, or other denitrification technology into the treatment process. Contact Orenco prior to designing a system to meet these requirements. See *pH Effect on Nitrification* and Cold-Weather Considerations for more information.

Process Stages – AdvanTex Treatment Systems

Primary Treatment Stage

Purpose and Description

The primary treatment stage is designed to collect wastewater; segregate settleable and floatable solids (sludge and scum); accumulate, consolidate, and store solids; digest organic matter; and discharge primary-treated effluent. Passive, energy-free primary tankage provides the most cost-efficient method of primary treatment available for nonindustrial sewage; BOD removal of >50% and TSS removal of > 90% (when using an effluent filter) are typically accomplished with passive primary treatment.

Process Stages – AdvanTex Treatment Systems, cont.

The primary treatment stage can be configured in several ways, including single- or multiple-compartment tanks, single tanks with meandering baffles (partitions), or multiple tanks in series. Some systems may utilize solids separation devices. Primary treatment includes effluent screening, and effluent may be discharged to the secondary treatment stage via gravity or pump.

Design Notes and Special Considerations

The volume and configuration of primary tankage or inclusion of other primary treatment devices (e.g., solids separation) is dependent on the system, the application type, and the expected waste strength. When using tankage for primary treatment, proper sizing ensures adequate volume for the development of the necessary microbial environments, appropriate sludge and scum storage, and surge volume. For recommendations on sizing of primary tankage, see Appendix A. The tank's structural soundness and watertightness are vital to the system's performance, and all tanks should be reviewed by the engineer and water-tested in the field after installation.

Pre-Anoxic Treatment Stage

Purpose and Description

This process consists of recirculating a portion of the recirc-blend (or filtrate) from the AdvanTex secondary treatment system to an anoxic zone within the initial primary solids settling/collection chamber or, preferably, in a separate pre-anoxic tank. A pre-anoxic treatment stage will tend to balance as well as lower constituent concentrations. By blending primary-treated effluent with AdvanTex filtrate, it also provides an environment for denitrifying a portion of the nitrified filtrate.

The use of a pre-anoxic stage benefits all applications and is essential for those applications with high-strength waste (organic or nitrogen concentrations) and restrictive permit limits, as well as applications desiring higher-quality effluent and enhanced overall removal performance.

Design Notes and Special Considerations

Orenco recommends the use of a pre-anoxic stage for all projects. For recommendations on sizing of pre-anoxic tankage (typically 1 day Q_M), see Appendix A. Pre-anoxic tankage volume is a component of the overall primary tankage. For an LOS or STEP system, the pre-anoxic tank is sized at 50% of the values provided in Appendix A for gravity or onsite tankage options.

The pre-anoxic return ratio (R_{NOX}) is the ratio of flow of the pre-anoxic return loop in relation to the Design Average Day Flow (Q_A). For most applications, the R_{NOX} value is equal to 1± and therefore the return flow to the pre-anoxic stage (Q_{RNOX}) is equal to Q_A.

Alkalinity is often added in this stage because the pre-anoxic return line is a convenient place to add alkalinity while simplifying the overall system layout. The pre-anoxic return line can also be used to introduce supplemental carbon while maintaining a simple design. The establishment of denitrification in this stage reduces organic and nitrogen levels while returning about 50% of the alkalinity consumed during the first stage of secondary treatment (3.57mg/L alkalinity per 1mg/L NO_3-N denitrified).

Consider supplemental carbon addition in the pre-anoxic stage for:

- Systems requiring significant total nitrogen reduction (> 85%)
- Systems with high nitrogen values in primary-treated effluent (Application Types 2, 3, & 5), resulting in low C:N ratios (< 4:1)

Orenco offers liquid chemical feed units for adding alkalinity as well as for adding supplemental carbon. There are advantages and disadvantages to various alkalinity sources and supplemental carbon products, so consider specific project conditions when selecting.

Flow Equalization Stage

Purpose and Description

Flow equalization (EQ) provides stability by leveling out peaks in flow and allowing consistent loading of the treatment system. EQ is strongly recommended for systems with variable flow patterns and restrictive discharge limits. EQ is especially important for systems that have highly variable flow patterns due to usage (for example, resorts and churches) or collection method (such as gravity sewer collection).

The EQ stage consists of a tank or tanks fitted with a timed-dose-controlled pumping system. It follows the primary tank and pre-anoxic tank (if used) and is typically located before pre-aeration/clarification tankage (if used) or a recirculation-blend chamber.

Design Notes and Special Considerations

EQ tank sizing recommendations vary for systems with significant fluctuations in flow. For support with EQ tank sizing, contact Orenco.

For schools and churches, Orenco typically recommends dividing the system's total weekly flow by six and using this value as the Design Average Flow, with one day allowed for recovery. Using this technique, an EQ tank equal to the Design Maximum Day Flow is generally adequate, but calculations should be performed to verify the tank sizing requirement.

Process Stages – AdvanTex Treatment Systems, cont.

By their nature, LOS and STEP collection systems inherently provide a significant amount of flow equalization. When using this collection method, the addition of EQ tanks at the treatment site is only necessary for systems with extreme flow fluctuations (for example, fairgrounds, racing venues, etc.) or highly restrictive permit requirements.

Pre-Aeration Treatment Stage

Purpose and Description

Pre-aeration reduces organic waste strength prior to secondary treatment, with a typical target reduction of BOD_5 to less than 400mg/L. It is used for applications with high-strength waste streams (such as Type 7 applications and any application with a significant volume of restaurant waste, such as Type 5) to condition the waste stream prior to secondary treatment by raising dissolved oxygen levels.

An aeration tank, followed by a clarification tank, is situated between the primary treatment system (or pre-anoxic tank, if used) and the secondary treatment system.

Design Notes and Special Considerations

Pre-aeration units should be sized to provide the appropriate amount of oxygen to reduce organic waste strength or to reduce BOD_5 to less than 400mg/L. For systems with high BOD_5 influent values from restaurant waste, pre-aeration can be sized to accomplish approximately 50% reduction in BOD_5 values. For systems with sugar-based BOD_5 influent values from food or wine processing, pre-aeration can be sized to accomplish approximately 75% reduction in BOD_5 values. For recommendations on sizing pre-aeration and clarification tanks, see Appendix A.

Pre-aeration is required for all Application Type 7 systems and highly recommended for systems that have greater than a 50% contribution of flow from restaurants (primarily Application Type 5 systems). Contact Orenco for more information.

Standard AdvanTex Treatment Stage

Purpose and Description

After primary or pre-anoxic treatment, effluent is transported to the recirculation-blend tank or chamber, where it is blended with AdvanTex filtrate. The blended wastewater is distributed over the AdvanTex textile media and percolates down through the media, where it is filtered, cleaned, and nitrified by the naturally occurring microorganisms populating the media. After treatment, a portion of the filtrate is returned to the recirculation-blend chamber while another portion is transported to the next treatment stage or to dispersal. Note that a portion of the recirc-blend (or filtrate) is often returned directly to the pre-anoxic treatment stage.

In the secondary treatment process, AdvanTex units filter and clean effluent from the primary treatment system. When loaded at or below the applicable loading rate, they typically achieve treatment levels of < 10mg/L BOD_5/$cBOD_5$ and TSS (30-day average or 30-day arithmetic mean), with total nitrogen (TN) reduction typically > 60% and nitrification averages of 95% (range 90-99%). For nitrogen loading rates and sizing requirements, refer to *Performance Requirements and Unit Sizing*.

Post-Anoxic Treatment Stage

Purpose and Description

The post-anoxic treatment stage provides additional denitrification after secondary treatment in wastewater systems that require significant reductions in TN, TIN, or NO_3-N. Nitrified AdvanTex filtrate from the secondary treatment stage is transported to an anoxic zone inside of the post-anoxic tank. During post-anoxic denitrification, BOD is consumed during the conversion of NO_3 to N_2 gas by facultative heterotrophic bacteria. The N_2 gas is then returned to the atmosphere. There are two options for post-anoxic treatment: standard post-anoxic treatment without media or an anoxic moving bed bioreactor (MBBRd) with media. A supplemental carbon feed unit is required for both options to provide the post-anoxic stage with the necessary carbon-to-nitrogen ratio for effective denitrification.

Design Notes and Special Considerations:

Post-anoxic tanks are typically sized at 100% of the Average Day Design Flow. For denitrification to take place, oxygen levels must be depleted to the level that nitrate becomes the primary oxygen source for microorganisms. Requirements for effective denitrification include:

- Dissolved oxygen levels < 0.5mg/L (preferably < 0.2mg/L)
- Carbon-to-nitrogen ratio greater than 4:1
- Adequate mixing to ensure chemical distribution throughout the vessel
- Sufficient residual alkalinity (100mg/L ±) in the secondary treatment stage to ensure optimum pH in the post-anoxic stage
- Waste stream temperature above 50°F (10°C) at all times and typically above 59°F (15°C)

Process Stages – AdvanTex Treatment Systems, cont.

For standard post-anoxic treatment meeting the above conditions, reduction of nitrate (NO_3) through conversion to nitrogen gas (N_2) should exceed 70%. For additional nitrogen reduction, Orenco recommends a denitrifying moving bed bioreactor (MBBRd). MBBRd units are built in insulated fiberglass vessels. They can achieve up to 85% reduction of nitrate (NO_3) through conversion to nitrogen gas (N_2) and are typically configured as follows:

- Fiberglass vessel, sizing, media, and mixing requirements based on NDA-TRT-MBB-1, Moving Bed Bioreactor (MBBR) Design Guidelines
- Media fill, typically 20% of the vessel volume
- One pneumatic ejector provided per 4 lineal ft (1.22m) of vessel to ensure optimal mixing and food delivery to the media
- Blowers, housed in a control building, to power ejectors

AdvanTex Treatment – Second Stage of Two-Stage and Three-Stage Treatment

Purpose and Description

A second stage of AdvanTex treatment can be used cost-effectively for enhanced nitrification or polishing:

- Nitrifying the waste stream for systems with very low ammonia (NH_3-N) or TKN discharge requirements: typically > 95% removal (nitrification)
- Removing any excess BOD_5 that is not consumed in the denitrification process following the post-anoxic stage on projects with restrictive BOD_5/$cBOD_5$ permit limits, typically 20mg/L or less (polishing)
- Removing BOD_5 for systems with "not to exceed" permit limits of < 10 mg/L BOD_5/$cBOD_5$ or 30-day average permit limits of ≤ 5mg/L BOD_5/$cBOD_5$ (polishing)

The treatment mechanisms are the same as described in *Standard AdvanTex Treatment Stage*. For sizing requirements, see *Performance Requirements and Unit Sizing*.

For information on the importance of pH and temperature on the nitrification process, see *pH Effect on Nitrification* and *Cold-Weather Considerations*.

Final Polishing Treatment Stage – Third Stage of Three-Stage Treatment

Purpose and Description

An AdvanTex Final Polishing Stage unit is typically used for final polishing of BOD_5/$cBOD_5$ for projects with high influent organic and/or nutrient loads and strict organic and nutrient limits:

- Nitrifying the waste stream for systems with very low ammonia (NH_3-N) or TKN discharge requirements: typically > 90% removal (nitrification)
- Removing any excess BOD_5 that is not consumed in the denitrification process following the post-anoxic stage on projects with restrictive BOD_5/$cBOD_5$ permit limits, typically 20mg/L or less (polishing)

The treatment mechanisms are the same as described in *Standard AdvanTex Treatment Stage*. For sizing requirements, see *Performance Requirements and Unit Sizing*. For information on the importance of pH and temperature on the nitrification process see *pH Effect on Nitrification* and Cold-Weather Considerations.

Disinfection Stage

Purpose and Description

Secondary-treated effluent is usually clear and odorless, but it still contains pathogens at levels that can cause illness if ingested or released into the environment. Disinfection is required in many surface discharge or reuse systems. Disinfection can be achieved by any method that destroys pathogens; ultraviolet (UV) rays, chlorine, and ozonation are the most common methods.

Due to the low turbidity of AdvanTex effluent and the fact that UV disinfection requires no chemicals and leaves no toxic residue, UV disinfection is the most common method used following AdvanTex systems.

Chlorination is also a common disinfection method used; however, handling issues and concerns about chemical residue make it less desirable than UV. Ozonation, another common method, is extremely effective and popular for reuse applications within facilities (e.g., toilet flushing), due to its ability to remove any residual color in the effluent stream. Ozonation is typically the least economical of the three methods in the lower-flow applications common with decentralized systems.

Design Notes and Special Considerations

UV disinfection lamps require cleaning and servicing on a regular basis (once a month to once a year, depending on effluent quality and UV system design). Disinfection devices can be integrated into the treatment system and connected to the TCOM control system for monitoring and control.

Process Stages – AdvanTex Treatment Systems, cont.

Reuse applications, such as toilet flushing and industrial processes, require a high level of effluent purity. Chlorination or ozonation are often used in these applications. In some circumstances, tertiary treatment may be required. This can include (in addition to chemical or ultraviolet disinfection) the use of fine mesh filter processes, such as polishing filters; multi-media filtration; micro-, ultra-, or nano-filtration through membranes; reverse osmosis; or cloth/disc filters. Contact Orenco for more information.

Performance Requirements and Unit Sizing

Performance of Typical AdvanTex Systems

When loaded at or below applicable loading rates, AdvanTex systems typically achieve < 10mg/L BOD_5 and TSS (30-day average or 30-day arithmetic mean). Total Nitrogen (TN) reduction typically exceeds 60%, with nitrification exceeding 95%, given liquid temperature levels greater than 50ºF (10ºC) and pH values between 7 and 9. The loading rates provided in *Standard AdvanTex Stage Sizing* are based upon these minimum values for liquid temperature and pH. With additional components and configurations, AdvanTex Treatment Systems can meet more stringent treatment levels.

Standard AdvanTex Stage Sizing

The primary criteria used to determine the amount of textile surface area necessary to meet treatment requirements are the daily flow volumes (Average and Maximum Day), primary-treated effluent Organic Load, Organic Loading Rate (OLR), and Hydraulic Loading Rate (HLR). For facilities that require advanced nitrogen discharge levels (> 60% TN or > 95% NH_3-N), the Ammonia Loading Rate (ALR) or Total Nitrogen Loading Rate (TNLR) should be used in conjunction with the organic and hydraulic loading rates to size the system. AdvanTex Treatment Systems must be sized so the designed treatment area meets or exceeds that required by the controlling loading rate. ***The loading rate that corresponds to the largest textile surface area controls the design.***

Packed-bed filters are effective organic- and nitrogen-removal systems and perform well for TSS removal. Since they treat primary-treated effluent, TSS should be lower than organic load. Therefore, TSS loading is never the determining factor in system sizing, and these loading rates are not covered in this design criteria. Other technologies may be more applicable for systems with higher influent TSS concentrations than BOD_5 concentrations. Contact Orenco or your local Orenco dealer for more information.

Standard AdvanTex Treatment Loading Rates – All Systems

<u>Organic Loading Rates (OLR)</u>

Design Average: 0.04lbs BOD_5/ft^2•d (0.2kg BOD_5/m^2•d)
Design Maximum Day: 0.08lbs BOD_5/ft^2•d (0.4kg BOD_5/m^2•d)
The equation for determining OLR-based treatment area is:

$$A_{OLR} = BOD_{5i} / OLR \qquad \text{Equation 1.1}$$

where:
A_{OLR} = Treatment area based on Organic Loading, ft^2 (m^2)
BOD_{5i} = Primary-treated effluent BOD_5 (organic) load, lbs/d (kg/d)
OLR = Organic loading rate, lbs/ft^2•d (kg/m^2•d)

<u>Hydraulic Loading Rates (HLR)</u>

Design Average: 25gpd/ft^2 (1m^3/m^2•d)
Design Maximum Day: 50gpd/ft^2 (2m^3/m^2•d)
The equation for determining HLR-based treatment area is:

$$A_{HLR} = Q / HLR \qquad \text{Equation 1.2}$$

where:
A_{HLR} = Surface area based on Design Average Hydraulic Loading, ft^2 (m^2)
Q = Influent hydraulic load, gpd (m^3/d)
HLR = Hydraulic loading rate, gpd/ft^2•d (m^3/m^2•d)

Systems with Total Nitrogen-Based Discharge Limits

For systems requiring a greater than 60% removal rate for TN, TIN, or NO_3-N, the required textile area is determined by using the Total Nitrogen Loading Rate (TNLR) and the TN value (if available) or TKN value (if the TN value isn't available) in the primary-treated effluent. The value for TN and TKN should be the same after anaerobic primary treatment, but it will vary significantly if pre-aeration is used.

Performance Requirements and Unit Sizing, cont.

Total Nitrogen Loading Rates (TNLR)

Design Average: 0.014lbs TN/ft^2•d (0.07kg TN/m^2•d)
The equation for determining TNLR-based treatment area is:

$$A_{TNLR} = (TKN_i \text{ or } TN_i) / TNLR \qquad \text{Equation 1.3}$$

where:
A_{TNLR} = Treatment area based on Total Nitrogen Loading, ft^2 (m^2)
TKN_i = Primary-treated effluent Total Kjeldahl Nitrogen load, lbs/d (kg/d)
TN_i = Primary-treated effluent Total Nitrogen load, lbs/d (kg/d)
TNLR = Total nitrogen loading rate, lbs/ft^2•d (kg/m^2•d)

Systems with Ammonia-Based or TKN-Based Discharge Limits

For applications requiring ammonia or TKN removal greater than 95%, use both the ALR (see below) and the TNLR (Equation 1.3) and choose the greater of the two values. ALR for primary-treated effluent ammonia and TNLR account for any organic nitrogen that may be converted to ammonia through the primary or secondary treatment processes (see *Primary-Treated Effluent Wastewater Strength*). In the equation below, TKN_i is substituted for NH_3-N_i if the influent NH_3-N_i concentration is unknown.

Ammonia Loading Rates (ALR) and TKN Loading Rates (TKNLR)

Design Average: 0.01lbs NH_3-N/ft^2•d (0.05kg NH_3-N/m^2•d)
For projects requiring specific TKN removal, Equation 1.4 can be used by substituting A_{TKNLR} for A_{ALR} and TKN_i for NH_3-N_i.
The equation for determining Ammonia- or TKN-based treatment area is:

$$A_{ALR} = NH_3\text{-}N_i / ALR \qquad \text{Equation 1.4}$$

where:
A_{ALR} = Surface area based on NH_3-N loading, ft^2 (m^2)
NH_3-N_i = Primary-treated effluent Ammonia load, lbs/d (kg/d)
ALR = Stage 1 Ammonia loading rate, lbs/ft^2•d (kg/m^2•d)

Second-Stage or Third-Stage AdvanTex Sizing in Two-Stage and Three-Stage Systems

For the calculation of second-stage or third-stage AdvanTex treatment area, use the treated effluent produced by the standard AdvanTex system, BOD_{5e} and TKN_e. Effluent values for BOD_5 and TKN are typically based upon 95% nitrification and 70% denitrification through the pre-anoxic stage and standard AdvanTex treatment stage. See Appendix B for a sample calculation.

Second-Stage or Third-Stage Organic Loading Rates (OLR)

Design Average: 0.02lbs BOD_5/ft^2•d (0.1kg BOD_5/m^2•d)
Design Maximum Day: 0.04lbs BOD_5/ft^2•d (0.2kg BOD_5/m^2•d)
The equation for determining OLR-based treatment area is:

$$A_{OLR} = BOD_{5e} / OLR \qquad \text{Equation 2.1}$$

where:
A_{OLR} = Treatment area based on Organic Loading, ft^2 (m^2)
BOD_{5e} = Secondary-treated effluent BOD_5 (organic) load, lbs/d (kg/d)
OLR = Organic loading rate, lbs/ft^2•d (kg/m^2•d)

Second-Stage or Third-Stage Hydraulic Loading Rates (HLR)

Design Average: 75gpd/ft^2 (3m^3/m^2•d)
Design Maximum Day: 125gpd/ft^2 (5m^3/m^2•d)
The equation for determining HLR-based treatment area is:

$$A_{HLR} = Q / HLR \qquad \text{Equation 2.2}$$

where:
A_{HLR} = Surface area based on Design Average Hydraulic Loading, ft^2 (m^2)
Q = Influent hydraulic load, gpd (m^3/d)
HLR = Hydraulic loading rate, gpd/ft^2•d (m^3/m^2•d)

Performance Requirements and Unit Sizing, cont.

Second-Stage or Third-Stage Total Nitrogen Loading Rates (TNLR)

Design Average: 0.007lbs TN/ft^2•d (0.035kg TN/m^2•d)
The equation for determining TNLR-based treatment area is:

$$A_{TNLR} = TKN_e / TNLR \quad \text{Equation 2.3}$$

where: A_{TNLR} = Treatment area based on Total Nitrogen Loading, ft^2 (m^2)
TKN_e = Secondary-treated effluent Total Kjeldahl Nitrogen, lbs/d (kg/d)
TNLR = Total nitrogen loading rate, lbs/ft^2•d (kg/m^2•d)

Second-Stage or Third-Stage Ammonia Loading Rates (ALR)

Design Average: 0.005lbs NH_3-N/ft^2•d (0.025kg NH_3-N/m^2•d)
The equation for determining ALR-based treatment area is:

$$A_{ALR} = TKN_e / ALR \quad \text{Equation 2.4}$$

where: A_{ALR} = Surface area based on NH_3-N loading, ft^2 (m^2)
TKN_e = Secondary-treated effluent Total Kjeldahl Nitrogen, lbs/d (kg/d)
ALR = Ammonia loading rate, lbs/ft^2•d (kg/m^2•d)

Design Considerations

Recirculation-Blend Tank Sizing

AdvanTex AX20 and AX100 systems require external recirculation-blend tankage. AdvanTex AX-Max units are configured with integral recirculation-blend capacity and do not require an external recirculation-blend tank. The following design considerations apply to recirculation-blend tankage for AX20 and AX100 systems:

- For standard AdvanTex systems, recirculation-blend tankage should be sized to at least 75% of the Design Maximum Day Flow or 100% Average Day Design Flow, whichever is greater.
- For second- or third-stage AdvanTex systems, recirculation-blend tankage should be sized to at least 25% of the Design Maximum Day Flow.

Recirculation Pump Sizing

AX20 units have five laterals and sixty-eight 1⁄8in (3mm) diameter orifices in each unit. A residual pressure of 5ft (1.5m) is used to determine initial timed-dosing settings. Typically, residual pressure ranges from 3 to 6ft (0.9 to 1.8m). This may vary depending on system hydraulics or special treatment requirements. Table 2 provides sizing information about Orenco 4in (100mm) submersible effluent pumps used in AdvanTex AX20 recirculation pumping assemblies for typical design configurations.

Table 2. Recirculation Pump Sizing, AX20

Number of Units	Number and Operation of Pumps	Nominal Flow Rate	60Hz Pump Selections	50Hz Pump Selections
1	2 pumps, alternate dosing	30gpm (1.9L/sec)	½hp (0.37kW); PF3005	¾hp (0.56kW); PF3005
2	2 pumps, alternate dosing	50gpm (3.2L/sec)	½hp (0.37kW); PF5005	¾hp (0.56kW); PF5007
3	2 pumps, alternate dosing	75gpm (4.7L/sec)	1hp (0.7kW); PF7510	1hp (0.7kW); PF7510
4	2 pumps, 1 pump for 2 units, alternate dosing	50gpm (3.2L/sec)	½hp (0.37kW); PF5005	¾hp (0.56kW); PF5007

AX100 units have four laterals with two spin nozzles per lateral, for a total of eight spin nozzles. The pumping rate is about 50gpm± per AX100 unit (minimum 6gpm ± per nozzle at 3.0psi, or 0.38L/sec at 20.7kPa). Adjusting pressure at the unit inlet can vary flow. Sufficient pump redundancy is required to ensure operational integrity with one or more inoperable pumps. Table 3 provides sizing information for Orenco 4in (100mm) submersible effluent pumps used in AdvanTex AX100 recirculation pumping assemblies for typical design configurations.

Design Considerations, cont.

Table 3. Recirculation Pump Sizing, AX100

Number of Units	Number and Operation of Pumps	Nominal Flow Rate	60Hz Pump Selections	50Hz Pump Selections
1	2 pumps, alternate dosing	50gpm (3.2L/sec)	¾hp (0.56kW); PF5007	¾hp (0.56kW); PF5007
2	2 pumps, 1 pump per unit, alternate dosing	50gpm (3.2L/sec)	¾hp (0.56kW); PF5007	1hp (0.7kW); PF5010
3	2 pumps, simultaneous dosing	75gpm (4.7L/sec)	1hp (0.7kW); PF7510	1hp (0.7kW); PF7510
4	4 pumps, 1 pump per unit, alternate dosing	50gpm (3.2L/sec)	¾hp (0.56kW); PF5007	1hp (0.7kW); PF5010
5-6	4 pumps, 2 pumps per 2-3 units, simultaneous or alternating dosing	75gpm (4.7L/sec)	1hp (0.7kW); PF7510	1hp (0.7kW); PF7510
7-9	6 pumps, 2 pumps per 2-3 units, simultaneous or alternating dosing	75gpm (4.7L/sec)	1hp (0.7kW); PF7510	1hp (0.7kW); PF7510

AX-Max units are typically designed to accommodate a specific application, based on Design Average and Design Maximum Day Flows, the application type's targeted treatment levels, and other factors. Because of this, AX-Max configurations vary and recirculation pumps for these units are determined on a project-by-project basis. Contact Orenco for more information.

AdvanTex TCOM Control System

The TCOM Control Panel is a telemetry-based panel that can be connected to a land line, cellular service, internet, or satellite service. It controls all sensors and pumping equipment for the system. TCOM panels are an integral part of all commercial AdvanTex Treatment System equipment packages. Telemetry provides real-time operator monitoring and control of system components, as well as remote data collection of key operational parameters and events. The panel's communication function provides notice to system operators in the event of an alarm. Operators can call into the control unit, determine the cause of the alarm, and – often – address the situation without having to be physically present at the treatment facility.

The TCOM unit can be programmed to automatically adjust timer settings using trend data, based on established recirculation ratios, so frequent operator adjustment is not necessary for systems with flow variations. If additional equipment is required for pretreatment, tertiary treatment, or disinfection, the controls for each component can easily be incorporated into the TCOM control panel. This allows Orenco to contact the panel directly to assist the operator in system evaluation and troubleshooting or to manually override operations. TCOM control panels can also integrate into existing SCADA systems. Consult with Orenco early in the design process to discuss any integration needs.

Multiple enclosure types are available with Orenco's TCOM control panels; the enclosure needs to provide the panel with protection from the elements, including direct sunlight, during regular operation and while the operator is accessing the panel. This should be taken into account when determining location of the control unit. Shelters are recommended for panels whenever possible. Contact Orenco for a quote.

AdvanTex System Ventilation

Proper ventilation, achieved by active or passive ventilation, is critical for maintaining aerobic treatment processes in AdvanTex Treatment Systems.

Active Ventilation

Active ventilation is the preferred means of ventilating AdvanTex Systems and is required for the following systems:

- All systems with Design Maximum Day Flows > 10,000gpd (37,854L/d)
- All systems with average primary-treated effluent waste strength > 200mg/L BOD_5 and 100mg/L TSS
- All systems with nitrogen discharge limits
- All AX-Max systems; at least one ventilation assembly is required per two connected units (AX-Max units are typically designed with a built-in active vent system, and one vent system per unit is preferred)

Passive Ventilation

Passive ventilation can be considered in AX20 or AX100 systems receiving primary-treated effluent of residential strength, with constituent concentrations of < 200mg/L BOD_5 and < 100mg/L TSS and with Design Maximum Day Flows < 10,000gpd (37,854L/d) for AX100 systems and 4,000gpd (15,140L/d) for AX20 systems. For proper function, it is critical for air movement to be greater than 5 cubic feet per minute (cfm) for every 100ft^2 of treatment area (0.14m^3/minute for every 9.3m^2). It is also critical to ensure that there is a clear path for airflow through the system if the system relies on passive ventilation. If these conditions cannot be met, active ventilation should be used.

Although activated carbon media is included to adsorb and mitigate odors in AdvanTex passive ventilation systems, slight odors may occur during dosing events. Passively ventilated systems should be located in areas where this will not be perceived as a nuisance.

Design Considerations, cont.

Antibuoyancy Features

AdvanTex AX20 units come standard with antibuoyancy flanges to help prevent the unit from floating out of the ground under saturated soil conditions. Always keep the top of the unit at least 6in (150mm) above grade at all times. When buried to this level, spacing is 5ft (1.5m) between AX20 units. Contact Orenco for details.

AdvanTex AX100 units are designed for installation in areas that are free of water. AX100 units can be bermed and free draining, but the bottom of each unit should be no more than 9in (230mm) below the natural grade to protect it from floating in saturated conditions.

AdvanTex AX-Max units should be ordered with antiflotation provisions if the unit will be partially buried. Spacing of the units varies, but at maximum bury of 6ft (1.83m) with high groundwater conditions, this spacing would be approximately 10ft (3m) between units. When the unit is set at natural grade and the material used for berming is free flowing, anti-buoyancy will not be necessary. Contact Orenco for details.

pH Effect on Nitrification

The pH level is extremely important for nitrification (Figure 7). The effective reaction rate (R_N) is 0.95 at a pH of 8±, dropping to 0.47 at a pH of 7, and dropping precipitously to 0.15 at a pH of 6. Nitrification effectively ceases at a pH of 5. The use of additional alkalinity to buffer the process is critical for all nitrogen removal configurations, and the feed system should be sized to provide a minimum targeted residual of 80mg/L, with a preferred residual target of 100mg/L.

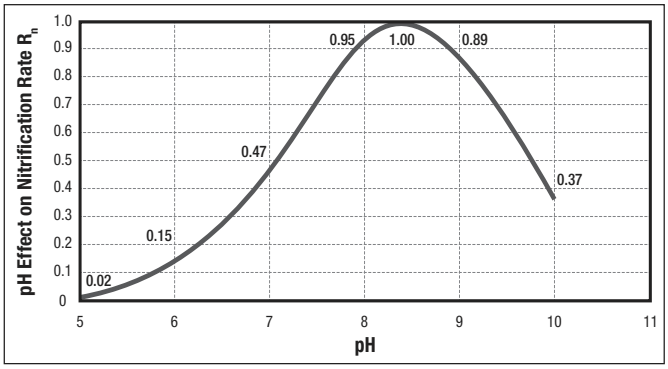


Figure 7. pH Effect on Nitrification

Cold-Weather Considerations

The naturally occurring bacteria that populate the AdvanTex treatment media are active at temperatures above 44ºF (6.7ºC), with an optimal temperature range above 68ºF (20ºC). To ensure treatment in cold climates or areas with seasonal cold weather, it is recommended that the liquid temperature remain above 50ºF (10ºC). Temperature is especially important in the nitrification and denitrification process. If temperature values are expected to be below this threshold, contact Orenco for heating options and/or safety factors for design purposes.

Temperature Effect on Nitrification and Denitrification

Temperatures in the liquid stream and treatment media have an impact on both the nitrification and denitrification processes. Figure 8 shows that the effect of temperature on nitrification and denitrification rates can be used to predict efficiency of the overall treatment process. Orenco bases performance on minimum temperature values of 50ºF (10ºC) during winter operation and 59ºF (15ºC) during summer operation. For actual liquid temperatures below these values, systems should be upsized to achieve treatment expectations described in this document. Following are cold-weather considerations for AX20, AX100, and AX-Max units, as well as general cold-weather considerations for all systems to prevent freezing and avoid damage due to frost heave:

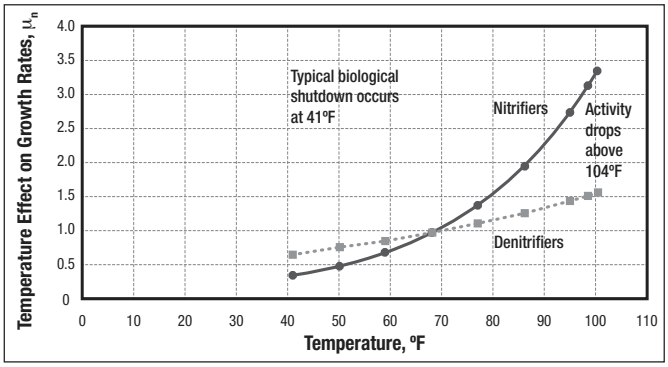


Figure 8. Temperature Effect on Nitrification and Denitrification

<u>AX20 and AX100 Units</u>

- Insulated foam-core lids with a minimum R-value of R6 (RSI1) are standard equipment to prevent heat loss through the top of AX20 and AX100 units. If necessary, insulation board or spray-on insulation foam can be added during installation.
- The depth of the recirculation-blend tank can be increased – but the tank must still be accessible to operators for maintenance activities.
- Warm air ventilation is critical. High flows of cold air through the treatment unit can cause significant temperature drops.
- Orenco fiberglass shelters provide a temperature-controlled air source for the treatment system, easy access to the control system, and housing and storage for chemical feed equipment.

Design Considerations, cont.

AX-Max Units

- Units are configurable for use in climates with extreme temperatures ranging from -60°F to 125°F (-51°C to 52º C).
- Units are constructed with 4in (100mm) foam cells that provide an estimated insulation value of R26 (RSI5).
- Orenco fiberglass shelters provide a temperature-controlled air source for the treatment system, easy access to the control system, and housing and storage for chemical feed equipment.

General Cold-Weather Considerations for All Systems

- Standard cold-weather practices for AdvanTex systems include allowing all lines to drain back to tankage and insulating access lids on primary and recirculation-blend tankage.
- In extreme climates with long periods of subfreezing weather, a warm air source into the treatment unit(s) or immersion heaters may be necessary to keep treatment temperatures above 50ºF (10ºC).
- In areas where snow typically accumulates each winter, air vents must be extended to ensure they are above peak snow levels.
- In areas where frost heave is a concern, backfilling access riser excavations with pea gravel is recommended.

Orenco provides training webinars on general wastewater concepts, design, and operation and maintenance throughout the year. Contact Orenco or a local Orenco dealer to attend a training session.

Orenco staff is prepared to support the designer throughout the project cycle, including the initial evaluation of technologies, preliminary design, and a thorough and timely design review – all without cost. Orenco can also assist with the approval process and the evaluation of operational and lifecycle costs.

Appendix A. Sizing for Primary and Pre-Anoxic Tankage

All secondary treatment systems are limited in their ability to break down and treat organic material. The purpose of primary tankage in AdvanTex Treatment Systems is to reduce and maintain organic material at a level that can be efficiently and economically treated by the AdvanTex treatment unit(s). Primary tankage can anaerobically digest organic material, remove solids, modulate flow, and provide emergency storage volume. To operate effectively, primary tankage must be properly designed and sized, structurally sound, watertight, and well-maintained.

Table A provides recommended minimum tank volumes for the application types defined in this Design Criteria. To calculate recommended minimum tank volumes, multiply the Design Maximum Day Flow specified for the system by the necessary hydraulic retention time (HRT) in days. For example, if local regulations require a 10,000gpd (37.9m^3) system design (based on Design Maximum Day Flow) for an office facility, Orenco recommends a minimum total tank volume of 30,000gal (113.6m^3). To determine preferred tank volumes, add approximately 50% to the minimum values.

The minimums in Table A exceed those set by the United States Environmental Protection Agency (USEPA) and the regulatory requirements for nearly every state in the United States. With regard to tank sizing, longer hydraulic retention times result in improved primary treatment.* Research strongly indicates that the smaller volumes calculated by using the USEPA formula (based on 1940's information), as well as the listed volumes for most state and local health agencies, consistently produce poor-quality effluent. They are also associated with increased pumpout frequencies and costs, increased need for secondary treatment capacity, and an increased need for maintenance activities and their associated costs.

Orenco recommends the use of pre-anoxic tankage prior to the recirculation-blend tank for all systems. Recommended total primary tankage is provided in Table A, followed in parentheses by the recommended configuration of the primary tankage for specific treatment needs, if any, such as a pre-anoxic stage, aeration unit, clarification chamber, or flow equalization.

Table A is intended as a general guideline for decentralized wastewater treatment designs. The system designer is responsible for ensuring adequate primary treatment prior to the secondary treatment system. Check local regulations to ensure that the recommended minimum volumes meet applicable regulatory requirements. For questions about special cases where larger tankage or other measures may be necessary, or for general questions about flow equalization, please call Orenco at (800) 348-9843 or +1 541-459-4449.

**Several references corroborate this statement, including the following:*

Metcalf & Eddy, "Wastewater Engineering Collection, Treatment, Disposal," 1972 (New York, McGraw Hill).

Winneberger, John H. Timothy, "Septic Tank Systems, A Consultant's Toolkit, Volume II The Septic Tank," 1984 (Butterworth Publishers, Ann Arbor Science).

Laak, Rein, "Wastewater Engineering Design for Unsewered Areas," 1980 (Butterworth Publishers, Ann Arbor Science).

Philip, H., et. al., "Septic Tank Sludges: Accumulation Rate and Biochemical Characteristics," 1993 Water Science & Technology.

Appendix A. Sizing for Primary and Pre-Anoxic Tankage, cont.

Table A. Recommended Minimum HRTs, Primary Tankage, and Configurations

Application Type	Hydraulic Retention Time (HRT) in Days		Minimum Volumes & Configurations for Primary Tankage	
	Grease Tankage[1]	Primary Tankage[2]	Without Aeration	With Aeration
Type 1. Residential quality waste[3] (includes apartments, condos, mobile home parks, municipal applications, planned communities, subdivisions, work camps)	n/a	2	2× Design Max. Day Flow (1P + 1A)	n/a
Type 2. Primarily blackwater waste[4,5] (includes airport facilities, campgrounds, fire departments, golf courses, marinas, offices, parks, public toilets, rest areas, RV parks[5], ski resorts, visitor centers)	3	3	3× Design Max. Day Flow (2P + 1A)	n/a
Type 3. Primarily blackwater waste with surge flows[6,7] (includes churches, schools)	3	3 4	3× Design Max. Day Flow (2P + 1A with no flow equalization) 4× Equalized Design Avg. Day Flow (2P + 1A + 1Q_M with flow equalization)	n/a
Type 4. Primarily blackwater waste with pharmaceutical concerns[8] (includes hospitals, retirement facilities, veterinary clinics)	3[4]	4	4× design max. day flow (3P + 1A)	3× design max. day flow (1P + 1A + 0.5 AE + 0.5 C)
Type 5. Blackwater waste and restaurant waste[9,10] (includes bars/taverns, casinos, delis, gas stations, hotels/motels, restaurants, resorts, shopping centers/strip malls)	3	n/a	4× design max. day flow (3P + 1A)	4× design max. day flow (2P + 1A + 0.5 AE + 0.5 C)
Type 6. Polishing bioreactors (includes polishing bioreactors for organic or ammonia removal, e.g., lagoon compliance)	n/a	n/a	n/a	n/a
Type 7. High-strength process waste[10] (includes wineries, breweries, dairy or food processing facilities, slaughterhouses)	n/a	n/a	n/a	4.5× design max. day flow (2P + 1A + 1AE + 0.5C)

Contact Orenco for support with applications that have characteristics not listed in this chart.

Key: P = Primary Tankage A = Pre-Anoxic AE = Aeration Tankage C= Clarification Tankage

[1] *HRT is based on a separate kitchen Design Maximum Day Flow integrated into the main flow prior to the primary septic tanks. Orenco recommends a grease tank for any facility with a commercial kitchen. Additional grease tankage provides increased reduction of organics, as well as separation of grease and oil (G&O) prior to secondary treatment. G&O concentrations entering secondary treatment should be limited to 25mg/L. Chemical disinfection dishwashers can cause significant downstream problems due to high volumes of sanitizing compounds and emulsifiers and should not be used in onsite treatment and soil dispersal applications.*

[2] *HRT is based on the sum of the Design Maximum Day Flows from all sources. This assumes each waste source has a separate primary tank and a watertight collection system. For systems using gravity collection to a single primary tank, add 1 day HRT (based on Design Maximum Day Flow). For grinder or vacuum collection systems feeding into primary tankage, the recommended volume for pre-anoxic tankage is 1.5 days HRT; the recommended volume for primary tankage is 2.5 days HRT for a total HRT of 4 days (based on Design Maximum Day Flow).*

[3] *Communities with gravity sewers should review 12+ months of documented wastewater flows to determine Design Maximum Day Flow.*

[4] *For systems with cafeteria or restaurant facilities, use the grease tankage listed.*

[5] *RV dump stations should have a minimum of 7 days of storage; flow should be blended into the balance of the waste stream throughout the course of the day by timer-controlled pumps. Dump station flow contributions should not exceed 20% of the Design Maximum Day Flow.*

[6] *Flow equalization is strongly recommended for this application type to reduce the total treatment area required. If flow equalization is not used, base the total primary tankage volume and treatment area on Design Maximum Day Flow.*

[7] *If using flow equalization for this application type, base the total primary tankage on Equalized Design Day Flow (EDDF) to secondary treatment. EDDF = total weekly flow divided by 6, allowing 1 day for recovery.*

[8] *To reduce septage pumping in these and other specialized applications, we recommend using multiple tanks. The first tank should be small (0.5 to 0.75 day HRT); subsequent tanks should provide the remaining HRT requirements.*

[9] *For facilities with restrooms and kitchen, the primary tank volume is determined by summing the Design Maximum Day Flows of the restrooms and kitchen, then multiplying by the HRT value in the "with aeration" or "without aeration" columns. Kitchen dishwashing appliances should be high-temperature disinfection models only; low-temperature chemical disinfection dishwashers are not recommended.*

[10] *Pre-treatment (e.g., aeration) is necessary to reduce overall influent organic waste strength for this application type.*

Appendix B. Basic Equations

Converting Waste Constituent Concentrations and Flow to Mass

To convert constituent concentrations of the primary-treated effluent (PTE, mg/L) and flow (gallons, imperial gallons, liters, or cubic meters) to mass/day (lbs/d or kg/d), use the following equation:

$$\text{Load} = \text{PTE value (mg/L)} \times \text{Conversion Factor} \times \text{Flow (Q)} \qquad \text{Equation B1}$$

Using flow in gallons to calculate pounds/day:

$$\text{Conversion Factor, } CF_G = \frac{1\text{lb}}{453{,}592\text{mg}} \times \frac{3.785\text{L}}{1\text{gal}} = 8.34 \times 10^{-6} \frac{\text{lbs•L}}{\text{mg • gal}} \qquad \text{Equation B1a}$$

Using flow in imperial gallons to calculate pounds/day:

$$\text{Conversion Factor, } CF_{IG} = \frac{1\text{lb}}{453{,}592\text{mg}} \times \frac{4.546\text{L}}{1\text{gal}} = 1.002 \times 10^{-5} \frac{\text{lbs•L}}{\text{mg•gal}} \qquad \text{Equation B1b}$$

Using flow in liters to calculate kilograms/day:

$$\text{Conversion Factor, } CF_L = \frac{1\text{kg}}{1{,}000{,}000\text{mg}} \times \frac{1\text{L}}{1\text{L}} = 1 \times 10^{-6} \frac{\text{kg}}{\text{mg}} \qquad \text{Equation B1c}$$

Using flow in cubic meters to calculate kilograms/day:

$$\text{Conversion Factor, } CF_{CM} = \frac{1\text{kg}}{1{,}000{,}000\text{mg}} \times \frac{1000\text{L}}{1\text{m}^3} = 0.001 \times 10^{-6} \frac{\text{kg•L}}{\text{mg•m}^3} \qquad \text{Equation B1d}$$

Example 1

PTE value of 150mg/L BOD_5; flow of 1000gal per day
Determine BOD_5 mass load in pounds per day using Equation B1a:

$$BOD_5 \text{ Mass Load} = (150\text{mg/L}) \times (8.34 \times 10^{-6} \text{ lbs•L/mg•gal}) \times 1000\text{gpd} = 1.25\text{lbs/d}$$

Example 2

PTE value of 150mg/L BOD_5; flow of 5 cubic meters per day
Determine BOD_5 mass load in kilograms per day using Equation B1d:

$$BOD_5 \text{ Mass Load} = (150\text{mg/L}) \times (0.001\text{kg•L/mg•m}^3) \times 5\text{m}^3\text{/d} = 0.75\text{kg/d}$$

Performing a Mass Balance Calculation for a Blended Waste Stream

Some applications are configured so that the waste stream to the treatment plant is made up of several contributing sources with varying flows and constituent concentrations. To determine the waste strength of a blended waste stream, a mass balance calculation must be performed.

The easiest way to perform the mass balance calculation is to prepare a table listing each source, the flow contribution from the source, and the constituent concentrations being treated.

- List contributing sources, anticipated flows, and corresponding waste strengths
- Waste strengths are provided after primary tankage and are listed as primary-treated effluent (PTE)

Table B1. Sample Mass Balance Calculation Table

Source[1]	Design Flow[2], Q (in gal, imp. gal, L, or m^3)	Constituent 1: BOD_5, mg/L	Constituent 2: TSS, mg/L	Constituent 3: TKN mg/L
Source 1	Q_{S1}	BOD_{5S1}	TSS_{S1}	TKN_{S1}
Source 2	Q_{S2}	BOD_{5S2}	TSS_{S2}	TKN_{S2}
Source 3	Q_{S3}	BOD_{5S3}	TSS_{S3}	TKN_{S3}
Source 4	Q_{S4}	BOD_{5S4}	TSS_{S4}	TKN_{S4}
Total[3]	**Q_T**	**BOD_{5B}**	**TSS_B**	**TKN_B**

[1] *The table can be built with as many contributing sources and constituents as needed; four sources and three constituents shown for simplicity.*

[2] *The actual unit of measure doesn't matter as long as the same unit of measure is used for all sources in the equation.*

[3] *The total flow (Q_T) is the sum of flow from all contributing sources.*

Appendix B. Basic Equations, cont.

For Constituent 1 (BOD_5), the mass balance equation for blended waste strength concentration (BOD_{5B}) is:

$$\text{Blended } BOD_{5B}, \text{ mg/L} = \frac{(Q_{S1} \times BOD_{5S1}) + (Q_{S2} \times BOD_{5S2}) + (Q_{S3} \times BOD_{5S3}) + (Q_{S4} \times BOD_{5S4})}{Q_T} \qquad \text{Equation B2}$$

Example

Determine the blended BOD_{5B} given the following for a camp application, using Equation B2:

Table B2. Sample Equation Table

Source	Design Max. Day Flow, gpd[1]	BOD_5, mg/L	TSS, mg/L	TKN, mg/L
RV Dump Station[2]	250	1800	800	160
Shower House w/ Restrooms[3]	4500	225	75	80
Restrooms[4]	1800	300	100	120
Camp Host Living Quarters	150	150	60	60
Total[5]	**6700**	**302**	**108**	**93**

[1] For Design Avg. Day Flow (Q_A), assume 50% of Design Max. Day Flow (Q_M); Q_A = 3350gpd.

[2] Dump station flow is calculated using 50gal/RV per day.

[3] Typically equals Number of Sites × Usage per Site or Number of Visitors × Usage per Visitor (45 sites × 4 users per site × 25gpcd)

[4] Typically equals Number of Sites × Usage per Site or Number of Visitors × Usage per Visitor (45 sites × 4 users per site × 10gpcd)

[5] Total Waste Strength is determined by mass balance calculation using the volume and strength of each contributing source.

$$\text{Blended } BOD_{5B} = \frac{(250\text{gpd} \times 1800\text{mg/L}) + (4500\text{gpd} \times 225\text{mg/L}) + (1800\text{gpd} \times 300\text{mg/L}) + (150\text{gpd} \times 150\text{mg/L})}{6700\text{gpd}} = 302\text{mg/L}$$

Determining Alkalinity Demand and Need for Supplemental Alkalinity Addition

Ensuring that the pH remains above 7 (and preferably above 7.5) at all times is critical for ammonia-sensitive applications. Supplemental alkalinity should be included if influent alkalinity is insufficient to buffer the process. During nitrification, 7.14mg/L alkalinity is used per mg/L TKN; during denitrification with a pre-anoxic return loop (at 100% denitrification), half of that – or 3.57mg/L – is returned. Without a denitrification component, there is no return. To be conservative in our calculation of alkalinity demand, we assume a 60% denitrification efficiency and a return of 2.14mg/L during denitrification. To determine alkalinity demand, multiply the primary-treated effluent value for TKN_i (in mg/L) by 5 (or 7.14mg/L minus 2.14mg/L). The buffering demand can be calculated based on the assumptions listed above and using the following equations:

$$\text{Alkalinity Demand} = TKN_i, \text{ mg/L} \times \frac{5\text{mg/L Alkalinity}}{1\text{mg/L TKN}} \qquad \text{Equation B3}$$

$$\text{Buffering Demand} = \text{Alkalinity Demand} + \text{Target Residual Alk} - \text{Residual Alk} \qquad \text{Equation B4}$$

The target residual for alkalinity is 100mg/L. If the result of Equation B4 is a positive number, the system will require supplemental alkalinity addition. If the result is a negative number, there is a likely surplus of alkalinity in the source water, and the system should function without alkalinity addition.

Example

PTE values of 80mg/L TKN and 160mg/L alkalinity in waste stream

Target residual of 100mg/L alkalinity

Determine the amount of alkalinity required to buffer the treatment process, using Equation B3:

$$\text{Alkalinity Demand} = 80\text{mg/L} \times \frac{5\text{mg/L Alkalinity}}{1\text{mg/L TKN}} = 400\text{mg/L Alkalinity}$$

Determine the buffering demand using Equation B4:

$$\text{Buffering Demand} = 400\text{mg/L} + 100\text{mg/L} - 160\text{mg/L} = 340\text{mg/L}$$

Therefore, the system will require the addition of supplemental alkalinity to buffer the treatment process.

Appendix B. Basic Equations, cont.

Anticipating Treatment Performance for a Standard AdvanTex Stage

Treated effluent values for BOD_5, TKN, and NH_3-N from a Standard AdvanTex Stage are typically based upon conservative estimates of 90% BOD_5 removal (Coefficient of BOD Removal, C_{BR}), 95% nitrification (Coefficient of Nitrification, C_{NR}) and 70% denitrification (Coefficient of Denitrification, C_{DNR}). The calculations below assume pH values are maintained between 7 and 8.4 and the temperature of the liquid stream is maintained above 50ºF (10ºC) at all times.

$$BOD_{5e} = BOD_{5i} \times (1 - C_{BR}) \quad \text{Equation B5}$$

$$TKN_e = TKN_i \times (1 - C_{NR}) \quad \text{Equation B6}$$

$$NH_{3e} = NH_{3i} \times (1 - C_{NR}) \quad \text{Equation B7}$$

$$NO_{3e} = (TKN_i - TKN_e) \times (1 - C_{DNR}) \quad \text{Equation B8}$$

Example

PTE values of 225mg/L BOD_{5i}, 120mg/L TKN_i, and 100mg/L NH_3-N in waste stream

Determine the value of BOD_{5e} and TKN_e after the Standard AdvanTex Stage.

Solving for Equation B5:

$$BOD_{5e} = 225mg/L \times (1 - 0.90) = 22.5mg/L$$

Solving for Equation B6:

$$TKN_e = 120mg/L \times (1 - 0.95) = 6mg/L$$

Solving for Equation B7:

$$NH_{3e} = 100mg/L \times (1 - 0.95) = 5mg/L$$

Solving for Equation B8:

$$NO_{3e} = (120mg/L - 6mg/L) \times (1 - 0.70) = 34.2mg/L$$

Therefore, the estimated Total Nitrogen (TN_e) value after the Standard AdvanTex Stage is:

$$TN_e = TKN_e + NO_{3e} = 6mg/L + 34.2mg/L = 40.2mg/L$$

Anticipating Treatment Performance for a Second AdvanTex Stage

In the second stage of a two-stage AdvanTex system, treated effluent values for BOD_5, TKN, and NH_3-N are typically based upon estimates of 90% BOD_5 removal (Coefficient of BOD Removal, C_{BR2}), 90% nitrification (Coefficient of Nitrification, C_{NR2}) and 25% denitrification (Coefficient of Denitrification, C_{DNR2}). Values for pH have to be maintained between 7 and 8.4 and the temperature of the liquid stream has to be maintained above 50°F (10°C) at all times.

Equations B5-B8 above can be used substituting C_{BR2} for C_{BR}, C_{NR2} for C_{NR}, and C_{DNR2} for C_{DNR} and using the effluent values from the first stage as the influent values.

Anticipating Total Nitrogen Treatment Performance for Post Anoxic Stage

For projects requiring 60-80% TN, TIN, or NO_3-N reduction, the use of a post-anoxic stage for conversion of NO_3-N to nitrogen gas (N_2) is often the most cost-effective means. A value for C_{DNR} of 0.7 (70%) is used to anticipate the performance of the post-anoxic stage. These calculations assume pH values are maintained between 7 and 8.4 and the temperature of the liquid stream is maintained above 50ºF (10ºC) at all times.

$$TN_{PAe} = TKN_e + NO_{3e} \times (1 - C_{DNR}) \quad \text{Equation B9}$$

Example

Determine the value of TN_e after the Post Anoxic Stage, using the example above.
Solving for Equation B9:

$$TN_{PAe} = 6mg/L + 34.2mg/L \times (1 - 0.70) = 16.3mg/L$$

Appendix C. Example Design for an Apartment Complex (Application Type 1)

AdvanTex Treatment for Removal of Organics and Ammonia With $cBOD_5$, TSS, and NH_3-N Discharge Limits

This example is based on a 40-unit apartment complex consisting of 12 one-bedroom units and 28 two-bedroom units. The system will be discharged to a creek; permit requirements include organic and ammonia discharge limits.

Establishing a Design Basis

Flows

List contributing sources, anticipated flows, and corresponding waste strengths.

Table C1. Flows

Source[1]	Design Max. Day Flow per Unit, gpd	Design Max. Day Flow, gpd[1]	Design Avg. Day Flow, gpd
12 one-bedroom units	200	2400	1200
28 two-bedroom units	300	8400	4200
Total	**500**	**10,800**	**5400**

[1] *For Design Average Day Flow, use 50% of Design Maximum Day Flow.*

Discharge Type

For this example project, stream discharge is used.

Influent (Primary-Treated Effluent) and Permit Parameters

Table C2. Influent and Permit Parameters

Source	BOD_5, mg/L	TSS, mg/L	TKN, mg/L	NH_3-N, mg/L	Alkalinity, mg/L
Primary-Treated Effluent (Avg./Max.)	140/250	40/140	50/80	40/70	60
Discharge Permit Requirement (30-day Average)	20	20	N/A	1 summer/3 winter	N/A

Temperature Effects

Temperature impacts the performance of a treatment system. For systems with stringent nitrogen limits, it is important to ensure that liquid and treatment system temperatures are maintained above minimum levels. AX-Max systems use insulated vessels and are preferred for cold environments, though AX100s with external insulation added in the field can also be used.

Alkalinity Needs

Because ensuring that the pH remains above 7 (and preferably greater than 7.5) at all times is critical for ammonia-sensitive applications, alkalinity addition should be included if influent alkalinity is insufficient to buffer the process.

Determine the alkalinity demand for this project:

$$\text{Alkalinity Demand} = 80\text{mg/L TKN} \times \frac{5\text{mg/L Alkalinity}}{1\text{mg/L TKN}} = 400\text{mg/L}$$

Determine the buffering demand for this project:

$$\text{Buffering Demand} = 400\text{mg/L} + 100\text{mg/L} - 60\text{mg/L} = 440\text{mg/L}$$

Determine the alkalinity mass load for this project in gallons per day:

$$\text{Alkalinity Mass Load} = (440\text{mg/L}) \times (8.34 \times 10^{-6}\text{lbs•L/mg•gal}) \times 5400\text{gpd} = 19.8\text{lbs/d}$$

The equation shows that a minimum addition of 19.8lbs of alkalinity per day is required for this system to accomplish 100% removal of TKN (assuming complete ammonification occurs).

Appendix C. Example Design for an Apartment Complex (Application Type 1), cont.

Design Specifics

Tankage Requirements

Primary tankage for apartment complexes is usually provided as either a single primary tank or through the use of several distributed primary tanks, with smaller tanks located next to each apartment block. If distributed primary tanks are used, pumps may be required if the treatment facility is located at an elevation higher than the primary tanks.

Apartment complexes fall within Application Type 1 (see Appendix A); therefore, total primary tank recommendations call for a minimum of 2 days of retention at Design Maximum Day Flow. Since a pre-anoxic tank is required and will be situated at the treatment site, provide a minimum of 1 day of retention in primary tankage and 1 day of retention in pre-anoxic tankage.

Table C3. Sample Tank Sizing Recommendations

Tank Sizing	Design Maximum Day Flow, gpd	Recommended Minimum Primary Tank Size, Gallons
Primary Tank	10,800	12,000
Pre-Anoxic Tank	10,800	12,000

A two-stage AdvanTex system is required for ammonia removal. The configuration is shown in Figure C1:

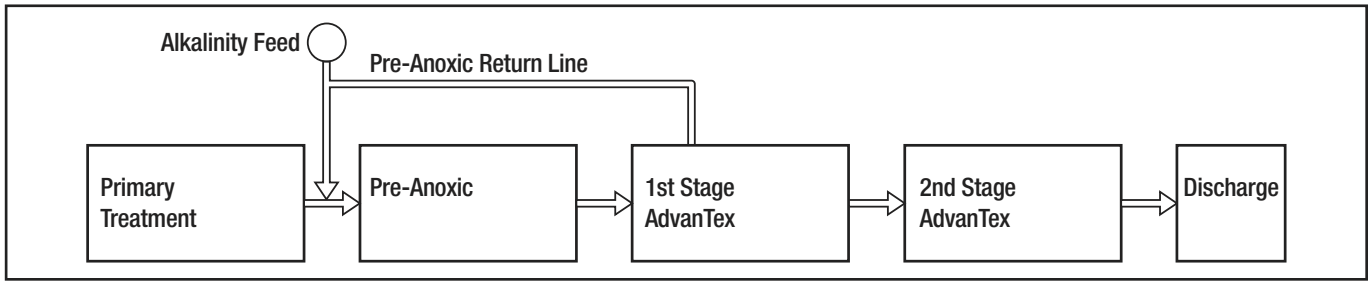


Figure C1. Configuration for Ammonia Removal

Loading Calculations – First Stage

For all first-stage calculations, the Design Maximum Day loading rates are double the Design Average Day loading rates. Since the Design Maximum Day Flow is not greater than two times the Design Average Day Flow, the calculation for Design Maximum Day load is unnecessary.

Organic Loading

Since BOD_5 is greater than TSS, the calculation for the most restrictive parameter (BOD_5) is necessary.

Design Average OLR_A is 0.04lbs $BOD_5/ft^2 \cdot d$.

Determine the pounds per day of Average Day Organic Load, OL_A:

$$OL_A = (140mg/L) \times (8.34 \times 10^{-6} lbs \cdot L/mg \cdot gal) \times 5400gpd = 6.31lbs/d$$

Determine the textile area required based on Average Day Organic Load, A_{OLRA}:

$$A_{OLRA} = \frac{(6.31lbs/d)}{0.04lbs/ft^2 \cdot d} = 158ft^2$$

Hydraulic Loading

Design Average HLR_A is $25gpd/ft^2$.

Determine the textile area required based on Average Day Hydraulic Load A_{HLRA}:

$$A_{HLRA} = \frac{(5400gpd)}{25gal/ft^2 \cdot d} = 216ft^2$$

Appendix C. Example Design for an Apartment Complex (Application Type 1), cont.

Total Nitrogen Loading

Design Average $TNLR_A$ is 0.014lbs TKN/ft^2•d.

Determine the pounds per day of Average Day Nitrogen Load, TNL_A:

$$TNL_A = (50mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times 5400gpd = 2.25lbs/d$$

Determine the textile area required based on Average Day Nitrogen Load, A_{TNLRA}:

$$A_{TNLRA} = \frac{(2.25lbs/d)}{0.014lbs/ft^2•d} = 161ft^2$$

Ammonia Loading

Design Average ALR_A is 0.01lbs NH_3-N/ft^2•d.

Determine the pounds per day of Average Day Ammonia Load, AL_A:

$$AL_A = (40mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times (5400gpd) = 1.8lbs/d$$

Determine the textile area required based on Average Day Ammonia Load, A_{ALRA}:

$$A_{ALRA} = \frac{(1.8lbs/d)}{0.01lbs/ft^2•d} = 180ft^2$$

The treatment area associated with the HLR is the most restrictive; therefore, the first-stage AdvanTex area should be a minimum of 216ft^2.

Treatment Unit Options – First Stage

Option 1: Using AX-Max units – 216ft^2 area

AX-MAX225-35 (Max unit includes recirc-blend tankage and discharge tankage)

Option 2: Using AX100 units – 216ft^2 area

Three AX100 units, 8100gal recirc tank (recirculation-blend tank sized at minimum of 75% of Q_M)

Loading Calculations – Second Stage

For all second-stage calculations, the values used are based on the predicted performance of the first-stage system. Effluent values for BOD_5 and TKN are typically based upon 90% BOD_5 removal, 95% nitrification, and 70% denitrification through pre-anoxic and first-stage AdvanTex treatment.

Organic Loading

Design Average OLR_A is 0.02lbs BOD_5/ft^2•d.

Determine the value of first-stage AdvanTex effluent BOD_{5e}:

$$BOD_{5e} = 140mg/L \times (1 - 0.9) = 14mg/L$$

Determine the pounds per day of Average Day Organic Load, OL_{A2}:

$$OL_{A2} = (14mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times (5400gpd) = 0.63lbs/d$$

Determine the textile area required based on Average Day Organic Load, A_{OLRA}:

$$A_{OLRA} = \frac{(0.32lbs/d)}{0.02lbs/ft^2•d} = 16ft^2$$

Hydraulic Loading

Design Average HLR_A is 75gpd/ft^2; Design Maximum HLR_A is 125gpd/ft^2.

Determine the textile area required based on Average Day Hydraulic Load, A_{HLRA}:

$$A_{HLRA} = \frac{(5400gpd)}{75gal/ft^2•d} = 72ft^2$$

Appendix C. Example Design for an Apartment Complex (Application Type 1), cont.

Determine the textile area required based on Maximum Day Hydraulic Load, A_{HLRM}:

$$A_{HLRM} = \frac{(10{,}800gpd)}{125gal/ft^2 \cdot d} = 86.4ft^2$$

Ammonia Loading

Design Average ALR_A is 0.005lbs NH_3-N/ft^2•d.

Determine the value of first-stage AdvanTex effluent TKN_e:

$$TKN_e = 50mg/L \times (1\text{-}0.95) = 2.5mg/L$$

Determine the pounds per day of Average Day TKN Load, TKN_e:

$$TKN_e = 2.5mg/L \times (8.34 \times 10^{-6} lbs \cdot L/mg \cdot gal) \times (5400gpd) = 0.113lbs/d$$

Determine the textile area required based on Average Day Ammonia Load, A_{ALRA}:

$$A_{ALRA} = \frac{(0.113lbs/d)}{0.005lbs/ft^2 \cdot d} = 23ft^2$$

The treatment area associated with the Design Maximum Day HLR is the most restrictive; therefore, the second-stage AdvanTex area should be a minimum of $86ft^2$.

Treatment Unit Options – Second Stage

Option 1: Using AX-Max units – $86ft^2$ area

AX-MAX100-21 (Max unit includes recirc-blend tankage and discharge tankage)

Option 2: Using AX100 units – $86ft^2$ area

One AX100, 2700gal recirc tank or 2160gal discharge tank (2700gal recirculation-blend tank sized at minimum of 25% of Q_M; 2160gal discharge tank size based on local regulation, but typically sized at minimum of 20% of Q_M)

Other Design Notes

- Ensure access to the treatment site for maintenance activities.
- Ensure availability of water at the treatment site for maintenance activities.
- Provide adequate alkalinity control for the system.
- Provide adequate temperature control for the system.

Appendix D. Example Design for a Campground (Application Type 2)

Standard AdvanTex Treatment for Removal of Organics With $cBOD_5$ and TSS Discharge Limits

This example is based on a campground with 5 RV spaces and dump station, 40 camping spaces, a shower house with restroom facility, a separate restroom-only building, and living quarters for a camp host. The system is to be discharged to a pressurized drainfield, and permit requirements include organic ($cBOD_5$ and TSS) discharge limits.

Establishing a Design Basis

Flows

List contributing sources, anticipated flows, and corresponding waste strengths.

Waste strengths are provided after primary tankage and are listed as primary-treated effluent (PTE).

Table D1. Flows

Source	Design Maximum Day Flow[1], gpd	BOD_5, mg/L	TSS, mg/L	TKN, mg/L
RV Dump Station[2]	250	1800	800	160
Shower House w/ Restrooms[3]	4500	225	75	80
Restrooms[4]	1800	300	100	120
Camp Host Living Quarters	150	150	60	60
Total[5]	**6700**	**302**	**108**	**93**

[1] Design Average Day Flow (Q_A): assume 50% of Design Maximum Day Flow (Q_M): Q_A = 3350gpd.

[2] Dump station flow is calculated using 50gal/RV per day.

[3] Typically equals Number of Sites × Usage per Site or Number of Visitors × Usage per Visitor (45 sites × 4 users per site × 25gpcd)

[4] Typically equals Number of Sites × Usage per Site or Number of Visitors × Usage per Visitor (45 sites × 4 users per site × 10gpcd)

[5] Total Waste Strength is determined by mass balance calculation, using the volume and strength of each contributing source.

Determine the mass balance for the blended concentration of BOD_{5B}:

$$\text{Blended } BOD_{5B} = \frac{(250gpd \times 1800mg/L) + (4500gpd \times 225mg/L) + (1800gpd \times 300mg/L) + (150gpd \times 150mg/L)}{6700gpd}$$

Using the calculations, the blended concentration of BOD_{5B} = 302mg/L (or approximately 300mg/L).

Discharge Type

For this example project, a pressurized drainfield is used.

Influent (Primary-Treated Effluent) and Permit Parameters

Table D2. Influent and Permit Parameters

	BOD_5, mg/L	TSS, mg/L
Primary-Treated Effluent	302	108
Discharge Permit Requirement (30-day Average)	20	20

Seasonal Use

Some camps are only used seasonally, and flows may vary wildly during this period. For those with highly variable flow fluctuations and limited full occupancy, flow equalization and a corresponding downsizing of the treatment facility may be in order.

Temperature Effects

Seasonally low temperatures may impact performance of a treatment system. For camps that are to be used during the winter months, there may be a need to address waste-stream temperature effects. AX-Max systems use insulated vessels and are preferred for cold environments, though AX100s with external insulation added in the field can also be used.

Appendix D. Example Design for a Campground (Application Type 2), cont.

Design Specifics

Tankage Requirements

Distributed primary tankage (locating tanks next to the flow sources) is the most common method of primary tankage due to the configuration of most campground facilities. The primary tanks may require the use of a pump if the treatment facility is located at an elevation higher than the primary tanks. Using a primary tank at the treatment area would likely require either a small liquid-only sewer system or a gravity sewer. A gravity sewer increases the risk for infiltration and inflow (I&I).

Campgrounds fall within Application Type 2 (see Appendix A); therefore, total primary tank recommendations call for a minimum of 3 days of retention at Design Maximum Day Flow. Since a pre-anoxic tank is recommended and will be situated at the treatment site, provide a minimum of 2 days of retention at each distributed site, except for the RV dump station.

Table D3. Sample Tank Sizing Recommendations

Tank Sizing	Design Maximum Day Flow, gpd	Recommended Minimum Primary Tank Size, Gallons
RV Dump Station[1]	250	2000
Shower House w/ Restrooms	4500	9000
Restrooms	1800	4000
Camp Host Living Quarters	150	1000

[1] *Per Appendix A, Table A, primary tankage for an RV dump station should have a minimum of 7 days of storage.*

For the size of the pre-anoxic tank at the treatment site (6700gal), use 6000 or 8000gal. Since the system is only required to treat for organic constituents, it would be configured as shown below:

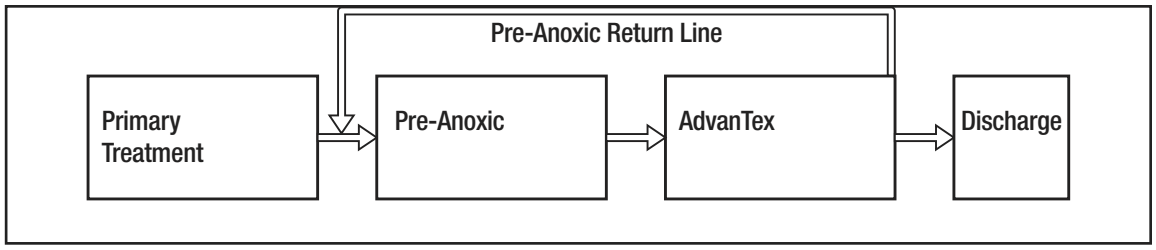


Figure D1. Treatment Configuration for Organic Constituents

Loading Calculations

For all loading calculations, the design maximum day loading rates are double the design loading rates for average day. Since the Design Maximum Day Flow is not greater than two times the Design Average Day Flow, the calculation for design maximum day load is unnecessary.

Organic Loading

Since BOD_5 is greater than TSS, calculating for the most restrictive parameter (BOD_5) is necessary. Design Average OLR_A is 0.04lbs $BOD_5/ft^2 \cdot d$.
Determine the pounds per day of Average Day Organic Load, OL_A:

$$OL_A = (300mg/L) \times (8.34 \times 10^{-6} lbs \cdot L/mg \cdot gal) \times (3350gpd) = 8.4lbs/d$$

Determine the textile area required based on Average Day Organic Load, A_{OLRA}:

$$A_{OLRA} = \frac{(8.4lbs/d)}{0.04lbs/ft^2 \cdot d} = 210ft^2$$

Hydraulic Loading

Design Average HLR_A is $25gpd/ft^2$.
Determine the textile area required based on Average Day Hydraulic Load, A_{HLRA}:

$$A_{HLRA} = \frac{(3350gal/d)}{25gal/ft^2 \cdot d} = 134ft^2$$

The area associated with the OLR is the most restrictive; therefore, the AdvanTex area should be a minimum of $210ft^2$.

Appendix D. Example Design for a Campground (Application Type 2), cont.

Treatment Unit Options

Option 1: Using AX-Max units – 210ft^2 area

AX-MAX225-35 (Max unit includes recirc-blend tankage and discharge tankage)

Option 2: Using AX100 units – 210ft^2 area

Three AX100 units, 5025gal recirc tank, 1500gal discharge tank; recirculation-blend tank sized at minimum of 75% of Q_M (equates to 5025gal minimum); discharge tank size based on local regulation, but typically sized at minimum of 20% of Q_M (equates to 1340gal minimum)

Other Design Notes

- RV dump waste should be limited to no more than 20% of the design flow (average or maximum day) and metered into the system using small doses, preferably with a timed-dose system.
- Ensure access to the treatment site for maintenance activities.
- Ensure availability of water at the treatment site for maintenance activities.

Appendix E. Example Design for a School (Application Type 3)

AdvanTex Treatment for Removal of Organics and Nitrogen with $cBOD_5$, TSS, and TN Discharge Limits

This example is based on a high school with a cafeteria, gymnasium, and sports fields. The system is discharged to a pressurized drainfield; permit requirements include organic ($cBOD_5$ and TSS) and total nitrogen (TN) discharge limits.

Establishing a Design Basis

Flows

School facilities include a cafeteria and gym with seating for 800. Due to their weekly flow characteristics, schools are a perfect application for the use of equalization tankage to evenly distribute the flows over the week. Flow equalization provides a consistent, stable loading of the treatment system, as well as slightly reduces the system size.

Table E1. Flows

Source	Design Max. Day Flow Per Unit, gpd	Design Max. Day Flow, gpd
400 students	25	10,000
60 Employees	15	900
School event seating, 800	5	4000
Total		**14,900**

Determine the Design Average Day Flow using flow equalization to reduce the treatment capacity requirement:

$$\text{Equalized Design Day Flow, } Q_E = \frac{(10{,}900\text{gpd} \times 4 \text{ days}) + (14{,}900\text{gpd} \times 1 \text{ day}) + (4000\text{gpd} \times 1 \text{ day}) + (0\text{gpd} \times 1 \text{ day})}{6 \text{ days}} = 10{,}416\text{gpd; use } 10{,}500\text{gpd}$$

The equation above allows for one day for recovery.

Discharge Type

The discharge type used in this example is a pressurized drainfield.

Influent (Primary-Treated Effluent) and Permit Parameters

Table E2. Influent and Permit Parameters

	BOD_5, mg/L	TSS, mg/L	TKN, mg/L	TN, mg/L	Alkalinity, mg/L
Primary-Treated Effluent (Avg./Max.)	280/350	50/100	160/200	N/A	120
Discharge Permit Requirement (30-day Average)	20	20	N/A	20	N/A

Seasonal Use

Most school applications see regular flows five days per week during the school year. For high schools, there may be 1-2 days per week that see significant additional flows associated with sporting events or other activities. Flows during the summer months are typically only a fraction of the usage while school is in session. Flow equalization and a corresponding downsizing of the treatment facility is typically in order.

Temperature Effects

Seasonally low temperatures may impact performance of a treatment system. For nitrogen-sensitive applications, there may be a need to address waste stream temperature effects. This is especially true for systems with significant nitrogen removal requirements.

Alkalinity Needs

Ensuring that the pH remains above 7 at all times is critical for ammonia-sensitive applications; therefore, alkalinity addition should be included if influent alkalinity is insufficient to buffer the process.

Appendix E. Example Design for a School (Application Type 3), cont.

Determine the alkalinity demand for this project:

$$\text{Alkalinity Demand} = 160\text{mg/L TKN} \times \frac{5\text{mg/L Alkalinity}}{1\text{mg/L TKN}} = 800\text{mg/L}$$

Determine the buffering demand for the project:

$$\text{Buffering Demand} = 800\text{mg/L} + 100\text{mg/L} - 120\text{mg/L} = 780\text{mg/L}$$

The two equations above show that alkalinity addition is required for this system.

Design Specifics

Tankage Requirements

Depending on the size of the facility, distributed tankage or a small gravity collection system leading to primary tankage is typically used. For systems with gravity collection, especially in areas with significant rainfall, an adjustment to the per capita flow may be necessary.

Schools fall within Application Type 3 (see Appendix A); therefore, total primary tank recommendations call for a minimum 3 days of retention at Design Maximum Day Flow. Since a pre-anoxic tank will be used due to the nitrogen reduction requirement, 2 days of primary tankage will be recommended with an additional 1-day pre-anoxic tank situated at the treatment site.

Table E3. Sample Tank Sizing Recommendations (With Flow Equalization)

Source	Equalized Design Daily Flow, gpd	Recommended Minimum Tank Size, gallons
Grease Tankage[1]	2100	8000
Primary Tankage	10,500	25,000
EQ Tank	10,500	12,000
Pre-Anoxic Tank	10,500	12,000
1st Stage Recirculation Tank[2]	10,500	8000
Post-Anoxic Tank	10,500	6000
2nd Stage Recirculation Tank[2,3]	10,500	3000
Discharge Tank	10,500	3000

[1] *Grease flow is estimated at 20% of Design Flow.*

[2] *Excludes AX-Max systems; recirc volume included in AX-Max systems.*

[3] *Tank is sized at 25% of Design Flow.*

Since the system is required to treat for organic constituents and provide nutrient reduction, it would be configured as shown in Figure E1.

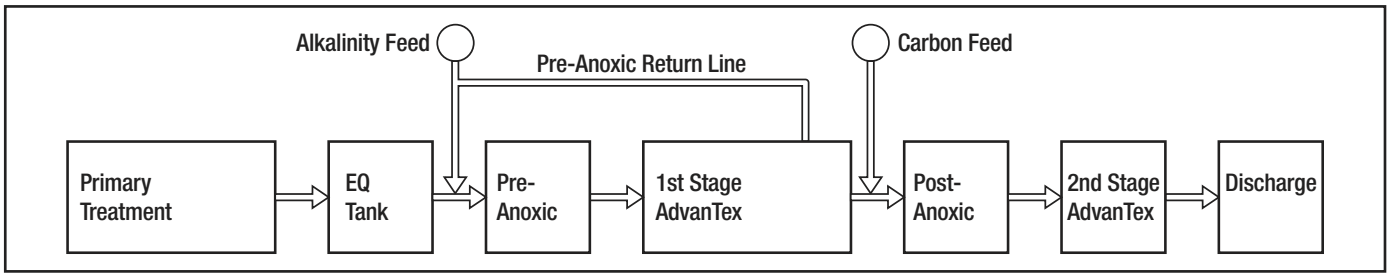


Figure E1. Treatment Configuration for Organic Constituents

When using flow equalization, all calculations are performed with the equalized flow considered as the Design Average Day Flow. Calculations for Design Maximum Day Flow are unnecessary.

Appendix E. Example Design for a School (Application Type 3), cont.

Organic Loading – First Stage

Since BOD_5 is greater than TSS, the calculation for the most restrictive parameter (BOD_5) is necessary. Design Average OLR_A is 0.04lbs BOD_5/ft^2•d.
Determine the pounds per day of Average Day Organic Load, OL_A:

$$OL_A = (280mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times (10{,}500gpd) = 24.5lbs/d$$

Determine the textile area required based on Average Day Organic Load, A_{OLRA}:

$$A_{OLRA} = \frac{(24.5lbs/d)}{0.04lbs/ft^2•d} = 613ft^2$$

Hydraulic Loading – First Stage

Design Average HLR_A is $25gpd/ft^2$.
Determine the textile area required based on Average Day Hydraulic Load, A_{HLRA}:

$$A_{HLRA} = \frac{(10{,}500gal/d)}{25gal/ft^2•d} = 420ft^2$$

Total Nitrogen Loading Calculations – First Stage

Design Average $TNLR_A$ is 0.014lbs TKN/ft^2•d.
Determine the pounds per day of Average Day Nitrogen Load, TNL_A:

$$TNL_A = (160mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times (10{,}500gpd) = 14lbs/d$$

Determine the textile area required based on Average Day Nitrogen Load, A_{TNLRA}:

$$A_{TNLRA} = \frac{(14lbs/d)}{0.014lbs/ft^2•d} = 1000ft^2$$

The area associated with the TNLR is the most restrictive; therefore, the first-stage AdvanTex area should be a minimum of $1000ft^2$.

Treatment Unit Options – First Stage

Option 1: Using AX-Max units – $1000ft^2$ area

Four AX-MAX250-35; one T-MAX-14 (AX-Max unit includes recirc-blend tankage and discharge tankage)

Option 2: Using AX100 units – $1000ft^2$ area

Ten AX100 units, 7875gal recirc tank (recirculation-blend tank sized at minimum of 75% of Q_M)

Loading Calculations – Second Stage

For all second-stage calculations, the values used are based on the predicted performance of the first-stage secondary treatment system. Effluent values for BOD_5 and TKN are typically based upon 90% BOD_5 removal, 95% nitrification, and 70% denitrification through pre-anoxic stage and first-stage AdvanTex treatment.

Organic Loading – Second Stage

Design Average OLR_A is 0.02lbs BOD_5/ft^2•d.
Determine the value of first-stage AdvanTex effluent BOD_{5e}:

$$BOD_{5e2} = 280mg/L \times (1 - 0.9) = 28mg/L$$

Determine the pounds per day of Average Day Organic Load, OL_A:

$$OL_{A2} = (28mg/L) \times (8.34 \times 10^{-6}lbs•L/mg•gal) \times (10{,}500gpd) = 2.45lbs/d$$

Determine the textile area required based on Average Day Organic Load, A_{OLRA}:

$$A_{OLRA2} = \frac{(2.45lbs/d)}{0.02lbs/ft^2•d} = 123ft^2$$

Appendix E. Example Design for a School (Application Type 3), cont.

Hydraulic Loading – Second Stage

Design Average HLR_A is 75gpd/ft^2.
Determine the textile area required based on Average Day Hydraulic Load, A_{HLRA}:

$$A_{HLRA} = \frac{(10{,}500/d)}{75gal/ft^2 \cdot d} = 140ft^2$$

Total Nitrogen Loading – Second Stage

Design Average $TNLR_A$ is 0.007lbs TN/ft^2•d.
Determine the value of first-stage AdvanTex effluent TKN_e:

$$TKN_e = 160mg/L \times (1 - 0.95) = 8mg/L$$

Determine the pounds per day of Average Day TKN Load, TKN_e:

$$TKN_e = (8mg/L) \times (8.34 \times 10^{-6} lbs \cdot L/mg \cdot gal) \times (10{,}500gpd) = 0.70lbs/d$$

Determine the textile area required based on Average Day Nitrogen Load, A_{TNLRA}:

$$A_{TNLRA} = \frac{(0.70lbs/d)}{0.007lbs/ft^2 \cdot d} = 100ft^2$$

The area associated with the Design Maximum Day Hydraulic Loading Rate is the most restrictive; therefore, the second-stage AdvanTex area should be a minimum of 140ft^2.

Treatment Unit Options – Second Stage

Option 1: Using AX-Max units – 140ft^2 area

One AX-MAX150-28 (Max unit includes recirc-blend tankage and discharge tankage)

Option 2: Using AX100 units – 140ft^2 area

Two AX100 units, 2625gal recirc tank, 2100gal discharge tank; recirculation-blend tank sized at minimum of 25% of Q_M; discharge tank size based on local regulation, but typically sized at minimum of 20% of Q_M

Other Design Notes

- Ensure access to treatment site for maintenance activities.
- Ensure availability of water at treatment site for maintenance activities.

Appendix F. Special Considerations for Greywater Treatment Systems (Application Type 6)

Orenco has increased the permissible hydraulic loading rates when using AdvanTex treatment systems for greywater applications – compared to a standard-stage wastewater treatment application – while retaining the organic and nitrogen loading parameters.

Table F1. Standard AdvanTex Stage Sizing for Greywater

	Design Avg.	Design Max.
Hydraulic Loading Rate (HLR)[1]	40gpd/ft^2	80gpd/ft^2
Organic Loading Rate (OLR)	0.04lbs BOD_5/ft^2•day	0.08lbs BOD_5/ft^2•day
Total Nitrogen Loading Rate (TNLR)	0.014lbs TN/ft^2•day	0.028lbs TN/ft^2•day
Ammonia Loading Rate (ALR)	0.01lbs NH_3-N/ft^2•day	0.02lbs NH_3-N/ft^2•day

[1] *This is the maximum rate allowed by Orenco; local regulations may be more restrictive. Check local regulations.*

Determining Influent Constituent Concentrations

Orenco prefers sampled data to establish influent waste strengths for greywater applications. When sample data is unavailable, NSF350-1 is typically used to estimate influent constituent concentrations. These concentrations are based upon what is being served and are listed in the table below.

Table F2. Expected Range of Greywater Constituents, 30-Day Average

Parameter	Application Type 6A, Shower/Bath Only	Application Type 6B, Laundry Only	Application Type 6C, Shower/Bath and Laundry
TSS	50-100mg/L	50-100mg/L	80-160mg/L
BOD_5	100-180mg/L	220-300mg/L	130-180mg/L
Temperature	25-35°C	25-35°C	25-35°C
pH	6.0-7.5	7.0-8.5	6.5-8.0
Turbidity	30-70NTU	50-90NTU	50-100NTU
Sodium	n/a	50-90mg/L	50-90mg/L
Total Phosphorous P	1.0-4.0mg/L	<2.0mg/L	1.0-3.0mg/L
Total Kjeldahl Nitrogen-N	3.0-5.0mg/L	4.0-6.0mg/L	3.0-5.0mg/L
COD	200-400mg/L	300-500mg/L	250-400mg/L
TOC	30-60mg/L	50-100mg/L	50-100mg/L
E. coli	10^2-10^3cfu/100mL	10^2-10^3cfu/100mL	10^2-10^3cfu/100mL
Total coliforms	10^3-10^4cfu/100mL	10^3-10^4cfu/100mL	10^3-10^4cfu/100mL

APPENDIX L

PHASE I ENVIRONMENTAL SITE ASSESSMENT
THE TOWN AND COUNTRY VILLAGE
EL DORADO COUNTY APNS 119-080-012, -021, & -023
EL DORADO HILLS, CALIFORNIA

Prepared For

Cap Funding – The Mohanna
1025 9th Street, Suite 205
Sacramento, California 95814

Prepared By

Youngdahl Consulting Group, Inc.
1234 Glenhaven Court
El Dorado Hills, California 95762

Project No. E21526.001
August 2022

YOUNGDAHL
ESTABLISHED 1984

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
1234 Glenhaven Court, El Dorado Hills, CA 95762
4300 Anthony Court, Unit D, Rocklin, CA 95677
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Cap Funding – The Mohanna
1025 9th Street, Suite 205
Sacramento, CA 95814

Project No. E21526.001
31 August 2022

Attn: Mr. Josh Pane

Subject: **THE TOWN AND COUNTRY VILLAGE**
Bass Lake Road and Country Club Drive, El Dorado Hills, California
Phase I Environmental Site Assessment

As requested, Youngdahl Consulting Group, Inc. (Youngdahl) has performed a Phase I Environmental Site Assessment (ESA) for The Town and Country Village located off of Bass Lake Road in El Dorado Hills, California (Subject Property). **Youngdahl did not identify any recognized environmental conditions in connection with the subject property.** Furthermore, no historic RECs (HRECs), controlled RECs (CRECs), or de minimis conditions (DMCs) were identified in connection with the property.

This Phase I Environmental Site Assessment has been completed in accordance to the ASTM Practice E1527-21. Youngdahl Consulting Group, Inc. declares that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 312.10(b). We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Regards,
Youngdahl Consulting Group, Inc.

Allie Denny
Staff Geologist

Reviewed by:

David C. Sederquist, C.E.G, C.H.G.
Senior Engineering Geologist/Hydrogeologist
8-31-22

CERTIFIED ENGINEERING GEOLOGIST
DAVID C. SEDERQUIST
NO. 2133
EXPIRATION DATE
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PHASE I ENVIRONMENTAL SITE ASSESSMENT
THE TOWN AND COUNTRY VILLAGE
EL DORADO COUNTY APNS 119-080-012, -021, & -023
EL DORADO HILLS, CALIFORNIA 95762

EXECUTIVE SUMMARY

Site Description

The property description referred to herein is based on an El Dorado County Assessor's Parcel Map and on a site reconnaissance performed by representatives of Youngdahl Consulting Group, Inc. (Youngdahl). These were also the basis for the "Vicinity Map" - Figure 1 and is referred to in this Report as the *subject property*. The subject property consists of 60.49 acres of land, and is assigned El Dorado County Assessor's Parcel Numbers (APNs) 119-080-012, -021, and -023 in El Dorado Hills, California.

The subject property is located to the east of Bass Lake Road in El Dorado Hills, California. The site consists of undeveloped land with topography that slopes in various directions. There are two wells located near the center of the property and Country Club Drive runs generally east/west through the site.

Adjacent Properties

North: Vacant undeveloped land.
East: Vacant undeveloped land.
South: Frontage Road and Highway 50.
West: Bass Lake Road and vacant undeveloped land.

Purpose

This Phase I ESA was conducted according to the American Society for Testing and Materials (ASTM) Designation E1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Phase I Standards). The ASTM E1527-21 standards are consistent with the requirements of the All Appropriate Inquiry (AAI) rule in Title 40 of the Code of Federal Regulations (40 C.F.R. 312.10).

Recognized environmental conditions (RECs) are defined in the ASTM Phase I Standards to mean "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

Historical recognized environmental condition (HREC) is a term used to state that the property has had a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls. The term 'controlled REC' (CREC) describes a REC that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls. De minimis conditions (DMCs) are those situations that do not present a threat to human health or the environment and generally would not be subject to enforcement action if brought to the attention of the regulating authority.

Summary and Opinion
No RECs, CRECs, HRECs, or DMCs were identified in connection with the subject property.

Site Assessor
A site reconnaissance visit was conducted on 25 August 2022 by Ms. Allie Denny, Youngdahl Consulting Group, Inc., (916) 933-0633, allie.denny youngdahl.net.

Significant Data Gaps
According to 3.3.19 of ASTM Standard E1527-21, a data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts to gather such information. Data gaps may result from incompleteness in any of the activities required by the ASTM Standard. A significant data gap (ASTM E1527-21 3.3.78) is a data gap that affects the ability to identify RECs. It is our opinion that no data gaps or significant data gaps were discovered during preparation of this report.

1.0 INTRODUCTION

1.1 Subject Property

The subject property, or property that is the subject of this environmental site assessment, is located off of Bass Lake Road, and has been assigned El Dorado County assessor's parcel numbers (APNs) 119-080-012, -021, and -023 in El Dorado Hills, California.

1.2 Purpose

The user, Cap Funding – The Mohanna, requested the completion of the Phase I ESA per ASTM E1527-21. This Phase I ESA was conducted according to the American Society for Testing and Materials (ASTM) Designation E1527-21 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Phase I Standards). The ASTM E1527-21 standards are consistent with the requirement of the All Appropriate Inquiry (AAI) rule in Title 40 of the Code of Federal Regulations (40 C.F.R. 312.10). The ASTM practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability.

Potential findings per the ASTM Phase I Standards can include recognized environmental conditions (RECs), controlled RECs (CRECs), historical RECs (HRECs), and de minimis conditions (DMCs). A REC is defined in the ASTM Phase I Standards to mean "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

HRECs are a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or authorities meeting unrestricted use criteria established by a regulatory authority or authorities without subjecting the property to any required controls (for example, activity and use limitations or other property use limitations).

CRECs are a REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, activity and use limitations or other property use limitations).

A de minimis condition (DMC) is a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor is a controlled recognized environmental condition.

Controlled substances (i.e., illegal drugs) are not included within the scope of this standard. Petroleum products are included within the scope of this practice because they are of concern with respect to many parcels of commercial real estate and current custom and usage is to include an inquiry into the presence of petroleum products when doing an ESA of commercial real estate. This practice does not address requirements of any state or local laws or of any federal laws other than the appropriate inquiry provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)'s landowner liability protection. Users are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the property that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance. The scope of this practice includes research and reporting requirements that support the user's ability to qualify for landowner liability protection. As such, sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report.

1.3 Detailed Scope of Services

This scope of services is site specific in that it relates to assessment of environmental conditions on a specific parcel of real estate. The Phase I ESA will be performed by an environmental professional. An environmental professional (EP) is defined as a person meeting the education, training, and experience requirements set forth in 40 CFR 312.10(b). The scope of services for this Phase I ESA is as follows:

Government Records Review: Standard environmental record sources, including Federal, Tribal, and State lists as well as local sources of environmental records were reviewed. We authorized Environmental Data Resources (EDR) to conduct a search of specified government databases and produce a map-based radius search report which would identify sites within the approximate minimum distances pursuant to the ASTM E1527-21 Standard.

Review of Historical Sources: Historical records that may have been reviewed include, but are not limited to, aerial photographs, fire insurance (Sanborn) maps, building department records, chain-of-title documents, city directory abstracts, land use records, and USGS Topographic Maps. The AAI rule requires that historical documents be reviewed as far back in time as the property contained structures or the property was used for agricultural, residential, commercial, industrial, or governmental purposes. Under the AAI rule, historical sources of information must be reviewed as far back as 1940. The AAI rule does not specify a research interval for reviewing historical records.

Site Reconnaissance: A site reconnaissance visit was conducted on 25 August 2022 by Ms. Allie Denny, allie.denny youngdahl.net.

Interviews: Interviews with past and present owners, operators, or occupants were conducted to obtain information indicating RECs in connection with the subject property. The Client was asked to identify a person with good knowledge of the property (the key site manager). A Phase I ESA Questionnaire completed by the Owner's representative to facilitate the collection of information is provided in Appendix A. The AAI rule requires interviews be conducted with the current owner(s) and occupant(s) of the subject property. The AAI rule also requires that additional interviews be conducted with current and past facility managers, past owners, operators or occupants of the property, and past employees, as necessary to meet the objectives of the AAI rule. The AAI rule allows the environmental professional to determine whether such interviews are necessary.

Interviews with state and/or local government officials to obtain information indicating RECs in connection with the subject property were performed.

Identify Significant Data Gaps: If a data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, the environmental professional will give the reasons for their exclusion. If data failure represents a significant data gap, the report shall comment on the impact of the data gap on the ability of the environmental professional to identify recognized environmental conditions. If the data gaps are found, the environmental professional can and does not warrant nor guarantee that no significant events, releases, or conditions arose during the periods of such data gaps.

Evaluation and Report Preparation: The findings, opinions, and conclusions in the Phase I ESA report are supported by documentation. The report: (1) describes all services performed; (2) has a findings section which summarizes known or suspect environmental conditions associated with the property, and which may include recognized environmental conditions, historical recognized environmental conditions, and de minimis conditions; (3) includes Youngdahl Consulting Group Inc.'s opinion(s) of the impact on the property of the known or suspect environmental conditions identified in the findings section as well as the logic and reasoning used in evaluating information collected during the course of the investigation; and (4) includes a conclusions and recommendations section that summarizes the recognized environmental conditions connected with the property and presents recommendations to address those conditions. The report will include an analysis of the relationship of the purchase price of the subject property to the fair market value of the property, if it were not contaminated.

Report Shelf Life: Under the AAI rule, a prospective property owner may use a Phase I ESA Report without having to update any information collected as part of the inquiry: (1) if the all appropriate inquiries investigation was completed less than 180 days prior to the date of acquisition of the property or (2) if the Phase I ESA report was prepared as part of a previous all appropriate inquiries investigation and was completed less than 180 days prior to the date of acquisition of the property. A prospective property owner may use a previously conducted Phase I ESA Report: (1) if the Phase I ESA report was prepared as part of a previous all appropriate inquiries investigation for the same property; and (2) if the information was collected or updated within one year prior to the date of acquisition of the property; and (3) certain aspects of the previously conducted report are conducted or updated within 180 days prior to the date of acquisition of the property. These aspects include the interviews; on-site visual inspection; reviews of federal, tribal, state, and local government records; the search for environmental liens; and the declaration by the environmental professional responsible for the assessment or update.

1.4 Significant Assumptions, Limitations, and Exceptions

This report and review of the subject property is limited in scope. All appropriate inquiry does not mean an exhaustive assessment of a clean property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of the ASTM 1527-21 practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an ESA and the reduction of uncertainty about unknown conditions resulting from additional information. The appropriate level of inquiry will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry. This type of investigation is undertaken with the risk that the presence, full nature, and extent of contamination would not be revealed by visual observation and review of available data alone. The findings presented in this report were based on field observations and review of available data. Therefore, the data obtained is clear and accurate only to the degree implied by the sources and methods used. The information presented herewith was based on professional interpretation and on the data obtained.

1.5 Special Terms and Conditions and/or Additional Services

A Phase I ESA meeting or exceeding the ASTM 1527-21 practice and has all components completed less than 180 days prior to the date of acquisition (the date on which a person acquires title to the subject property) or the date of the intended transaction is presumed to be valid. If within this period the assessment will be used by a different user than the user for whom the assessment was originally prepared, the subsequent user must also satisfy the User's Responsibilities set forth in Section 2.0. Users and environmental professionals may use information in prior environmental site assessments provided such information was generated as a result of procedures that meet or exceed the requirements of ASTM 1527-21.

1.6 Reliance

This Phase I ESA has been prepared for and is intended for the use of Cap Funding – The Mohanna. The individual components of this report are valid as of the date they were produced or completed; the report should not be relied upon for information concerning changes in the condition of the property after the report was prepared.

2.0 USER RESPONSIBILITIES

The user should provide reasonably ascertainable land title records and judicial records for review for the existence of environmental liens, activity and use limitations (AUL), or other property use limitation, if any, that are currently recorded against the property. An environmental lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. 9607(1) & 9607(r) and similar state or local laws. AULs are an explicit recognition by a federal, tribal, state, or local regulatory agency that residual levels of hazardous substances or petroleum products may be present on a property, and that unrestricted use of the property may not be acceptable. Property use limitations are a limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous substances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria. If the user is aware of any specialized

knowledge or experience that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate any information based on such specialized knowledge or experience to the environmental professional, and before the site reconnaissance is conducted.

In a transaction involving the purchase of a parcel of commercial real estate, the user shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The user should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property were not contaminated, and make a written record of such explanation. If the user is aware of any commonly known or reasonable ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, it is the user's responsibility to communicate such information to the environmental professional before the site reconnaissance is conducted.

2.1 Environmental Liens, Activity and Use Limitations, and/or other Property Use Limitations

Mr. Moe Mohanna did not indicate any knowledge of environmental liens or activity and use limitations on the completed questionnaire (Appendix A).

2.2 Specialized Knowledge and Commonly Known or Reasonably Ascertainable Information

Mr. Mohanna did not indicate specialized knowledge of the subject property on the completed questionnaire (Appendix A).

2.3 Valuation Reduction for Environmental Issues

Mr. Mohanna marked "No" to the question regarding valuation reduction on the completed questionnaire (Appendix A).

3.0 SITE INFORMATION

3.1 Site Description

The property description referred to herein is based on an El Dorado County Assessor's Parcel Map and on a site reconnaissance performed by representatives of Youngdahl Consulting Group, Inc. (Youngdahl). These were also the basis for the "Vicinity Map" - Figure 1. The subject site consists of 60.49 acres of land, and is assigned El Dorado County Assessor's Parcel Numbers (APNs) 119-080-012, -021, and -023 in El Dorado Hills, California.

3.2 Physical Setting

Geologic maps and a current United States Geologic Society (USGS) 7.5 Minute Topographic Series Map of the Clarksville Quadrangle, as well as observations made during our site reconnaissance were used to make interpretations regarding the physical setting of the subject property and the surrounding area. The elevation at the subject property ranges between approximately 1040 and 1220 feet above mean sea level (MSL) and is located in Township 9 North, Range 9 East, Sections 6 and 7, Mount Diablo Base & Meridian. The subject property slopes in various directions and is vegetated by seasonal grasses and scattered oak trees.

3.3 Regional Geology

The site is located in El Dorado Hills, California, which is found within the western foothills region of the Sierra Nevada geomorphic province This province is dominated by long belts of metamorphic rock formed by ancient subduction and related volcanism, continental accretion and uplift during the Jurassic and Cretaceous ages (CDMG, 1984, OFR 84-50). According to the Geologic Map of the Sacramento Quadrangle, California (Gutierrez C.I., 2011), the subject property and vicinity are underlain by metavolcanic rock.

3.4 Groundwater Conditions

According to a well completion report dated 23 March 2022 for a well located on the subject property within APN 119-080-012, the depth to first water was at 105 feet below the ground surface (bgs) with a static water level at 80 feet bgs. Groundwater flow direction was estimated from topographic contours on the 7.5 Minute Map of the Clarksville Quadrangle to be generally to the southwest.

3.5 Soil Conditions

The United States Department of Agriculture Natural Resources Conservation Service's Web Soil Survey was accessed on 21 July 2022. Soils present on the site include:

- **85.9% Auburn Very Rocky Silt Loam, 2 to 30 percent slopes (Map Unit Symbol AxD)** Parent material is residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock, the unit is well drained, has a medium runoff class, and is not prime farmland.
- **12.4% Auburn Silt Loam, 2 to 30 percent slopes, (Map Unit Symbol AwD)** Parent material is residuum weathered from basic igneous rock and/or basic residuum weathered from metamorphic rock, the unit is well drained, has a low runoff class, and is not prime farmland.
- **1.8% Auburn Extremely Rocky Silt Loam, 3 to 70 percent slopes, (Map Unit Symbol AyF)** Parent material is amphibolite schist, the unit is well drained, has a medium runoff class, and is not prime farmland.

4.0 SITE RECONNAISSANCE

4.1 Purpose

A reconnaissance of the subject property and a windshield survey of the surrounding area were conducted by Youngdahl Consulting Group, Inc. on 25 August 2022. The subject property was visually and/or physically observed including the periphery of the site, interior and exterior of all structures at the site, and all adjacent properties. Views of the subject property at the time of the reconnaissance visit are presented as Figures 3 - 8.

4.2 Subject Property

Some features discussed in this section are shown on the Site Plan – Figure 2. The subject property consists of vacant land with Country Club Drive running generally east/west through the site (Fig. 8, Photo 12). Two wells were observed near the center of the subject property (Fig. 7, Photo 10) and there is an unimproved road that runs parallel to Country Club Drive and Bass Lake Road. Two soil stockpiles were also observed near the center of the site and did not appear to contain any solid waste (Fig. 7, Photo 9). Garbage piles were observed on the northeast section of the subject property (Fig. 8, Photo 11).

Reconnaissance Item	Observed	Reconnaissance Observations (25 August 2022)
Structures	No	None Observed.
Liquid Storage Systems (UST/AST)	No	None Observed.
Drums	No	None Observed.
Other Containers	No	None Observed.
PCBs	No	None Observed.
Pits/Ponds/Ditches/Caves/Streams/ Lagoons	No	None Observed.
Stained Soil/Pavement	No	None Observed.
Stressed Vegetation	No	None Observed.
Solid Waste (Mounds or depressions)	No	None Observed.
Waste Water (Discharge into drain/ditch/injection system/stream/adjacent property)	No	None Observed.
Wells (Dry/irrigation/injection/abandoned)	Yes	Two well were observed near the center of the subject property.
Other underground systems	No	None Observed.
Septic Systems	No	None Observed.

4.3 Adjacent Properties

North: Vacant undeveloped land.
East: Vacant undeveloped land.
South: Frontage Road and Highway 50.
West: Bass Lake Road and vacant undeveloped land.

5.0 HISTORICAL SOURCES REVIEW

All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural uses and placement of fill dirt. Standard historical sources shall be reviewed at approximately five-year intervals. In an effort to fulfill due diligence requirements, Youngdahl Consulting Group, Inc. employed the services of Environmental Data Resources, Inc. (EDR) to provide the following standard historical sources: aerial photographs, USGS topographic maps, local city directories, and fire insurance maps (Sanborn Maps). Standard historical sources may also include: property tax files, recorded land title records, building department records, and zoning/land use records.

5.1 Aerial Photographic Review

Aerial photographs for the years 1940, 1952, 1962, 1973, 1984, 1993, 2006, 2009, 2012, and 2016 were provided in the EDR Aerial Photo Decade Package (Appendix B). Interpretations were made in an effort to evaluate former uses of the subject property and adjacent areas, and to determine if any significant topographic or cultural changes have occurred. All photographs were provided at a scale of 1" = 500'. A summary of the photographs reviewed is provided below.

Date	Source	Comments
1940	USDA	The subject property consists of vacant land with natural vegetation growth, a creek/drainage flowing through the northern portion of the site, and an unimproved road on the southern portion. The surrounding areas to the north and east are also vacant land with drainage features present. There are roads to the west and south of the subject property and structures are located to the west.
1952	USGS	No significant changes to the subject and adjacent properties are visible.
1962	USDA	The eastern portion of this photo is missing, so information on the eastern side of the subject property is not shown. No significant changes to the subject and adjacent properties are visible.
1973	NASA	There is a road running generally east/west that crosses through the northern portion of the subject property. Roads to the south have expanded into a highway with on and off ramps.
1984	USDA	No significant changes to the subject property are shown. There is an unimproved road to the north of the site and additional structures are visible to the east and west.
1993	USGS/DOQQ	No significant changes to the subject property are shown. The area to the east has additional structures.
2006	USDA/NAIP	No significant changes to the subject property are shown. The area adjacent to the site to the south appears to have undergone some development.
2009	USDA/NAIP	No significant changes to the subject and adjacent properties are visible.
2012	USDA/NAIP	No significant changes to the subject and adjacent properties are visible.
2016	USDA/NAIP	No significant changes to the subject and adjacent properties are visible.

5.2 Review of Historical and Current USGS Topographic Maps

A topographic map is a color-coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topographic maps show the shape, elevation, and development of the terrain in precise detail by using contour lines and color-coded symbols. The EDR Historical Topographic Map Report (Appendix B) provided maps dated 1891 to 2018. Interpretations were made in an effort to evaluate former uses of the subject property and adjacent areas, and determine if any significant topographic or cultural changes have occurred.

Date	Map Name	Series	Comments
1891	Sacramento and Placerville	30 Minute	No features are shown within the subject property boundary. There is a road adjacent to the site to the west and at the southeast corner. There is a road running generally east/west across the map with roads jutting off of it to the north and south. There is a creek to the southeast of the subject property, a drainage feature to the west, and a reservoir on the northern portion of the map.
1892	Sacramento and Placerville	30 Minute	No significant changes to the subject and adjacent properties are shown.
1893	Sacramento and Placerville	30 Minute	No significant changes to the subject and adjacent properties are shown.
1941	Folsom	15 Minute	No significant changes to the subject property are shown. The road adjacent to the site to the south is labeled as Highway 50 and there are unimproved roads jutting off of it to the south. There is a building in the lot to the west of the subject property and the reservoir to the north is now labeled as Bass Lake. The areas to the south and east of the site are shown as woodland.
1944	Folsom	15 Minute	No significant changes to the subject or adjacent properties are shown.
1973	Clarksville and Shingle Springs	7.5 Minute	There is an intermittent stream and an unimproved road running east/west through the northern portion of the subject property. There is a roadway adjacent to the site on the western and southern sides, which is connected to highway 50 to the south by a new off ramp. The property to the west now has three buildings.
1980	Clarksville	7.5 Minute	There is a powerline that crosses through the southern section of the subject property. The area to the west of the site now has four structures and two structures are visible to the east of the site. New roads and structures are visible throughout the map.
2012	Clarksville and Shingle Springs	7.5 Minute	Only major roadways, topography, and water features are depicted in this map. The road that crosses through the subject property is labeled as City Lights Drive, the road adjacent to the west is shown as Bass Lake Road, and the road to the south is Country Club Drive. There are no structures shown in the areas surroundings the site.
2015	Clarksville and Shingle Springs	7.5 Minute	No significant changes to the subject and adjacent properties are shown.
2018	Clarksville and Shingle Springs	7.5 Minute	No significant changes to the subject and adjacent properties are shown.

5.3 Historical City Directory Abstract Review

EDR provided the EDR-City Directory Image Report for review and a copy is provided in Appendix B. Building directories including city, cross reference and telephone directories were reviewed, if available, at approximately five-year intervals for the years spanning 1971 through 2017. No listings were identified for the subject property or any adjacent properties.

5.4 Certified Sanborn Map Report

No Sanborn Map coverage was identified for the subject property.

6.0 REGULATORY RECORDS REVIEW

The records review consisted of a review of reasonably ascertainable environmental record sources, physical setting sources, and historical use information that will help identify recognized environmental conditions in connection with the property. Reasonably ascertainable record information must be publicly available, obtainable from its source within reasonable time and cost constraints, and be practically reviewable.

6.1 Commercial Database Search Review

In an effort to fulfill due diligence requirements, Youngdahl Consulting Group, Inc. employed the services of Environmental Data Resources, Inc. (EDR) to identify sites listed on regulatory agency databases within approximate minimum search distances from the subject property with potential of existing environmental problems. The term “approximate minimum search distances” means the distances within the area which government records must be reviewed pursuant to ASTM Phase I Standards. The term “minimum search distance” is used in lieu of radius as to include irregularly shaped properties. A current EDR Radius Map with GeoCheck (EDR Report) was provided by EDR on 25 July 2022 (Appendix C). Included in the report are the dates the original government sources were updated and the dates the sources were last updated by EDR, as well as a list of acronyms used by EDR.

The EDR Radius Map with GeoCheck (EDR Report) identified two sites within minimum search distances listed in multiple databases:

- **Bass Lake Road and Country Club Drive Project**; Bass Lake Road; 0 miles, within the subject property. The site is listed in the CERS and CIWQS databases.
- **Silver Dove Elementary**; Silver Dove Way/Bass Lake Road; 0.312 miles WNW. The site is listed in the ENVIROSTOR and SCH databases.

Due to poor or inadequate information, EDR is unable to map certain sites. These sites are referred to by EDR as Orphans. One Orphan sites was identified in the EDR Report.

City	EDR ID	Site Name	Address	Database
Cameron Park	S116165446	MARBLE VALLEY QUARRY	MARBLE VALLEY ROAD	ENVIROSTOR

6.2 Review of State and/or Local Government Records

The El Dorado County Public Records Request system was utilized to request any records pertaining to hazardous materials at the subject site. The only record identified in the search was a Well Completion Report and a permit for a well that is located on the subject property.

The State of California Water Resources Control Board's GeoTracker database was researched to identify if sites with groundwater contamination exist within the minimum search distances to the subject property (www.geotracker.waterboards.ca.gov). Also, the Department of Toxic Substance Control's (DTSC) Envirostor database was researched for sites of environmental concern near or at the subject property (https://www.envirostor.dtsc.ca.gov/public/). The subject property was not identified on the GeoTracker or Envirostor websites.

6.3 Vapor Encroachment Screening

Vapor intrusion is the term used to describe the migration of volatile organic compounds (VOCs) via soil vapor from the sub-surface soil and/or groundwater upward into buildings, potentially causing unacceptable chemical exposure for building occupants. The vapor intrusion pathway is evaluated using the Conceptual Site Model (CSM) and vapor intrusion pathway screening. Volatilization of petroleum products in the subsurface occurs via the volatilization of constituents that are in the dissolved phase (in pore water or groundwater), volatilization from light nonaqueous phase liquid (LNAPL) (either mobile or residual) directly, and volatilization from impacted soil. Once the individual constituents are in the vapor phase, they can continue to migrate in the vadose zone (soil zone between first groundwater and ground surface). Transport will occur through diffusion caused by concentration gradients. The greatest movement will take place in the most permeable materials. If the soil-moisture content in the vadose zone is high, then relatively soluble compounds such as ethanol and MTBE will tend not to stay in the vapor phase, but rather will stay in the soil moisture.

Soil vapor is one of the pathways of contamination to the subject property, along with ground water and soil. ASTM E1527-21 requires that vapor migration be treated no differently than contaminated groundwater. The soil vapor contaminant pathway needs to be considered in evaluation of RECs or other environmental concerns. The ASTM Standard Guide for Vapor Encroachment Screening (VES) on Property Involved in Real Estate Transactions (ASTM E2600-10) is the industry-accepted guidance for using Phase I ESA information to determine if a vapor encroachment condition (VEC) exists at the subject property. EDR's Vapor Encroachment Worksheet was designed to assist parties seeking to meet the search requirements of the ASTM E 2600-10. No sites of potential risk were discovered during completion of the EDR VES. A copy of the EDR VES is provided in Appendix D.

7.0 INTERVIEWS

7.1 Interviews with Past and Present Owners, Key Site Manager, and/or Occupant

Mr. Moe Mohanna was interviewed via email on 26 August 2022. He informed us that he has owned the subject property for more than three decades and that to the best of his knowledge there has never been any hazardous waste spills or storage at the site. Additionally, he stated that the property has only been used as vacant land and there are two wells located on the site.

7.2 Interviews with State and/or Local Government Officials

Ms. Monica Smithcamp with the El Dorado County Environmental Management department was contacted via email on the El Dorado County Public Records Request website and was requested to provide records regarding the subject property and nearby sites that may be of a concern. The only record that she provided us with was a well completion report and permit for a well that was recently drilled on the subject property.

8.0 COMMON CONTAMINANTS

8.1 Lead-based Paint

Lead is considered to be a harmful environmental pollutant. In late 1991, the Secretary of the Department of Health and Human Services called lead the "number one environmental threat to the health of children in the United States." Humans are exposed to lead through the air, drinking water, food, contaminated soil, deteriorating paint, and dust. Airborne lead enters the body by breathing or swallowing lead particles or dust once it has settled. Old lead-based paint is the most significant source of lead exposure in the U.S. Lead-based paint in the United States resulted in a court case against the Lead Industries Association. Due in great part to studies carried out by Philip J. Landrigan, paint containing more than 0.06% (by weight of dried product) lead was banned for residential use in the United States in 1978 by the U.S. Consumer Product Safety Commission (16 Code of Federal Regulations CFR 1303). Most homes and other buildings built before 1960 contain heavily leaded paint. Some homes built as recently as 1978 may also contain lead paint. There are no indications of buildings ever having been located on the site, therefore there is a low risk of lead-based paint in the soil on the subject property.

8.2 Termiticides

Termiticides - organochlorine termiticides (OC termiticides) are a group of persistent pesticides that were formerly used for termite control in and around wooden structures from the mid-1940s to the late 1980s. These OC termiticides used in the past include chlordane, aldrin, dieldrin, heptachlor, and DDT. Chlordane and other organochlorine pesticides (OCPs) were commonly used as termiticides around structures until 1988. Above-ground use of chlordane was phased out between 1978 and 1983 by the United States Environmental Protection Agency (USEPA); although chlordane was used as a termiticide for wooden structures until it was prohibited in 1988. In 2004, the California Department of Toxic Substances Control (DTSC) evaluated OCPs in soil for proposed school sites on residential properties; finding chlordane in 98 percent of the samples, DDT in 95 percent, dieldrin in 71 percent, and heptachlor in 17 percent. DTSC implemented an “Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers” in 2006. There are no indications of buildings ever having been located on the site, therefore there is low risk of OC termiticide contamination on the subject property.

8.3 Pesticides

Prior to 1950, the use of arsenical pesticides and herbicides as lead arsenate (LA) was the most extensively used of the arsenal insecticides. The search for substitutes for LA began when it was discovered in 1919 that contemporary practices for washing produce were failing to adequately remove As residues (Shepard, 1939). Unfortunately, all of the tested alternative materials were found to provide less effective insect control or were more toxic to plants and animals. No adequate substitutes were found until 1947, when the synthetic organic insecticide dichlorodiphenyltrichloroethane (DDT) was introduced. Lead arsenate use in Washington State, USA, effectively terminated in 1948, when DDT became widely available to the public (Benson et al., 1968). Veneman et al. (1983) stated that LA use ceased in Massachusetts, USA, in the early 1950s. All insecticidal uses of LA in the USA were officially banned on 1 August 1988 (USEPA, 1988), with a comment that all registrations for insecticidal use had lapsed before that date.

Organochlorine pesticides (OCPs) were commonly used in the United States between the 1940s and 1970s for public health vector control, agricultural crop production, and pest control around structures. Although most OCPs were banned or withdrawn from use in the 1970s (including DDT), the compounds remain in the environment where surface soils associated with historical agricultural and termite control pesticides are present (DTSC, 2010). The subject property has no history of agriculture, therefore there is low risk of pesticides on the site.

8.4 Fill Dirt and/or Solid Waste

Fill dirt is defined by ASTM E1527-21 as*: "dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities."* This differs from the definition of solid waste, which is considered areas filled or graded by non-natural causes (or filled by fill of unknown origin) suggesting trash construction debris, demolition debris, or other solid waste disposal, or mounds or depressions suggesting trash or other solid waste disposal. Soil stockpiles were observed near the center of the subject property, however they appeared clean and did not contain any solid waste.

9.0 COMMON NON-SCOPE CONSIDERATIONS

Non-scope services include potential environmental conditions that may be present at the subject property that do not present potential CERCLA liability, and are beyond the scope of this practice. We have provided information regarding some non-scope items that may arise at the subject property below.

9.1 Regional Radon Values

Elevated radon gas levels in indoor air are a result of radon moving into buildings from the soil, either by diffusion or flow due to air pressure differences. The ultimate source of radon gas in buildings is the uranium naturally present in rock, water, and soil. Some rock types are known to contain more uranium than others. In California, most uranium deposits are relatively small in aerial extent and are located in rural areas. Consequently, the chance of severe radon levels (>200 Picocuries per Liter) occurring in buildings in California should be very low. The following rock units in California contain uranium in concentrations above the crustal average: the Monterey Formation, asphaltic rocks, marine phosphatic rocks, granitic rocks, felsic volcanic rocks, and certain metamorphic rocks. According to EPA publication 402-R-93-025, entitled EPA's Map of Radon Zones, California, dated September 1993, El Dorado County is shown to be in Zone 2. Zone 2 has a predicted average radon screening level between 2 and 4 pCi/L; this is considered to be a moderate value of geologic radon potential.

The California Department of Health Services, California Indoor Radon Levels Sorted by Zip Code was last updated February 2016. The number of tests does not necessarily represent the number of houses tested. A single house may have had several tests conducted. The table contains both long-term and short-term indoor radon measurements. The California Department of Health Services recommends that you take action to reduce radon levels in your house if they are 4pCi/L or greater. Of the 283 tests conducted for Zip Code 95762, 10 were equal to or greater than 4pCi/L.

9.2 Treated Wood Waste

Wood that has been preserved using chemicals that are meant to protect the wood from insect attack and fungal decay during its use is commonly preserved with hazardous chemicals that pose a risk to human health and the environment. Some of the toxic or carcinogenic chemicals used in the preservation process include arsenic, chromium, copper, creosote, and pentachlorophenol. When this preservative-treated wood has reached the end of its service life, it is considered treated wood waste (TWW) (California Department of Toxic Substances Control, Requirements for Treated Wood Waste, December 2008). If TWW is not properly disposed, the chemicals it contains can leach out of the wood and contaminate surface water and groundwater, posing a risk to human health and the environment. Exposure to the harmful compounds within TWW can occur through dermal contact or from inhalation or ingestion of particles (e.g., sawdust and smoke).

The statute (HSC 25150.7) and regulations (22 CCR 67386.1 et seq.) that allow treated wood waste to be handled with Alternative Management Standards (AMS) expired on December 31, 2020. After that date, all hazardous treated wood waste (not exempted by HSC 25143.1.5 as utility generated) managed in California has to be stored and manifested as hazardous waste and transported to class I hazardous waste landfills for disposal. On August 31, 2021, Assembly Bill 332 had taken affect, adopting new AMS for treated wood waste that are codified in Health and Safety Code section 25230. More information regarding TWW can be found on the September 2021 Fact Sheet – Requirements for Generators of Treated Wood Waste (TWW) (DTSC, 2021).

9.3 Substances Not Defined as Hazardous Substances

Hazardous substance is defined in ASTM 1527-21 3.2.36 as “those substances defined as hazardous substance pursuant to CERCLA 42 U.S.C. 9601(14), as interpreted by EPA regulations and the courts.” There are some substances that non-environmental professionals and others may assume to be hazardous substances that are not defined (or not yet defined) as hazardous substances under CERCLA through interpretation by EPA regulations and the courts. These substances may include: (1) some substances that occur naturally through biological digestion (for example, methane), and (2) substances about which human understanding is evolving (for example, per- and polyfluoroalkyl substances, also known as “PFAS”). These and any other “emerging contaminants,” where they are not identified as a hazardous substance by CERCLA, as interpreted by EPA regulations and the courts, are not included in the scope of this practice. Some of these substances may be considered a “hazardous substance” (or equivalent) under applicable state laws. In those instances, where a Phase I ESA is performed to satisfy both federal and state requirements, or as directed by the user of the report, it is permissible to include analysis and/or discussion of these substances in the same manner as any other Non-Scope Consideration.

10.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This Phase I Environmental Site Assessment (ESA) was performed for The Town and Country Village located off of Bass Lake Road within El Dorado County Assessor’s Parcel Numbers (APNs) 119-080-012, -021, and -023 in El Dorado Hills, California. This Phase I ESA was conducted for Cap Funding – The Mohanna. Our study consisted of an environmental record sources review, physical setting sources review, site related documents review, historical use information review, interviews, and a site reconnaissance. We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitation of ASTM Standard Practice E 1527-21. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report.

10.1 Recognized Environmental Conditions (RECs)

Recognized environmental conditions (RECs) are defined in the ASTM Phase I Standards to mean "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." **No RECs were identified in connection with the subject property.**

10.2 Historic Recognized Environmental Conditions (HRECs)

Historical recognized environmental conditions (HRECs) is a term used to state that the property has had a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls. **This assessment did not identify any HRECs in connection with the subject property.**

10.3 Controlled Recognized Environmental Conditions (CRECs)

The term 'controlled REC' (CREC) describes a REC that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls. **This assessment did not identify any CRECs in connection with the subject property.**

10.4 De Minimis Conditions (DMCs)

De minimis conditions (DMCs) are those situations that do not present a threat to human health or the environment and generally would not be subject to enforcement action if brought to the attention of the regulating authority. **This assessment did not identify any DMCs in connection with the subject property.**

10.5 Significant Data Gaps

According to 3.3.19 of ASTM Standard E1527-21, a data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts to gather same. Data gaps may result from incompleteness in any of the activities required by the ASTM Standard. A significant data gap (ASTM E1527-21 3.3.78) is a data gap that affects the ability to identify RECs. It is our opinion that no data gaps or significant data gaps were discovered during preparation of this report.

11.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in 312.10 of 40 C.F.R. 312" and 12.14.2. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

David C. Sederquist, C.E.G., C. HG.
Professional Geologist - California No. 4715; Certified Engineering Geologist, California No. 2133; Certified Hydrogeologist; California No. 619
Bachelor of Arts in Geology; California State University, Sacramento, 1980

Mr. Sederquist has performed Phase I and Phase II Environmental Site Assessments for commercial, residential, public utility and school projects since 1990. He has assessed, monitored, and closed soil and groundwater contamination sites. He is experienced in working closely with both regulatory officials and property owners/purchasers.

12.0 SELECTED REFERENCES

1. Benson, N.R., R.D. Bartram, C.D. Moodie, W.A. Starr, E. Blodgett, D.R. Heinicke, H.M. Reisenauer, and F.G. Viets. 1969. Re-establishing apples orchards in the Chelan-Manson area. Report to the U.S. Bureau of Reclamation, Denver, CO, USA.

2. California Department of Conservation - Division of Oil, Gas, and Geothermal Resources Well Finder. (https://maps.conservation.ca.gov/doggr/wellfinder/#close).

3. California Department of Toxic Substances Control, Requirements for Generators of Treated Wood Waste (TWW). Fact Sheet, September 2021.

4. California Department of Toxic Substances Control, Treated Wood Waste – Implementation of Assembly Bill 332. August 2021.

5. California Department of Water Resources (DWR) – Well Completion Report Map Application

6. California Division of Mines and Geology, Open File Report 84-50, 1984.

7. Churchill, Ronald, Geologic Controls on the Distribution of Radon in California for the Department of Health Services, 25 January 1991, revised February 2016.

8. Custom Soil Resource Report for Bass Lake Road and Country Club Drive, El Dorado County, California, National Resource Conservation Service Web Soil Survey.

9. Gutierrez, Carlos I., Preliminary Geologic map of the Sacramento 30’ x 60’ Quadrangle, California. California Geologic Survey, 2011.

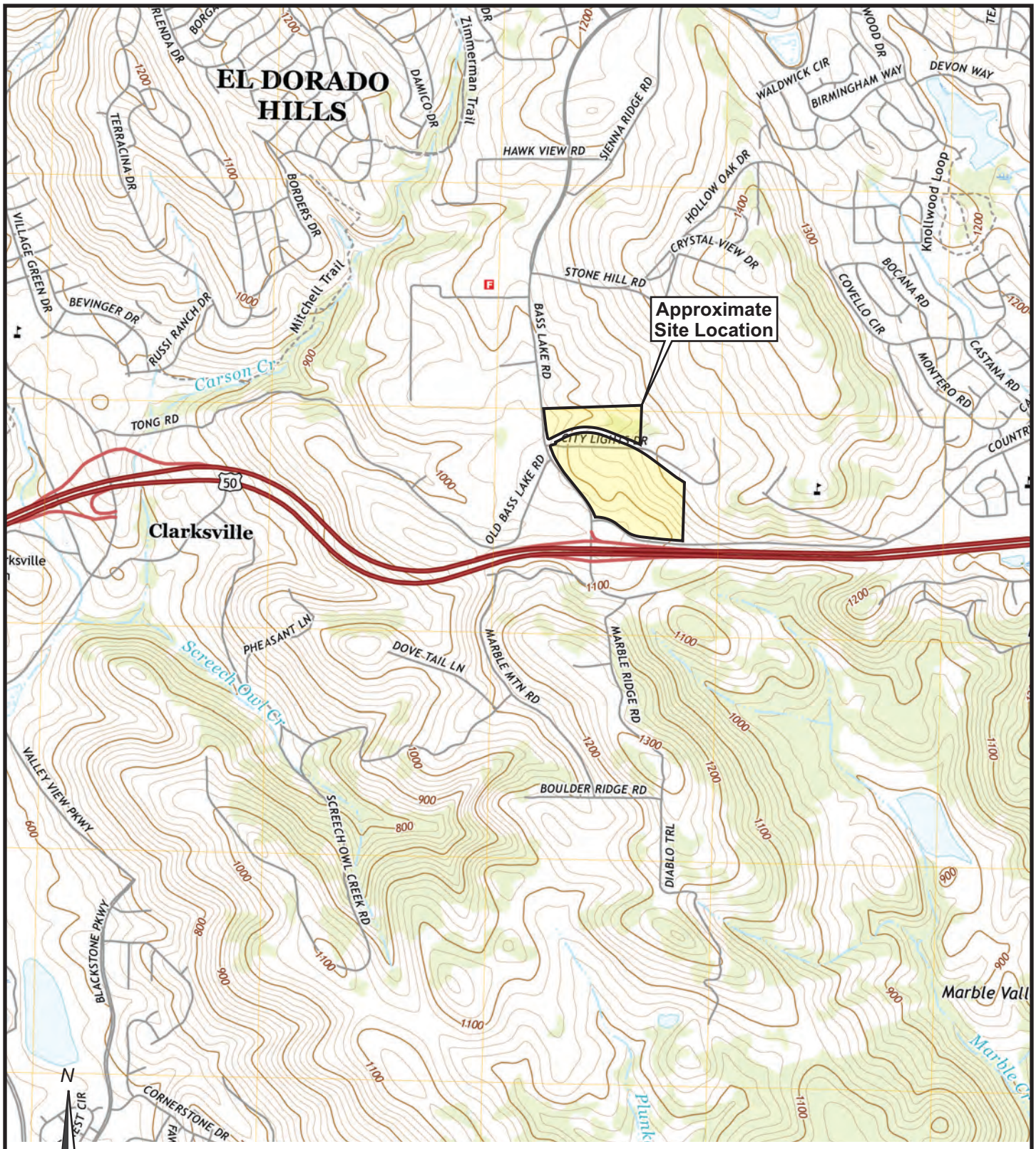
10. National Pesticide Information Center, Chlordane General Fact Sheet, January 2001.

11. Shepard, H. (1939). The chemistry and toxicology of insecticides. The Chemistry and Toxicology of Insecticides.

12. United States Geologic Society (USGS) 7.5 Minute Topographic Series Map of the Clarksville Quadrangle, 2018.

13. Veneman, P.L.M., J.R. Murray, and J.H. Baker. 1983. J. Environ. Qual. 12:101-104 Printing Office, Washington, D.C., USA.

FIGURES



Scale: 1:24,000

BASE MAP REFERENCE: *U.S.G.S. 7.5 Minute Topographic Series, Clarksville Quadrangle, Dated 2018*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001 **August 2022**	**VICINITY MAP** **The Town & Country Village Phase I ESA** El Dorado Hills, California	**FIGURE** **1**

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984

Project No.: E21526.001

August 2022

SITE PLAN

The Town & Country Village Phase I ESA
El Dorado Hills, California

FIGURE 2

REFERENCE: *Overlaid onto Google Earth, Aerial Data Dated 6/3/2021*

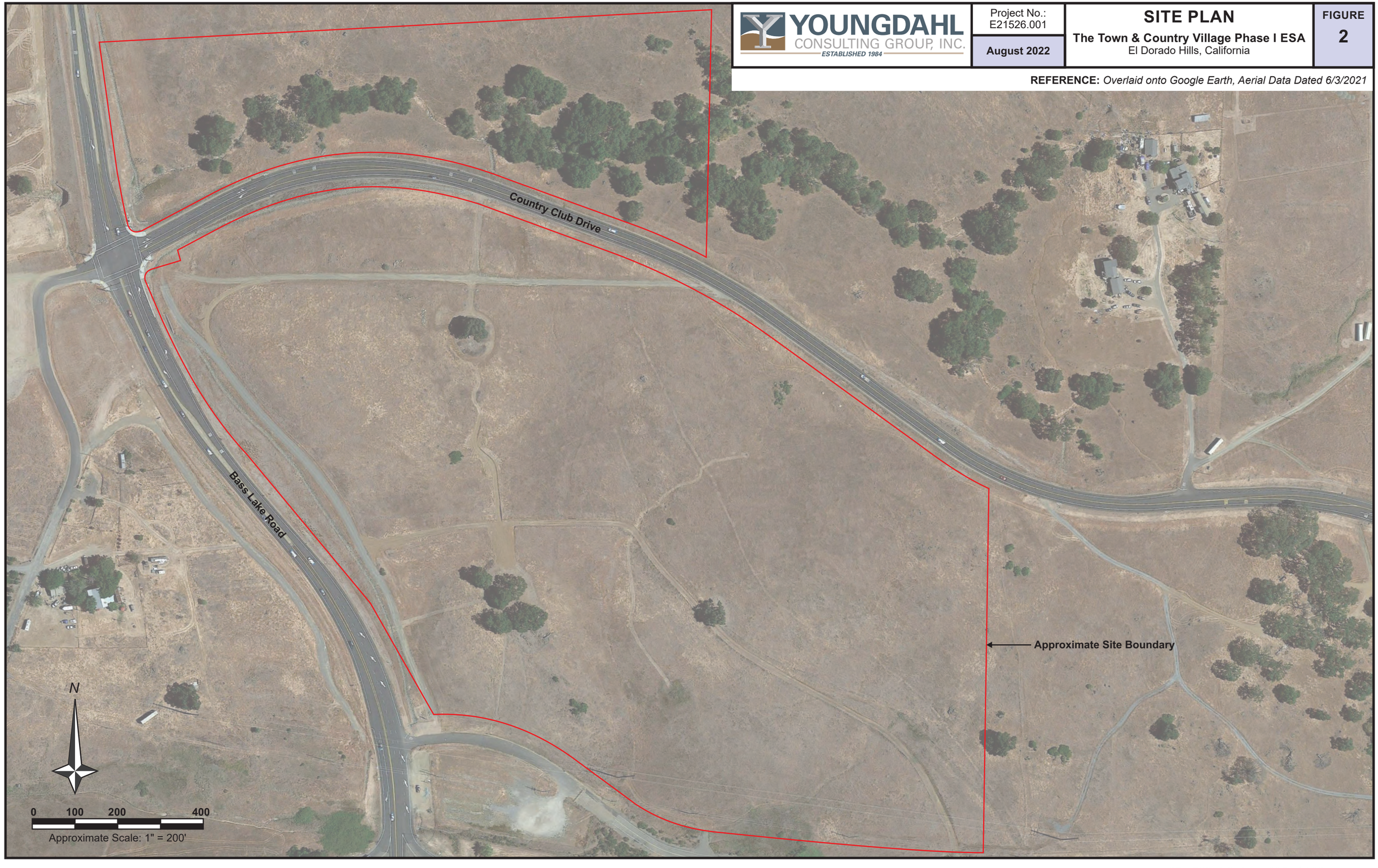




Photo 1: *View of the subject property from the northeast corner.*



Photo 2: *View of the subject property from the northwest corner.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984

Project No.: E21526.001

August 2022

SITE PHOTOGRAPHS

The Town & Country Village Phase I ESA
El Dorado Hills, California

FIGURE 3



Photo 3: *View of the subject property from the southeast corner.*



Photo 4: *View of the subject property from the southwest corner.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001 **August 2022**	**SITE PHOTOGRAPHS** **The Town & Country Village Phase I ESA** El Dorado Hills, California	**FIGURE 4**



Photo 5: *Vacant undeveloped land to the north of the subject property.*



Photo 6: *Frontage Road and Highway 50 to the south of the subject property.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001 August 2022	**SITE PHOTOGRAPHS** **The Town & Country Village Phase I ESA** El Dorado Hills, California	**FIGURE 5**



Photo 7: *Vacant undeveloped land to the east of the subject property.*



Photo 8: *Bass Lake Road and vacant undeveloped land to the west of the subject property.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001	**SITE PHOTOGRAPHS**	**FIGURE**
	August 2022	**The Town & Country Village Phase I ESA** El Dorado Hills, California	**6**



Photo 9: *Soil stockpiles near the center of the subject property.*



Photo 10: *A well located near the center of the subject property.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001 August 2022	**SITE PHOTOGRAPHS** **The Town & Country Village Phase I ESA** El Dorado Hills, California	FIGURE 7



Photo 11: *Garbage piles located on the northern part of the subject property.*



Photo 12: *Country Club Drive crossing through the subject property.*

YOUNGDAHL CONSULTING GROUP, INC. ESTABLISHED 1984	Project No.: E21526.001	**SITE PHOTOGRAPHS**	**FIGURE**
	August 2022	**The Town & Country Village Phase I ESA** El Dorado Hills, California	**8**

APPENDICES

APPENDIX A
Phase I ESA Questionnaire

YOUNGDAHL CONSULTING GROUP, INC.
ESTABLISHED 1984
1234 Glenhaven Court, El Dorado Hills, CA 95762
4300 Anthony Court, Unit D, Rocklin, CA 95677
ph 916.933.0633 fx 916.933.6482
www.youngdahl.net

Project: **Site Name:** **The Town and Country Village Phase I ESA**
Location: **El Dorado Hills, California**
El Dorado County APNs 119-080-012, -021, & -023

The ASTM Standards require that the *user* of the report, or your representative, answer the questions found on the following site assessment questionnaire. Please also have someone who is knowledgeable regarding the use and condition of the property fill out this questionnaire.

Please answer these questions in good faith and to the extent of your actual knowledge. Circle the appropriate answer. For yes answers please provide additional explanation. We would appreciate it if you would FAX the completed questionnaire as soon as possible to Youngdahl Consulting Group, Inc. FAX: 916-933-6482 or email it to Allie Denny at allie.denny@youngdahl.net or David Sederquist at dcs@youngdahl.net

1.	Currently is, or in the past has, the *subject property* or any *adjoining* property been used for an industrial use?	Yes	X No	Unknown
2.	Currently is, or in the past has, the *subject property* or any *adjoining* property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes	X No	Unknown
3.	Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (208 L) in the aggregate, stored on or used at the *subject property*?	Yes	X No	Unknown
4.	Are there currently, or have there been previously, any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the *subject property*?	Yes	X No	Unknown
5.	Has *fill dirt* been brought on to the *subject property* that originated from a contaminated site or that is of an unknown origin?	Yes	X No	Unknown

6.	Are there currently, or have there been previously, any *pits, ponds, or lagoons* located on the *subject property* in connection with waste treatment or waste disposal?	Yes	X No	Unknown
7.	Is there currently, or has there been previously, any stained soil on the *subject property*?	Yes	X No	Unknown
8.	Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *subject property*?	Yes	X No	Unknown
9.	Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *subject property*?	Yes	X No	Unknown
10.	Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting unusual odors?	Yes	X No	Unknown
11.	If the *subject property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?	Yes	X No	Unknown
12.	Are you aware of any floor drains or sumps on the *subject property*?	Yes	X No	Unknown
13.	Have any *hazardous substances* or *petroleum products,* unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *subject property*?	Yes	X No	Unknown
14.	Are there any transformers, capacitors, or hydraulic equipment on the property which may contain PCBs?	Yes	X No	Unknown

15.	Do you have any knowledge of *environmental liens* with respect to the *subject property*?	Yes	X No	Unknown
16.	Do you have any knowledge of *activity and use limitations* with respect to the *subject property*?	Yes	X No	Unknown
17.	Do you have any *specialized knowledge* or experience related to the *subject property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *subject* or *adjoining properties* so that you would have specialized knowledge of the chemicals and processes used by this type of business?	Yes	X No	Unknown
18.	Have you been informed of the past or current existence of environmental violations with respect to the *subject property*?	Yes	X No	Unknown
19.	Do you have any knowledge of any *environmental site assessments* of the *subject property*?	Yes	X No	Unknown
20.	Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *subject property*?	Yes	X No	Unknown
21.	Is the purchase price or appraised value of the property significantly less than comparable properties in the vicinity?	Yes	X No	Unknown

To the best of the undersigned knowledge, the above statements and facts are true and correct and to the best of the undersigned's actual knowledge no material facts have been suppressed or misstated.

This questionnaire was completed by:

Moe Mohamma Moe Moh

NAME (PRINT):	**(SIGNATURE):**
TITLE:	**ADDRESS:** 1025 9th St. #205
FIRM: CAP Founding LLC.	**DATE:** Sacto CA. 95814
PHONE NUMBER:	**FAX NUMBER:**
RELATIONSHIP TO SITE: Owner _____	**or Owner's Representative** _____

APPENDIX B

EDR Aerial Photo Decade Package
EDR Historical Topographic Map Report
EDR–City Directory Abstract
Certified Sanborn Map Report (No Coverage)

The Town and Country Village

Bass Lake Road

El Dorado Hills, CA 95762

Inquiry Number: 7061659.8

July 25, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/25/22

Site Name:

The Town and Country Village
Bass Lake Road
El Dorado Hills, CA 95762
EDR Inquiry # 7061659.8

Client Name:

Youngdahl Consulting Group
1234 Glenhaven Court
El Dorado Hills, CA 95762
Contact: Allie Denny

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1993	1"=500'	Acquisition Date: May 09, 1993	USGS/DOQQ
1984	1"=500'	Flight Date: June 08, 1984	USDA
1973	1"=500'	Flight Date: January 01, 1973	NASA
1962	1"=500'	Flight Date: July 29, 1962	USDA
1952	1"=500'	Flight Date: July 24, 1952	USGS
1940	1"=500'	Flight Date: June 30, 1940	USDA

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INQUIRY #: 7061659.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 1993
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 1984
= 500'
N
EDR

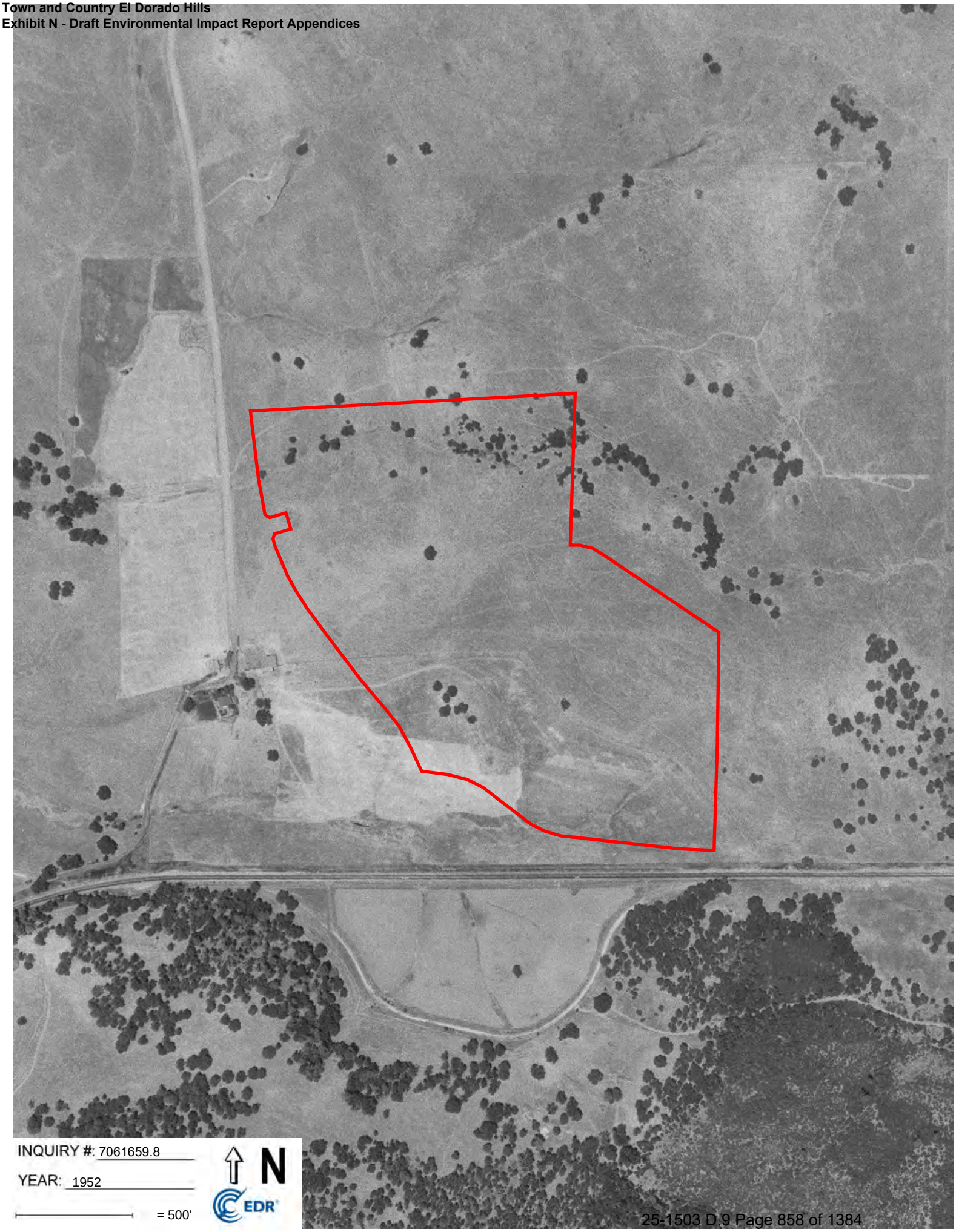

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YEAR: 1973
= 500'
N
EDR

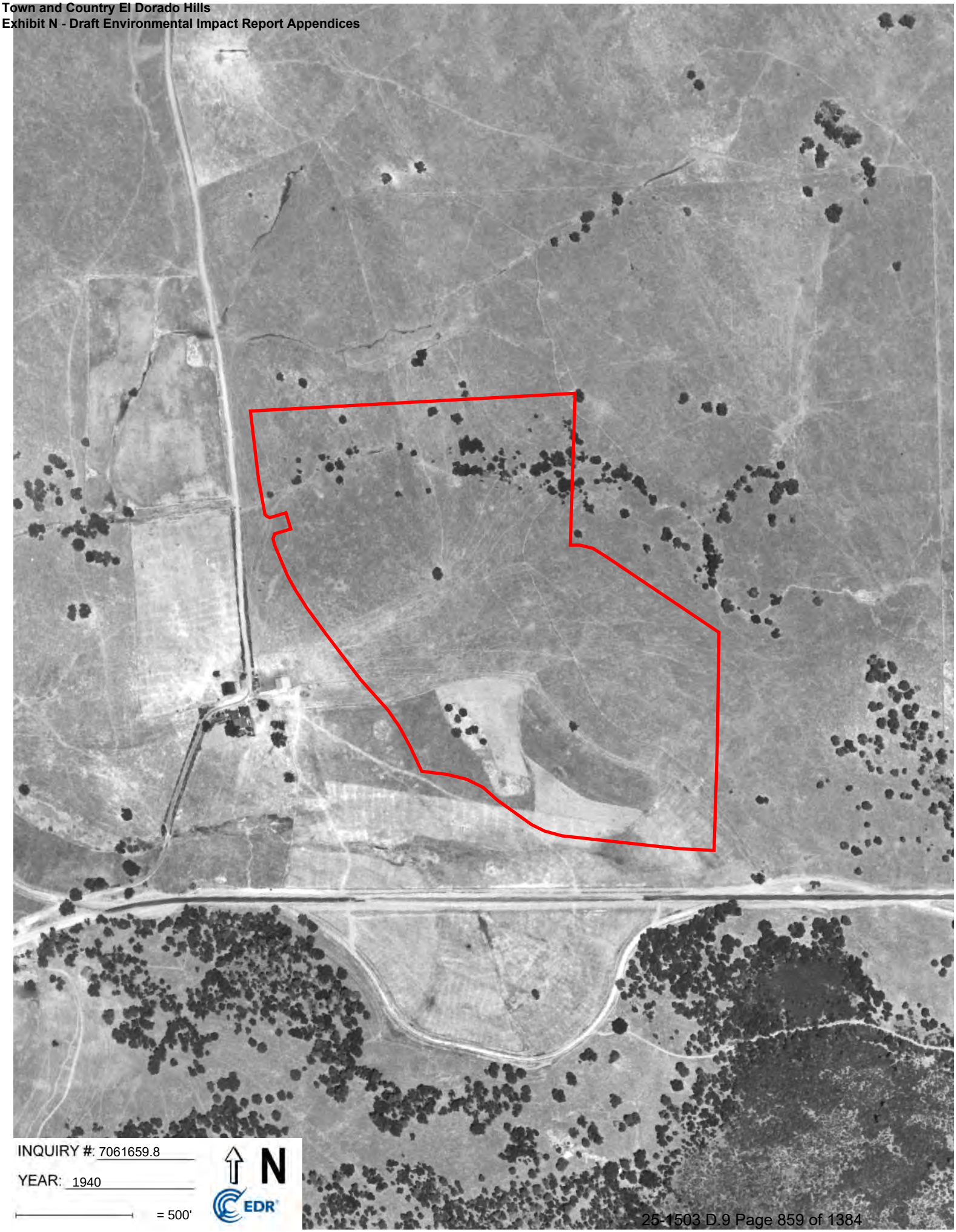


INQUIRY #: 7061659.8
YEAR: 1962
= 500'

N

EDR


INQUIRY #: 7061659.8
YEAR: 1952
= 500'
N
EDR


INQUIRY #: 7061659.8
YEAR: 1940
= 500'
N
EDR

The Town and Country Village

Bass Lake Road

El Dorado Hills, CA 95762

Inquiry Number: 7061659.4

July 21, 2022

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

07/21/22

Site Name:	Client Name:
The Town and Country Village	Youngdahl Consulting Group
Bass Lake Road	1234 Glenhaven Court
El Dorado Hills, CA 95762	El Dorado Hills, CA 95762
EDR Inquiry # 7061659.4	Contact: Allie Denny

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Youngdahl Consulting Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		*Coordinates:*	
P.O.#	NA	**Latitude:**	38.658419 38° 39' 30" North
Project:	E21526.001	**Longitude:**	-121.028387 -121° 1' 42" West
		UTM Zone:	Zone 10 North
		UTM X Meters:	671550.76
		UTM Y Meters:	4280716.30
		Elevation:	1122.30' above sea level

Maps Provided:

2018	1892
2015	1891
2012	
1980	
1973	
1944	
1941	
1893	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2018 Source Sheets



Clarksville
2018
7.5-minute, 24000



Shingle Springs
2018
7.5-minute, 24000

2015 Source Sheets



Clarksville
2015
7.5-minute, 24000



Shingle Springs
2015
7.5-minute, 24000

2012 Source Sheets

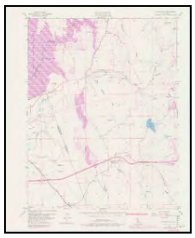


Clarksville
2012
7.5-minute, 24000



Shingle Springs
2012
7.5-minute, 24000

1980 Source Sheets

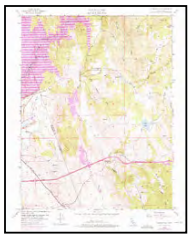


Clarksville
1980
7.5-minute, 24000
Aerial Photo Revised 1978

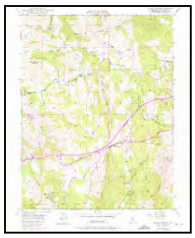
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1973 Source Sheets



Clarksville
1973
7.5-minute, 24000
Aerial Photo Revised 1973



Shingle Springs
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1944 Source Sheets



Folsom
1944
15-minute, 62500

1941 Source Sheets



Folsom
1941
15-minute, 62500

1893 Source Sheets



Placerville
1893
30-minute, 125000



Sacramento
1893
30-minute, 125000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1892 Source Sheets



Sacramento
1892
30-minute, 125000



Placerville
1892
30-minute, 125000

1891 Source Sheets



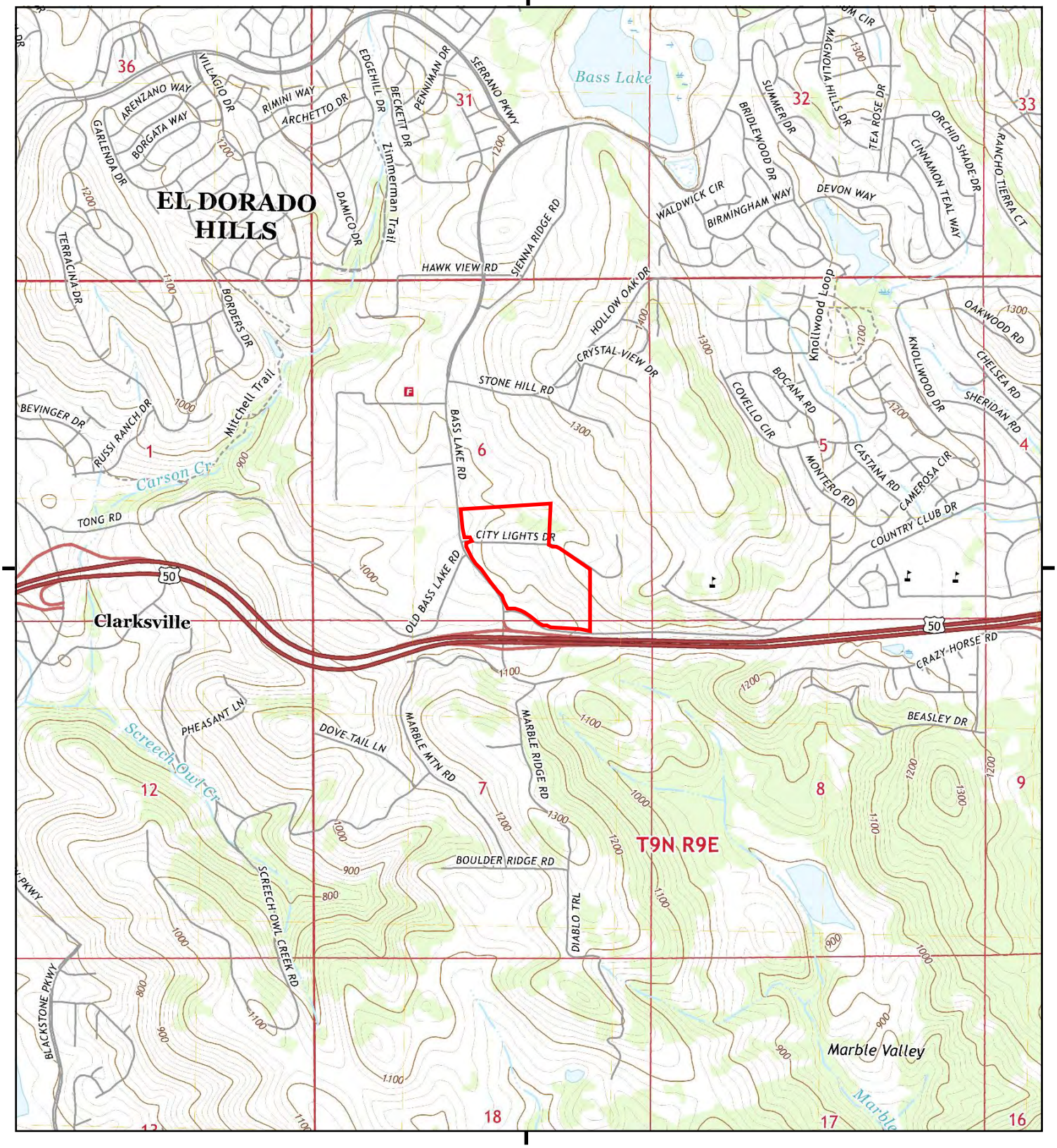
Placerville
1891
30-minute, 125000



Sacramento
1891
30-minute, 125000

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

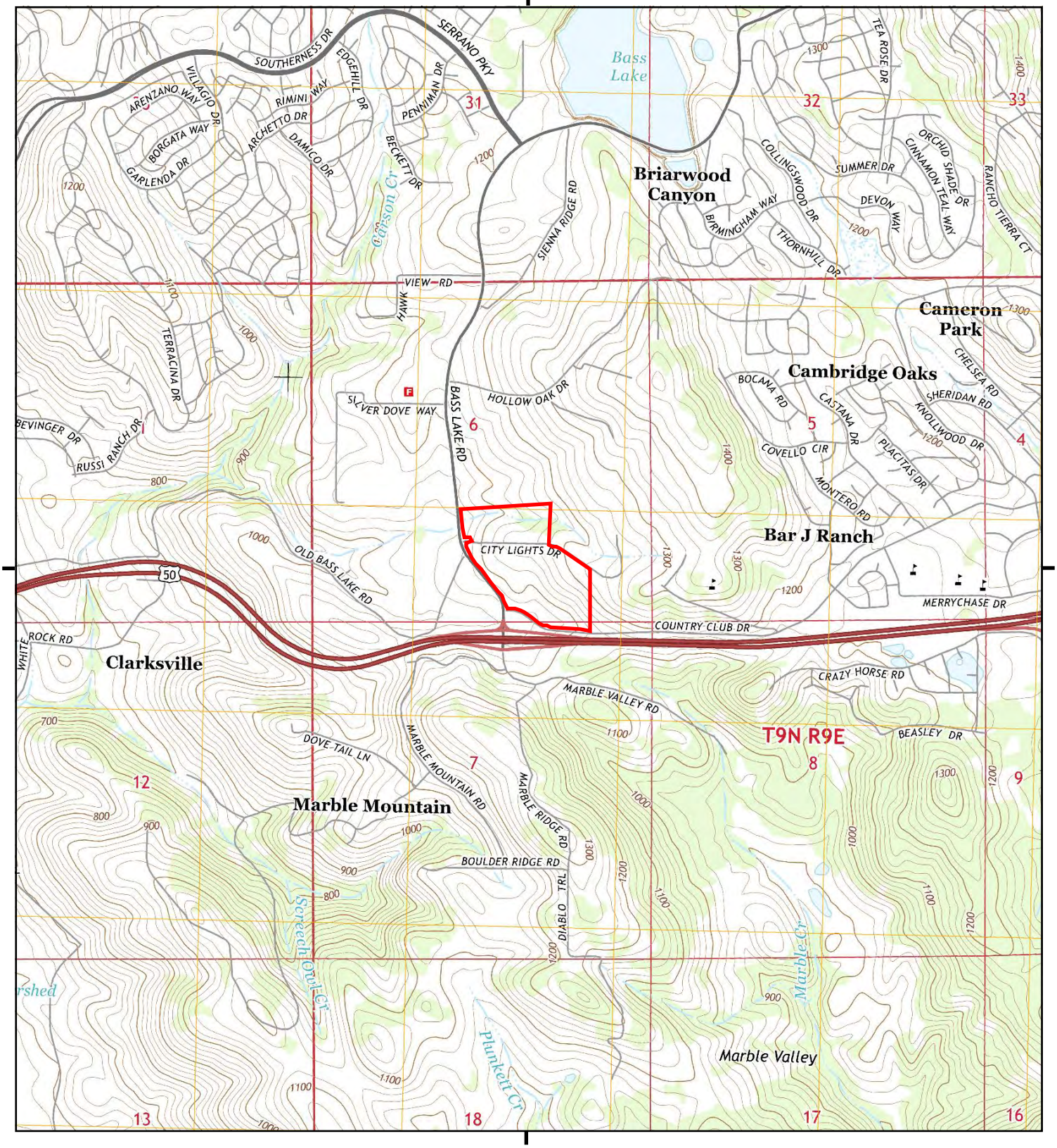
TP, Clarksville, 2018, 7.5-minute
E, Shingle Springs, 2018, 7.5-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

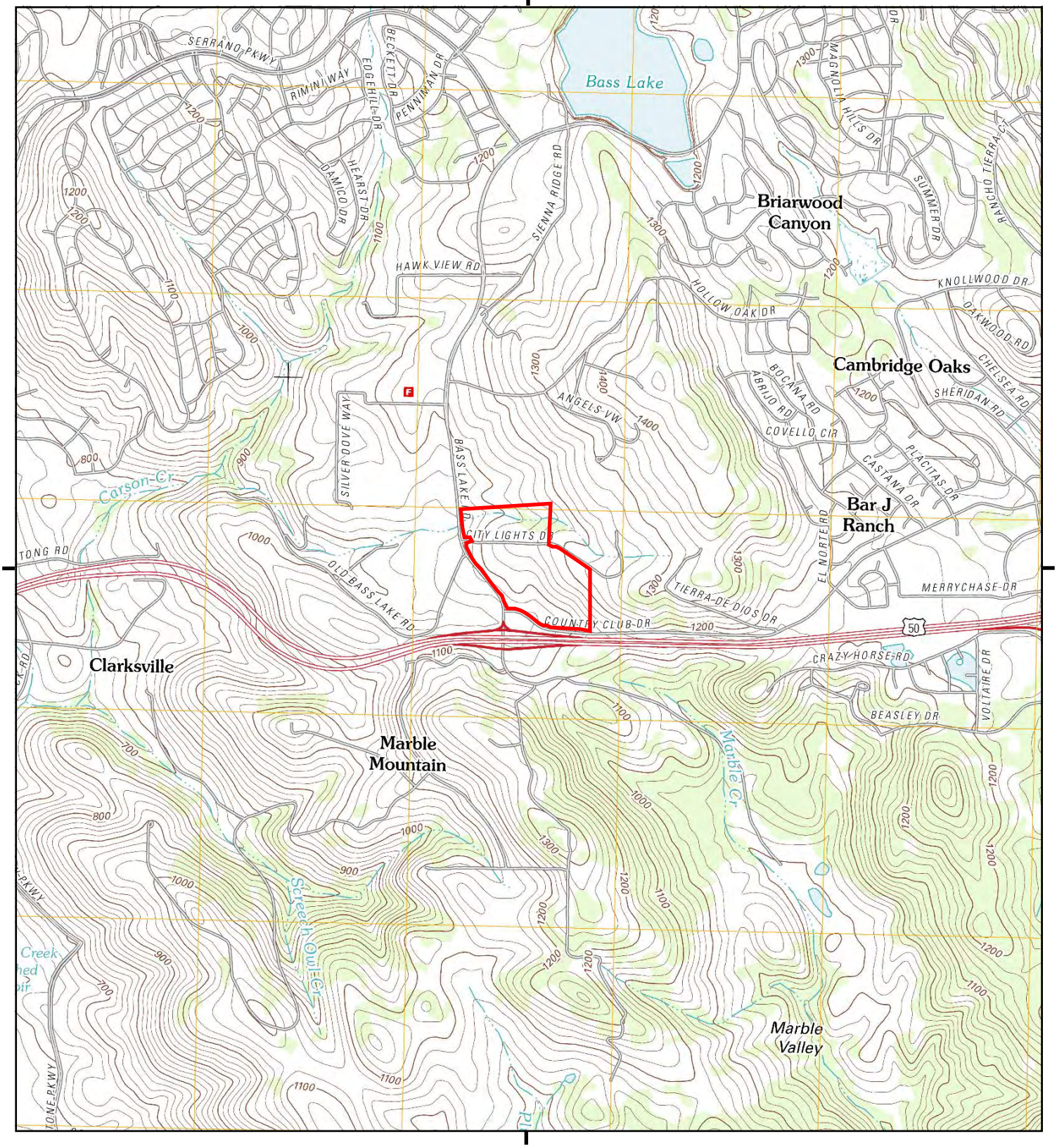
TP, Clarksville, 2015, 7.5-minute
E, Shingle Springs, 2015, 7.5-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

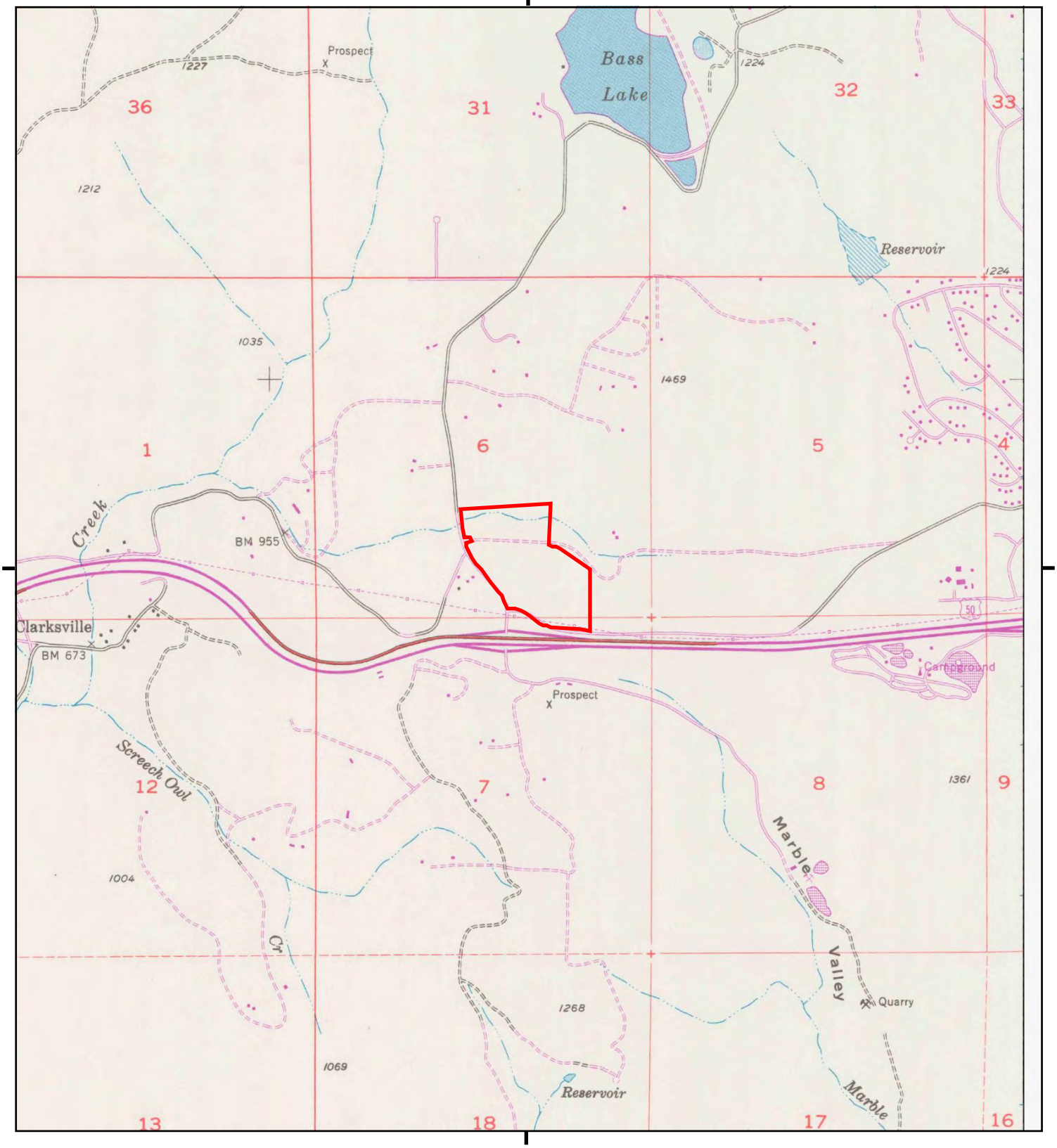
TP, Clarksville, 2012, 7.5-minute
E, Shingle Springs, 2012, 7.5-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1980



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

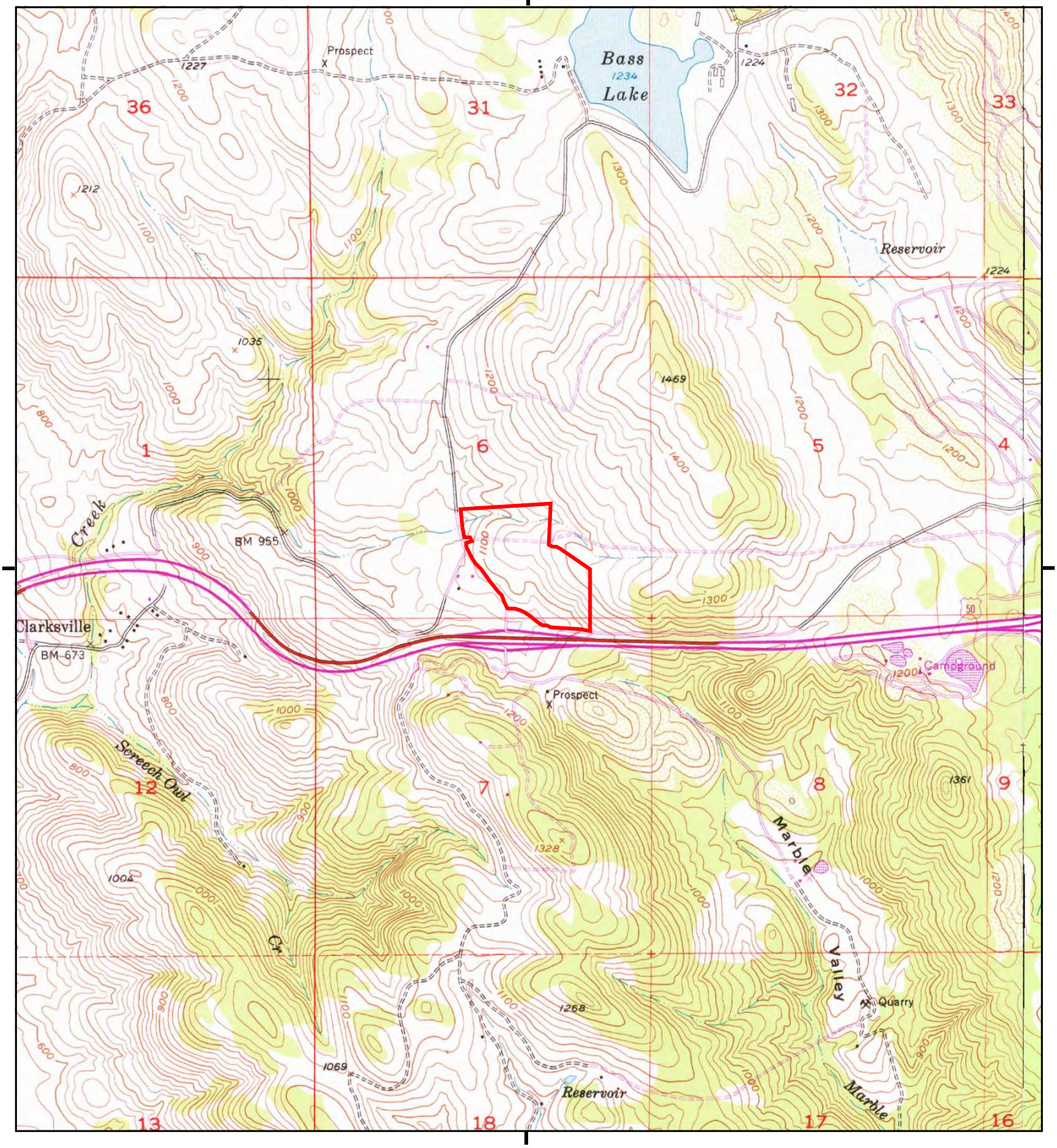
TP, Clarksville, 1980, 7.5-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1973



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

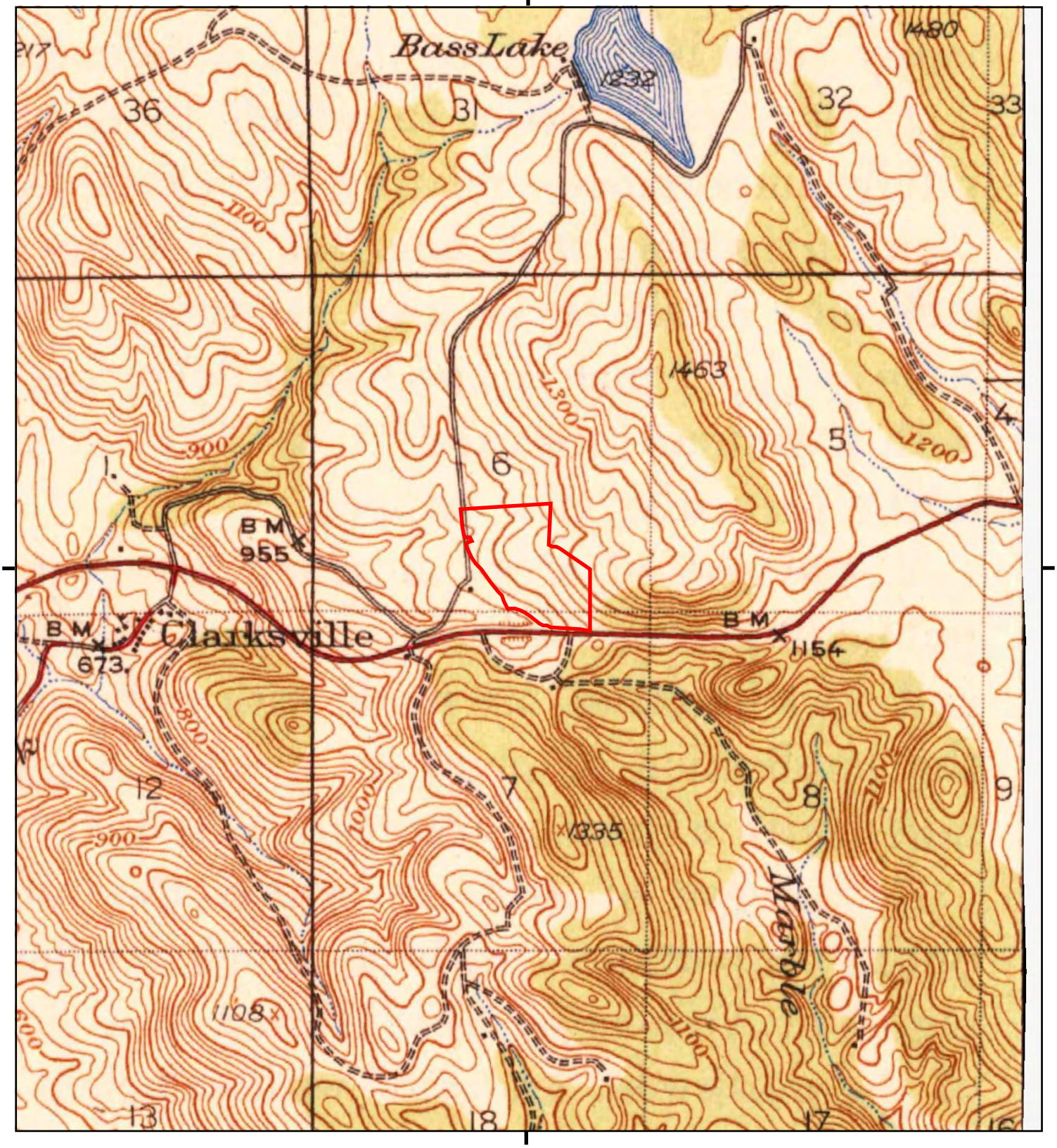
TP, Clarksville, 1973, 7.5-minute
E, Shingle Springs, 1973, 7.5-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1944



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

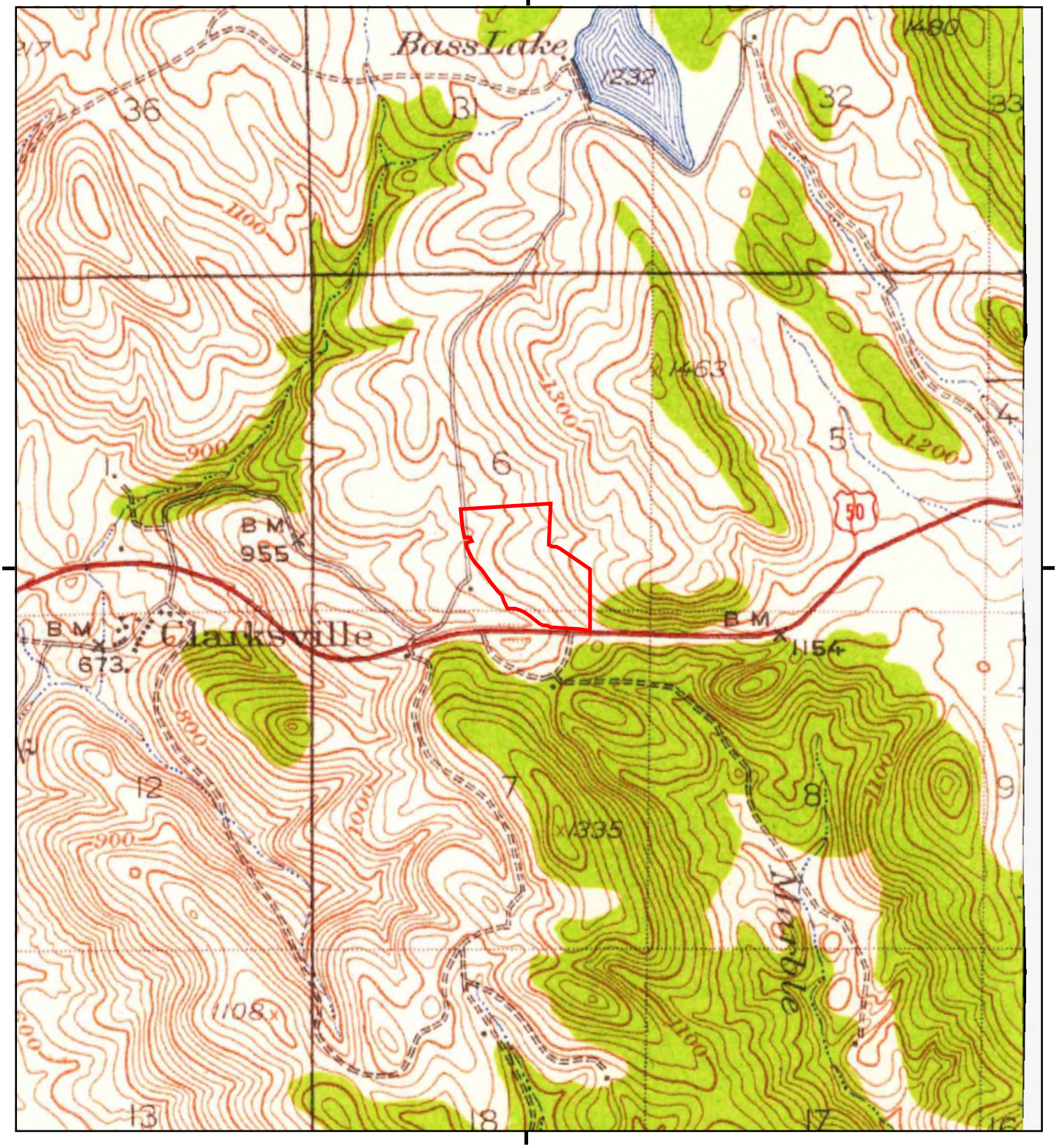
TP, Folsom, 1944, 15-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1941



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

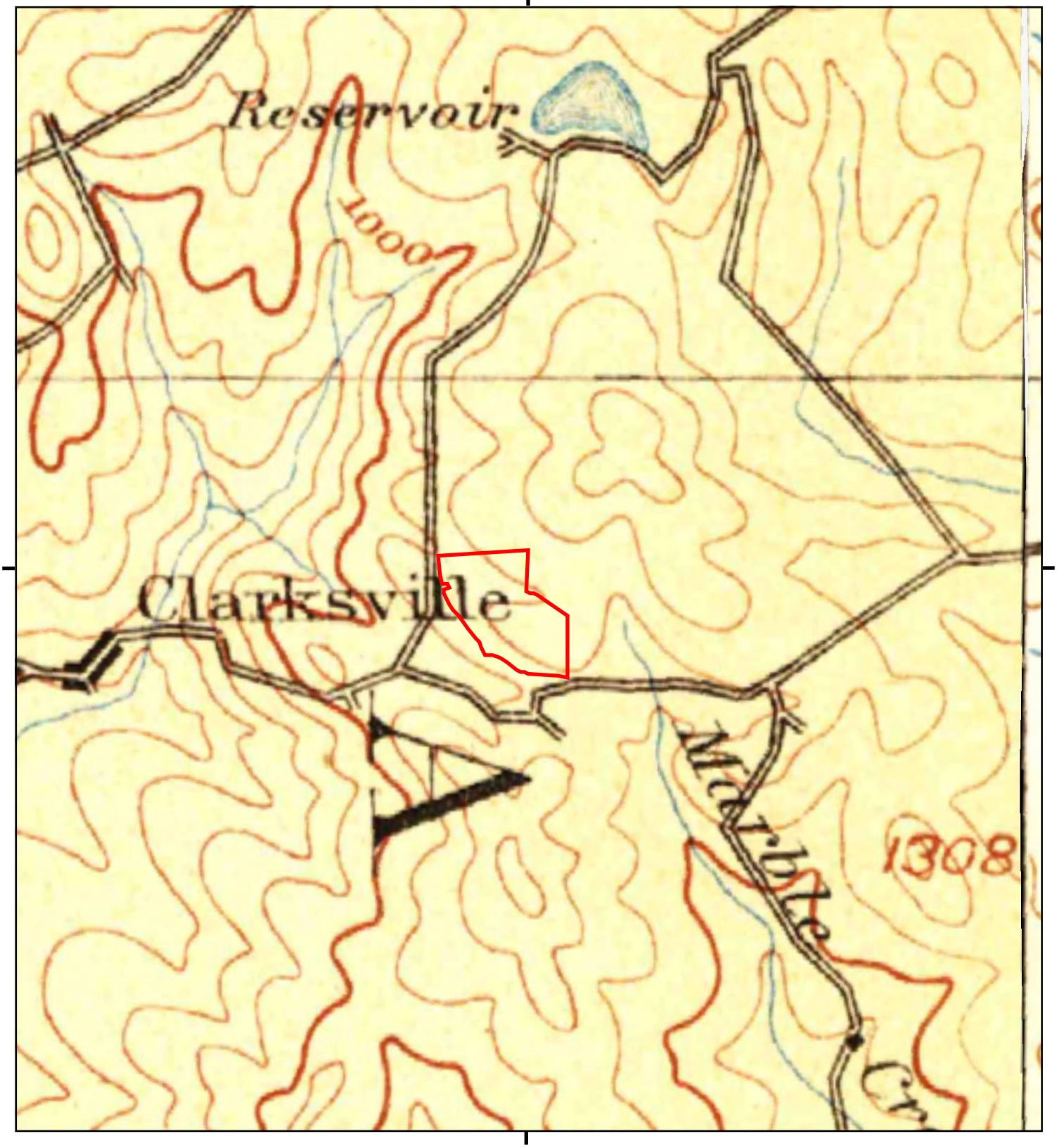
TP, Folsom, 1941, 15-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1893



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

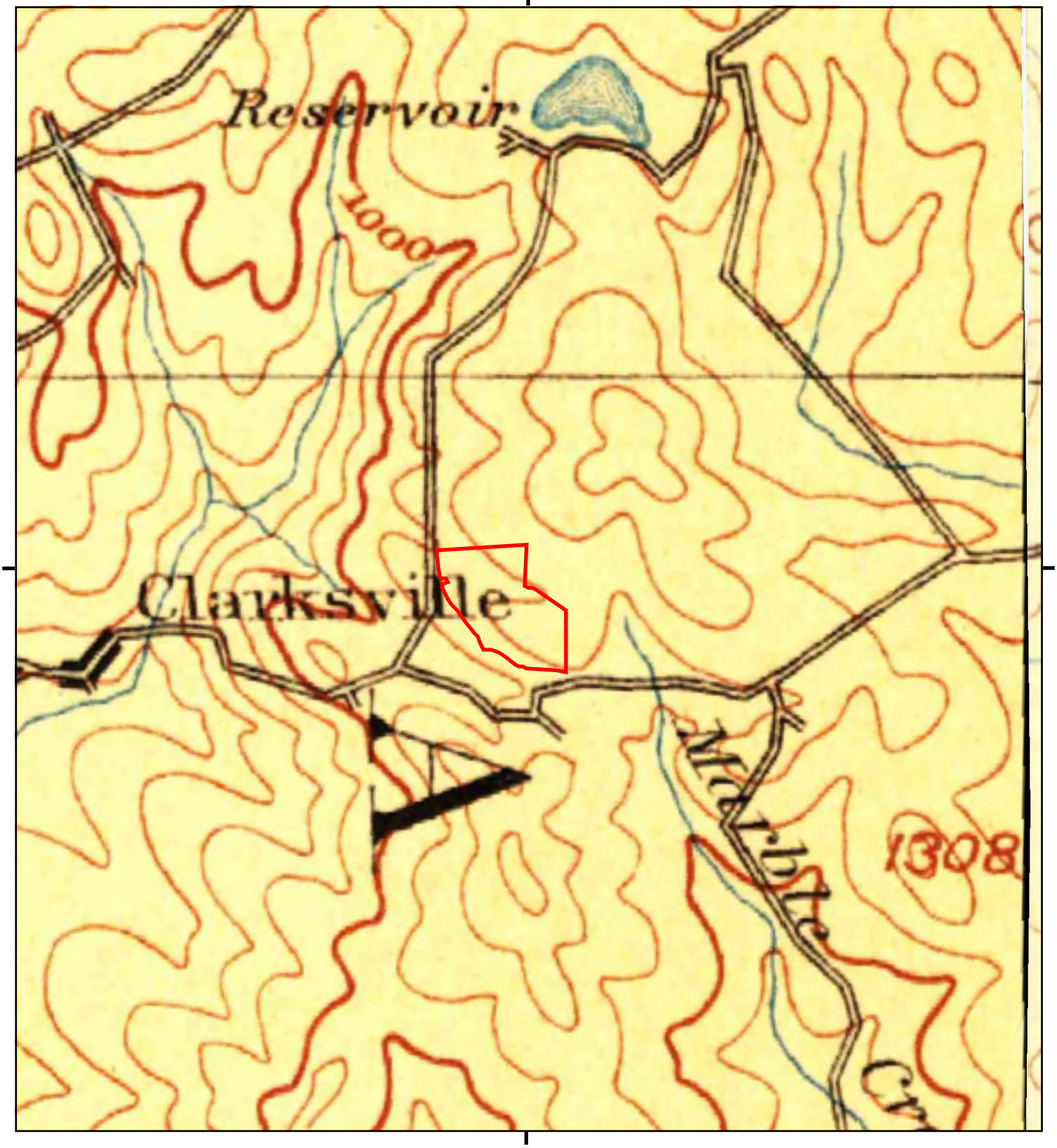
TP, Sacramento, 1893, 30-minute
NE, Placerville, 1893, 30-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1892



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

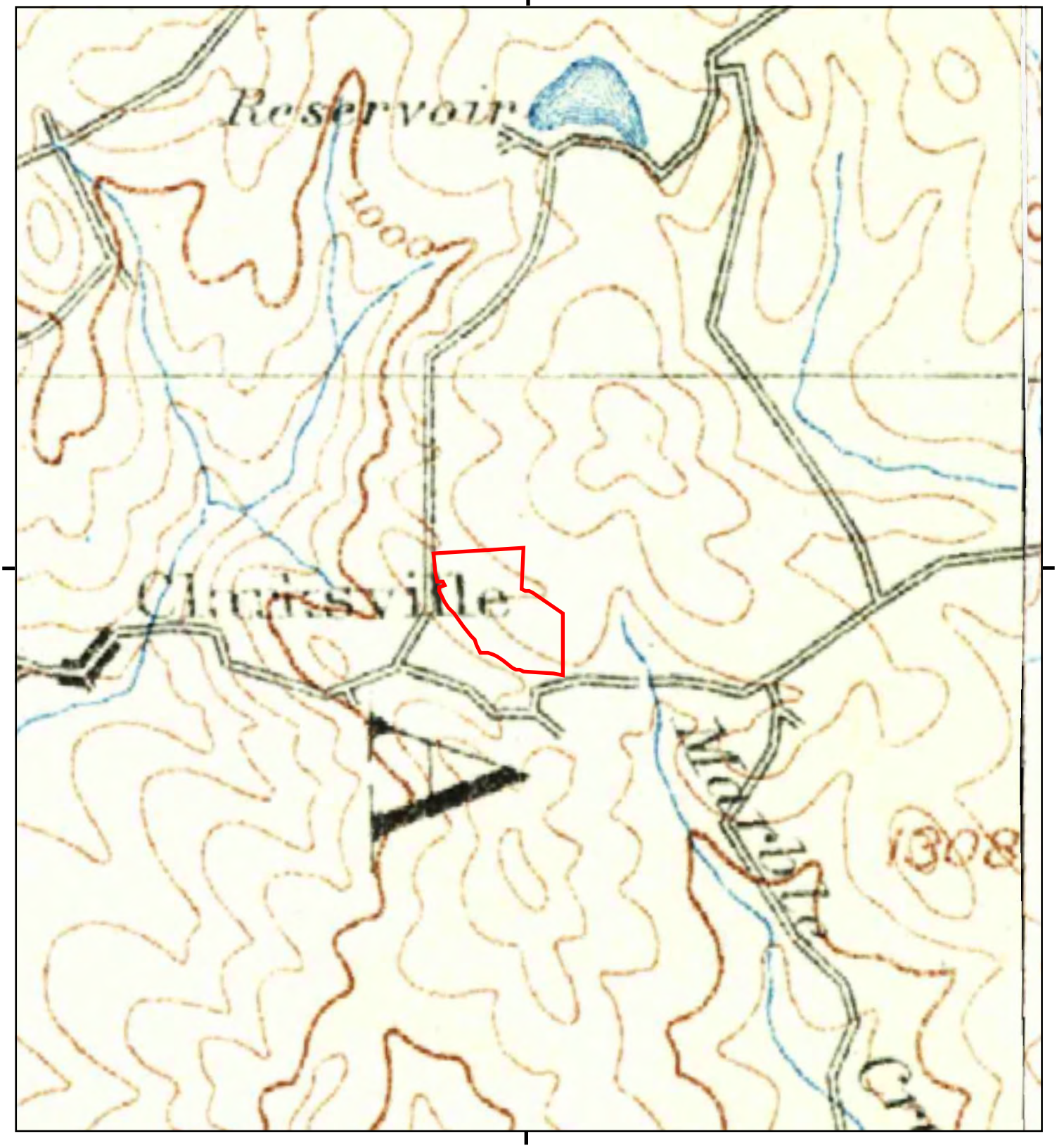
TP, Sacramento, 1892, 30-minute
NE, Placerville, 1892, 30-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

Historical Topo Map

1891



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Sacramento, 1891, 30-minute
NE, Placerville, 1891, 30-minute

SITE NAME: The Town and Country Village
ADDRESS: Bass Lake Road
El Dorado Hills, CA 95762
CLIENT: Youngdahl Consulting Group

N

The Town and Country Village
Bass Lake Road
El Dorado Hills, CA 95762

Inquiry Number: 7061659.5
July 26, 2022

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

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Executive Summary

Findings

City Directory Images

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☐	☐	EDR Digital Archive
1992	☐	☐	EDR Digital Archive
1990	☐	☐	Haines Criss-Cross Directory
1986	☐	☐	Haines Criss-Cross Directory
1981	☐	☐	Haines Criss-Cross Directory
1977	☐	☐	Haines Criss-Cross Directory
1971	☐	☐	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

Bass Lake Road
El Dorado Hills, CA 95762

Year	*CD Image*	*Source*	
BASS LAKE RD			
2017	pg A1	EDR Digital Archive	
2014	pg A2	EDR Digital Archive	
2010	pg A3	EDR Digital Archive	
2005	pg A4	EDR Digital Archive	
2000	pg A5	EDR Digital Archive	
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1990	-	Haines Criss-Cross Directory	Street not listed in Source
1986	-	Haines Criss-Cross Directory	Street not listed in Source
1981	-	Haines Criss-Cross Directory	Street not listed in Source
1977	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
COUNTRY CLUB DR			
2017	-	EDR Digital Archive	Street not listed in Source
2014	-	EDR Digital Archive	Street not listed in Source
2010	-	EDR Digital Archive	Street not listed in Source
2005	-	EDR Digital Archive	Street not listed in Source
2000	-	EDR Digital Archive	Street not listed in Source
1995	-	EDR Digital Archive	Street not listed in Source
1992	-	EDR Digital Archive	Street not listed in Source
1990	-	Haines Criss-Cross Directory	Street not listed in Source
1986	-	Haines Criss-Cross Directory	Street not listed in Source
1981	-	Haines Criss-Cross Directory	Street not listed in Source
1977	-	Haines Criss-Cross Directory	Street not listed in Source
1971	-	Haines Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BASS LAKE RD 2017

3618	JAMES, COLE
3640	MOORE, BETTY J
3651	ROY, DOUG J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BASS LAKE RD 2014

3618	CARDONA, PEDRO C
3620	RODRIGUEZ, DISTR
3640	MOORE, BETTY D
3651	ROY, DOUG J
3750	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BASS LAKE RD 2010

3618	CARDONA, CRIS C
3620	OCCUPANT UNKNOWN,
3640	MOORE, BETTY D
3651	ROY, STEVE M
3691	BEACHELL, SHANE A

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BASS LAKE RD 2005

3351	DENT EXTRACTORS HAND CARWASH
	OCCUPANT UNKNOWN,
3460	GREENWALT, JIM B
	MUSIC & MORE ENTERTAINMENT
3491	OCCUPANT UNKNOWN,
3501	PULLIAM, DANA
3541	MCINTOCH ASSOCS
	MCINTOSH, JIM G
3618	CARDONA, CRIS C
3620	OCCUPANT UNKNOWN,
3640	PRESTRIDGE, RUTH
3651	HAPPY ONE HANDYMAN
	ROY, DOUG J
3691	CRAWFORD, EDIE
3750	GREENWALT, HARRIS G

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BASS LAKE RD 2000

3240	KIEWIT PACIFIC CO
3460	GREENWALT, JIM
3501	MCCUTCHAN, ROBIN L
3541	MCINTOSH, JIM
3561	ROY, DOUGLAS J
3617	LAKE, HENRY H
3618	LAKE, THELMA H
3620	MONTENEGRO, LORENA B
	RODRIGUEZ, EUGENE
3640	BASS LAKE ROAD STABLES
	MOORE, BETTY D
3651	ROY, DOUG

The Town and Country Village

Bass Lake Road

El Dorado Hills, CA 95762

Inquiry Number: 7061659.3

July 21, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/21/22

Site Name:

The Town and Country Village
Bass Lake Road
El Dorado Hills, CA 95762
EDR Inquiry # 7061659.3

Client Name:

Youngdahl Consulting Group
1234 Glenhaven Court
El Dorado Hills, CA 95762
Contact: Allie Denny

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Youngdahl Consulting Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 151C-42F5-94C2

PO # NA

Project E21526.001

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 151C-42F5-94C2

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX C

EDR Radius Map Report with GeoCheck

The Town and Country Village
Bass Lake Road
El Dorado Hills, CA 95762

Inquiry Number: 7061659.2s
July 25, 2022

EDR Summary Radius Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FORM-NULL-PVC

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BASS LAKE ROAD
EL DORADO HILLS, CA 95762

COORDINATES

Latitude (North):	38.6584190 - 38ˆ 39' 30.30''
Longitude (West):	121.0283870 - 121ˆ 1' 42.19''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	671555.1
UTM Y (Meters):	4280509.0
Elevation:	1126 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	U.S. Geological Survey

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140713
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
BASS LAKE ROAD
EL DORADO HILLS, CA 95762

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	BASS LAKES ROAD AND	BASS LAKE	CERS		TP
A2	BASS LAKES ROAD AND	BASS LAKE ROAD	CIWQS		TP
3	SILVER DOVE ELEMENTA	SILVER DOVE WAY/BASS	ENVIROSTOR, SCH	Lower	1649, 0.312, WNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
BASS LAKES ROAD AND BASS LAKE EL DORADO HILLS, CA 95762	CERS	N/A
BASS LAKES ROAD AND BASS LAKE ROAD EL DORADO HILLS, CA 95762	CIWQS	N/A

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.
ENVIROSTOR: A review of the ENVIROSTOR list, as provided by EDR, and dated 04/25/2022 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

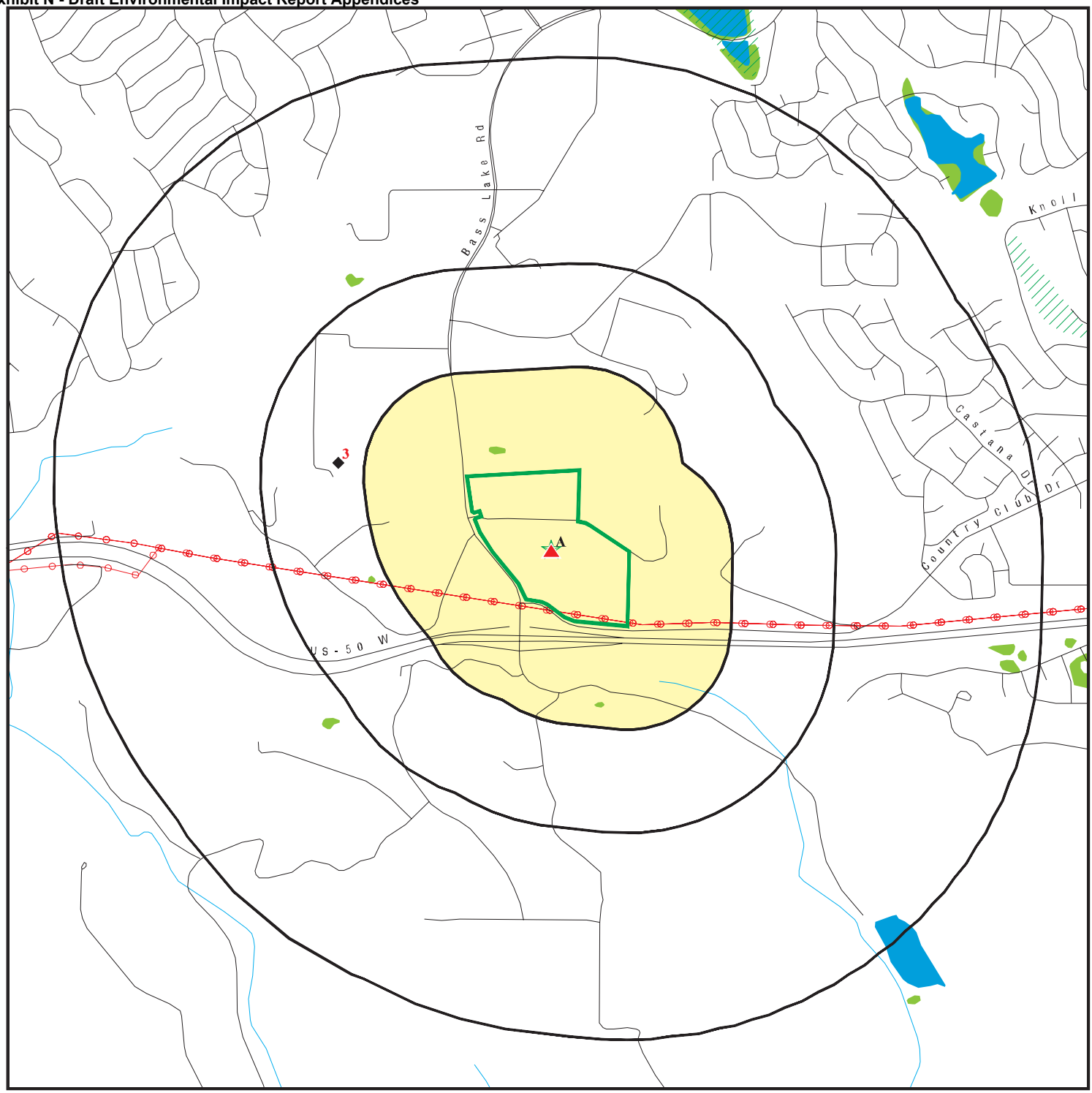
Lower Elevation	Address	Direction / Distance	Map ID	Page
SILVER DOVE ELEMENTA Facility Id: 09000003 Status: No Further Action	***SILVER DOVE WAY/BASS***	***WNW 1/4 - 1/2 (0.312 mi.)***	***3***	***9***

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CAMERON PARK	S116165446	MARBLE VALLEY QUARRY	MARBLE VALLEY ROAD	95682	ENVIROSTOR

OVERVIEW MAP - 7061659.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

0 1/4 1/2 1 Miles

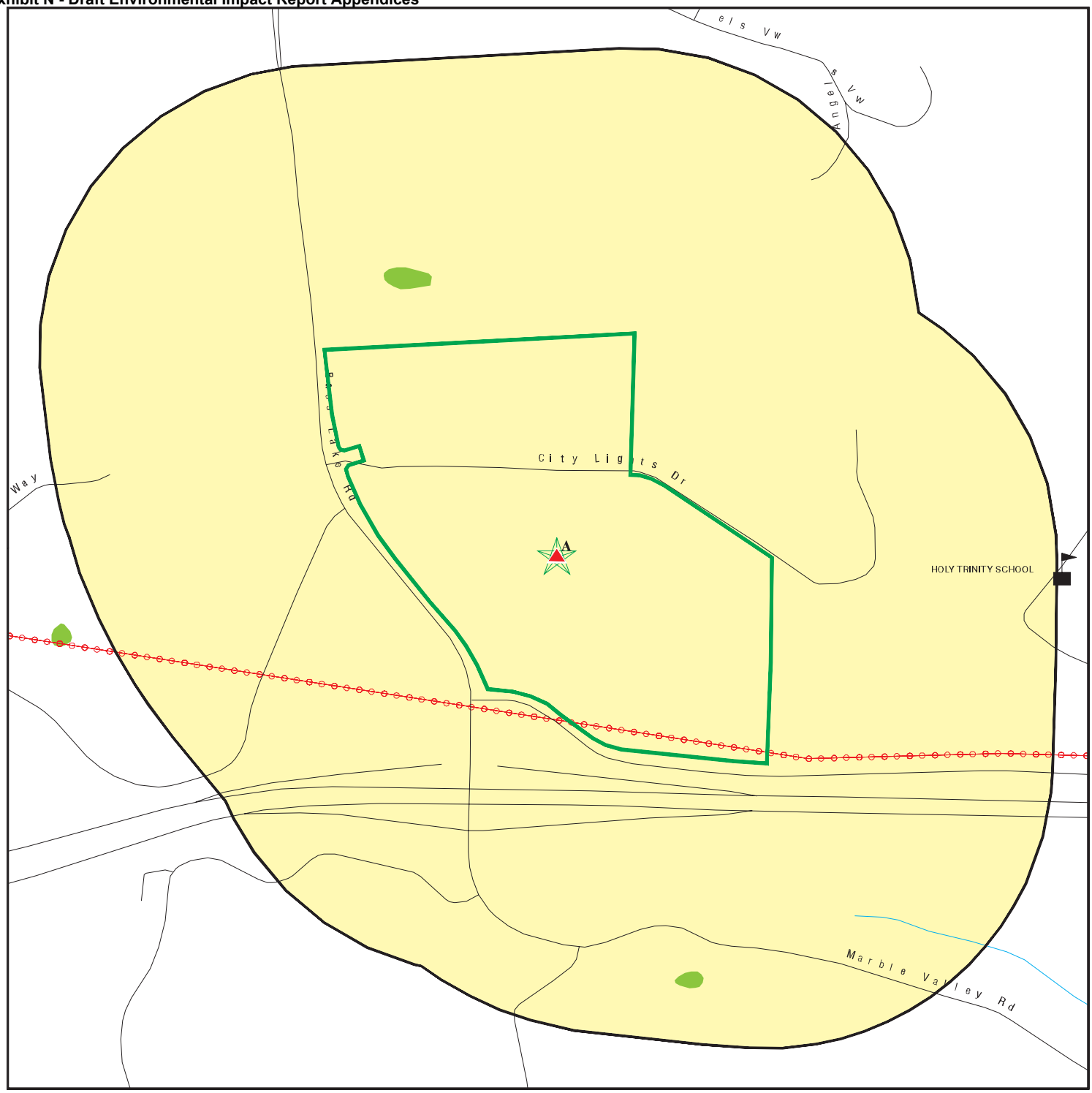
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
		INQUIRY #:	7061659.2s
LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 10:03 am

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DETAIL MAP - 7061659.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
		INQUIRY #:	7061659.2s
LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 10:03 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	1	0	NR	1
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
AQUEOUS FOAM	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001	1	0	NR	NR	NR	NR	1
CERS	0.001	1	0	NR	NR	NR	NR	1
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
MINES MRDS	0.001		0	NR	NR	NR	NR	0
HWTS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		2	0	0	1	0	0	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 **Target** **Property** **Actual:** **1126 ft.**	**BASS LAKES ROAD AND COUNTRY CLUB DRIVE PROJECT** **BASS LAKE** **EL DORADO HILLS, CA 95762** **Click here for full text details**	**CERS**	**S123102535** **N/A**
A2 **Target** **Property** **Actual:** **1126 ft.**	**BASS LAKES ROAD AND COUNTRY CLUB DRIVE PROJECT** **BASS LAKE ROAD** **EL DORADO HILLS, CA 95762** **Click here for full text details**	**CIWQS**	**S123168233** **N/A**
3 **WNW** **1/4-1/2** **0.312 mi.** **1649 ft.** **Relative:** **Lower**	**SILVER DOVE ELEMENTARY** **SILVER DOVE WAY/BASS LAKE ROAD** **EL DORADO HILLS, CA 95762** **Click here for full text details** **ENVIROSTOR** Facility Id 09000003 Status No Further Action **SCH** Facility Id 09000003 Status No Further Action	**ENVIROSTOR** **SCH**	**S116165440** **N/A**

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	AQUEOUS FOAM	Former Fire Training Facility Assessments Listing	State Water Resources Control Board	02/20/2020	12/10/2021	02/25/2022
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
CA	BROWNFIELDS	Considered Brownfieds Sites Listing	State Water Resources Control Board	03/21/2022	03/21/2022	06/14/2022
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2019	01/20/2021	04/08/2021
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	04/18/2022	04/19/2022	07/12/2022
CA	CERS HAZ WASTE	CERS HAZ WASTE	CalEPA	04/18/2022	04/19/2022	07/12/2022
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	04/18/2022	04/19/2022	07/12/2022
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	04/03/2022	04/19/2022	07/12/2022
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	02/28/2022	02/28/2022	05/25/2022
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	03/21/2022	03/21/2022	06/14/2022
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	12/07/2021	05/09/2022	05/17/2022
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	02/28/2022	02/28/2022	05/25/2022
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	02/24/2022	02/25/2022	05/18/2022
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	02/17/2022	02/24/2022	05/18/2022
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	08/27/2021	09/01/2021	11/19/2021
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2019	06/10/2021	08/27/2021
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	04/12/2022	04/19/2022	05/31/2022
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	04/19/2022	04/29/2022	07/15/2022
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/23/2022	02/24/2022	05/18/2022
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	02/15/2022	02/24/2022	05/25/2022
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2019	04/15/2020	07/02/2020
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/14/2022	02/15/2022	05/12/2022
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	04/05/2022	04/05/2022	06/27/2022
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	04/05/2022	04/05/2022	04/26/2022
CA	ICE	ICE	Department of Toxic Subsances Control	02/14/2022	02/15/2022	05/12/2022
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Qualilty Control Board	05/23/2022	05/23/2022	05/24/2022
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	02/24/2022	02/25/2022	03/09/2022
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	MINES	Mines Site Location Listing	Department of Conservation	03/07/2022	03/08/2022	06/01/2022
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	02/17/2022	02/28/2022	05/25/2022
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	03/11/2022	03/15/2022	06/08/2022
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/07/2022	02/08/2022	05/05/2022
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	02/28/2022	02/28/2022	05/25/2022
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	03/07/2022	03/08/2022	06/02/2022
CA	PROC	Certified Processors Database	Department of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	05/05/2022	05/06/2022	07/21/2022
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/07/2022	02/08/2022	05/05/2022
CA	SWRCY	Recycler Database	Department of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	05/23/2022	05/23/2022	06/02/2022
CA	UST	Active UST Facilities	SWRCB	03/07/2022	03/08/2022	06/02/2022
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	03/07/2022	03/08/2022	06/03/2022
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	02/11/2021	07/01/2021	09/29/2021
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	03/07/2022	03/08/2022	06/03/2022
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/10/2022	03/10/2022	06/14/2022
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2019	03/02/2022	03/25/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2020	11/30/2021	02/22/2022
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	03/31/2022	04/14/2022	07/12/2022
US	CORRACTS	Corrective Action Report	EPA	06/20/2022	06/21/2022	06/28/2022
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	Delisted NPL	National Priority List Deletions	EPA	04/27/2022	05/05/2022	05/31/2022
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	04/02/2022	04/05/2022	06/28/2022
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/14/2022	06/15/2022	06/21/2022
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	05/25/2021	06/24/2021	09/20/2021
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FEMA UST	Underground Storage Tank Listing	FEMA	10/14/2021	11/05/2021	02/01/2022
US	FINDS	Facility Index System/Facility Registry System	EPA	05/13/2022	05/18/2022	05/31/2022
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	12/01/2021	02/15/2022	05/10/2022
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/17/2022	02/17/2022	05/10/2022
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/26/2021	07/27/2021	10/22/2021
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/21/2022	03/21/2022	06/14/2022
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/12/2021	11/15/2021	02/08/2022
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/14/2021	11/15/2021	02/08/2022
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/12/2021	11/15/2021	02/08/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/27/2022	05/05/2022	05/31/2022
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/27/2022	05/05/2022	05/31/2022
US	LUCIS	Land Use Control Information System	Department of the Navy	02/08/2022	02/11/2022	05/10/2022
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	03/21/2022	03/22/2022	03/25/2022
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/11/2022	03/15/2022	06/14/2022
US	NPL	National Priority List	EPA	04/27/2022	05/05/2022	05/31/2022
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	01/20/2022	01/20/2022	03/25/2022
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	PCS	Permit Compliance System	EPA, Office of Water	07/14/2011	08/05/2011	09/29/2011
US	PCS ENF	Enforcement data	EPA	12/31/2014	02/05/2015	03/06/2015
US	PCS INACTIVE	Listing of Inactive PCS Permits	EPA	11/05/2014	01/06/2015	05/06/2015
US	PRP	Potentially Responsible Parties	EPA	01/25/2022	02/03/2022	02/25/2022
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/27/2022	05/05/2022	05/31/2022
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RMP	Risk Management Plans	Environmental Protection Agency	04/27/2022	05/04/2022	05/10/2022
US	ROD	Records Of Decision	EPA	04/27/2022	05/05/2022	05/31/2022
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	SEMS	Superfund Enterprise Management System	EPA	04/27/2022	05/05/2022	05/31/2022
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/27/2022	05/05/2022	05/31/2022
US	SSTS	Section 7 Tracking Systems	EPA	01/19/2022	01/19/2022	04/11/2022
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	02/23/2022	03/10/2022	03/10/2022
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/21/2022	02/23/2022	05/24/2022
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/21/2022	03/21/2022	06/14/2022
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/21/2022	02/23/2022	05/24/2022
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/01/2022	02/23/2022	05/24/2022
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2020	01/11/2022	02/14/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	12/03/2021	02/11/2022	05/06/2022
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2018	04/10/2019	05/16/2019
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	01/01/2019	10/29/2021	01/19/2022
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	06/30/2018	07/19/2019	09/10/2019
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2020	11/30/2021	02/18/2022
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	05/31/2018	06/19/2019	09/03/2019
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
CA	Daycare Centers	Sensitive Receptor: Licensed Facilities	Department of Social Services			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
CA	State Wetlands	Wetland Inventory	Department of Fish and Wildlife			
US	Topographic Map		U.S. Geological Survey			
US	Oil/Gas Pipelines		Endeavor Business Media			
US	Electric Power Transmission Line Data		Endeavor Business Media			

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

THE TOWN AND COUNTRY VILLAGE
BASS LAKE ROAD
EL DORADO HILLS, CA 95762

TARGET PROPERTY COORDINATES

Latitude (North):	38.658419 - 38ˆ 39’ 30.31’’
Longitude (West):	121.028387 - 121ˆ 1’ 42.19’’
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	671555.1
UTM Y (Meters):	4280509.0
Elevation:	1126 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	12021729 CLARKSVILLE, CA
Version Date:	2018

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

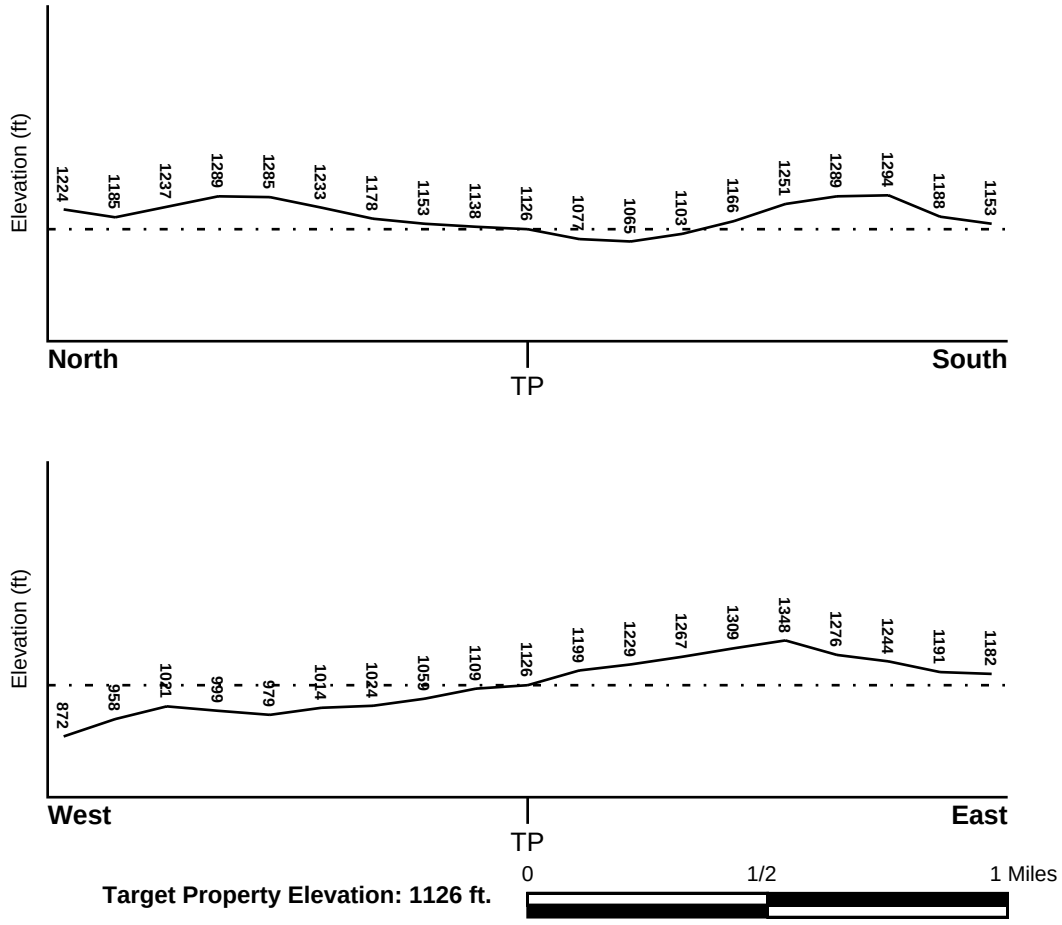
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 1126 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06017C0725E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLARKSVILLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

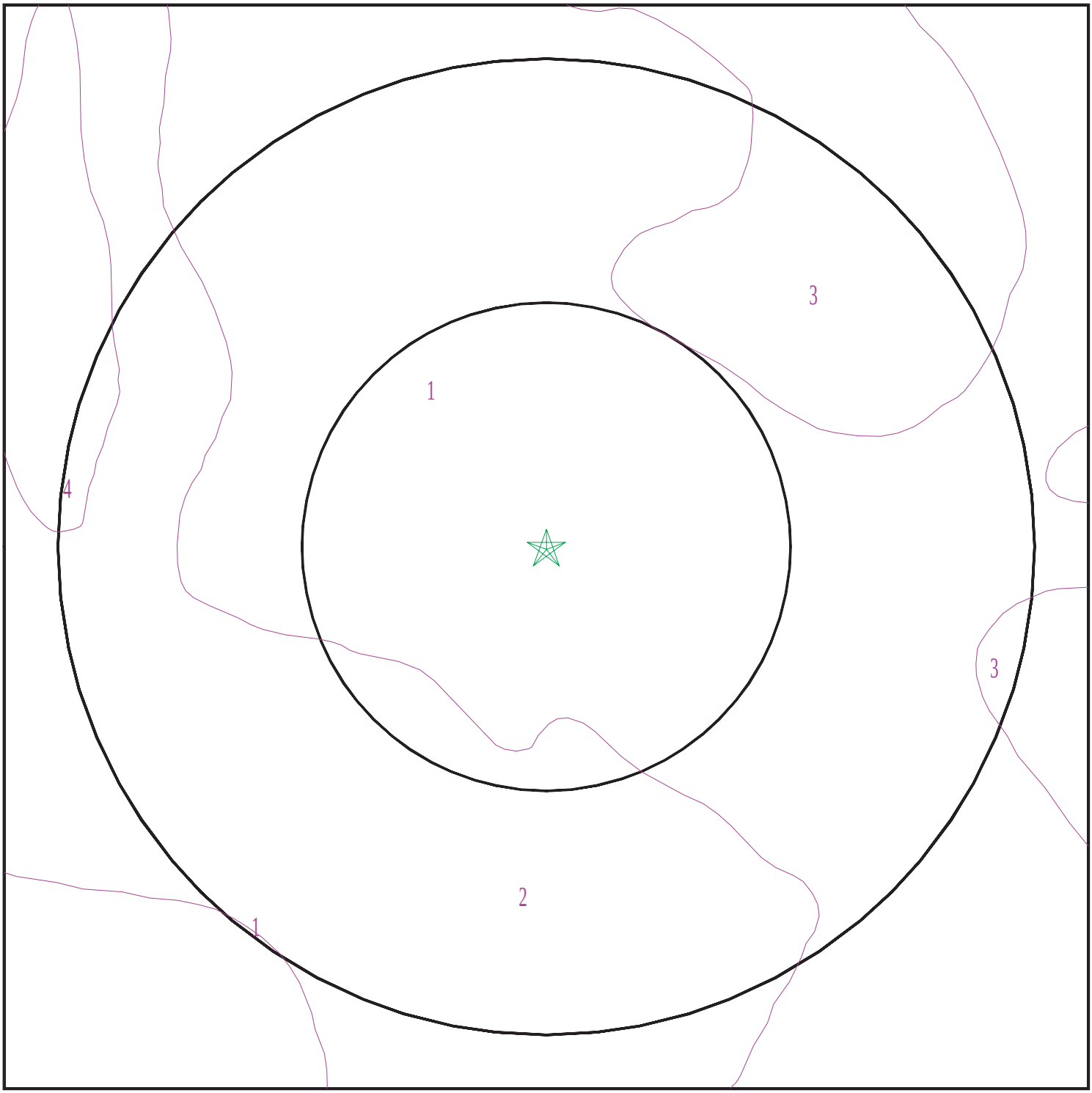
Era:	Mesozoic
System:	Jurassic
Series:	Jurassic
Code:	Jg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Jurassic granitic rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7061659.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

GPA22-0003 / SP-R21-0002 / PD21-0005 / Z21-0013 / TM22-0005 / CUP23-0008
Town and Country El Dorado Hills
Exhibit N - Draft Environmental Impact Report Appendices

SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
		INQUIRY #:	7061659.2s
LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 15:08 PM

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Not reported	Not reported	Max: Min:	Max: Min:
2	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 2

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Not reported	Not reported	Max: Min:	Max: Min:
2	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 3

Soil Component Name: AUBURN

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 48 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Not reported	Not reported	Max: Min:	Max: Min:
2	14 inches	18 inches	unweathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: ARGONAUT

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Not reported	Not reported	Max: Min:	Max: Min:
2	9 inches	29 inches	clay	Not reported	Not reported	Max: Min:	Max: Min:
3	29 inches	33 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

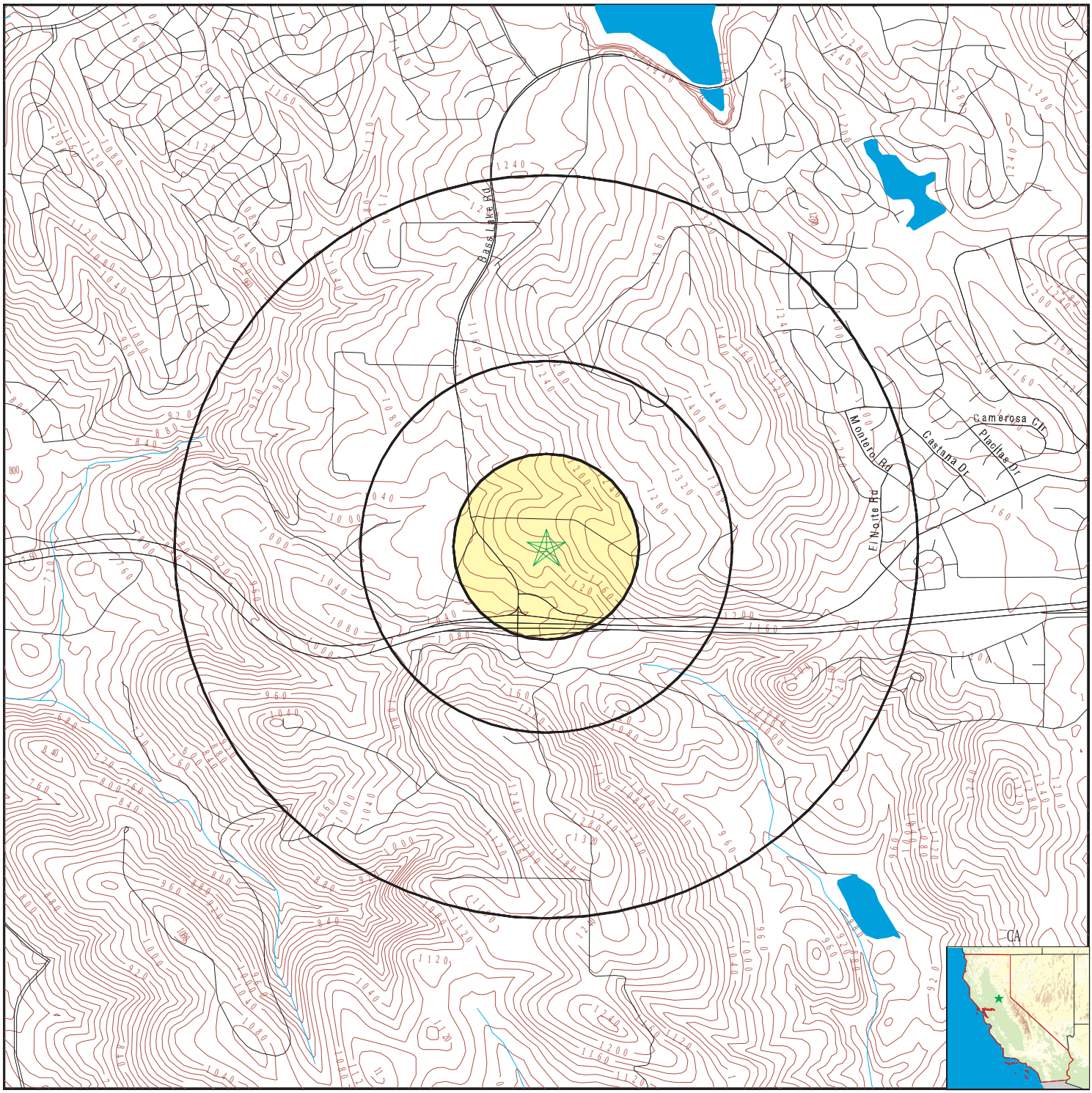
Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No Wells Found

PHYSICAL SETTING SOURCE MAP - 7061659.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

GPA22-0003 / SP-R21-0002 / PD21-0005 / Z21-0013 / TM22-0005 / CUP23-0008
Town and Country El Dorado Hills
Exhibit N - Draft Environmental Impact Report Appendices

SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
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LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 10:03 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95762	31	3

Federal EPA Radon Zone for EL DORADO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for EL DORADO COUNTY, CA

Number of sites tested: 27

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.844 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.400 pCi/L	50%	50%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX D
EDR Vapor Encroachment Screen

The Town and Country Village
Bass Lake Road
El Dorado Hills, CA 95762

Inquiry Number: 7061659.2s
July 25, 2022

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Map Findings	4
Record Sources and Currency	GR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EDR has not taken any action to verify any such modifications, and this report and the findings set forth herein must be read in light of this fact. Environmental Data Resources shall not be responsible for any customer's decision to include or not include in any final report any records determined to be within the relevant minimum search distances.

This report contains information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANYSUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES.ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this report "AS IS". Any analyses, estimates, ratings, or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can produce information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Lists of Federal NPL (Superfund) sites	1.0	0	0	0
Lists of Federal Delisted NPL sites	1.0	0	0	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders	0.5	0	0	0
Lists of Federal CERCLA sites with NFRAP	0.5	0	0	0
Lists of Federal RCRA facilities undergoing Corrective Action	1.0	0	0	0
Lists of Federal RCRA TSD facilities	0.5	0	0	0
Lists of Federal RCRA generators	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	0.001	0	0	-
Lists of state- and tribal (Superfund) equivalent sites	1.0	0	0	0
Lists of state- and tribal hazardous waste facilities	1.0	0	0	0
Lists of state and tribal landfills and solid waste disposal facilities	0.5	0	0	0
Lists of state and tribal leaking storage tanks	0.5	0	0	0
Lists of state and tribal registered storage tanks	0.25	0	0	0
State and tribal institutional control / engineering control registries	not searched	-	-	-
Lists of state and tribal voluntary cleanup sites	0.5	0	0	0
Lists of state and tribal brownfield sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	0	0
Local Lists of Registered Storage Tanks	0.25	0	0	0
Local Land Records	0.5	0	0	0
Records of Emergency Release Reports	0.5	0	0	0
Other Ascertainable Records	1.0	0	0	0

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	0	0
Exclusive Recovered Govt. Archives	0.001	0	0	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

THE TOWN AND COUNTRY VILLAGE
BASS LAKE ROAD
EL DORADO HILLS, CA 95762

COORDINATES

Latitude (North):	38.658419 - 38° 39′ 30.314026″
Longitude (West):	121.028387 - 121° 1′ 42.200317″
Elevation:	1126 ft. above sea level

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records.

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

Not Reported

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

Not Reported

EDR HIGH RISK HISTORICAL RECORDS

Name	Address	Dist/Dir	Map ID	Page

Not Reported

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page

Not Reported

PRIMARY MAP - 7061659.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

0 300 1/3 1/2 Miles

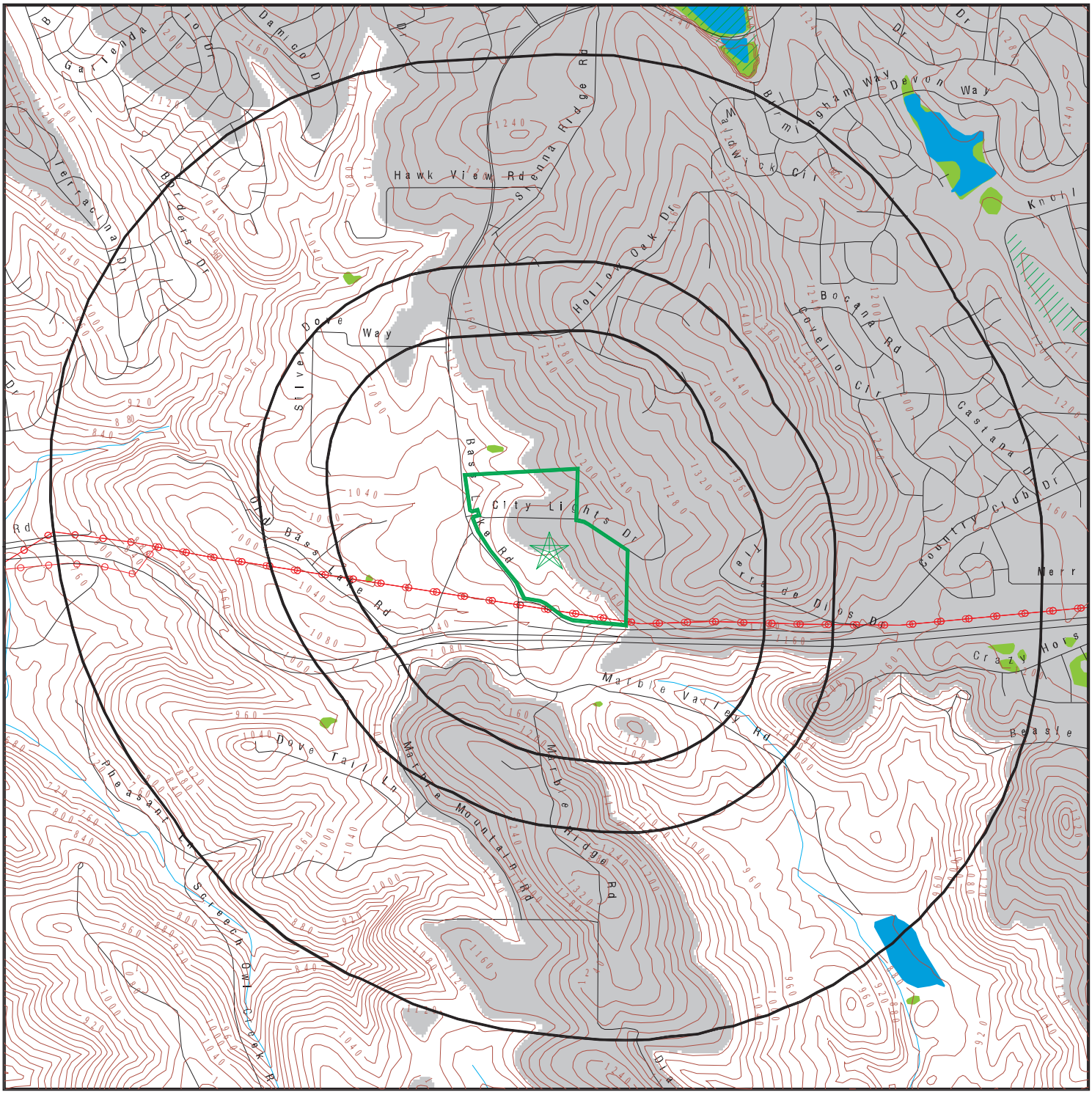
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
		INQUIRY #:	7061659.2s
LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 10:03 am

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SECONDARY MAP - 7061659.2S



0 1/3 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

GPA22-0003 / SP-R21-0002 / PD21-0005 / Z21-0013 / TM22-0005 / CUP23-0008
Town and Country El Dorado Hills
Exhibit N - Draft Environmental Impact Report Appendices

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SITE NAME:	The Town and Country Village	CLIENT:	Youngdahl Consulting Group
ADDRESS:	Bass Lake Road El Dorado Hills CA 95762	CONTACT:	Allie Denny
		INQUIRY #:	7061659.2s
LAT/LONG:	38.658419 / 121.028387	DATE:	July 25, 2022 10:03 am

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MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**		EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	04/27/2022	05/05/2022	05/31/2022
US	Proposed NPL	Proposed National Priority List Sites	EPA	04/27/2022	05/05/2022	05/31/2022
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	04/27/2022	05/05/2022	05/31/2022
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	06/20/2022	06/21/2022	06/28/2022
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	RCRA-VSQG	RCRA - Very Small Quantity Generators (Formerly Conditionall	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	02/08/2022	02/11/2022	05/10/2022
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	02/21/2022	02/23/2022	05/24/2022
US	US INST CONTROLS	Institutional Controls Sites List	Environmental Protection Agency	02/21/2022	02/23/2022	05/24/2022
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	06/14/2022	06/15/2022	06/21/2022
State and tribal - equivalent NPL						
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
State and tribal - equivalent CERCLIS						
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022
State and tribal landfill / solid waste disposal						
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	02/07/2022	02/08/2022	05/05/2022
State and tribal leaking storage tank lists						
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST	Leaking Underground Fuel Tank Report (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/28/2021	06/11/2021	09/07/2021
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	10/12/2021	11/15/2021	02/08/2022
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
CA	CPS-SLIC	Statewide SLIC Cases (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victorv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
State and tribal registered storage tank lists						
CA	UST	Active UST Facilities	SWRCB	03/07/2022	03/08/2022	06/02/2022
CA	MILITARY UST SITES	Military UST Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	UST CLOSURE	Proposed Closure of Underground Storage Tank (UST) Cases	State Water Resources Control Board	03/07/2022	03/08/2022	06/03/2022
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	07/06/2016	07/12/2016	09/19/2016
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/06/2021	06/11/2021	09/07/2021
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	10/14/2021	11/15/2021	02/08/2022
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	10/12/2021	11/15/2021	02/08/2022
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/28/2021	06/22/2021	09/20/2021
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	10/12/2021	11/15/2021	02/08/2022
US	FEMA UST	Underground Storage Tank Listing	FEMA	10/14/2021	11/05/2021	02/01/2022
State and tribal voluntary cleanup sites						
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal Brownfields sites						
CA	BROWNFIELDS	Considered Brownfieds Sites Listing	State Water Resources Control Board	03/21/2022	03/21/2022	06/14/2022
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	03/31/2022	04/14/2022	07/12/2022
US	ROD	Records Of Decision	EPA	04/27/2022	05/05/2022	05/31/2022
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	04/27/2022	05/05/2022	05/31/2022
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
CA	SWRCY	Recycler Database	Department of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	SAN FRANCISCO AST	Aboveground Storage Tank Site Listing	San Francisco County Department of Public Hea	05/05/2022	05/06/2022	07/21/2022
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	03/21/2022	03/21/2022	06/14/2022
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	09/13/2019	11/06/2019	02/10/2020
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	07/26/2021	07/27/2021	10/22/2021
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2020	11/30/2021	02/22/2022
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	04/27/2022	05/05/2022	05/31/2022
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	01/12/2017	03/05/2019	11/11/2019
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	Delisted NPL	National Priority List Deletions	EPA	04/27/2022	05/05/2022	05/31/2022
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	04/27/2022	05/05/2022	05/31/2022
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	06/20/2022	06/21/2022	06/28/2022
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/21/2022	03/21/2022	06/14/2022
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	01/02/2020	01/28/2020	04/17/2020
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	02/22/2022	02/23/2022	05/10/2022
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	02/23/2022	03/10/2022	03/10/2022
US	DOD	Department of Defense Sites	USGS	06/07/2021	07/13/2021	03/09/2022
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	04/02/2018	04/11/2018	11/06/2019
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	12/01/2021	02/15/2022	05/10/2022
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	08/30/2019	11/15/2019	01/28/2020
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	MINES VIOLATIONS	MSHA Violation Assessment Data	DOL, Mine Safety & Health Admi	03/21/2022	03/22/2022	03/25/2022
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	02/01/2022	02/23/2022	05/24/2022
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	05/06/2020	05/27/2020	08/13/2020
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	01/25/2022	02/03/2022	02/25/2022
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2018	08/14/2020	11/04/2020
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/17/2020	09/10/2020

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	01/19/2022	01/19/2022	04/11/2022
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	01/20/2022	01/20/2022	03/25/2022
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	03/11/2022	03/15/2022	06/14/2022
US	RADINFO	Radiation Information Database	Environmental Protection Agency	07/01/2019	07/01/2019	09/23/2019
US	FINDS	Facility Index System/Facility Registry System	EPA	05/13/2022	05/18/2022	05/31/2022
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	04/27/2022	05/04/2022	05/10/2022
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2019	03/02/2022	03/25/2022
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	ABANDONED MINES	Abandoned Mines	Department of Interior	03/10/2022	03/10/2022	06/14/2022
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	12/31/2019	01/20/2021	04/08/2021
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	04/03/2022	04/19/2022	07/12/2022
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	03/21/2022	03/21/2022	06/14/2022
CA	CUPA LIVERMORE-PLEASANTON	CUPA Facility Listing	Livermore-Pleasanton Fire Department	12/07/2021	05/09/2022	05/17/2022
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	02/28/2022	02/28/2022	05/25/2022
CA	DRYCLEAN SOUTH COAST	South Coast Air Quality Management District Drycleaner Listi	South Coast Air Quality Management District	02/17/2022	02/24/2022	05/18/2022
CA	DRYCLEAN AVAQMD	Antelope Valley Air Quality Management District Drycleaner L	Antelope Valley Air Quality Management Distri	02/24/2022	02/25/2022	05/18/2022
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	08/27/2021	09/01/2021	11/19/2021
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2019	06/10/2021	08/27/2021
CA	ENF	Enforcement Action Listing	State Water Resoruces Control Board	04/12/2022	04/19/2022	05/31/2022
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	04/19/2022	04/29/2022	07/15/2022
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	02/23/2022	02/24/2022	05/18/2022
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	02/15/2022	02/24/2022	05/25/2022
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2019	04/15/2020	07/02/2020
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	02/14/2022	02/15/2022	05/12/2022
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	04/05/2022	04/05/2022	06/27/2022
CA	ICE	ICE	Department of Toxic Subsances Control	02/14/2022	02/15/2022	05/12/2022
CA	LDS	Land Disposal Sites Listing (GEOTRACKER)	State Water Qualilty Control Board	05/23/2022	05/23/2022	05/24/2022
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	02/24/2022	02/25/2022	03/09/2022
CA	MCS	Military Cleanup Sites Listing (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	05/24/2022
CA	MINES	Mines Site Location Listing	Department of Conservation	03/07/2022	03/08/2022	06/01/2022
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	02/17/2022	02/28/2022	05/25/2022
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	02/07/2022	02/08/2022	05/05/2022
CA	PEST LIC	Pesticide Regulation Licenses Listing	Department of Pesticide Regulation	02/28/2022	02/28/2022	05/25/2022
CA	PROC	Certified Processors Database	Department of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	03/11/2022	03/15/2022	06/08/2022
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	04/25/2022	04/26/2022	07/15/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	03/07/2022	03/08/2022	06/02/2022
CA	WASTEWATER PITS	Oil Wastewater Pits Listing	RWQCB, Central Valley Region	02/11/2021	07/01/2021	09/29/2021
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
CA	SAMPLING POINT	Sampling Point ? Public Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	UIC GEO	Underground Injection Control Sites (GEOTRACKER)	State Water Resource Control Board	05/23/2022	05/23/2022	06/02/2022
CA	WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	MILITARY PRIV SITES	Military Privatized Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	NON-CASE INFO	Non-Case Information Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	OTHER OIL GAS	Other Oil & Gas Projects Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	PFAS	PFAS Contamination Site Location Listing	State Water Resources Control Board	03/07/2022	03/08/2022	06/02/2022
CA	AQUEOUS FOAM	Former Fire Training Facility Assessments Listing	State Water Resources Control Board	02/20/2020	12/10/2021	02/25/2022
CA	CIWQS	California Integrated Water Quality System	State Water Resources Control Board	02/28/2022	02/28/2022	05/25/2022
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/06/2021	05/21/2021	08/11/2021
CA	CERS	CalEPA Regulated Site Portal Data	California Environmental Protection Agency	04/18/2022	04/19/2022	07/12/2022
CA	CERS TANKS	California Environmental Reporting System (CERS) Tanks	California Environmental Protection Agency	04/18/2022	04/19/2022	07/12/2022
CA	PROJECT	Project Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
CA	PROD WATER PONDS	Produced Water Ponds Sites (GEOTRACKER)	State Water Resources Control Board	05/23/2022	05/23/2022	06/02/2022
US	MINES MRDS	Mineral Resources Data System	USGS	04/06/2018	10/21/2019	10/24/2019
US	UXO	Unexploded Ordnance Sites	Department of Defense	12/31/2020	01/11/2022	02/14/2022
CA	WDR	Waste Discharge Requirements Listing	State Water Resources Control Board	03/07/2022	03/08/2022	06/03/2022
CA	HWTS	Hazardous Waste Tracking System	Department of Toxic Substances Control	04/05/2022	04/05/2022	04/26/2022
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	05/25/2021	06/24/2021	09/20/2021
CA	CERS HAZ WASTE	CERS HAZ WASTE	CalEPA	04/18/2022	04/19/2022	07/12/2022
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	02/17/2022	02/17/2022	05/10/2022
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	04/02/2022	04/05/2022	06/28/2022
HISTORICAL USE RECORDS						
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
CA	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGA LUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
COUNTY RECORDS						
CA	CS ALAMEDA	Contaminated Sites	Alameda County Environmental Health Services	01/09/2019	01/11/2019	03/05/2019
CA	UST ALAMEDA	Underground Tanks	Alameda County Environmental Health Services	06/29/2022	06/29/2022	07/21/2022
CA	CUPA AMADOR	CUPA Facility List	Amador County Environmental Health	02/04/2022	02/04/2022	05/02/2022
CA	CUPA BUTTE	CUPA Facility Listing	Public Health Department	04/21/2017	04/25/2017	08/09/2017
CA	CUPA CALVERAS	CUPA Facility Listing	Calveras County Environmental Health	03/17/2022	03/18/2022	06/08/2022
CA	CUPA COLUSA	CUPA Facility List	Health & Human Services	04/06/2020	04/23/2020	07/10/2020
CA	SL CONTRA COSTA	Site List	Contra Costa Health Services Department	04/21/2022	04/22/2022	07/12/2022
CA	CUPA DEL NORTE	CUPA Facility List	Del Norte County Environmental Health Divisio	01/10/2022	01/26/2022	04/14/2022
CA	CUPA EL DORADO	CUPA Facility List	El Dorado County Environmental Management Dep	02/16/2022	02/17/2022	05/10/2022
CA	CUPA FRESNO	CUPA Resources List	Dept. of Community Health	06/28/2021	12/21/2021	03/03/2022
CA	CUPA GLENN	CUPA Facility List	Glenn County Air Pollution Control District	01/22/2018	01/24/2018	03/14/2018
CA	CUPA HUMBOLDT	CUPA Facility List	Humboldt County Environmental Health	08/12/2021	08/12/2021	11/08/2021
CA	CUPA IMPERIAL	CUPA Facility List	San Diego Border Field Office	04/18/2022	04/19/2022	07/12/2022
CA	CUPA INYO	CUPA Facility List	Inyo County Environmental Health Services	04/02/2018	04/03/2018	06/14/2018
CA	CUPA KERN	CUPA Facility List	Kern County Public Health	02/10/2022	02/11/2022	05/04/2022
CA	UST KERN	Underground Storage Tank Sites & Tank Listing	Kern County Environment Health Services Depar	02/10/2022	02/11/2022	05/04/2022
CA	CUPA KINGS	CUPA Facility List	Kings County Department of Public Health	12/03/2020	01/26/2021	04/14/2021
CA	CUPA LAKE	CUPA Facility List	Lake County Environmental Health	02/10/2022	02/11/2022	05/04/2022
CA	CUPA LASSEN	CUPA Facility List	Lassen County Environmental Health	07/31/2020	08/21/2020	11/09/2020
CA	AOCONCERN	Key Areas of Concerns in Los Angeles County		03/30/2009	03/31/2009	10/23/2009
CA	HMS LOS ANGELES	HMS: Street Number List	Department of Public Works	04/04/2022	04/05/2022	04/13/2022
CA	LF LOS ANGELES	List of Solid Waste Facilities	La County Department of Public Works	04/11/2022	04/12/2022	07/05/2022
CA	LF LOS ANGELES CITY	City of Los Angeles Landfills	Engineering & Construction Division	01/01/2022	01/21/2022	04/11/2022
CA	LOS ANGELES AST	Active & Inactive AST Inventory	Los Angeles Fire Department	06/01/2019	06/25/2019	08/22/2019
CA	LOS ANGELES CO LF METHANE	Methane Producing Landfills	Los Angeles County Department of Public Works	01/10/2022	01/12/2022	04/04/2022
CA	LOS ANGELES HM	Active & Inactive Hazardous Materials Inventory	Los Angeles Fire Department	01/13/2022	03/21/2022	06/15/2022
CA	LOS ANGELES UST	Active & Inactive UST Inventory	Los Angeles Fire Department	01/13/2022	03/21/2022	06/15/2022
CA	SITE MIT LOS ANGELES	Site Mitigation List	Community Health Services	05/26/2021	07/09/2021	09/29/2021
CA	UST EL SEGUNDO	City of El Segundo Underground Storage Tank	City of El Segundo Fire Department	01/21/2017	04/19/2017	05/10/2017
CA	UST LONG BEACH	City of Long Beach Underground Storage Tank	City of Long Beach Fire Department	04/22/2019	04/23/2019	06/27/2019
CA	UST TORRANCE	City of Torrance Underground Storage Tank	City of Torrance Fire Department	04/20/2022	04/21/2022	07/12/2022
CA	CUPA MADERA	CUPA Facility List	Madera County Environmental Health	08/10/2020	08/12/2020	10/23/2020
CA	UST MARIN	Underground Storage Tank Sites	Public Works Department Waste Management	09/26/2018	10/04/2018	11/02/2018
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	09/22/2021	11/18/2021	11/22/2021
CA	CUPA MERCED	CUPA Facility List	Merced County Environmental Health	02/15/2022	02/17/2022	05/11/2022
CA	CUPA MONO	CUPA Facility List	Mono County Health Department	02/22/2021	03/02/2021	05/19/2021
CA	CUPA MONTEREY	CUPA Facility Listing	Monterey County Health Department	10/04/2021	10/06/2021	12/29/2021
CA	LUST NAPA	Sites With Reported Contamination	Napa County Department of Environmental Manag	01/09/2017	01/11/2017	03/02/2017
CA	UST NAPA	Closed and Operating Underground Storage Tank Sites	Napa County Department of Environmental Manag	09/05/2019	09/09/2019	10/31/2019
CA	CUPA NEVADA	CUPA Facility List	Community Development Agency	01/25/2022	01/26/2022	04/14/2022
CA	IND_SITE ORANGE	List of Industrial Site Cleanups	Health Care Agency	01/14/2022	02/03/2022	04/14/2022
CA	LUST ORANGE	List of Underground Storage Tank Cleanups	Health Care Agency	01/14/2022	02/04/2022	05/02/2022
CA	UST ORANGE	List of Underground Storage Tank Facilities	Health Care Agency	04/08/2022	05/03/2022	07/20/2022
CA	MS PLACER	Master List of Facilities	Placer County Health and Human Services	05/25/2022	05/26/2022	06/01/2022
CA	CUPA PLUMAS	CUPA Facility List	Plumas County Environmental Health	03/31/2019	04/23/2019	06/26/2019

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	LUST RIVERSIDE	Listing of Underground Tank Cleanup Sites	Department of Environmental Health	03/31/2022	03/31/2022	04/08/2022
CA	UST RIVERSIDE	Underground Storage Tank Tank List	Department of Environmental Health	03/31/2022	03/31/2022	04/08/2022
CA	CS SACRAMENTO	Toxic Site Clean-Up List	Sacramento County Environmental Management	06/18/2021	09/28/2021	12/14/2021
CA	ML SACRAMENTO	Master Hazardous Materials Facility List	Sacramento County Environmental Management	05/04/2022	06/30/2022	07/05/2022
CA	CUPA SAN BENITO	CUPA Facility List	San Benito County Environmental Health	04/29/2022	04/29/2022	05/05/2022
CA	PERMITS SAN BERNARDINO	Hazardous Material Permits	San Bernardino County Fire Department Hazardo	05/12/2022	05/12/2022	05/18/2022
CA	HMMD SAN DIEGO	Hazardous Materials Management Division Database	Hazardous Materials Management Division	02/28/2022	02/28/2022	05/25/2022
CA	LF SAN DIEGO	Solid Waste Facilities	Department of Health Services	10/27/2021	03/04/2022	05/31/2022
CA	SAN DIEGO CO LOP	Local Oversight Program Listing	Department of Environmental Health	07/22/2021	10/19/2021	01/13/2022
CA	SAN DIEGO CO SAM	Environmental Case Listing	San Diego County Department of Environmental	03/23/2010	06/15/2010	07/09/2010
CA	CUPA SAN FRANCISCO CO	CUPA Facility Listing	San Francisco County Department of Environmen	02/03/2022	02/04/2022	02/11/2022
CA	LUST SAN FRANCISCO	Local Oversite Facilities	Department Of Public Health San Francisco Cou	09/19/2008	09/19/2008	09/29/2008
CA	UST SAN FRANCISCO	Underground Storage Tank Information	Department of Public Health	05/05/2022	05/06/2022	07/20/2022
CA	SAN FRANCISCO MAHER	Maher Ordinance Property Listing	San Francisco Planning	01/18/2022	01/20/2022	04/27/2022
CA	UST SAN JOAQUIN	San Joaquin Co. UST	Environmental Health Department	06/22/2018	06/26/2018	07/11/2018
CA	CUPA SAN LUIS OBISPO	CUPA Facility List	San Luis Obispo County Public Health Departme	02/15/2022	02/16/2022	05/13/2022
CA	BI SAN MATEO	Business Inventory	San Mateo County Environmental Health Service	02/20/2020	02/20/2020	04/24/2020
CA	LUST SAN MATEO	Fuel Leak List	San Mateo County Environmental Health Service	03/29/2019	03/29/2019	05/29/2019
CA	CUPA SANTA BARBARA	CUPA Facility Listing	Santa Barbara County Public Health Department	09/08/2011	09/09/2011	10/07/2011
CA	CUPA SANTA CLARA	Cupa Facility List	Department of Environmental Health	02/14/2022	02/16/2022	05/12/2022
CA	HIST LUST SANTA CLARA	HIST LUST - Fuel Leak Site Activity Report	Santa Clara Valley Water District	03/29/2005	03/30/2005	04/21/2005
CA	LUST SANTA CLARA	LOP Listing	Department of Environmental Health	03/03/2014	03/05/2014	03/18/2014
CA	SAN JOSE HAZMAT	Hazardous Material Facilities	City of San Jose Fire Department	11/03/2020	11/05/2020	01/26/2021
CA	CUPA SANTA CRUZ	CUPA Facility List	Santa Cruz County Environmental Health	01/21/2017	02/22/2017	05/23/2017
CA	CUPA SHASTA	CUPA Facility List	Shasta County Department of Resource Manageme	06/15/2017	06/19/2017	08/09/2017
CA	LUST SOLANO	Leaking Underground Storage Tanks	Solano County Department of Environmental Man	06/04/2019	06/06/2019	08/13/2019
CA	UST SOLANO	Underground Storage Tanks	Solano County Department of Environmental Man	09/15/2021	09/16/2021	12/09/2021
CA	CUPA SONOMA	Cupa Facility List	County of Sonoma Fire & Emergency Services De	07/02/2021	07/06/2021	07/14/2021
CA	LUST SONOMA	Leaking Underground Storage Tank Sites	Department of Health Services	06/30/2021	06/30/2021	09/24/2021
CA	CUPA STANISLAUS	CUPA Facility List	Stanislaus County Department of Ennvironmenta	02/08/2022	02/10/2022	05/04/2022
CA	UST SUTTER	Underground Storage Tanks	Sutter County Environmental Health Services	11/23/2021	11/29/2021	02/11/2022
CA	CUPA TEHAMA	CUPA Facility List	Tehama County Department of Environmental Hea	01/13/2021	01/14/2021	04/06/2021
CA	CUPA TRINITY	CUPA Facility List	Department of Toxic Substances Control	04/18/2022	04/19/2022	07/12/2022
CA	CUPA TULARE	CUPA Facility List	Tulare County Environmental Health Services D	04/26/2021	04/28/2021	07/13/2021
CA	CUPA TUOLUMNE	CUPA Facility List	Divison of Environmental Health	04/23/2018	04/25/2018	06/25/2018
CA	BWT VENTURA	Business Plan, Hazardous Waste Producers, and Operating Unde	Ventura County Environmental Health Division	03/28/2022	04/28/2022	07/15/2022
CA	LF VENTURA	Inventory of Illegal Abandoned and Inactive Sites	Environmental Health Division	12/01/2011	12/01/2011	01/19/2012
CA	LUST VENTURA	Listing of Underground Tank Cleanup Sites	Environmental Health Division	05/29/2008	06/24/2008	07/31/2008
CA	MED WASTE VENTURA	Medical Waste Program List	Ventura County Resource Management Agency	03/28/2022	04/28/2022	07/15/2022
CA	UST VENTURA	Underground Tank Closed Sites List	Environmental Health Division	02/28/2022	03/08/2022	06/02/2022
CA	UST YOLO	Underground Storage Tank Comprehensive Facility Report	Yolo County Department of Health	03/24/2022	03/31/2022	06/27/2022
CA	CUPA YUBA	CUPA Facility List	Yuba County Environmental Health Department	01/26/2022	01/27/2022	04/14/2022

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date

STREET AND ADDRESS INFORMATION

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APPENDIX M

PRELIMINARY DRAINAGE REPORT

TOWN & COUNTRY VILLAGE EL DORADO

May 2023

cta Engineering & Surveying

Civil Engineering ■ Land Surveying ■ Land Planning

PREAMBLE

This report was prepared by CTA Engineering & Surveying for Town and Country Village El Dorado, located in El Dorado County, California. The information presented in this report is intended to support proposed on-site improvements; any other use of this report and its associated technical analyses and models, is at the user's sole risk.

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2.0 EXISTING CONDITIONS 1
3.0 PROPOSED CONDITIONS 1
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5.0 HYDROLOGY 2
6.0 CULVERTS 2
7.0 WATER QUALITY 3
8.0 CONCLUSIONS 3

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Appendix B – Pre-Development Shed Map
Appendix C – Post-Development Shed Map
Appendix D – Hydrograph Analyses
Appendix E – Supporting Drainage Shed Maps

PRELIMINARY DRAINAGE REPORT
FOR
TOWN & COUNTRY VILLAGE – EL DORADO

1.0 INTRODUCTION

Town & Country Village – El Dorado (Project) is comprised of 3 existing parcels covering roughly 60 acres, located north of US 50 along Bass Lake Road, in El Dorado County. The Project description includes a large commercial site on the southern parcels with restaurants, retail services, a museum, an events center, and two hotels with ample parking for all proposed services (±13 acres). The Project also includes cottages on the northern parcel which will serve the hotels including employee housing and guest lodging (±12 acres). The overall Project development area consists of roughly 25 acres in which the remainder acreage will be evaluated in the future. The Project is bordered to the north and east by largely undeveloped land, to the south by Old Country Club Drive, and to the west by Bass Lake Road. Country Club Drive also bisects the proposed project area. Primary access is from Bass Lake Road to the commercial site. Old Country Club Drive provides a secondary access point to the commercial site. Primary access to the cottage site is from Country Club Drive with two fire access options. There will also be a roadway that connects the hotel site with the cottage site at Country Club Drive.

The purpose of this report is to provide hydrologic and hydraulic analyses in support of storm drainage improvements shown in the exhibits herein, and to verify adherence with guidelines and procedures outlined in the County of El Dorado *Drainage Manual.*

2.0 EXISTING CONDITIONS

At present the parcels are grassy covered land, with partially tree-covered areas that generally slope from the northeast to the southwest. There are existing storm drainage improvements and grading along the western edge of the site at Bass Lake Road for the installation of a bike path. There are also existing drainage ditches and pipes along Country Club Drive. An intermittent drainage path passes through the cottage site from east to west and passes through two 48” culverts beneath Bass Lake Road. A wagon trail passes through the commercial site where a rock culvert exists to allow an existing historical drainage path to flow beneath. There are also various culverts and ditches along Old Country Club Drive that allow the historical drainage patterns to flow beneath Bass Lake Road north of the Highway 50 interchange in a 60” culvert. These two drainage crossings eventually converge downstream and continue to flow west. Large drainage sheds that encompass the site and portions of Bass Lake Road and Country Club Drive are shown in the Pre-Development Shed Map in Appendix B.

There have been two previous drainage studies within this area in which flows were added to the Pre-Development Shed Map; the Bass Lake Road and Country Club Drive Extension project and the Bell Ranch project. Both projects have a shed that outfalls into the intermittent drainage path within the cottage project site.

3.0 PROPOSED CONDITIONS

Proposed development for the cottage site will include 112 cottages with walkways, drive aisles, and parking. The existing drainage path on this parcel will cross under two proposed roadways with twin culverts at each location. This path will be zoned as open space with setbacks which cover up to 4.4 acres of the site. The commercial site includes the development of roughly 13 acres and will leave remainder parcels to be developed in future phases. Bass Lake Road is proposed to be widened and will provide the main entry and exit to the commercial site. Old Country Club Drive will be widened as well to provide a secondary entrance into the commercial site and conclude at a fire department turnaround. A drive aisle will run north to connect this point to Country Club Drive with an intersection to the main entrance of the cottages. The proposed roadway will follow the existing wagon trail path and include a bike path and sidewalk.

4.0 DESIGN RUNOFF

Design runoff was computed using the HEC-HMS computer program. These computations also validate the effectiveness of on-site detention storage. The proposed facilities operate in concert so that the project

achieves infiltration, evapotranspiration and/or harvesting/reuse of the 100-year storm. HEC-HMS computations simulate the rainfall-runoff process for a 24-hour storm assumed to occur uniformly over the study area. The computations utilize the SCS dimensionless unit hydrograph method to transform precipitation excess, defined as rainfall not lost to surface retention by vegetation, cracks and crevices, local depressions, etc., or infiltrated into the ground, into runoff. Precipitation losses are computed within the program on the basis of a runoff curve number (CN) assigned to each shed. CN values reflect land usage and the runoff potential of underlying soils. Input datum required for the development of a unit hydrograph for each sub basin is the estimated lag time, defined as the time between the center of mass of precipitation excess and the unit hydrograph peak, and simplified as 0.6X time of concentration. Input parameters used for each contributing shed in hydrograph computations are: a runoff curve number used in the computation of precipitation losses, and a lag time; from which the SCS dimensionless unit hydrograph is constructed.

5.0 HYDROLOGY

This project will ensure post project flows will not exceed pre-project flow rate for the 100-year, 24-hour storm. A preliminary study was conducted to confirm that this requirement is achievable. A portion of the project to the north will be directed to a detention basin and a major portion of the project to the south will be directed to a second detention basin. In each basin, the flows can be detained and released at the pre-development rate. See Appendix C for the Post-Development Shed Map. The shed map depicts the general areas that will be draining to the ponds. Key point runoff locations can be found on the shed map. Hydrograph calculations show a more detailed breakdown of the areas within the shed that are contributing to the ponds. Impervious and pervious areas have also been separated in these calculations to establish appropriate sizing of the two ponds. Due to the differences in shed areas and the ultimate intersection downstream of the drainage paths, the totals in the 100-year flows were calculated for the overall reduction in post vs pre-development flows. See Appendix D for the HEC-HMS hydrograph calculations.

Table 1 – 100-Year Flows Summary

	Pre (cfs)	Post (cfs)
Key Point 1	59.4	69.6
Key Point 2	18.8	22.6
Key Point 3	22.8	11.1
Key Point 4	88.7	81.5
TOTAL	**189.7**	**184.8**

6.0 CULVERTS

The two proposed crossings on the cottage site were sized using the calculations from previous drainage shed maps. The outfall from the Bell Ranch property occurs at Point A on the *Bell Ranch: Post-Project Drainage Key Points and Detention Basins* Shed Map found in Appendix E. After detention of pre-project flows on the Bell Ranch site, Point A represents the location at which runoff converges within the natural regional runoff system and drains to Shed AB on the Post-Development Shed Map. The 100-year flow at “Outfall Bell Ranch” is 122.3 cfs. The second outfall from a small shed on Country Club Drive occurs at “Outfall H” on *Bass Lake Road & Country Club Drive Extension: Drainage Shed Map* found in Appendix E. The 100-year flow at this outfall is 4.70 cfs which will add to the existing path and continue west. Table 2 incorporates the two known outfalls and the two Key Points that flow to the existing two 48” culverts beneath Bass Lake Road.

Table 2 – Culvert Flows

Sheds	100-Year Flows (cfs)
Outfall Bell Ranch	122.3
Outfall CCR	4.70
Key Point 1	69.6
Key Point 2	22.6
SUM	**219.2**

However, this convergence point is also displayed as "Crossing C" on the *Bass Lake Road & Country Club Drive Extension: Drainage Shed Map* which shows a total 100-year flow of 263 cfs. This flow included the assumed future development of ½ acre residential lots within a 150 acre shed. This number is a more conservative approach to size the proposed culverts. Since the 48" twin culverts were generously sized for the 263 cfs flow at Crossing C, twin 48" culverts are proposed at the other two crossings for the cottages as well.

7.0 WATER QUALITY

Water quality considerations will be reviewed at the project improvement plan stage and appropriate analyses will be included in a subsequent drainage report. The El Dorado County Storm Water Management Plan (SWMP), dated August 2004, serves as a regulatory document related to reducing the discharge of pollutants associated with storm water drainage systems.

The following Treatment Control BMPs also may be incorporated into final design of the project if a project proponent would like to reduce water quality flow (WQF) requirements:

1. Incorporation within the site's plan or design, land use planning measures to minimize water quality impacts, including stream buffers and restoration activities.

2. Reduction of the site's imperviousness, conserving natural resources and areas, maintaining and using natural drainage courses in the storm water conveyance system and minimizing clearing and grading.

3. When landscaping is required or proposed, provision of runoff storage measures dispersed uniformly throughout the site's landscape with the use of a variety of detention, retention, and runoff practices.

4. Implementation of on-site hydrologically functioning landscape design and management practices.

5. Minimize project's impervious footprint and conserve natural areas. Minimize directly connected impervious areas.

Where landscaping is proposed in or adjacent to parking areas, to the extent feasible, incorporate landscaped areas into a site drainage design that minimizes runoff.

8.0 CONCLUSIONS

The 100-year flows for this site were evaluated and shown in the table above. The detention ponds as proposed are designed to meet the necessary standards in order to mitigate post-development flows to a pre-project level.

APPENDIX A

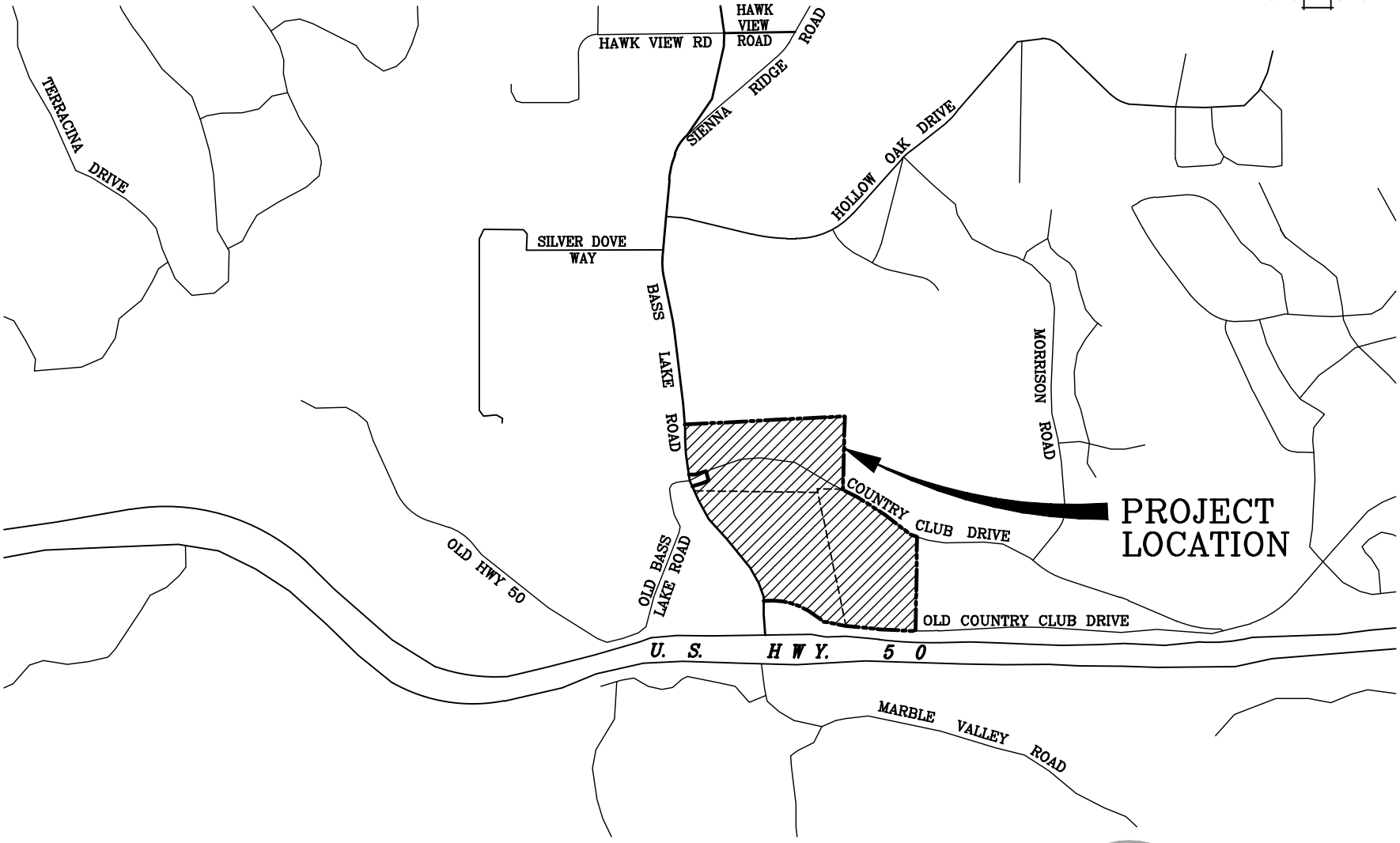
VICINITY MAP

TOWN & COUNTRY VILLAGE

VICINITY MAP

EL DORADO HILLS, CALIFORNIA

NTS MAY, 2023



cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

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APPENDIX B

PRE-DEVELOPMENT SHED MAP

TOWN & COUNTRY VILLAGE - EL DORADO

PRE-DEVELOPMENT SHED MAP

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=200' MAY, 2023

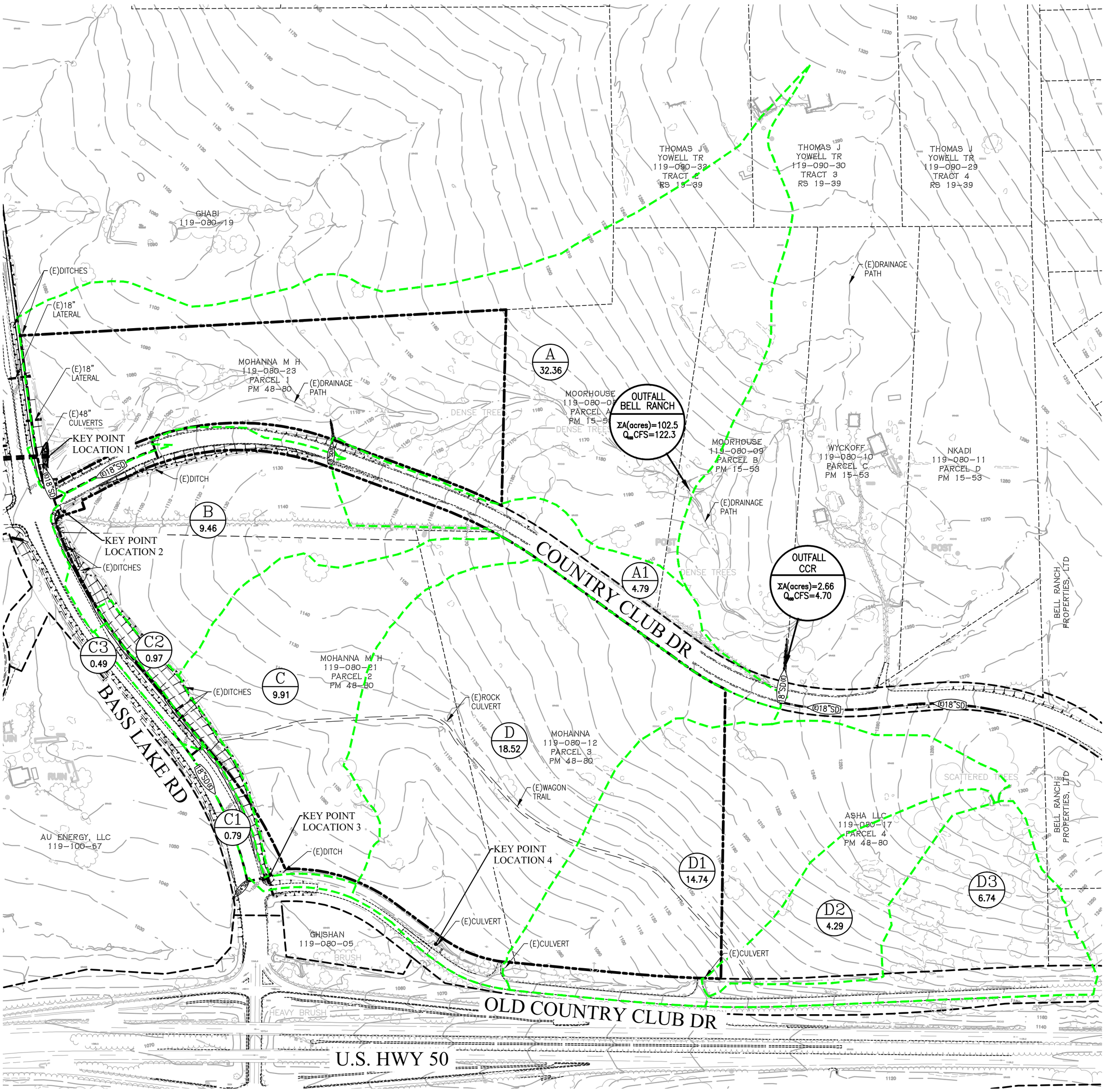
0 100' 200' 400'

SCALE: 1" = 200'

LEGEND:

DRAINAGE SHED BOUNDARY

SHED I.D. & AREA in ACRES



cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

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APPENDIX C

POST-DEVELOPMENT SHED MAP

TOWN & COUNTRY VILLAGE - EL DORADO

POST-DEVELOPMENT SHED MAP

EL DORADO COUNTY, CALIFORNIA

SCALE: 1"=200' MAY, 2023

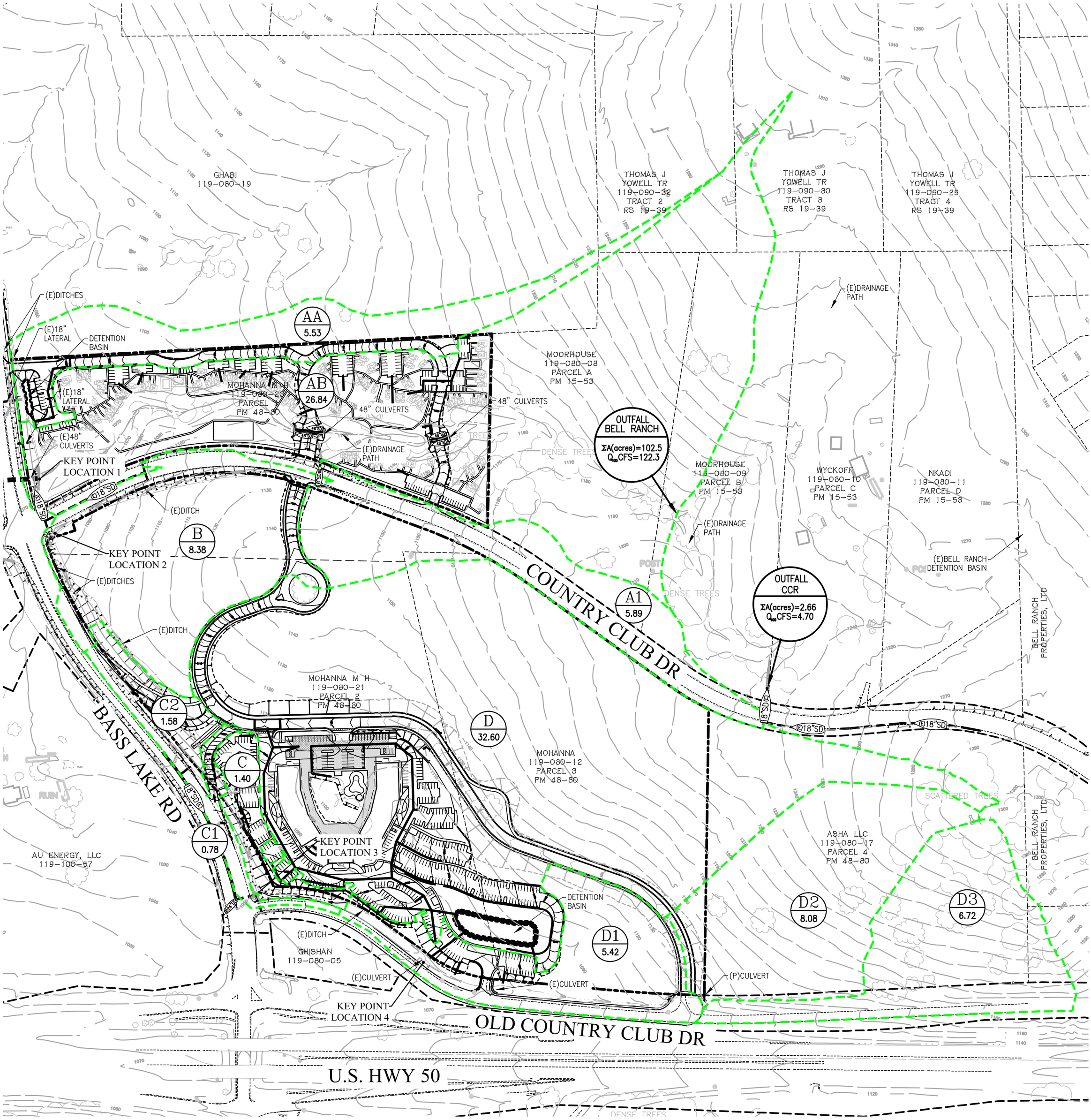
0 100' 200' 400'

SCALE: 1" = 200'

LEGEND:

DRAINAGE SHED BOUNDARY

A1 / 3.5 — SHED I.D. & AREA in ACRES



cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

M:\20-113-001\PLANNING\DRAINAGE\20-113-001-POST DEVELOPMENT SHED MAP.dwg, 7/19/2023 7:51:13 AM, tjaime, 1:1

APPENDIX D

HYDROGRAPH ANALYSES

121°0'0"W
120°30'0"W
120°0'0"W
39°0'0"N
38°30'0"N

PROJECT LOCATION

1
0 6 12 24 Miles
Units are inches per year

Mean annual precipitation for El Dorado County, CA
County boundary

Note:
Source: Report on El Dorado County design rainfall.
Prepared by Jim Goodridge, August 2008.

Project: El Dorado County drainage manual
Task: MAP mapping
Datum: NAD 83
Date: September 2008

Table A2.2.1 Rainfall Depth Table with Return Period of 2 Years

El Dorado County Design Rainfall
Precipitation Depth Duration Frequency
Return Period 2 Years

Mean Annual Precipitation	5 Min	10 Min	15 Min	30 Min	1 Hour	2 Hour	3 Hour	6 Hour	12 Hour	1 Day	2 Day	3 Day	4 Day	5 Day	6 Day	8 Day	10 Day	15 Day	20 Day	30 Day	60 Day	365 Day
8	0.04	0.06	0.07	0.10	0.14	0.19	0.23	0.33	0.46	0.65	0.87	1.01	1.11	1.20	1.27	1.44	1.60	1.93	2.18	2.69	3.91	7.81
10	0.05	0.07	0.09	0.12	0.17	0.24	0.29	0.41	0.58	0.81	1.09	1.26	1.39	1.50	1.59	1.80	2.00	2.41	2.72	3.36	4.89	9.76
12	0.06	0.08	0.10	0.14	0.20	0.29	0.35	0.49	0.69	0.98	1.31	1.51	1.67	1.81	1.91	2.16	2.40	2.89	3.26	4.03	5.87	11.71
14	0.07	0.10	0.12	0.17	0.24	0.33	0.41	0.57	0.81	1.14	1.53	1.77	1.94	2.11	2.23	2.52	2.80	3.38	3.81	4.70	6.85	13.66
16	0.08	0.11	0.14	0.19	0.27	0.38	0.47	0.66	0.93	1.30	1.75	2.02	2.22	2.41	2.55	2.88	3.21	3.86	4.35	5.38	7.83	15.61
18	0.09	0.13	0.15	0.22	0.31	0.43	0.52	0.74	1.04	1.47	1.97	2.27	2.50	2.71	2.86	3.24	3.61	4.34	4.90	6.05	8.81	17.57
20	0.10	0.14	0.17	0.24	0.34	0.48	0.58	0.82	1.16	1.63	2.19	2.52	2.78	3.01	3.18	3.60	4.01	4.82	5.44	6.72	9.78	19.52
22	0.11	0.15	0.19	0.26	0.37	0.53	0.64	0.90	1.27	1.79	2.40	2.78	3.06	3.31	3.50	3.96	4.41	5.30	5.98	7.39	10.76	21.47
24	0.12	0.17	0.21	0.29	0.41	0.57	0.70	0.99	1.39	1.95	2.62	3.03	3.33	3.61	3.82	4.32	4.81	5.79	6.53	8.06	11.74	23.42
26	0.13	0.18	0.22	0.31	0.44	0.62	0.76	1.07	1.50	2.12	2.84	3.28	3.61	3.91	4.14	4.68	5.21	6.27	7.07	8.73	12.72	25.37
28	0.14	0.20	0.24	0.34	0.47	0.67	0.82	1.15	1.62	2.28	3.06	3.53	3.89	4.21	4.45	5.04	5.61	6.75	7.62	9.41	13.70	27.33
30	0.15	0.21	0.26	0.36	0.51	0.72	0.87	1.23	1.74	2.44	3.28	3.78	4.17	4.51	4.77	5.40	6.01	7.23	8.16	10.08	14.68	29.28
35	0.17	0.24	0.30	0.42	0.59	0.84	1.02	1.44	2.02	2.85	3.83	4.42	4.86	5.26	5.57	6.30	7.01	8.44	9.52	11.76	17.12	34.16
40	0.20	0.28	0.34	0.48	0.68	0.95	1.17	1.64	2.31	3.26	4.37	5.05	5.56	6.02	6.36	7.20	8.01	9.64	10.88	13.44	19.57	39.04
45	0.22	0.31	0.38	0.54	0.76	1.07	1.31	1.85	2.60	3.67	4.92	5.68	6.25	6.77	7.16	8.10	9.02	10.85	12.24	15.12	22.02	43.92
50	0.25	0.35	0.43	0.60	0.85	1.19	1.46	2.05	2.89	4.07	5.47	6.31	6.94	7.52	7.95	9.00	10.02	12.06	13.60	16.80	24.46	48.80
55	0.27	0.38	0.47	0.66	0.93	1.31	1.60	2.26	3.18	4.48	6.01	6.94	7.64	8.27	8.75	9.91	11.02	13.26	14.96	18.48	26.91	53.68
60	0.30	0.42	0.51	0.72	1.02	1.43	1.75	2.46	3.47	4.89	6.56	7.57	8.33	9.03	9.54	10.81	12.02	14.47	16.32	20.16	29.35	58.55
65	0.32	0.45	0.56	0.78	1.10	1.55	1.90	2.67	3.76	5.29	7.10	8.20	9.03	9.78	10.34	11.71	13.02	15.67	17.68	21.84	31.80	63.43
70	0.35	0.49	0.60	0.84	1.19	1.67	2.04	2.87	4.05	5.70	7.65	8.83	9.72	10.53	11.13	12.61	14.02	16.88	19.04	23.52	34.25	68.31

Source: Design Rainfall Tables for El Dorado County prepared by Jim Goodridge, August 30, 2008

Table A2.2.13 Rainfall Intensity with Return Period of 100 Years

El Dorado County Design Rainfall
Precipitation Intensity (inches per hour) Duration Frequency
Return Period 100 Years

Mean Annual Precipitation	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	6 Hr	12 Hr	1 Day
8	1.07	0.75	0.61	0.43	0.3	0.21	0.17	0.12	0.09	0.06
10	1.34	0.94	0.77	0.54	0.38	0.27	0.22	0.15	0.11	0.08
12	1.60	1.13	0.92	0.65	0.46	0.32	0.26	0.18	0.13	0.09
14	1.87	1.32	1.07	0.76	0.53	0.37	0.31	0.21	0.15	0.11
16	2.14	1.51	1.23	0.86	0.61	0.43	0.35	0.50	0.17	0.12
18	2.41	1.69	1.38	0.97	0.68	0.48	0.39	0.28	0.19	0.14
20	2.67	1.88	1.53	1.08	0.76	0.54	0.44	0.31	0.22	0.15
22	2.94	2.07	1.69	1.19	0.84	0.59	0.48	0.34	0.24	0.17
24	3.21	2.26	1.84	1.30	0.91	0.64	0.52	0.37	0.26	0.18
26	3.47	2.45	1.99	1.40	0.99	0.70	0.57	0.40	0.28	0.20
28	3.74	2.63	2.15	1.51	1.06	0.75	0.61	0.43	0.30	0.21
30	4.01	2.82	2.30	1.62	1.14	0.80	0.65	0.46	0.32	0.23
35	4.68	3.29	2.68	1.89	1.33	0.94	0.76	0.54	0.38	0.27
40	5.34	3.76	3.07	2.16	1.52	1.07	0.87	0.61	0.43	0.30
45	6.01	4.23	3.45	2.43	1.71	1.20	0.98	0.69	0.49	0.34
50	6.68	4.70	3.83	2.70	1.9	1.34	1.09	0.77	0.54	0.38
55	7.35	5.17	4.22	2.97	2.09	1.47	1.20	0.84	0.59	0.42
60	8.02	5.65	4.60	3.24	2.28	1.61	1.31	0.92	0.65	0.46
65	8.69	6.12	4.98	3.51	2.47	1.74	1.42	1.00	0.70	0.49
70	9.35	6.59	5.36	3.78	2.66	1.87	1.53	1.07	0.76	0.53

Source: Design Rainfall Tables for El Dorado County prepared by Jim Goodridge, August 30, 2008

TABLE B-1 - CN VALUES FOR DRAINAGE SHEDS

SHED	AREA (AC)	STREETS & ROADS [1/] (AC)	OPEN SCAPE (AC)	GRAVEL (AC)	PAVERS (AC)	COMMERCIAL (AC)	CN [2/]
PRE-DEVELOPMENT							
A	32.36	0.31	32.05	0.00	0.00	0.00	84.1
A1	4.79	1.24	3.55	0.00	0.00	0.00	87.6
B	9.46	0.79	8.67	0.00	0.00	0.00	85.2
C	9.91	0.00	9.91	0.00	0.00	0.00	84.0
C1	0.79	0.44	0.35	0.00	0.00	0.00	91.8
C2	0.97	0.00	0.97	0.00	0.00	0.00	84.0
C3	0.49	0.21	0.28	0.00	0.00	0.00	90.0
D	18.52	0.23	18.29	0.00	0.00	0.00	84.2
D1	14.74	0.38	14.36	0.00	0.00	0.00	84.4
D2	4.29	0.00	4.29	0.00	0.00	0.00	84.0
D3	6.74	0.64	6.10	0.00	0.00	0.00	85.3
POST-DEVELOPMENT							
AA	5.53	1.15	4.38	0.00	0.00	0.00	86.9
AB	26.84	3.12	22.90	0.82	0.00	0.00	85.8
A1	5.89	1.30	4.59	0.00	0.00	0.00	87.1
B	8.38	1.39	6.99	0.00	0.00	0.00	86.3
C	1.40	0.00	0.94	0.00	0.00	0.46	87.6
C1	0.78	0.50	0.28	0.00	0.00	0.00	93.0
C2	1.58	0.67	0.91	0.00	0.00	0.00	89.9
D	32.60	2.29	21.09	0.00	0.95	8.27	87.9
D1	5.42	0.44	4.50	0.00	0.00	0.48	86.1
D2	8.08	0.16	7.92	0.00	0.00	0.00	84.3
D3	6.72	0.62	6.10	0.00	0.00	0.00	85.3

Paved Streets & Roads - CN=98	
Commercial - CN=95	
Undeveloped open space area (grass) - CN=84	
Cottage Gravel Parking Bays & Walking Trails - CN=91	
Landscape/Green Pavers - CN=90	
[1/]'TYPICAL ROADWAY/DRIVE AISLE WIDTH = 26'	
[2/] Weighted CN	

TABLE B-2 DEVELOPMENT SHED PARAMETERS FOR TOWN & COUNTRY VILLAGE

			SHEET FLOW TRAVEL TIME						*CONCENTRATED FLOW TIME*				*SUM Tt*	*Lag Time*	*COMMENTS*
DRAINAGE ID #	*Shed Area (AC)*	*Shed Area (MI^2)*	*L1 (ft)*	*n*	*P (IN)*	*S1*	*Tt1 (HR)*	*Tt1 (MIN)*	*Flow Length (FT)*	*S2*	*V2 (FT/SEC)*	*Tt2 (MIN)*			
PRE DEVELOPMENT - OVERALL															
A	32.36	0.0506	300	0.24	2.28	0.10	0.36	21.4	2050	0.066	4.15	8.2	29.6	17.8	
A1	4.79	0.0075											10.0	6.0	
B	9.46	0.0148	300	0.24	2.28	0.11	0.34	20.6	530	0.130	5.82	1.5	22.1	13.3	
C	9.91	0.0155	300	0.24	2.28	0.11	0.34	20.6	530	0.094	4.95	1.8	22.4	13.4	
C1	0.79	0.0012											10.0	6.0	
C2	0.97	0.0015											10.0	6.0	
C3	0.49	0.0008	300	0.240	2.28	0.02	0.68	40.7	380	0.020	2.28	2.8	43.5	26.1	
D	18.52	0.0289	300	0.24	2.28	0.13	0.32	19.3	780	0.096	5.00	2.6	21.9	13.1	
D1	14.74	0.0230	300	0.24	2.28	0.16	0.30	17.7	500	0.140	6.04	1.4	19.1	11.5	
D2	4.29	0.0067	300	0.24	2.28	0.18	0.28	17.1	500	0.100	5.10	1.6	18.7	11.2	
D3	6.74	0.0105	300	0.24	2.28	0.19	0.28	16.5	950	0.052	3.68	4.3	20.8	12.5	
POST DEVELOPMENT - OVERALL															
AA (imp)	1.15	0.0018											10.0	6.0	
AA (perv)	4.38	0.0068	300	0.24	2.28	0.10	0.36	21.4					21.4	12.8	
AB (imp)	3.94	0.0062											10.0	6.0	
AB (perv)	22.90	0.0358	300	0.24	2.28	0.10	0.36	21.4	2050	0.066	4.15	8.2	29.6	17.8	
A1	5.89	0.0092											10.0	6.0	
B	8.38	0.0131											10.0	6.0	
C	1.40	0.0022											10.0	6.0	
C1	0.78	0.0012											10.0	6.0	
C2	1.58	0.0025											10.0	6.0	
D (comm)	11.51	0.0180											10.0	6.0	
D (perv)	21.09	0.0330	300	0.24	2.28	0.08	0.39	23.4	500	0.140	6.04	1.4	24.8	14.9	
D1	5.42	0.0085	300	0.24	2.28	0.13	0.32	19.3	515	0.078	4.51	1.9	21.2	12.7	
D2	8.08	0.0126	240	0.24	2.28	0.10	0.30	18.1	500	0.100	5.10	1.6	19.7	11.8	
D3	6.72	0.0105	300	0.24	2.28	0.19	0.28	16.5	950	0.052	3.68	4.3	20.8	12.5	

T_{sh} = 0.007 x (nL)^0.8 / [(P_2)^0.5 x (S)^0.4] — Eq 2.4.7

Where,

n = overland flow roughness

L = length of overland flow surface

P_2 = 2-yr, 24 hr rainfall depth

(For MAP = 28"/yr, P_2=2.28")

S = land slope (ft/ft)

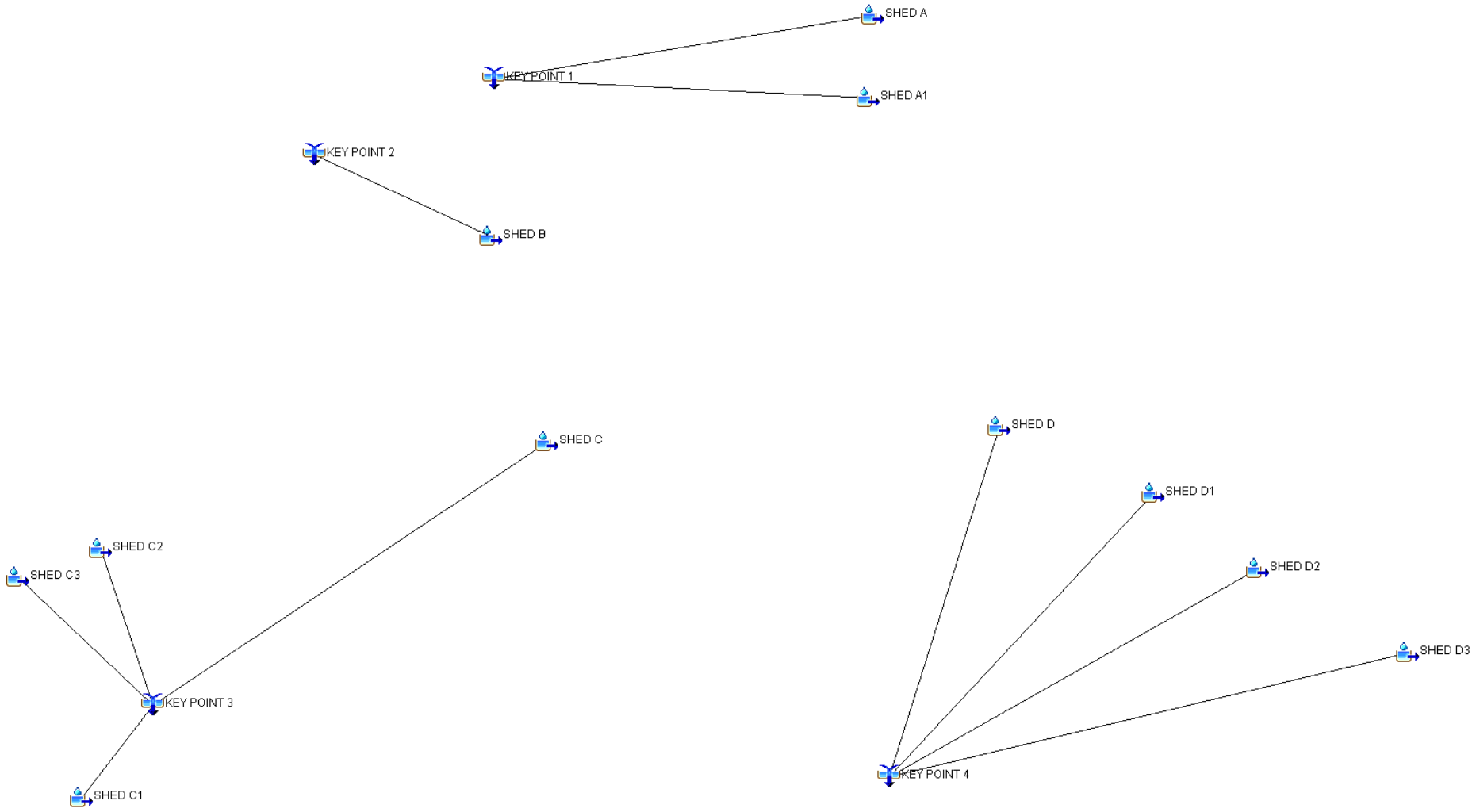
T_{sc} = L/V

Where,

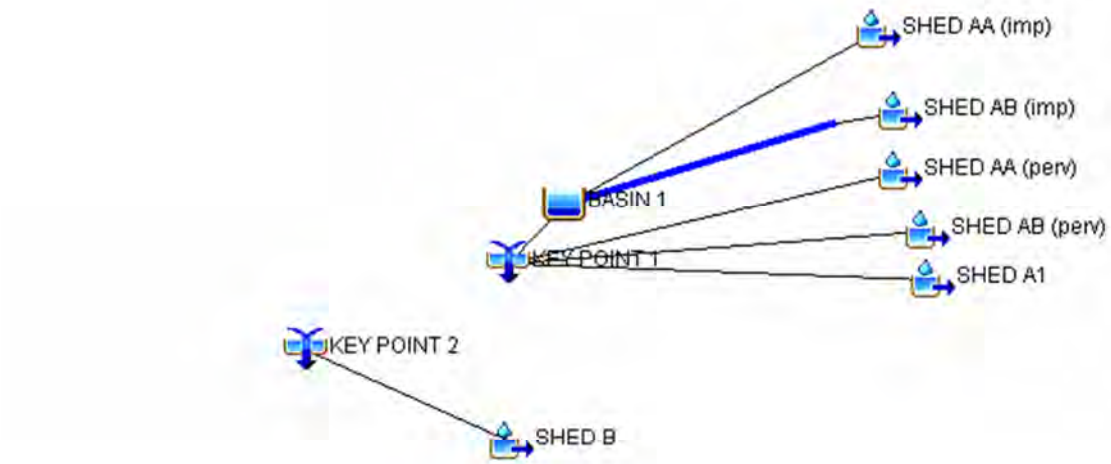
$V_{UNPAVED}$ = 16.1345 S^0.5 — Eq 2.4.8

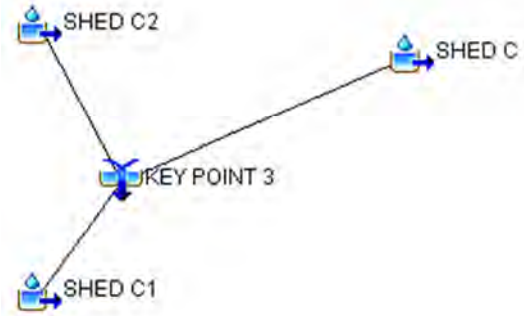
V_{PAVED} = 20.3283 S^0.5 — Eq 2.4.9

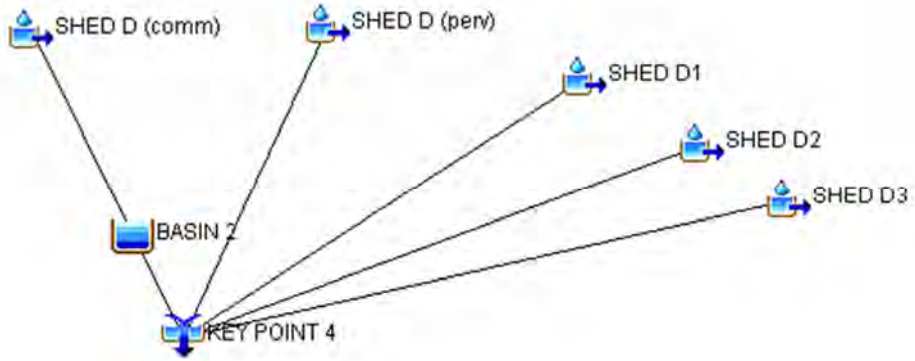
PRE DEVELOPMENT SCHEMATIC



POST DEVELOPMENT SCHEMATIC







PRE DEVELOPMENT 100-YEAR RESULTS

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
KEY POINT 1	0.0581	59.4	01Jan2022, 10:08	3.43
KEY POINT 2	0.0148	18.8	01Jan2022, 10:06	3.49
KEY POINT 3	0.0190	22.8	01Jan2022, 10:05	3.45
KEY POINT 4	0.0691	88.7	01Jan2022, 10:05	3.41
SHED A	0.0506	53.9	01Jan2022, 10:11	3.38
SHED A1	0.0075	13.4	01Jan2022, 09:59	3.73
SHED B	0.0148	18.8	01Jan2022, 10:06	3.49
SHED C	0.0155	18.9	01Jan2022, 10:06	3.37
SHED C1	0.0012	2.4	01Jan2022, 09:59	4.18
SHED C2	0.0015	2.4	01Jan2022, 09:59	3.37
SHED C3	0.0008	0.8	01Jan2022, 10:18	3.98
SHED D	0.0289	35.9	01Jan2022, 10:06	3.39
SHED D1	0.0230	30.4	01Jan2022, 10:04	3.41
SHED D2	0.0067	8.9	01Jan2022, 10:04	3.37
SHED D3	0.0105	13.8	01Jan2022, 10:05	3.50

POST DEVELOPMENT 100-YEAR RESULTS

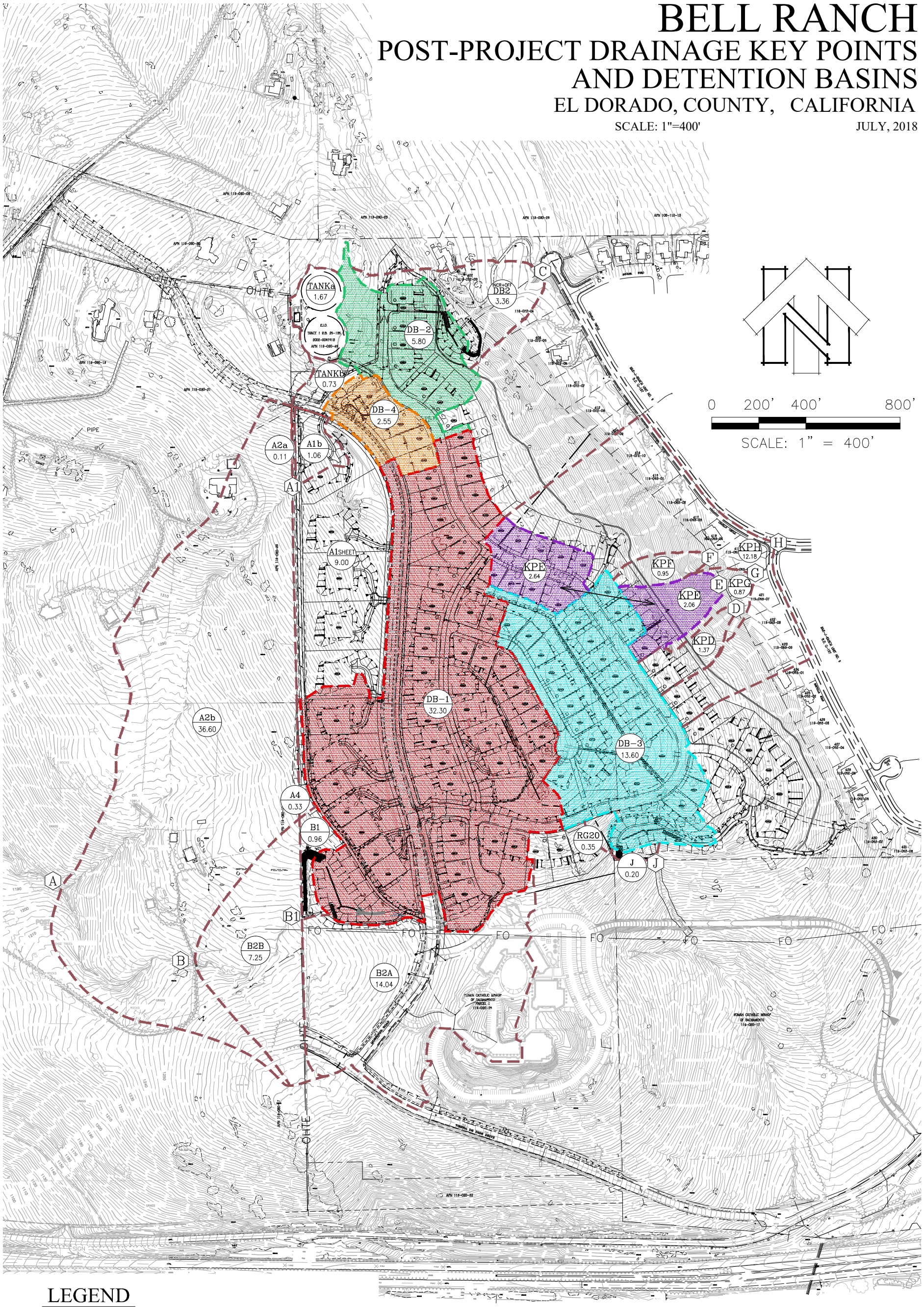
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BASIN 1	0.0080	15.7	01Jan2022, 10:03	4.71
BASIN 2	0.0180	2.8	01Jan2022, 12:42	3.51
DITCH	0.0062	12.7	01Jan2022, 10:04	4.70
KEY POINT 1	0.0598	69.6	01Jan2022, 10:05	3.60
KEY POINT 2	0.0131	22.6	01Jan2022, 09:59	3.60
KEY POINT 3	0.0059	11.1	01Jan2022, 09:59	3.95
KEY POINT 4	0.0826	81.5	01Jan2022, 10:06	3.44
SHED AA (imp)	0.0018	3.9	01Jan2022, 09:59	4.87
SHED AA (perv)	0.0068	8.5	01Jan2022, 10:06	3.37
SHED AB (imp)	0.0062	13.2	01Jan2022, 09:59	4.70
SHED AB (perv)	0.0358	38.0	01Jan2022, 10:11	3.37
SHED A1	0.0092	16.2	01Jan2022, 09:59	3.68
SHED B	0.0131	22.6	01Jan2022, 09:59	3.60
SHED C	0.0022	3.9	01Jan2022, 09:59	3.73
SHED C1	0.0012	2.4	01Jan2022, 09:59	4.31
SHED C2	0.0025	4.7	01Jan2022, 09:59	3.97
SHED D (comm)	0.0180	37.7	01Jan2022, 09:59	4.55
SHED D (perv)	0.0330	38.3	01Jan2022, 10:08	3.37
SHED D1	0.0085	11.3	01Jan2022, 10:06	3.58
SHED D2	0.0126	16.4	01Jan2022, 10:05	3.40
SHED D3	0.0105	13.8	01Jan2022, 10:05	3.50

APPENDIX E

SUPPORTING DRAINAGE SHED MAPS

BELL RANCH
POST-PROJECT DRAINAGE KEY POINTS AND DETENTION BASINS
EL DORADO, COUNTY, CALIFORNIA

SCALE: 1"=400' JULY, 2018



LEGEND

- POST PROJECT DRAINAGE SHED BOUNDARY
- POST PROJECT DB-1 SHED
- POST PROJECT DB-2 SHED
- POST PROJECT DB-3 SHED
- POST PROJECT DB-4 SHED
- POST PROJECT SHED E

B1A 14.32 — SHED I.D. & AREA

A — NODE

LINKED SHED

cta Engineering & Surveying
Civil Engineering ■ Land Surveying ■ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ■ F (916) 638-2479 ■ www.ctaes.net

BASS LAKE ROAD & COUNTRY CLUB DRIVE EXTENSION

DRAINAGE SHED MAP

EL DORADO COUNTY, CALIFORNIA

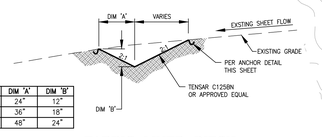
SCALE: 1"=80' JANUARY, 2019

LEGEND

- NODE X-1 (A(acres)=X.XX, ΣA(acres)=X.XX, Q_A CFS=X.XX, Q_M CFS=X.XX) — DRAINAGE NODE NUMBER
- OUTFALL Z (ΣA(acres)=X.XX, Q_A CFS=X.XX, Q_M CFS=X.XX) — DRAINAGE OUTFALL NUMBER
- DITCH X-1 — DITCH NUMBER
- P-X — DRAINAGE PIPE NUMBER
- θ-- — DRAINAGE NODE

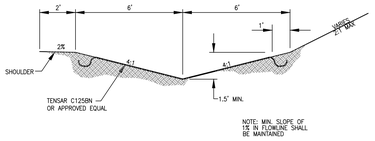
0 40' 80' 160'
SCALE: 1" = 80'

OUTFALL I: ΣA(acres)=0.05, Q_A CFS=0.09, Q_M CFS=0.13
NODE I-1: A(acres)=0.05, ΣA(acres)=0.05, Q_A CFS=0.09, Q_M CFS=0.13
P-I1
OUTFALL D: ΣA(acres)=0.59, Q_A CFS=1.06, Q_M CFS=1.50
CROSSING C: Q_M CFS=263
NODE D-1: A(acres)=0.59, ΣA(acres)=0.59, Q_A CFS=1.06, Q_M CFS=1.50
DITCH D-1
NODE C-1: A(acres)=0.62, ΣA(acres)=0.62, Q_A CFS=1.12, Q_M CFS=1.58
DITCH C-1
DITCH D-3
OUTFALL B: ΣA(acres)=9.98, Q_A CFS=14.75, Q_M CFS=20.90
DITCH D-2
OUTFALL C: ΣA(acres)=0.62, Q_A CFS=1.12, Q_M CFS=1.58
P-D1
P-C1
P-B1
P-B3
P-B2
P-B6
P-B4
P-B5
DITCH B-4
OUTFALL E: ΣA(acres)=1.66, Q_A CFS=2.64, Q_M CFS=3.76
DITCH E-4
NODE B-3: A(acres)=5.00, ΣA(acres)=5.00, Q_A CFS=5.36, Q_M CFS=7.59
NODE B-2: A(acres)=0.46, ΣA(acres)=0.46, Q_A CFS=0.83, Q_M CFS=1.17
DITCH B-3
NODE B-1: A(acres)=0.22, ΣA(acres)=0.22, Q_A CFS=0.40, Q_M CFS=0.56
OUTFALL G: ΣA(acres)=2.21, Q_A CFS=2.57, Q_M CFS=3.64
DITCH G-3
SHED G-3: A(acres)=0.40, A(acres)=2.56, Q_A CFS=2.85, Q_M CFS=4.04
SHED G-2: A(acres)=2.16, A(acres)=2.16, Q_A CFS=2.13, Q_M CFS=3.02
DITCH G-2
P-G1
NODE G-1: A(acres)=2.21, ΣA(acres)=2.21, Q_A CFS=2.57, Q_M CFS=3.64
DITCH G-1
NODE E-1: A(acres)=0.37, ΣA(acres)=1.66, Q_A CFS=2.64, Q_M CFS=3.76
P-E1
DITCH E-2
SHED B-4: A(acres)=1.49, A(acres)=9.08, Q_A CFS=10.11, Q_M CFS=14.32
DITCH B-1
SHED E-2: A(acres)=0.41, A(acres)=0.41, Q_A CFS=0.74, Q_M CFS=1.05
SHED B-5: A(acres)=0.28, A(acres)=0.28, Q_A CFS=0.50, Q_M CFS=0.71
SHED B-6: A(acres)=2.31, A(acres)=2.31, Q_A CFS=2.51, Q_M CFS=3.56
NODE E-3: A(acres)=0.88, ΣA(acres)=0.88, Q_A CFS=1.30, Q_M CFS=1.84
DITCH B-2
DITCH E-1
DITCH E-3
BASS LAKE ROAD
COUNTRY CLUB DRIVE
SHED A-2: A(acres)=0.92, A(acres)=0.92, Q_A CFS=1.66, Q_M CFS=2.35
DITCH A-1
NODE A-1: A(acres)=0.49, ΣA(acres)=0.49, Q_A CFS=0.88, Q_M CFS=1.25
DITCH A-2
NODE A-6: A(acres)=0.08, ΣA(acres)=0.08, Q_A CFS=0.14, Q_M CFS=0.20
P-A1
P-A2
DITCH A-3
SHED A-3: A(acres)=8.87, A(acres)=8.87, Q_A CFS=9.80, Q_M CFS=13.86
DITCH A-4
P-A3
SHED A-4: A(acres)=1.05, A(acres)=1.05, Q_A CFS=1.30, Q_M CFS=1.84
DITCH A-5
SHED A-8: A(acres)=0.98, A(acres)=0.98, Q_A CFS=1.76, Q_M CFS=2.50
P-A4
P-A6
P-A5
NODE A-5: A(acres)=0.79, ΣA(acres)=11.63, Q_A CFS=14.17, Q_M CFS=20.08
LATERAL A
OUTFALL A: ΣA(acres)=12.20, Q_A CFS=15.20, Q_M CFS=21.53
DITCH A-6
NODE A-7: A(acres)=, ΣA(acres)=12.20, Q_A CFS=15.20, Q_M CFS=21.53
BRUSH
DENSE TREES
POST
SCATTERED TREES
OUTFALL H: ΣA(acres)=2.66, Q_A CFS=3.31, Q_M CFS=4.70
DITCH H-2
NODE H-2: A(acres)=1.14, ΣA(acres)=2.11, Q_A CFS=2.60, Q_M CFS=3.68
NODE H-4: A(acres)=0.12, ΣA(acres)=2.66, Q_A CFS=3.31, Q_M CFS=4.70
P-H5
NODE H-1: A(acres)=0.97, ΣA(acres)=0.97, Q_A CFS=1.30, Q_M CFS=1.84
P-H2
P-H4
18"SD
P-H3
P-H1
DITCH H-1
NODE H-3: A(acres)=0.43, ΣA(acres)=0.43, Q_A CFS=0.50, Q_M CFS=0.71
TRAIL
NODE J-1: A(acres)=0.66, ΣA(acres)=0.66, Q_A CFS=0.80, Q_M CFS=1.13
ROMAN CATHOLIC BISHOP
119-020-16
DITCH J-1
COUNTRY CLUB DRIVE EXTENSION



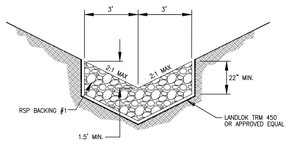
DESIGN CASE	DIM 'A'	DIM 'B'
(A)	24"	12"
(B)	36"	18"
(C)	48"	24"

FABRIC LINED DITCH
SCALE 1"=3'

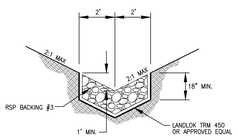


NOTE: MIN. SLOPE OF 1% IN FLOWLINE SHALL BE MAINTAINED

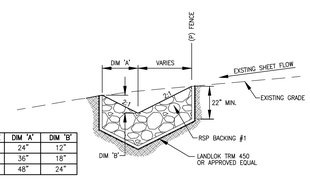
FABRIC LINED ROADSIDE DITCH
SCALE 1"=3'



ROCK LINED DITCH (1)
SCALE 1"=3'

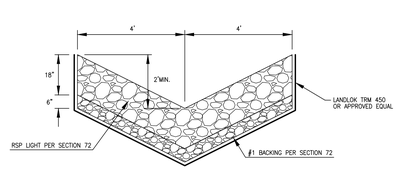


ROCK LINED DITCH (2)
SCALE 1"=3'



DESIGN CASE	DIM 'A'	DIM 'B'
(A)	24"	12"
(B)	36"	18"
(C)	48"	24"

INTERCEPTOR DITCH
TYPE 1
SCALE 1"=3'



INTERCEPTOR DITCH
TYPE 2
SCALE : 1" = 2'

cta Engineering & Surveying
Civil Engineering ▪ Land Surveying ▪ Land Planning
3233 Monier Circle, Rancho Cordova, CA 95742
T (916) 638-0919 ▪ F (916) 638-2479 ▪ www.ctaes.net

APPENDIX N

Appendix N:
El Dorado County General Plan and BLHSP Policy Discussion

Policy		Policy Consistency
El Dorado County General Plan		
Land Use Element		
Policy 2.1.1.4	Community Region boundaries shall generally be coterminous with the Sphere of Influence boundaries of incorporated cities. Community Region boundaries may extend beyond a city's sphere of influence to recognize existing and anticipated development patterns consistent with that of Community Regions. However, cities should be encouraged to expand their sphere of influence to be contiguous with Community Region boundaries.	As discussed in Chapter 3, Project Description, of this EIR, the current Community Region boundary includes the portion of the project site located north of Country Club Drive. The proposed project would require approval of a General Plan Amendment to modify the Community Region boundary in recognition of the anticipated development pattern of the project area.
Policy 2.1.1.6	The boundaries of existing Community Regions may be modified through the General Plan amendment process.	As discussed in Chapter 3, Project Description, of this EIR, the proposed project would require approval of a General Plan Amendment to modify the existing Community Region Boundary to include the project site.
Policy 2.1.1.7	Development within Community Regions, as with development elsewhere in the County, may proceed only in accordance with all applicable General Plan Policies, including those regarding infrastructure availability as set forth in the Transportation and Circulation and the Public Services and Utilities Elements. Accordingly, development in Community Regions and elsewhere will be limited in some cases until such time as adequate roadways, utilities, and other public service infrastructure become available and wildfire hazards are mitigated as required by an approved Fire Safe Plan.	The proposed project's consistency with all applicable General Plan Policies is discussed throughout this Appendix. Infrastructure availability is further discussed in Chapters 4.10, Public Services and Recreation, 4.11, Transportation, and 4.13, Utilities and Service Systems, of this EIR. The foregoing chapters discuss how adequate roadways, utilities, and other public service infrastructure are available to serve the proposed project or would be constructed as part of the proposed project. For example, the proposed project includes the construction of off-site water, sewer, and natural gas infrastructure to serve the project. In addition, at the time that the Notice of Preparation (NOP) for the proposed project was published, projects located outside of a High or Very High Fire Hazard Severity Zone (FHSZ) and/or a Wildlife Urban Interface (WUI) zone were not required to prepare a Fire Safe Plan; as such, a Fire Safe Plan has not been prepared for the proposed project. Nonetheless, as discussed in Chapter 4.14, Wildfire, of this EIR, the proposed project is located within a Moderate FHSZ and would not result in any significant impacts related to wildfire that cannot be mitigated.
Policy 2.2.3.3	Where an application to apply the -PD combining zone district also includes the request to rezone the base zone district(s), said rezone shall not occur where the land cannot support a higher density or intensity of land use due to infrastructure availability, physical and topographic constraints, or otherwise conform with Policy 2.2.5.3.	As discussed in Chapter 3, Project Description, of this EIR, the proposed project would require approval of a Rezone from RE-10 to RM, CC, and OS. Additionally, as required by the BLHSP, the Planned Development Combining District (-PD) suffix would be added to all the zoning district designations listed above. See response to General Plan Policy 2.1.1.7 regarding infrastructure availability. In addition, as discussed in Chapters

Appendix N:
El Dorado County General Plan and BLHSP Policy Discussion

Policy		Policy Consistency
		4.3, Biological Resources, and 4.5, Geology and Soils, of this EIR, the proposed project would not encounter physical or topographic constraints. See below for response to General Plan Policy 2.2.5.3.
Policy 2.2.5.2	All applications for discretionary projects or permits including, but not limited to, General Plan amendments, zoning boundary amendments, tentative maps for major and minor land divisions, and special use permits shall be reviewed to determine consistency with the policies of the General Plan. No approvals shall be granted unless a finding is made that the project or permit is consistent with the General Plan. In the case of General Plan amendments, such amendments can be rendered consistent with the General Plan by modifying or deleting the General Plan provisions, including both the land use map and any relevant textual policies, with which the proposed amendments would be inconsistent.	As discussed further in Chapter 3, Project Description, of this EIR, the proposed project would require several entitlements listed in this policy, including approval of a General Plan Amendment (related to a change in the Community Region boundary), Rezone and Tentative Subdivision Map. The proposed project also requires amendments to the BLHSP and approval of a Planned Development. As demonstrated in this table, the project would be generally consistent with the applicable policies outlined in the El Dorado County General Plan. As noted in Chapter 4.8 of this EIR, the conclusions expressed in this table reflect the best judgment of County staff and the County's consultant. The ultimate question of the meaning of particular General Plan policies, and thus, the proposed project's consistency with the policies, lies with the Board of Supervisors. It should be noted, however, that the language found in general plans is sometimes susceptible to varying interpretations, and reasonable minds may differ as to the meaning of specific policies and how to apply the policies to proposed projects. Case law interpreting the Planning and Zoning Law (Government Code, Section 65000 et seq.) makes it clear that: (i) the ultimate meaning of such policies is to be determined by the elected legislative body or a lower tier decision-making body, such as a planning commission, as opposed to County staff and EIR consultants, applicants, or members of the public; and (ii) the decision-making body's interpretations of such policies shall prevail in court (if challenged) if the interpretations are "reasonable," even though other reasonable interpretations are also possible.[1] Courts have also recognized that, because general plans often contain numerous policies adopted to address differing or competing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or is arguably inconsistent with some specific policies within a given general plan.[2] Furthermore, courts strive to "reconcile" or harmonize seemingly

[1] See *No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal.App.3d 223, 245-246, 249.
[2] *Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 719

Appendix N:
El Dorado County General Plan and BLHSP Policy Discussion

Policy		Policy Consistency
		disparate general plan policies to the extent reasonably possible (*No Oil, supra*, 196 Cal.App.3d at p. 244). Agencies should do the same. Some policies, in fact, may be irreconcilable. As the courts have said, "it is beyond cavil that no project could completely satisfy every policy stated in the [General Plan], and that state law does not impose such a requirement" (*Sequoyah, supra*, 23 Cal.App.4th 704, 719, citing *Greenebaum v. City of Los Angeles* [1984] 153 Cal.App.3d 391, 406-407 and 59 Ops.Cal.Atty.Gen. 129, 131 [1976]). "A general plan must try to accommodate a wide range of competing interests including those of developers, neighboring homeowners, prospective homebuyers, environmentalists, current and prospective business owners, jobseekers, taxpayers, and providers and recipients of all types of city-provided services and to present a clear and comprehensive set of principles to guide development decisions. Once a general plan is in place, it is the province of elected [county] officials to examine the specifics of a proposed project to determine whether it would be 'in harmony' with the policies stated in the plan" (*Sequoyah*, *supra*, 23 Cal.App.4th at pg. 719, citing *Greenebaum*, *supra*, 153 Cal.App.3d at pg. 406). Should the Board of Supervisors choose to approve the proposed project, the Board may rely on the analysis in this table as support for the conclusion that the project, which includes the proposed General Plan and BLHSP amendments, is consistent with the General Plan and BLHSP as amended. Certification of the Final EIR will be indicative of agreement with the conclusions in this Table.
Policy 2.2.5.3	The County shall evaluate future rezoning: (1) To be based on the General Plan's general direction as to minimum parcel size or maximum allowable density; and (2) To assess whether changes in conditions that would support a higher density or intensity zoning district. The specific criteria to be considered include, but are not limited to, the following:	The proposed project's environmental effects are discussed throughout this EIR, and thus, the EIR addresses the criteria included in General Plan Policy 2.2.5.3. For example, regarding criteria 1 and 2, a project-specific Water Supply Assessment (WSA) was prepared for the proposed project and adopted by the El Dorado Irrigation District (EID) Board, which determined that the proposed project would receive sufficient water supplies from EID during normal, dry, and multiple dry years. Regarding criterion 3, sewer demand for Project Buildout would equate to an average dry weather flow (ADWF) of approximately 114,530 gallons per

Appendix N:
El Dorado County General Plan and BLHSP Policy Discussion

Policy	Policy Consistency
1. Availability of an adequate public water source or an approved Capital Improvement Project to increase service for existing land use demands; 2. Availability and capacity of public treated water system; 3. Availability and capacity of public waste water treatment system; 4. Distance to and capacity of the serving elementary and high school; 5. Response time from nearest fire station handling structure fires; 6. Distance to nearest Community Region or Rural Center; 7. Erosion hazard; 8. Septic and leach field capability; 9. Groundwater capability to support wells; 10. Critical flora and fauna habitat areas; 11. Important timber production areas; 12. Important agricultural areas; 13. Important mineral resource areas; 14. Capacity of the transportation system serving the area; 15. Existing land use pattern; 16. Proximity to perennial water course; 17. Important historical/archeological sites; and 18. Seismic hazards and present of active faults. 19. Consistency with existing Conditions, Covenants, and Restrictions.	day (gpd), which can be accommodated by the El Dorado Hills (EDH) wastewater treatment plant's (WWTP) current permitted capacity of 4.0 million gallons per day (mgd) and a current ADWF of approximately 2.6 mgd. With respect to criterion 4, the project site is within the boundaries of the Blue Oak Elementary School, Camerado Springs Middle School, and Ponderosa High School attendance areas. According to the 2023-2024 enrollment projections, Blue Oak Elementary School would have over 300 available seats and Camerado Springs Middle School was anticipated to have sufficient capacity ranging from 458 to 516 available seats for new students through the projected years, which extended to the 2029-2030 school year. In addition, Ponderosa High School was anticipated to have over 600 available seats for students through the projected years, which extended to the 2028-2029 school year. Regarding criterion 5, the EDH Fire Department (EDHFD) Station 86 is located approximately 0.4-mile from the project and can respond to the project site within six minutes 90 percent of the time, which is within the Department's response time goal. Regarding criterion 6, the northern portion of the project site is located within the Community Region of the El Dorado County General Plan, and the southern portion of the site is located within the Rural Region. The proposed project would amend the existing Community Region's boundary to include the entire project site. Erosion hazards, as included in criterion 7, are discussed in Chapter 4.5, Geology and Soils, of this EIR, which concludes that implementation of Mitigation Measure 4.5-2 would reduce soil erosion impacts to a less-than-significant level. Regarding criterion 8, septic field capability is addressed in Chapter 4.13, Utilities and Service Systems, of this EIR, which concludes that the proposed 6.43-acre septic leach field for the cottage site and the 7.7-acre

Appendix N:
El Dorado County General Plan and BLHSP Policy Discussion

Policy	Policy Consistency
	septic leach field for the hotels, restaurants, retail, and convention center would not cause significant environmental effects. Regarding criterion 9, and as discussed under Impact 4.5-2 of this EIR, the EID does not currently pump groundwater, and the proposed project would not use wells. Criteria 10 and 16 are discussed in Chapter 4.3, Biological Resources, of this EIR. As discussed in Chapter 4.3, the proposed project's impacts on special-status species would be reduced through the mitigation measures included therein. In addition, critical habitat is not located on-site or within the off-site improvement areas. and the project site is not within proximity of a perennial water course. It should be noted that the proposed off-site sewer line would cross Carson Creek, a perennial watercourse to the west of the project site. However, as discussed under Impact 4.3-12, the creek would not be directly impacted, as the new sewer pipe would be hung over the creek channel. It should be noted that criteria 11, 12, and 13 are discussed in Chapter 4.15, Effects Not Found to be Significant, of this EIR, as such considerations are not applicable to the proposed project. Regarding criterion 14, roadway capacity and level of service (LOS) are not currently required to be evaluated under CEQA. As such, criterion 14 would not apply to the proposed project. Potential impacts to the existing transportation system in the area, excluding LOS, are discussed in Chapter 4.11, Transportation, of this EIR. Criterion 15 has been discussed throughout this EIR, as far as land use patterns and consistency with County regulations relate to environmental impacts. Regarding criterion 17, Chapter 4.4, Cultural Resources, and Chapter 4.12, Tribal Cultural Resources include mitigation measures to ensure impacts to significant historical and/or archaeological sites would not occur as part of the proposed project.

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Policy		Policy Consistency
		Regarding criterion 18, as discussed in Chapter 4.5, Geology and Soils, of this EIR, the project site is not underlain by any active faults and is not located within an Alquist-Priolo Fault Special Studies Zone. Regarding criterion 19, existing conditions, covenants, and restrictions applicable to the project site do not exist. Therefore, criterion 19 would not apply to the proposed project.
Policy 2.2.5.21	Development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in effect at the time the development project is proposed. Development projects that are potentially incompatible with existing adjoining uses shall be designed in a manner that avoids any incompatibility or shall be located on a different site.	The proposed project would be compatible with adjoining land uses currently permitted by the County. Surrounding land uses include undeveloped land and rural residences within the BLHSP to the north; rural residences and the EDHFD Station 86 to the west/northwest, across Bass Lake Road; undeveloped land and rural residences to the south, across U.S. Highway 50 (US 50); and undeveloped land to the east, with the Holy Trinity Parish and School located farther east. It should be noted that in recent years, multiple Tentative Subdivision Maps have been approved for properties within the BLHSP, north of the project site, which are undergoing development. Noise is often a compatibility concern for proximate land uses. With respect to the proposed project, the noise analysis referenced within Chapter 4.9 determined that a significant impact would occur related to the generation of a substantial permanent increase in ambient noise levels associated with full Project Buildout. Implementation of Mitigation Measure 4.9-3 would result in the identification of specific noise mitigation measures designed to reduce noise levels associated with operations of full Project Buildout, but the successful implementation of the identified measures cannot be guaranteed at this time. As such, the impact remains significant and unavoidable, even with mitigation. All other potentially significant impacts related to noise were determined to be less than significant or less than significant with the implementation of mitigation.
Policy 2.3.1.1	The County shall continue to enforce the tree protection provisions in the Grading Erosion and Sediment Control Ordinance and utilize the hillside road standards.	As discussed under Impact 4.5-2 in Chapter 4.5, Geology and Soils, of this EIR, Improvement Plans provided to the County prior to authorization of construction would be required to conform to applicable provisions of the County Grading, Erosion, and Sediment Ordinance (Chapter 110.14 of the El Dorado County Code), which would include those related to tree protection. In addition, the majority of on-site topography is comprised of

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El Dorado County General Plan and BLHSP Policy Discussion

Policy		Policy Consistency
		slopes less than 30 percent. Therefore, hillside road standards would not apply.
Policy 2.3.2.1	Disturbance of slopes thirty (30) percent or greater shall be discouraged to minimize the visual impacts of grading and vegetation removal.	The majority of the project site (approximately 95 percent of the overall site area) contains slopes of less than 30 percent. The steepest on-site slopes are located along the western project site boundary and south side of Country Club Drive, and are associated with road cut embankments along Bass Lake Road and Country Club Drive, respectively. In addition, there are limited incursions of slopes ranging between 29 and 39 percent, primarily associated with the on-site intermittent drainage, and to a lesser extent, small portions of Program Study Area. The steepest on-site areas would be located primarily within the proposed open space areas, and thus, would be minimally disturbed as compared to the remaining project areas. In addition, Mitigation Measure 4.5-3 of this EIR requires completion of a design-level geotechnical engineering report, and implementation of all recommendations therein, to address various topics related to geology and soils, including slope configuration and grading practices.
Policy 2.5.1.1	Low intensity land uses shall be incorporated into new development projects to provide for the physical and visual separation of communities. Low intensity land uses may include any one or a combination of the following: parks and natural open space areas, special setbacks, parkways, landscaped roadway buffers, natural landscape features, and transitional development densities.	As discussed in Chapter 3, Project Description, of this EIR, the proposed project incorporates 7.6 acres of open space, landscaping improvements along roadway frontages, and natural landscape features. Open space areas would be located within the northern portion of the project site, partially along the Country Club Drive frontage, and along the Bass Lake Road project frontage to the west. The on-site open space areas would help transition the area toward the project's greater development densities, as compared to the existing BLHSP area. Of note, however, is the intent for the proposed project to be part of the BLHSP community, not separate from it. Thus, rather than focusing on how the project could be separated from the surrounding community through incorporation of low intensity land uses, the focus is appropriately on how the project can be integrated into the existing BLHSP community, with attention given to incorporation of open space and landscaping along prominent roadways to soften the transition to the central portion of the site where the project's land uses would be most intense.
Policy 2.6.1.2	Until such time as the Scenic Corridor Ordinance is adopted, the County shall review all projects within designated State Scenic Highway corridors for compliance with State criteria.	As discussed in Chapter 4.1, Aesthetics, of this EIR, the project site is not located within a designated State scenic highway corridor associated with an adopted Scenic Corridor Ordinance or associated with specific

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Policy		Policy Consistency
		development standards and is not located within the proximity of a designated State scenic highway.
Policy 2.6.1.3	Discretionary projects reviewed prior to the adoption of the Scenic Corridor Ordinance, that would be visible from any of the important public scenic viewpoints identified in Table 5.3-1 and Exhibit 5.3-1 of the El Dorado County General Plan Draft Environmental Impact Report, shall be subject to design review, and Policies 2.6.1.4, 2.6.1.5, and 2.6.1.6 shall be applicable to such projects until scenic corridors have been established.	The important public scenic viewpoints identified in Table 5.3-1 and Exhibit 5.3-1 of the General Plan EIR located nearest to the project site are the view of Marble Valley looking south from US 50 and the view of the Sacramento Valley looking west from US 50. The project site is not visible from any of the important public scenic viewpoints identified in Table 5.3-1 and Exhibit 5.3-1 of the General Plan EIR. It should be noted that because the project site is not visible from any of the important public scenic viewpoints identified in Table 5.3-1 of the General Plan EIR, Policies 2.6.1.4, 2.6.1.5, and 2.6.1.6 are not applicable to the proposed project, and are not discussed further in this Table.
Policy 2.8.1.1	Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light.	As discussed in Chapter 4.1, Aesthetics, of this EIR, the proposed project would be designed in compliance with the standards established in Chapter 130.34, Outdoor Lighting, of the El Dorado County Code, which requires that all outdoor lighting be located, adequately shielded, and directed such that direct light does not fall outside of the property line or into the public right-of-way.
Circulation Element		
Policy TC-1q	The County shall utilize road construction methods that seek to reduce air, water, and noise pollution associated with road and highway development.	Potential construction-related air quality, water quality, and noise impacts are discussed in Chapter 4.2, Air Quality, GHG Emissions, and Energy, Chapter 4.7, Hydrology and Water Quality, and Chapter 4.9, Noise, of this EIR, respectively. As discussed in each of the respective chapters, the proposed project would comply with El Dorado County Air Quality Management District rules and regulations, including rules related to fugitive dust and visible emissions; the National Pollutant Discharge Elimination System stormwater discharge permit and all provisions of said permit, including preparation of a Stormwater Pollution Prevention Plan, and any associated regulations or ordinances; and standard construction noise best management practices (BMPs) required by the County as conditions of approval (COAs).

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Policy		Policy Consistency
Policy TC-3c	The County shall encourage new development within Community Regions and Rural Centers to provide appropriate on-site facilities that encourage employees to use alternative transportation modes. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.	As discussed further in Chapter 3, Project Description, of this EIR, the proposed project would include on-site housing reserved for employees, which would encourage the use of alternative commute methods (i.e., walking or biking to work). In addition, the proposed project would include the provision of several on- and off-site bicycle and pedestrian system improvements to further encourage the use of alternative transportation modes. It should also be noted that the proposed hotel would provide low emission vehicles, such as shuttle vans and buses, to transport guests to events, and, as required by Mitigation Measure 4.2-7(a), the proposed project would be required to include electric vehicle (EV) ready parking spaces at the ratio with which the current CalGreen Tier 2 standards require EV Capable spaces.
Policy TC-4b	The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists.	The proposed project would expand the Class 1 bike path system in the project area by extending the Old Country Club Class 1 bike path north into the site along the historic Clarksville Toll Road alignment. In addition, a Class 1 bike path bridge crossing would be constructed across Bass Lake Road to connect to a BLHSP planned Class 1 bike path on the west side of Bass Lake Road. All proposed bicycle system improvements would be constructed in accordance with County standards, which would ensure that conflicts between bicyclists and motorists are minimized.
Policy TC-4e	The County shall require that rights-of-way or easements be provided for bikeways or trails designated in adopted master plans, as a condition of land development when necessary to mitigate project impacts.	See response to General Plan Policy TC-4b, above.
Policy TC-4g	The County shall support development of facilities that help link bicycling with other modes of transportation.	See response to General Plan Policy TC-4b, above.
Policy TC-4i	Within Community Regions and Rural Centers, all development shall include pedestrian/bike paths connecting to adjacent development and to schools, parks, commercial areas and other facilities where feasible. In Rural Regions, pedestrian/bike paths shall be considered as appropriate.	See response to General Plan Policy TC-4b, above.
Housing Element		
Policy HO-5.1	The County shall require all new dwelling units to meet current state requirements for energy efficiency and shall encourage the retrofitting of existing units.	As discussed under Impact 4.2-5 of this EIR, development associated with the proposed project is required to comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, including the California Building Standards Commission (CBSC) and California Air

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		Resources Board (CARB) standards, which would ensure that the proposed and future uses would be designed to be energy efficient to the maximum extent practicable. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed development would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. In addition, the 2022 CBSC has begun phasing in the provision of zero net energy by requiring residential projects to meet the annual electricity usage of the building through an on-site solar system. The 2022 Building Energy Efficiency Standards also require that newly constructed non-residential buildings, including grocery stores, offices, financial institutions, unleased tenant space, retail space, schools, warehouses, auditoriums, convention centers, hotel/motels, libraries, medical office building/clinics, and theaters, be developed to include a solar PV system. Therefore, a portion of the electricity demand associated with development of the proposed project would be met by on-site renewable energy.
Policy HO-5.2	New land use development standards and review processes should encourage energy and water efficiency, to the extent feasible.	See response to General Plan Policy HO-5.1, above. With regard to water efficiency the CALGreen 2022 standards require a mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' (DWR's) Model Water Efficient Landscape Ordinance (MWELO). Further, as indicated by the project applicant, the proposed project would result in a 30 percent reduction in indoor water use and a 50 percent reduction in outdoor water use as compared to current water conservation requirements.
Public Services and Utilities Element		
Policy 5.1.2.1	Prior to the approval of any discretionary development, the approving authority shall make a determination of the adequacy of the public services and utilities to be impacted by that development. Where, according to the purveyor responsible for the service or utility as provided in Table 5-1, demand is determined to exceed capacity, the approval of the development shall be conditioned to require expansion of the impacted facility or service to be available concurrent with the demand, mitigated, or a finding made	As discussed in Chapter 4.13, Utilities and Service Systems, of this EIR, and based on the WSA prepared for the proposed project, EID would have sufficient water supplies under normal, dry, and multiple dry year conditions to serve the proposed project. In addition, the additional wastewater flow from the proposed project to the public sewer system would be within the current capacity of the WWTP. The solid waste facilities would experience a small increase from the project and would not consume a substantial proportion of the available permitted capacity and would not trigger the need to expand the Potrero Hills Landfill.

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	that a CIP project is funded and authorized which will increase service capacity.	In order to receive water service and public sewer service from EID, the project site would need to be annexed into the EID service area, subject to El Dorado Local Agency Formation Commission (LAFCo) approval. The approving authorities listed within Table 5-1 (see Table 4.13-5 of this EIR) would ultimately determine the adequacy of the public services and utilities impacted by the proposed project. The proposed project would be required to comply with any conditions to require expansion of the impacted facility or service to be available.
Policy 5.1.2.2	Provision of public services to new discretionary development shall not result in a reduction of service below minimum established standards to current users, pursuant to Table 5-1. The following Levels of Service [in Table 5-1 of the El Dorado County General Plan] shall apply to the review of discretionary projects.	Acceptable service ratios, response times, and other performance objectives for public services are discussed in Chapter 4.10, Public Services and Recreation, of this EIR. As discussed therein, the proposed project would not result in a reduction of service below applicable standards.
Policy 5.1.2.3	New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. Lack of available public or private services or adequate infrastructure to serve the project which cannot be satisfactorily mitigated shall be grounds for denial of any project or cause for the reduction of size, density, and/or intensity otherwise indicated on the General Plan land use map to the extent allowed by State law.	The proposed project would pay fair share fees, which would help fund the upsizing of wastewater infrastructure through EID's Facility Capacity Charges. Additionally, as discussed in both Chapter 4.10, Public Services and Recreation, and Chapter 4.13, Utilities and Service Systems, of this EIR, adequate public services and utility infrastructure is either available to serve the proposed project or will be constructed by the project.
Policy 5.1.3.1	Growth and development and public facility expenditures shall be primarily directed to Community Regions and Rural Centers.	Following approval of the requested General Plan Amendment, the entirety of the project site would be located within the Community Region.
Policy 5.2.1.2	An adequate quantity and quality of water for all uses, including fire protection, shall be provided for with discretionary development.	As discussed under Impact 4.13-2, EID has sufficient permanent and reliable water supply to meet the anticipated water demands of the proposed project.
Policy 5.2.1.3	All medium-density residential, high-density residential, multifamily residential, commercial, industrial and research and development projects shall be required to connect to public water systems when located within Community Regions and to either a public water system or to an approved private water systems in Rural Centers.	As discussed under Impact 4.13-1, the proposed project would connect to EID's existing public water system.

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Policy 5.2.1.4	Rezoning and subdivision approvals in Community Regions or other areas dependent on public water supply shall be subject to the availability of a permanent and reliable water supply.	See response to General Plan Policy 5.2.1.2 above.
Policy 5.2.1.5	Approval of development projects requiring annexations to water districts in Rural Regions may only occur if groundwater sources are not available to serve, or are unable to continue serving, the development, or if existing infrastructure abuts the property and sufficient water is available to serve the annexed area.	The proposed project would require annexation of the project site into the EID El Dorado Hills (EDH) water service region. As discussed in Chapter 4.7, Hydrology and Water Quality, the EID's EDH region obtains water supplies under rights and entitlements from Folsom Reservoir rather than from groundwater sources. Additionally, see responses to Policies 5.2.1.3 and 5.2.1.2.
Policy 5.2.1.9	In an area served by a public water purveyor or an approved private water system, the applicant for a tentative map or for a building permit on a parcel that has not previously complied with this requirement must provide a Water Supply Assessment that contains the information that would be required if a water supply assessment were prepared pursuant to Water Code section 10910. In order to approve the tentative map or building permit for which the assessment was prepared the County must (a) find that by the time the first grading or building permit is issued in connection with the approval, the water supply from existing water supply facilities will be adequate to meet the highest projected demand associated with the approval on the lands in question; and (b) require that before the first grading permit or building permit is issued in connection with the approval, the applicant will have received a sufficient water meters or a comparable supply guarantee to provide adequate water supply to meet the projected demand associated with the entire approval. A water supply is adequate if the total entitled water supplies available during normal, single, dry, and multiple dry years within a 20-year projection will meet the highest projected demand associated with the approval, in addition to existing and 20-year projected future uses within the area served by the water supplier, including but not limited to, fire protection, agricultural, and industrial uses, 95% of the time, with	A WSA was prepared for the proposed project and adopted by EID's Board of Supervisors on October 10, 2023. As discussed under Impact 4.13-2, according to the WSA, EID has sufficient permanent and reliable water supply to meet the anticipated water demands of the proposed project during normal, single dry, and multiple dry years.

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	cutbacks calculated not to exceed 20% in the remaining 5% of the time.	
Policy 5.2.1.11	The County shall direct new development to areas where public water service already exists. In Community Regions, all new development shall connect to a public water system. In Rural Centers, all new development shall connect either to a public water system or to an approved private water system.	The proposed project would connect to an existing public water line located in Bass Lake Road, approximately 2,000 feet north of the project site. The project would fund and construct the extension of the existing water line to the project site.
Policy 5.3.1.1	High-density and multifamily residential, commercial, and industrial projects shall be required to connect to public wastewater collection facilities as a condition of approval except in Rural Centers and areas designated as Platted Lands (-PL). In the Community Region of Camino/Pollock Pines, the long term development of public sewer service shall be encouraged; however, development projects will not be required to connect to wastewater collection facilities where such connection is infeasible, based on the scale of the project. (Res. No. 298-98; 12/8/98)	As discussed under Impact 4.13-1, two options are evaluated in this EIR to provide sewer service to the project site: construction of an on-site septic sewer system, and a connection to the public sewer system through construction of an off-site sewer pipeline. The Project Development Area could initially include development of an on-site septic system, and connect to the public sewer system at a later date when future development within the Program Study Area commences. On-site septic would not be feasible for full project buildout due to the scale of the project. It should be noted that the applicant may choose to pursue the public sewer connection earlier in the project timeline, at which point the septic system would be abandoned prior to future development within the Program Study Area in accordance with standard El Dorado County procedures.
Policy 5.3.1.7	In Community Regions, all new development shall connect to public wastewater treatment facilities. In Community Regions where public wastewater collection facilities do not exist project applicants must demonstrate that the proposed wastewater disposal system can accommodate the highest possible demand of the project.	See response to General Plan Policy 5.3.1.1 above. With respect to the wastewater disposal system, Impact 4.13-3 includes Table 4.13-18, which displays sewer demands for full Project Buildout. As shown therein, the El Dorado Hills WWTP has adequate capacity to accommodate the full sewer generation from the proposed project.
Policy 5.4.1.1	Require storm drainage systems for discretionary development that protect public health and safety, preserve natural resources, prevent erosion of adjacent and downstream lands, prevent the increase in potential for flood hazard or damage on either adjacent, upstream or downstream properties, minimize impacts to existing facilities, meet the National Pollution Discharge Elimination System (NPDES) requirements, and preserve natural resources such as wetlands and riparian areas.	As discussed in Chapter 4.7, Hydrology and Water Quality, of this EIR, implementation of Mitigation Measures 4.7-2(a) through 4.7-2(e) would ensure that the proposed on-site storm drain system would meet the NPDES requirements, thereby preventing erosion, increased flood hazards, or harm to natural resources.

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Policy 5.4.1.2	Discretionary development shall protect natural drainage patterns, minimize erosion, and ensure existing facilities are not adversely impacted while retaining the aesthetic qualities of the drainage way.	As discussed under Impact 4.7-4, and shown in Table 4.7-2 of the EIR, the proposed project would not increase the rate of runoff leaving the project site during the design storm event. As such, the proposed project would not substantially alter the existing drainage patterns of the site. The proposed project would also be required to submit a Final Drainage Report for review and approval by the El Dorado County Planning and Building Department and the County Engineer, in compliance with Mitigation Measure 4.7-2(a). In addition, as discussed in Chapter 4.5, Geology and Soils, Mitigation Measure 4.5-2 would require the contractor to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), which would ensure the proposed project does not result in substantial soil erosion.
Policy 5.5.2.1	Concurrent with the approval of new development, evidence will be required that capacity exists within the solid waste system for the processing, recycling, transformation, and disposal of solid waste.	As discussed under Impact 4.13-4, the Potrero Hills landfill has sufficient capacity to serve the proposed project.
Policy 5.6.2.1	Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.	See response to General Plan Policy HO-5.2.
Policy 5.6.2.2	All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.	See response to General Plan Policy HO-5.1.
Policy 5.7.1.1	Prior to approval of new development, the applicant will be required to demonstrate that adequate emergency water supply, storage, conveyance facilities, and access for fire protection either are or will be provided concurrent with development.	As discussed in Chapter 4.10, Public Services and Recreation, of this EIR, all proposed structures would be constructed consistent with the California Building Code (CBC) and California Fire Code (CFC). As such, all buildings would include the installation and use of automatic fire sprinklers. Fire flow for the proposed project would be provided by the proposed on-site water system. As discussed under Impact 4.13-2 of this EIR, EID has sufficient water supply to meet the anticipated water demands of the proposed project. In addition, the State Minimum Fire Safe Regulations include regulations pertaining to the provision of basic emergency access. As previously discussed, the proposed project would include three emergency access connections to the project site, which would provide adequate access to the EDHFD. It should be noted that the closest EDHFD station is located approximately 0.4-mile northwest of the project site. As discussed under

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		Impact 4.10-1, the EDHFD would provide adequate fire protection services to the proposed project.
Policy 5.7.2.1	Prior to approval of new development, the responsible fire protection district shall be requested to review all applications to determine the ability of the district to provide protection services. The ability to provide fire protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.	See Response to General Plan Policy 5.7.1.1 above.
Policy 5.7.3.1	Prior to approval of new development, the Sheriff's Department shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional equipment, facilities, and adequate access may be incorporated as conditions of approval.	As discussed in Chapter 4.10, Public Services and Recreation, of this EIR, the El Dorado County Sheriff's Office (EDCSO) has reviewed the proposed project. Pursuant to EDCSO's response, response times to the project site would be adequate, and the proposed project would not require expansion of existing or construction of new Sheriff facilities.
Policy 5.7.4.1	Prior to approval of new development, the applicant shall be required to demonstrate that adequate medical emergency services are available and that adequate emergency vehicle access will be provided concurrent with development.	As previously discussed, the proposed project would include three emergency access connections designed in compliance with Section 130.30.090 of the El Dorado County Code, which would ensure sufficient emergency access to the project site. EDHFD would provide emergency medical services to the project site. As discussed in Chapter 4.10, Public Services and Recreation, response times to the project site from the EDHFD Station 86 would be adequate.
Policy 5.7.4.2	Prior to approval of new development, the Emergency Medical Services Agency shall be requested to review all applications to determine the ability of the department to provide protection services. The ability to provide protection to existing development shall not be reduced below acceptable levels as a consequence of new development. Recommendations such as the need for additional	See response to General Plan Policy 5.7.4.1, above.

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	equipment, facilities, and adequate access may be incorporated as conditions of approval.	
Policy 5.8.1.1	School districts affected by a proposed development shall be relied on to evaluate the development's adverse impacts on school facilities or the demand therefore. No development that will result in such impacts shall be approved unless: 1. To the extent allowed by State law, the applicant and the appropriate school district(s) have entered into a written agreement regarding the mitigation of impacts to school facilities; or 2. The impacts to school facilities resulting from the development are mitigated, through conditions of approval, to the greatest extent allowed by State law.	As discussed in Chapter 4.10, Public Services and Recreation, of this EIR, the El Dorado Union High School District (EDUHSD) and Buckeye Union School District (BUSD) anticipate over 300 available seats for Blue Oak Elementary School, a range of 458 to 516 available seats for Camerado Springs Middle School, and over 600 available seats for Ponderosa High School, and could therefore accommodate any new students generated by the proposed project. In addition, all construction associated with the proposed project would be required to pay all applicable fees upon issuance of a building permit, which are deemed to be full and complete mitigation of the impact for the planning, use, development, or provision of adequate school facilities, pursuant to Government Code Section 65995(h).
Policy 5.8.2.2	The affected school district shall be relied upon to review development applications to determine the ability of the district to serve the new development. The level of educational services shall not be reduced below acceptable levels as a consequence of new development to the extent permitted by State law.	See response to General Plan Policy 5.8.1.1 above.
	Public Health, Safety, and Noise Element	
Policy 6.2.1.3	Require all existing and new residential development in State Responsibility Areas (SRAs) and/or very high Fire Hazard Severity Zones (VHFHSZs) to enforce fire-resistant landscaping and defensible space requirements that meet or exceed Title 14, Code of California Regulations (CCR), Division 1.5, Chapter 7, Subchapter 2, Articles 1-5 (commencing with Section 1270) (State Minimum Fire Safe regulations) and Subchapter 3, Article 3 (commencing with Section 1299.01) (Fire Hazard Reduction around Buildings and Structures Regulations). Adequate compliance with these requirements shall be determined by the local Fire Protection Districts (FPDs) or other local fire agencies, as appropriate.	Although the project site is not located within a Very High FHSZ, the site is located within a SRA. As discussed in Chapter 4.14, Wildfire, of this EIR, the proposed project would be required to comply with all applicable California Health and Safety Codes and local ordinances related to preventing fire hazards. As such, the proposed project would be consistent with EDHFD standards.

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Policy 6.2.1.4	Require consistency with fire code and development standards that ensure adequate defensible space clearance around all existing and new structures in compliance with the California Fire Code, Public Resources Code Section 4291 (ember-resistant zone), Government Code Section 51175-51188, CCR Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299.03, and in the County Code of Ordinances Chapter 8.09.	See response to General Plan Policy 6.2.1.3 above.
Policy 6.2.2.1	FHSZ Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.	According to the California Department of Forestry and Fire Resources Fire Hazard Severity Zone Viewer, the project site is located within a Moderate FHSZ. As such, the proposed project would not conflict with General Plan Policy 6.2.2.1.
Policy 6.2.2.2	The County shall preclude development, including public facilities and essential services (see definition in the Background Information Report in Appendix B) in areas of high and very high wildland fire hazard or in areas identified as wildland-urban interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local FPD having jurisdiction and/or CAL FIRE. (Resolution 124- 2019, August 6, 2019)	As discussed in Chapter 4.14, Wildfire, of this EIR, the project site is located in a Moderate FHSZ, and is not located within a WUI. Therefore, the proposed project would not be required to prepare WUI Fire Safe Plan.
Policy 6.2.3.1	As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible FPD that, concurrent with development, adequate emergency and peak load water supply, water flow, fire access, and firefighting personnel and equipment will be available in accordance with applicable State and local fire district standards to support fire suppression efforts.	See response to General Plan Policy 5.7.1.1.

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Policy 6.2.3.2	As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.	See response to General Plan Policy 5.7.4.1.
Policy 6.2.3.4	All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.	As discussed throughout Chapter 4.14, Wildfire, of this EIR, the proposed project is located within a Moderate FHSZ, and to the extent applicable, would be required to comply with all applicable federal, State, and local fire requirements. Therefore, the proposed project would be consistent with General Plan Policy 6.2.3.4.
Policy 6.2.3.6	All new development within an SRA or very high (VHFHSZs) shall prepare a Fire Protection Plan that complies with established fire safety standards. Ingress and egress to the new development will be constructed utilizing the most current State Fire Safe Regulations, Fire Code, and/or County Code that meets these minimum requirements. Key components of a Fire Protection Plan include: 1. risk analysis; 2. fire response capabilities; 3. fire safety requirements – defensible space, infrastructure, and building ignition resistance; 4. mitigation measures and design considerations for non-conforming fuel modification; 5. wildfire education, maintenance, and limitations; and 6. evacuation planning. Community fire breaks and discussion of how those fire breaks will be maintained. Existing development within an SRA or VHFHSZ can meet these requirements through retro-fitting and home hardening.	The NOP for the proposed project was published prior to the adoption of the County's updated Safety Element, which includes new General Plan Policy 6.2.3.6. Because the project site is not located within a High or Very High FHSZ, the County determined that a Fire Protection Plan was not required for the proposed project. Furthermore, as discussed throughout Chapter 4.14, Wildfire, of this EIR, a significant impact related to wildfire that cannot be mitigated to a less-than-significant level would not occur.
Policy 6.2.4.3	Require fuel modification around homes and subdivision developments in SRAs or VHFHSZs by assisting the local FPDs and other local fire agencies.	Mitigation Measure 4.14-2 of this EIR requires the preparation and implementation of a Vegetation Management Plan (VMP) for the proposed project, subject to review and approval by CAL FIRE and the EDHFD.
Policy 6.3.1.1	The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit	As discussed within the Air Quality, Greenhouse Gas Emissions, and Energy chapter of this EIR (Chapter 4.2), according to the California

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	that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) comply with the Air Quality Management District (AQMD) Rules 223, 223-1 and 223-2 requirements. The Department of Transportation and the County Air Quality Management District shall consider the requirement of posting a warning sign at the work site in areas likely to contain naturally occurring asbestos based on the mapping developed by the DOC.	Geological Survey (CGS) El Dorado County Naturally Occurring Asbestos (NOA) Review Map, the majority of the project site is not in a NOA review zone; however, the southeast corner of the site has been identified as being located within a quarter-mile buffer for areas more likely to contain asbestos (see Figure 4.2-1 of this EIR). As such, Mitigation Measure 4.2-3 of this EIR requires that prior to the approval of improvement plans, a qualified geologist or geotechnical engineer be retained to conduct additional geologic evaluations of the portion of the site located within an El Dorado County review area for NOA to determine the presence or absence of NOA. In the event that NOA is located on-site, Mitigation Measure 4.2-3 also requires that an Asbestos Dust Mitigation Plan be prepared and submitted to the El Dorado County Air Quality Management District (EDCAQMD) and the El Dorado County Planning and Building Department for review and approval. The Asbestos Dust Mitigation Plan would be required to comply with the El Dorado County Code Section 8.44.030(B), which provides performance standards for ensuring that adverse impacts do not result from asbestos dust during construction. The plan is also required to address compliance with EDCAQMD Rule 223-2, Fugitive Dust – Asbestos Hazard Mitigation, and the CARB's Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.
Policy 6.3.1.4	Enforce the California Uniform Building Code and general building design and construction requirements related to life safety to address seismic risks associated with ground shaking.	As discussed further in Chapter 4.5, Geology and Soils, of this EIR, the CBSC includes building standards adapted from national codes to meet California conditions and contains provisions to safeguard against major structural failures or loss of life caused by geologic hazards. The proposed project would be subject to the CBSC. In addition, as discussed under Impact 4.5-1, the proposed project would not expose people or structures to the risk of loss, injury, or death involving strong ground shaking.
Policy 6.3.2.4	Applications for development of habitable structures shall be reviewed for potential hazards associated with steep or unstable slopes, areas susceptible to high erosion, and avalanche risk. Geotechnical studies shall be required when development may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project will not be approved.	Chapter 4.5, Geology and Soils, of this EIR evaluates the extent to which implementation of the proposed project could be affected by unstable earth conditions and various geologic and geomorphic hazards, including, but not limited to expansive soils, landslide, lateral spreading, liquefaction, subsidence/settlement, and collapse. A Preliminary Geotechnical Engineering Report was prepared by Youngdahl Consulting Group for the proposed project. As required by Mitigation Measure 4.5-3, prior to final design approval and issuance of building permits for the proposed project, the project applicant will submit a design-level geotechnical engineering

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		report produced by a California Registered Civil Engineer or Geotechnical Engineer to the El Dorado County Planning and Building Department, for review and approval. The report will include the geotechnical recommendations specified in the Preliminary Geotechnical Engineering Study prepared for the proposed project, unless it is determined in the design-level report that one or more recommendations need to be revised.
Policy 6.5.1.1	Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table HS-3 or the performance standards of Table HS-4, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.	An Environmental Noise & Vibration Assessment (Noise Assessment) was prepared for the proposed project by Bollard Acoustical Consultants, Inc. (BAC) (see Appendix K of this EIR), and included an analysis of future interior and exterior traffic noise levels at the project site. This, however, is an analysis that is outside the scope of CEQA, which is focused on the project's effects to the surrounding environment.
Policy 6.5.1.2	Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table HS-4 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.	A Noise Assessment was prepared for the proposed project by BAC (see Appendix K of this EIR), which included an analysis of noise levels generated by the proposed project. Results of the analysis are presented in Chapter 4.9, Noise, of this EIR.
Policy 6.5.1.3	Where noise mitigation measures are required to achieve the standards of Table HS-3 and Table HS-4, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings	As discussed in Chapter 4.9, Noise, of this EIR, project operational noise would exceed the applicable El Dorado County noise level criteria. Mitigation Measures 4.9-2(a), 4.9-2(b), and 4.9-3 would be required to reduce operational noise generated by the proposed project through restrictions on on-site truck circulation during nighttime hours, and the preparation of design level acoustical analyses for the Project Development Area and Program Study Area, which would be required to include design and operational measures to reduce noise levels, such as shielding and setbacks, event sound system configurations, and outdoor event restrictions.
Policy 6.5.1.6	New noise-sensitive uses shall not be allowed where the noise level, due to non-transportation noise sources, will exceed the noise level standards of Table HS-4 unless effective noise mitigation measures have been incorporated into the development design to achieve those standards.	As discussed in Chapter 4.9, Noise, of this EIR, the existing ambient noise environment in the vicinity of the project site does not exceed the noise level standards.

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Policy 6.5.1.7	Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table HS-4 for noise-sensitive uses.	Mitigation Measures 4.9-2(a), 4.9-2(b), and 4.9-3 would reduce new non-transportation noise sources associated with the proposed project. As discussed in Chapter 4.9, with implementation of Mitigation Measures 4.9-2(a) and 4.9-2(b), operational noise associated with the Project Development Area would be reduced to a less-than-significant level. However, depending on the site design associated with future development applications within the Program Study Area, implementation of the measures included in Mitigation Measure 4.9-3, should they be warranted, may not fully mitigate combined noise level exposure from on-site operations associated with full Project Buildout to a state of compliance with applicable El Dorado County noise level criteria at nearby existing sensitive uses. Due to the identified uncertainties, the impact was conservatively determined to remain significant and unavoidable.
Policy 6.5.1.8	New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table HS-3 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table HS-3.	See response to General Plan Policy 6.5.1.1.
Policy 6.5.1.9	Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table HS-3 at existing noise-sensitive land uses.	As discussed under Impact 4.9-2 of this EIR, transportation noise sources associated with the proposed project would not exceed the levels specified in General Plan Table 6-1 at existing noise-sensitive uses.
Policy 6.5.1.11	The standards outlined in Table HS-5, Table HS-6, and Table HS-7 shall apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally- recognized holidays. Further, the standards outlined in Tables HS-5, HS-6, and HS-7 shall not apply to public projects to alleviate traffic congestion and safety hazards.	As discussed under Impact 4.9-1 of this EIR, the County would require various conditions of project approval to ensure consistency with the El Dorado County Noise Standards, including all on-site noise-generating construction activities to be limited to between the hours of 7:00 AM to 7:00 PM, Monday through Friday, and 8:00 AM to 5:00 PM on weekends and federally recognized holidays.

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Policy 6.5.1.12	When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration. A. Where existing or projected future traffic noise levels are less than 60 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 5 dBA Ldn caused by a new transportation noise source will be considered significant; B. Where existing or projected future traffic noise levels range between 60 and 65 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 3 dBA Ldn caused by a new transportation noise source will be considered significant; and C. Where existing or projected future traffic noise levels are greater than 65 dBA Ldn at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA Ldn caused by a new transportation noise will be considered significant.	The Noise Assessment prepared for the proposed project analyzed traffic noise impacts in relation to the significance criteria included in General Plan Policy 6.5.1.12. As discussed in Chapter 4.9, Noise, the proposed project would not conflict with General Plan Policy 6.5.1.12.
Policy 6.5.1.13	When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration: A. In areas in which ambient noise levels are in accordance with the standards in Table HS-3, increases in ambient noise levels caused by new non transportation noise sources that exceed 5 dBA shall be considered significant; and B. In areas in which ambient noise levels are not in accordance with the standards in Table HS-3, increases in ambient noise levels caused by	The Noise Assessment prepared for the proposed project analyzed operational noise impacts in relation to the increase significance criteria included in General Plan Policy 6.5.1.13. As discussed in Chapter 4.9, Noise, the proposed project would not conflict with General Plan Policy 6.5.1.13.

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	new nontransportation noise sources that exceed 3 dBA shall be considered significant.	
Policy 6.6.1.2	Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit.	As discussed in Chapter 4.6, Hazards and Hazardous Materials, of this EIR, a Phase I Environmental Site Assessment (ESA) was conducted for the project site. The Phase I ESA evaluated the project site for known or suspected contamination and none was detected. Mitigation Measure 4.6-2(a) requires preparation of a Phase I ESA for the off-site improvement areas and would include recommendations for remediation to be incorporated into the proposed project, as necessary. The off-site Phase I ESA would be submitted to the County for review and approval prior to issuance of a grading permit.
Policy 6.7.1.1	Improve air quality through land use planning decisions.	As discussed throughout this EIR, the proposed project is a mixed-use development consisting of two hotels, retail services, two restaurants, a museum, an event center, associated parking, 56 residential cottages for employee housing, and an additional 56 residential cottages within the Project Development Area, as well as future development of additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the proposed zoning districts within the Program Study Area. High density mixed-use development helps to reduce air quality emissions and greenhouse gases (GHGs) from on-road vehicles, and promotes sustainability, which helps the region overall to attain health-based ambient air quality standards and to meet local, State, and federal climate protection goals. In addition, the proposed project would be required to comply with all federal, State, and local regulations related to air quality and GHG emissions, such as the EDCAQMD rules and regulations, the 2022 CBSC, 2022 Building Energy Efficiency Standards, and CARB standards. Furthermore, the proposed project would be required to comply with the Mitigation Measures included herein, such as Mitigation Measure 4.2-2(a), which requires reactive organic gases (ROG) reduction measures be implemented as part of Program Study Area development; Mitigation

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		Measure 4.11-3, as set forth in the Transportation chapter of this EIR, which requires implementation of California Air Pollution Officers Association (CAPCOA) measures to reduce the number of vehicle trips that would be generated by the residential component of the Program Study Area, which would further reduce the proposed project's operational mobile source emissions; Mitigation Measure 4.2-3, related to compliance with all applicable EDCAQMD and CARB requirements regarding NOA; Mitigation Measure 4.2-7(a), which includes restrictions regarding the use of natural gas on-site and requires project compliance with the CalGreen Tier 2 EV standards; and Mitigation Measure 4.2-7(b), which requires GHG reduction measures to be implemented during construction of the Program Study area. Implementation of the aforementioned requirements would ensure that emissions associated with the proposed project would be reduced to the maximum extent feasible.
Policy 6.7.2.2	Encourage, both through County policy and discretionary project review, the use of staggered work schedules, flexible work hours, compressed work weeks, teleconferencing, telecommuting, and carpool/van pool matching as ways to reduce peak-hour vehicle trips.	As discussed in Chapter 4.11, Transportation, of this EIR, the proposed project would include on-site housing reserved for employees, which would encourage the use of alternative commute methods (i.e., walking or biking to work). In addition, several measures to reduce vehicle miles traveled (VMT), as required by CAPCOA, are already inherently included as part of project design. Mitigation Measure 4.11-3, which requires implementation of additional CAPCOA measures, such as unbundling of parking costs from rent, and reducing the total parking supply available at the project site, would further help to reduce peak-hour vehicle trips.
Policy 6.7.2.5	Upon reviewing projects, the County shall support and encourage the use of, and facilities for, alternative-fuel vehicles to the extent feasible. The County shall develop language to be included in County contract procedures to give preference to contractors that utilize low-emission heavy-duty vehicles	As discussed in Chapter 4.2, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, as of 2015, vehicles with Tier 0 and Tier 1 engines are prohibited from being added to equipment fleets. Fleets with a total horsepower over 2,501, excluding non-profit training centers, may not add any Tier 2 engines and, starting January 1, 2024, all newly added engines must be Tier 4 final or higher. The In-Use Off-Road Diesel Vehicle Regulation would, therefore, help to improve fuel efficiency for equipment used in construction of the proposed project. In addition, with regard to alternative-fueled vehicle use during operations, Mitigation Measure 4.2-7(a) would require that EV Ready parking spaces be provided within the project site at the ratio with which the current CalGreen Tier 2 standards require EV Capable spaces. The provision of

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		on-site EV Ready parking spaces would encourage the use of alternative-fueled vehicles associated with the proposed project.
Policy 6.7.4.1	Reduce automobile dependency by permitting mixed land use patterns which locate services such as banks, childcare facilities, schools, shopping centers, and restaurants in close proximity to employment centers and residential neighborhoods.	As discussed further in Chapter 3, Project Description, of this EIR, the proposed project is a mixed-use project featuring commercial land uses, such as restaurants and an event center, as well as the proposed residential uses.
Policy 6.7.4.2	Promote the development of new residential uses within walking or bicycling distance to the County's larger employment centers.	The proposed project would include residential development and commercial uses, as well as bicycle and pedestrian facilities to link the two areas. On-site employees living in the employee housing would therefore be able to walk or bike to work. In addition, the proposed bicycle and pedestrian facilities would connect to existing County facilities in the area, which would provide access to additional alternative means of transportation outside of the project site.
Policy 6.7.4.6	The County shall regulate wood-burning fireplaces and stoves in all new development. Environmental Protection Agency (EPA)-approved stoves and fireplaces burning natural gas or propane are allowed. The County shall discourage the use of non-certified wood heaters and fireplaces during periods of unhealthy air quality.	Wood-burning fireplaces would not be installed as part of the proposed project. As discussed in Chapter 4.2, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, the modeling assumed that all residential cottages would include a natural gas fireplace, as indicated by the project applicant.
Policy 6.7.6.2	New facilities in which sensitive receptors are located (e.g. residential subdivisions, schools, childcare centers, playgrounds, retirement homes, and hospitals) shall be sited away from significant sources of air pollution.	Surrounding land uses include undeveloped land and rural residences within the BLHSP to the north; rural residences and the EDHFD Station 86 to the northwest, across Bass Lake Road; undeveloped land and rural residences to the south, approximately 750 feet south of US 50; and undeveloped land to the east, with the Holy Trinity Parish and School located farther east. In addition, multiple Tentative Subdivision Maps have been approved for properties within the BLHSP, north of the project site, which are undergoing development. Such uses are not significant sources of air pollution. As discussed in Chapter 4.2, Air Quality, GHG Emissions, and Energy of this EIR, CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a Toxic Air Contaminant (TAC). CARB recommends the evaluation of emissions when a freeway or high-traffic roadway is located within 500 feet of sensitive receptors. The nearest proposed residences to US 50 would be located approximately 2,000 feet from US 50. Thus, the

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		proposed project would not site sensitive receptors in the vicinity of any significant sources of air pollution. Further, as discussed under Impact 4.2-3 of this EIR, the proposed project would not be anticipated to result in the production of substantial concentrations of TACs. As a result, the proposed project would not result in the exposure of sensitive receptors to substantial pollutant concentrations related to such.
Policy 6.7.7.1	The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available prior to periodic updates of the Guide.	An analysis of the proposed project's potential to result in impacts related to Air Quality, Greenhouse Gas Emissions, and Energy is included in Chapter 4.2 of this EIR, and is based on Appendix G of the CEQA Guidelines. As discussed therein, the chapter is primarily based on information and guidance within the EDCAQMD's CEQA Air Quality Handbook, as applicable. Based on the analysis included within Chapter 4.2, the proposed project would be required to comply Mitigation Measure 4.2-2(a), which requires ROG reduction measures be implemented as part of future Program Study Area development; Mitigation Measure 4.11-3 as set forth in the Transportation chapter of this EIR, which requires implementation of CAPCOA measures to reduce the number of vehicle trips that would be generated by the potential residential component of the Program Study Area, would further reduce the proposed project's operational mobile source emissions; Mitigation Measure 4.2-3, related to compliance with all applicable EDCAQMD and CARB requirements regarding NOA; Mitigation Measure 4.2-7(a), which includes restrictions regarding the use of natural gas on-site and requires project compliance with the CalGreen Tier 2 EV standards; and Mitigation Measure 4.2-7(b), which requires GHG reduction measures to be implemented during construction of the Program Study area. Implementation of the aforementioned requirements would ensure that emissions associated with the proposed project would be reduced to the maximum extent feasible. All other impacts were determined to be less than significant. In addition, the proposed project would be required to comply with all federal, State, and local regulations related to air quality and GHG

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		emissions, such as EDCAQMD rules and regulations, the 2022 CBSC, 2022 Building Energy Efficiency Standards, and CARB standards.
Policy 6.9.1.3	New roads connecting to County roads shall be designed to provide safe access as required by the County Design and Improvement Standards Manual.	As discussed further in Chapter 4.11, Transportation, of this EIR, the design of the on-site internal circulation system would not involve any features that would increase traffic hazards at the site. All internal roadways would be designed consistent with applicable El Dorado County standards, which would be confirmed during improvement plan review. It should be noted that, as discussed under Impact 4.11-4 of this EIR, the most collision-prone area within the vicinity of the project site is the portion of Bass Lake Road located between the US 50 eastbound offramp and Country Club Drive. However, the overall collision rate is well below the statewide collision average. In addition, the proposed project includes widening a portion of Bass Lake Road from US 50 to just north of Country Club Drive from two lanes to four lanes (two in each direction). Such improvements would be consistent with the County's Capital Improvement Plan and would improve roadway safety.
Policy 6.11.2.1	Development shall be served by a street system with at least two evacuation routes capable of carrying peak load traffic and have sufficient capacity to meet project needs, or they must provide the necessary capacity to ensure the development has adequate fire protection and safe ingress and egress routes in conformance with the California Fire Safe Regulations (Section 1273 and 1274) of the California Code of Regulations – Title 14, Division 1.5, Chapter 7, Articles 2 and 3).	As discussed under Impact 4.14-1 in Chapter 4.14, Wildfire, of this EIR, multiple evacuation routes are available to and from the project site, including Bass Lake Road and Country Club Drive. In addition, as discussed therein, project development would not significantly interfere with ingress or egress routes during a wildfire event under cumulative or "super-cumulative" conditions, as defined in Chapter 4.14.
Policy 6.11.2.2	Construction of new roads, streets, and evacuation routes must be adequate in terms of width, turning radius, and grade to facilitate access by firefighting apparatus. Priorities for road improvements will be based on evacuation accessibility.	See response to General Plan Policy 6.11.2.1 above. In addition, as discussed in Chapter 4.11, Transportation, of this EIR, the design of the on-site internal circulation system would be designed consistent with applicable El Dorado County standards, which would be confirmed during improvement plan review. Such confirmation would ensure that on-site roadways would facilitate adequate access by firefighting apparatus.
Conservation and Open Space Element		
Policy 7.1.2.2	Discretionary and ministerial projects that require earthwork and grading, including cut and fill for roads, shall be required to minimize erosion and sedimentation, conform to natural contours, maintain natural drainage patterns, minimize	Construction located within the Project Development Area would require approximately 100,000 cubic yards of cut and 80,525 cubic yards of fill. The excess fill of approximately 19,475 cubic yards would be evenly distributed over the 30.2-acre Program Study Area. As discussed in Chapter 4.5,

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	impervious surfaces, and maximize the retention of natural vegetation. Specific standards for minimizing erosion and sedimentation shall be incorporated into the Zoning Ordinance.	Geology and Soils, Improvement Plans provided to the County prior to authorization of construction would conform to applicable provisions of the County Grading, Erosion, and Sediment Ordinance (Chapter 110.14 of the El Dorado County Code). In addition, because the proposed project would result in land disturbance of over one acre, the project applicant would be required by the State to comply with the most current NPDES Construction General Permit requirements. Pursuant to NPDES requirements, a SWPPP would be prepared for the proposed project, which would include the site plan, drainage patterns and stormwater collection and discharge points, BMPs, and a monitoring and reporting framework for implementation of BMPs, as necessary. Furthermore, the project would be required to comply with the applicable erosion and sediment control measures outlined in the El Dorado County Design and Improvement Standards Manual and the County's Stormwater Management Program (SWMP).
Policy 7.1.2.3	Enforce Grading Ordinance provisions for erosion control on all development projects and adopt provisions for ongoing, applicant-funded monitoring of project grading.	See response to General Plan Policy 7.1.2.2.
Policy 7.3.1.1	Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.	See response to General Plan Policy 7.1.2.2.
Policy 7.3.2.2	Projects requiring a grading permit shall have an erosion control program approved, where necessary.	See response to General Plan Policy 7.1.2.2.
Policy 7.3.2.3	Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).	A Final Drainage Report would be prepared for the proposed project and would be subject to review and approval by the County. In accordance with the requirements established by the County's NPDES Phase II MS4 permit, the Storm Drainage Management Plan (SDMP) would be required to identify the Drainage Management Areas (DMAs) within the Project Development Area. Additionally, as part of approval of the SDMP, the proposed project would be required to demonstrate how the foregoing drainage improvements would comply with applicable SDMP and Baseline Hydromodification Measure requirements, including the proposed detention basin(s), treatment-control BMPs, and Low-Impact Development (LID) measures.
Policy 7.3.3.1	For projects that would result in the discharge of material to or that may affect the function and value of river, stream,	Potential impacts to aquatic resources and wetlands are discussed in Chapter 4.3, Biological Resources, of this EIR. The chapter includes

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	lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.	mitigation measures to reduce potentially significant impacts related to aquatic resources, including wetlands, to a less-than-significant level. For example, Mitigation Measures 4.3-10(a) and 4.3-10(b) would require the project proponent to apply for a Section 404 permit from USACE for impacts to regulated Waters of the U.S., as well as applications for Waste Discharge Requirements and/or a Water Quality Certification from the Regional Water Quality Control Board (RWQCB).
Policy 7.3.3.4	The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas. Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned lands that utilize “best management practices (BMPs)” as recommended by the County Agricultural Commission and adopted by the Board of Supervisors. Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is	As discussed under Impacts 4.3-9 and 4.3-10 in Chapter 4.3, Biological Resources, of this EIR, although the proposed project has been designed to minimize potential impacts to riparian areas and wetlands, respectively, project buildout would result in both temporary and permanent impacts to such resources. However, Mitigation Measures 4.3-9 and 4.3-10(a) through 4.3-10(d) would minimize potential impacts to riparian areas and wetlands by requiring the project applicant to apply for permits from the appropriate regulatory agencies (e.g. USACE, RWQCB) and comply with permit conditions identified by said agencies. In addition, the proposed project would include 50-foot setbacks on either side of the intermittent drainage located in the northern portion of the site, north of Country Club Drive. Each setback would create 50 feet of buffered space between Country Club Drive and the intermittent drainage, and between the intermittent drainage and the proposed residences.

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	necessary or would be sufficient to protect the particular riparian area at issue. For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.	
Policy 7.3.3.5	Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.	As discussed in Chapter 4.3, Biological Resources, of this EIR, the proposed project would result in both temporary and permanent impacts to multiple on-site aquatic resources, including seasonal wetlands, an intermittent drainage, and Carson Creek. However, as discussed in Response to General Plan Policy 7.3.3.4 above, the proposed project would include setbacks from the intermittent drainage located in the northern portion of the site, minimizing impacts upon the resource. In addition, as discussed in Chapter 3, Project Description, of this EIR, walking trails would be constructed in the northern portion of the site, allowing visitors of the proposed project to walk along the intermittent drainage.
Policy 7.3.4.1	Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.	See response to General Plan Policy 7.3.3.5 above.
Policy 7.3.5.1	Drought-tolerant plant species, where feasible, shall be used for landscaping of commercial development. Where the use of drought- tolerant native plant species is feasible, they should be used instead of non-native plant species.	In compliance with Chapter 130.33, Landscaping Standards, of the El Dorado County Code, a landscaping plan has been prepared for the Project Development Area as part of the proposed Planned Development application (see Figure 4.1-14, Landscape Plan, in Chapter 4.1, Aesthetics, of this EIR). Consistent with El Dorado County and BLHSP requirements, on-site landscaping would consist of drought-tolerant plants and trees.
Policy 7.4.1.1	The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 130.71 and the	As determined by the Biological Resources Assessment (BRA) prepared for the proposed project by Madrone Ecological Consulting (Madrone), and presented in Table 4.3-3, Special-Status Species with Potential to Occur Within the study area of this EIR, two Pine Hill endemics (Pine Hill ceanothus and Pine Hill flannelbush) were determined to have the potential to occur within the study area for the proposed project. However, the BRA

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	USFWS's *Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan* (USFWS 2002).	determined that because serpentine and gabbro soils do not occur within the study area, suitable habitat for the foregoing species is absent from the project site. Therefore, the proposed project would not result in any impacts to Pine Hill endemics.
Policy 7.4.4.2	Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.	Mitigation Measure 4.3-13 requires the project applicant to off-set impacts to on-site native trees through the payment of in-lieu fees, off-site deed restrictions, and/or replacement planting. The requirements established therein are consistent with the County's Oak Resources Conservation Ordinance and BLHSP policies.
Policy 7.4.4.3	Encourage the clustering of development to retain the largest contiguous areas of forests and oak woodlands possible.	The proposed project has been designed to cluster residential uses away from the existing on-site oak resources. Specifically, the proposed residential cottages in the northern portion of the project site would be set back from the existing intermittent drainage and the associated oak woodland. In addition, the small oak woodland patch south of Country Club Drive has been incorporated into the outdoor plaza area of the hotel/event center area.
Policy 7.4.4.4	For all new development projects or actions that result in impacts to oak woodlands and/or individual native oak trees, including Heritage Trees, the County shall require mitigation as outlined in the El Dorado County Oak Resources Management Plan (ORMP). The ORMP functions as the oak resources component of the County's biological resources mitigation program, identified in Policy 7.4.2.8. The ORMP identifies standards for oak woodland and native oak tree impact determination, mechanisms to mitigate oak woodland and native oak tree impacts, technical report submittal requirements, minimum qualifications for technical report preparation, mitigation monitoring and reporting requirements, and projects or actions that are exempt from this policy. The ORMP also establishes an in-lieu fee payment option for impacts to oak woodlands and native oak trees, identifies Priority Conservation Areas (PC As) where oak woodland conservation efforts may be focused, and outlines minimum standards for identification of oak woodland conservation areas outside the PCAs.	See response to General Plan Policy 7.4.4.2 above.

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	Requirements for monitoring and maintenance of conserved oak woodland areas and identification of allowable uses within conserved oak woodland areas are also included in the ORMP.	
Policy 7.5.1.3	Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.	A Cultural Resources Study was prepared for the proposed project by Historic Resource Associates (HRA), and included a cultural resources literature search, archival research, consultation with the Native American Heritage Commission (NAHC), and field surveys. Based on the results of the analysis, the Cultural Resources Study included avoidance and protection measures, which are required through implementation of the mitigation measures included in Chapter 4.4, Cultural Resources, and Chapter 4.12, Tribal Cultural Resources, of this EIR.
Policy 7.5.2.4	The County shall prohibit the modification of all National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) listed properties that would alter their integrity, historic setting, and appearance to a degree that would preclude their continued listing on these registers. If avoidance of such modifications on privately owned listed properties is deemed infeasible, mitigation measures commensurate with NRHP/CRHR standards shall be formulated in cooperation with the property owner.	As discussed in Chapter 4.4, Cultural Resources, of this EIR, known historic and/or archaeological resources were identified within the project site or in immediate proximity to areas that could be disturbed as part of project construction activities. Such resources include portions of the Sacramento-Placerville Road and the Mormon Hill Road-Lincoln Highway, a multi-component archaeological resource, and a prehistoric milling site. Although the roadway portions are eligible for listing, listed properties do not occur on-site. In addition, Chapter 4.4 includes Mitigation Measures 4.4-1(a) and 4.4-2(d) to address potential impacts related to the historic roadway segments.
Parks and Recreation Element		
Policy 9.2.2.5	The County shall establish a development fee program applicable to all new development to fund park and recreation improvements and acquisition of parklands such that minimum neighborhood, community, and regional park standards are achieved. This fee is in addition to Quimby Act requirements that address parkland acquisition only. The fee will be adjusted periodically to fully fund the improvements identified in the Parks and Capital Improvement Program concurrent with development over a five-year period.	As discussed in Chapter 4.10, Public Services and Recreation, of this EIR, the proposed project would pay all applicable development impact fees, including Quimby Act fees and other park fees established by the County.

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Bass Lake Hills Specific Plan	
Residential Development Standards	
1. All village PDs shall include a visual simulation of project design from the following travel-way vantage points: a. U.S. Highway 50 and Bass Lake Road eastbound off-ramp; b. U.S. Highway 50 eastbound and El Dorado Hills Boulevard off-ramp; and c. U.S. Highway 50 westbound at Crazy Horse Campground.	Visual simulations of the project site from the indicated travel-way vantage points are presented in Figures 4.1-22 through 4.1-24 in Chapter 4.1, Aesthetics, of this EIR; the chapter also includes an analysis of the proposed project's impacts upon the vantage points.
2. "Conservation setbacks" which include open space and conservation easements, recorded non-building setbacks, or any other method to permanently set aside property for the purposes of natural resources conservation shall be the primary method of protection for such resources. Commonly held open space areas within a PD can also be used to establish natural resource conservation areas. "Conservation easements," as described in this Plan, require the restriction of development rights within a defined area to a public agency such as the County or the Community Services District (CSD). Commonly owned open space is owned and maintained by the homeowners association of the subdivision. It is a separate lot with a deed restriction restricting improvements to trails, public utilities and recreational facilities. A conservation easement or commonly owned open space does not, in and of itself, provide for access by the general public. Public access is provided only where public access easements are recorded, generally in conjunction with a pedestrian pathway. Also see Section 9.1.7 regarding conservation easements.	As shown in Figure 3-6, Tentative Subdivision Map, of this EIR, the portions of the western area of the project site, as well as portions of the northern area of the project site in the vicinity of the intermittent drainage, would be designated as open space and would not be disturbed by project buildout.
6. Villages shall be zoned to include the PD Zone District overlay prior to development. Clustering of residential units shall be encouraged in order to maximize land use while conserving natural site features and resources and creation of open space.	The proposed project would require approval of a Rezone that includes the Planned Development (PD) Zone District overlay. In addition, as discussed in Chapter 3, Project Description, of this EIR, the proposed residential uses are clustered at the north of the project site, and open space is proposed to be located throughout the site in order to preserve the majority of natural site features and resources.
8. To preserve the natural appearance of the hillside in 20-30 percent slope areas, solid fences shall not be used, except within recorded building envelopes. Open fencing, such as wire, wrought iron and split rail, is permitted outside the building envelope.	As discussed throughout Chapter 4.1, Aesthetics, of this EIR, the proposed project would employ landscaping trees to partially obscure views of the proposed structures from public viewpoints, and would not include solid fences. Furthermore, very limited portions of the project site contain steep

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	slopes. For example, limited incursions of slopes over 30 percent occur within the intermittent drainage, north of Country Club Drive, but disturbance in this area would be limited to installation of span bridges for vehicle access to the proposed cottages. Other steeper slope areas are limited to the road cut embankments along Bass Lake Road and Country Club Drive.
General Circulation and Trail Standards	
3. Pathways shall be constructed at locations convenient to residential lots to facilitate pedestrian travel to open space trails, secondary local roads, primary local roads, and Bass Lake Road. Such pedestrian and bike lane connections shall be located and protected to restrict access to adjoining private property.	The proposed project would include pedestrian pathways north of Country Club Drive to connect the proposed residential cottages to natural spaces around the on-site intermittent drainage.
6. Where practical and compatible, pedestrian paths shall be constructed in public open space to separate pedestrians from motor vehicles.	As discussed further in Chapter 3, Project Description, of this EIR, the proposed project would include various four-foot pedestrian trails throughout the proposed residential areas. The trails would be located throughout the open space acreage and would be set back from Country Club Drive, thereby separating pedestrians from motor vehicles.
7. The Clarksville Toll Road Trail, an off-road pedestrian/equestrian/bicycle trail connecting the eastern and western boundaries of the Plan area shall be created within the approximate alignment of the historic Clarksville Toll Road. (In certain instances, this alignment may coincide with the current alignment of Country Club Drive.) To facilitate access to the trail, a parking lot capable of containing approximately 10 vehicles shall be created at the eastern end of Country Club Drive at the Plan area boundary. The Trail and the park-and-ride lot shall be constructed to allow joint use of the parking facilities. These improvements shall be funded by the area-wide assessment district and built during the improvements to Country Club Drive.	As discussed further in Chapter 3, Project Description, of this EIR, the proposed project would extend the existing Class 1 bike path, located along Old Country Club Drive, north into the site along the historic Clarksville Toll Road alignment.
15. Plan area streets shall be curvilinear in both vertical and horizontal design in order to conform to topography and avoid tree removal.	Internal streets have been designed to preserve existing protected oak trees and minimize topographical alteration.
Water Conservation Standards	
1. Landscaping, excluding lawn areas in all public parks and street rights-of-way, shall be achieved with low water-using native plants and trees and irrigation systems which utilize the best available technology for water conservation and comply with State and local regulations.	See response to General Plan Policy 7.3.5.1.
2. Construction of residential projects shall be encouraged to utilize low water-using plants and irrigation and plumbing systems which utilize the best	See responses to General Plan Policy 7.3.5.1 and General Plan Policy HO-5.2.

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available technology for water conservation and comply with State or local regulations.	
3. Established indigenous plants, trees, and shrubs shall be protected as much as possible.	See responses to General Plan Policy 7.4.4.2 and General Plan Policy 7.4.1.1. In addition, Mitigation Measure 4.3-1 of this EIR would ensure impacts to special-status plant species would be reduced to a less-than-significant level.
General Stormwater Facility Standards	
1. Storm drainage detention basins shall be designed and constructed to comply with the provisions in the County of El Dorado Drainage Manual.	As discussed in Chapter 4.7, Hydrology and Water Quality, of this EIR, all on-site drainage system infrastructure is required to be constructed in accordance with the provisions included in the Western El Dorado County SWMP, which requires compliance with the County's Grading Ordinance, the El Dorado County Design and Improvement Standards Manual, and the El Dorado County Drainage Manual.
2. Storm drainage detention basins may be located in open space areas and parks and may be accessible to the public in order to serve a dual impact mitigation/recreation function. Detention basins shall be designed to ensure public safety, to be visually unobtrusive, and to provide wildlife habitat. Landscaping around the perimeter of the basin shall be encouraged. (See Section 8.3 of the Design Guidelines)	As described in Chapter 4.7, Hydrology and Water Quality, of this EIR, flows would be conveyed to either the east-west intermittent drainage north of Country Club Drive, or to new detention basins in the northwest portion of the project site immediately south of the proposed emergency access connection to Bass Lake Road, and in the southerly portion of the project site, north of the proposed emergency access connection to old Country Club Drive. The proposed project would be required to demonstrate how the aforementioned proposed drainage improvements, including the proposed detention basins, would comply with applicable County requirements, treatment-control BMPs, Source-Control Measures, and LID measures. In addition, Mitigation Measures 4.7-2(b) through 4.7-2(e) would ensure construction of the proposed detention basins would comply with all applicable regulations. In addition, pursuant to Mitigation Measure 4.7-2(a), a Final Drainage Report shall be prepared for the proposed project and shall be approved by the El Dorado County Planning and Building Department and the County Engineer.
3. To protect water quality, catch basins which incorporate oil, grease, and sediment traps will be installed along urban streets in order to intercept storm runoff prior to release into intermittent streams. A conceptual illustration of a silt/ grease trap is provided in Figure 5-4. Other suitable best management practices may be employed to reduce point sources of pollutants. Maintenance of these facilities shall be provided through a County Service Area, Zone of Benefit (CSA, ZOB).	Mitigation Measure 4.7-2(b) requires the proposed project to submit a BMP and water quality maintenance plan to the El Dorado County Planning and Building Department, which would include requirements related to the project's stormwater discharges. Source control measures would be designed for pollutant-generating activities or sources consistent with recommendations from the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and

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	Redevelopment, or equivalent manual, and would be shown on the Improvement Plans.
Open Space Policies	
2. Except for the limited installation of underground public utilities, water and sewer lines, and construction of maintenance roads and pedestrian paths, grading and construction shall be prohibited within open space areas. Mitigation tree planting is encouraged, as defined in this Plan. Where utilities are installed, grading and vegetation removal shall be the minimum necessary, and shall conform to all policies set forth herein.	The project site is not currently designated as open space by the BLHSP. Following the proposed BLHSP amendment, portions of the site would be designated as open space (see Figure 3-4 of this EIR). However, with the exception of limited roadway, bicycle/pedestrian trail, and utility improvements, development of the proposed project would not include grading and construction within the proposed open space areas. In addition, as discussed in Chapter 4.3, Biological Resources, of this EIR, Mitigation Measure 4.3-12(a) provides the project applicant with the option to mitigate potential impacts to oak woodland through replacement planting. Additionally, as part of the on-site landscaping improvements, a total of 9,530 square feet (sf) of trees are proposed to be planted on-site consisting of 24-inch, 36-inch, and 48-inch box sized trees.
5. Public open space areas shall be accessible to fire suppression equipment to the satisfaction of the fire protection district.	As previously discussed, the proposed project's open space areas are largely located within the northern portion of the project site, as well as a portion along the western site boundary at Bass Lake Road. The three emergency access connections on-site would provide emergency service vehicles, including fire protection vehicles, adequate access to the public open space areas.
Fire Protection Policies	
Tentative maps may be approved only after the fire department determines that adequate fire protection services will be provided.	See response to General Plan Policy 5.7.1.1.
Grading Standards	
1. Regardless of the specific grading limitations set forth herein, development should conform to natural slopes to the maximum extent possible, rather than changing topography to fit development.	Based on the Preliminary Grading and Drainage Plan for the Project Development Area, development of the proposed project would conform to the natural slopes of the project site to the maximum extent possible. Grading and Drainage Plans will be prepared as specific development proposals within the Program Study Area come forward, which would ensure that development within the Program Study Area also conforms to the natural slopes of the project site to the maximum extent possible.
2. Creation of large graded pads which extend beyond the boundaries of one lot (i.e., masspad grading) shall be prohibited, except as noted herein. Some deviation may be allowed for clustered development, affordable housing, and avoidance of other resources.	As established in Chapter 4.5, Geology and Soils, of this EIR, Mitigation Measure 4.5-3 requires development of a design-level geotechnical engineering report to address various topics, including appropriate grading practices.

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3. Development limitations shall be in accordance with steepness of existing slopes as shown in Figure 6-1, Grading Constraints Map. Required grading plans shall include a site specific slope map of at least 1" = 50' and 5-foot contours showing the following classes: <u>30 percent and over slopes (Restricted Grading Area)</u> a. Setbacks shall be provided and encumbered by a conservation easement (See Section 3.3.2) held as common open space or zoned open space. b. No grading or construction is allowed, except the minimum required for trail access. <u>15 to 30 percent slopes (Limited Grading Area)</u> a. Primary local roads may include separated grade where necessary to minimize cuts and fills. b. Dwellings constructed to natural grade utilizing foundation designs which conform to topography is encouraged. c. All grading activities will incorporate the erosion control measures as provided I the El Dorado County Grading Ordinance. Areas subjected to grading shall not slope in excess of 2:1 unless otherwise approved by the County. <u>10 to 15 percent slopes (Lot Pad Grading Area)</u> a. Grading cuts or fills may occur to the lot boundary (property line) in order to provide a relatively level site or pad for construction of a dwelling and creation of usable yard areas. A landscaping plan shall be required for cut and fill slopes. b. Property lines should occur at the top of slope banks. <u>0 to 10 percent slopes (Whole Site/Mass Pad Grading Area)</u> a. This category allows most forms of grading, including mass-pad grading, subject to adherence to the grading policies contained herein and County ordinance.	As required by Mitigation Measure 4.5-3, prior to final design approval and issuance of building permits for the proposed project, a design-level geotechnical engineering report shall be prepared which addresses, at a minimum, compaction specifications and subgrade preparation for on-site soils; structural foundations; slope configuration and grading practices; and expansive/unstable soils, including fill. The report is required to be produced by a California Registered Civil Engineer or Geotechnical Engineer and submitted to the El Dorado County Planning and Building Department, for review and approval. All project-related foundation and improvement plans would be required to incorporate the report's design-level recommendations, subject to review and approval by the El Dorado County Planning and Building Department prior to issuance of any building permits.
4. Where grading is necessary, contouring techniques shall be employed to avoid angular flat slopes and distinct edges. The top and toe of slopes and the slope itself shall be rounded and feathered in a natural-appearing	See response to BLHSP Grading Standard 3.

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manner.	
8. Use of retaining structures (retaining walls, crib walls, and gibions) are encouraged in instances where such a design will reduce grading quantities and visual impact. All such structures shall be landscaped.	See response to BLHSP Grading Standard 3.
9. Grading shall be prohibited in all open space areas, except as specifically set forth in Section 7.4.1.10 herein.	See response to BLHSP Open Space Policy 2.
10. All grading shall conform to the County Grading Ordinance, Subdivision Design and Improvement Manual (Hillside Regulations), and the Hillside and Ridgeline Development Guidelines for Bass Lake Hills Specific Plan Appendix B).	See response to BLHSP Grading Standard 3.
11. Architectural style of buildings should be adapted to hillside slopes rather than adapting land forms to buildings designed for flat land topography.	See response to General Plan Policy 2.3.2.1. In addition, as discussed in Chapter 4.1, Aesthetics, of this EIR, OMVI Architecture prepared computer-generated simulations of the seven selected viewpoints to aid in the visual character evaluation of the proposed project. As shown in Figure 4.1-15 through Figure 4.1-24, in general, the proposed project would be designed in consideration of the existing slopes within the project site.
Noise Standards	
1. Interior and exterior noise levels for transportation sources shall not exceed levels contained in the Noise Element of the General Plan.	See response to General Plan Policy 6.5.1.12.
2. Tentative subdivisions which propose lots within the identified 65 dB L_{dn} contour lines shown along U.S. Highway 50 and Bass Lake Road in Figure 7-1, Noise Contour Map, shall submit acoustical analyses consistent with General Plan Noise Element policies and procedures.	See response to General Plan Policy 6.5.1.1.
3. Setbacks, berms, and/or other noise attenuation measures capable of reducing street and highway noise levels to standards contained in the Noise Element of the General Plan shall be provided where required in all residential areas and schools. Prohibiting the creation of additional housing units within the 65 dB/CNEL noise contour shall occur as an alternative to using sound walls to mitigate noise related impacts. A setback of at least 50 feet for residential units from Bass Lake Road shall be provided.	See response to General Plan Policy 6.5.1.3.
4. All noise attenuation structures and landscaping shall adhere to a common design theme outlined in Section 8.6.1 of the Design Guidelines.	See response to General Plan Policy 6.5.1.3.
Cultural Resource Protection Standards	
1. The County shall require site-specific archaeological investigations for all development proposals which may impact sensitive archaeological sites described in the EIR.	See response to General Plan Policy 7.5.1.3.

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2. Mitigation measures to protect archaeological sites shall be implemented through conditions in development permits and shall require on-site monitoring by qualified personnel during excavation work in areas identified as sensitive for archaeological resources. Development activity shall cease whenever artifacts or skeletal remains are discovered until arrangements can be made to avoid or otherwise protect the site. Identified archaeological sites shall be protected through non-building setbacks to be recorded on the subdivision map.	As discussed under Impact 4.4-2 of this EIR, Mitigation Measure 4.4-2(a) and 4.4-2(b) would ensure potential impacts to archaeological sites would be reduced to a less-than-significant level. Additionally, as discussed in Chapter 4.12, Tribal Cultural Resources, of this EIR, as requested by the UAIC, Mitigation Measure 4.12-1(b) requires tribal monitoring in certain areas during construction of the proposed project. Mitigation Measures 4.12-1(c) and 4.4-2(c) also require work to pause within the area of a tribal cultural resource find. Finally, potential impacts to skeletal remains are discussed under Impact 4.4-3 of this EIR. As discussed therein, Mitigation Measure 4.4-3 requires work to pause within the area if such remains are discovered during ground-disturbing activity.
3. The local Indian Council shall be notified of all discretionary development application for review and comment.	As discussed in Chapter 4.12, Tribal Cultural Resources, of this EIR, Pursuant to AB 52 and SB 18, invitations to consult were sent to tribes who requested notification of proposed projects within the geographic area of the project site. Specifically, notification letters were sent to the UAIC and Shingle Springs Band of Miwok Indians.
Wetlands and Intermittent Streams and Drainages Protection Standards	
1. Wetlands, as identified on Figure 1-5, Wetlands and Surface Hydrology Map, shall be protected by the creation of a conservation easement extending 50 feet from the boundary of the identified wetland or from the edge of the riparian zone, whichever is greater.	The intermittent drainage in the northern portion of the project site is identified in Figure 1-5 of the BLHSP. However, the majority of the area surrounding the intermittent drainage would be maintained as open space. In addition, see response to General Plan Policy 7.3.3.4.
2. Intermittent streams and drainages, as identified in Figure 1-5, Wetlands and Surface Hydrology Map, shall be protected by a 25-foot-wide conservation easement measured from each side of the channel bank or from the outside edge of the riparian zone, whichever is greater. This non-building area shall be shown on all subdivision maps and building site plans and shall be recorded with every parcel so effected. All grading and construction other than fences, as defined herein, shall be prohibited. (See Figure 7-2, Intermittent Stream Setback Concept)	See response to General Plan Policy 7.3.3.5.
3. Any project proposing septic systems shall provide a minimum 50-foot setback from stream bank to any component of the septic system if a septic capability study determines septic is appropriate for the site.	As discussed in Chapter 3, Project Description, of this EIR, two alternatives are currently proposed for providing sewer service to the project site, one of which includes an on-site septic sewer system as an interim solution for the Project Development Area of the project site. The potential septic system would be located within the Program Study Area of the project site, which is not located in proximity of the intermittent drainage in the northern portion of the site or Carson Creek, west of the project site. As such, the

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	proposed project would not include the development of a septic system within the proximity of a stream bank.
4. Where applicable, 15-foot public access easements shall be recorded within the riparian corridors and shall be located at least 25 feet from the banks of intermittent streams. Pedestrian and bike trails and utilities may be installed within these easements. Pedestrian and bicycle trails shall be constructed only within designated open space areas located at least 25 feet from streambanks and outside of the riparian vegetation areas. Such pathways shall be designed to avoid impacts to wetlands and intermittent streams.	See response to General Plan Policy 7.3.3.5.
6. Fences shall not be permitted within any conservation easement or designated open space areas.	As discussed throughout Chapter 4.1, Aesthetics, of this EIR, the proposed project would employ landscaping trees, but would not include fences within designated open space areas.
7. Ponds or detention basins shall be protected by a conservation easement, excluding those located within parks, which extends 100 feet from the high water line.	See response to General Stormwater Facility Standard 2.
9. Temporary fencing (chain link, ski fencing, or other suitable high visibility material intended to alert construction workers to the presence of protected wetlands) shall be installed at least 10 feet from the outside boundary of retained wetland areas along the length of the construction site prior to construction, grading, or movement of material or machinery onto the site. The fencing shall not be removed until construction activity is completed and finaled by the appropriate inspection authority.	The proposed project would be required to implement minimization and avoidance measures associated with on-site aquatic resources. In addition, as required by Mitigation Measure 4.5-2, the proposed project would be required to implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. Construction (temporary) BMPs for the project may include, but are not limited to: fiber rolls, straw bale barrier, straw wattles, storm drain inlet protection, velocity dissipation devices, silt fences, wind erosion control, stabilized construction entrance, hydroseeding, revegetation techniques, and dust control measures.
10. Intermittent stream and drainage channels, as identified in Figure 1-5, shall be left in a natural condition, except where minor grading and vegetation cutting is required to maintain drainage flows within the channel to minimize erosion. Energy dissipators shall utilize natural materials which do not adversely effect water quality.	As discussed in Chapter 4.3, Biological Resources, of this EIR, the proposed project would include the development of two bridges over the intermittent drainage in the northern portion of the project site. Although development of the bridges would require some grading within and/or adjacent to the intermittent drainage, such development would not be considered to alter the natural condition of the channel.
11. Within jurisdictional wetlands, all grading and construction shall be in accordance with a Section 404 permit.	Pursuant to Mitigation Measure 4.3-10(a) of this EIR, the project applicant shall be required to apply for a Section 404 permit from the U.S. Army Corps of Engineers (USACE) for impacts to regulated waters of the U.S. and comply with permit conditions.
12. Storm water detention basins shall be designed to ensure public safety, be visually unobtrusive, and provide wildlife habitat. The design shall be	See response to General Stormwater Facility Standard 2.

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reviewed and approved by the Department of Transportation (DOT) and the CDFG.	
14. Street crossings of intermittent streams shall be by bridges or half-round culverts to facilitate passage of terrestrial and aquatic organisms.	As discussed in Chapter 4.3, Biological Resources, of this EIR, an intermittent drainage occurs in the northern portion of the project site, a portion of which would be impacted by the development of two bridges associated with the proposed project. However, as discussed under Impact 4.3-11, the potential wildlife corridor along the intermittent drainage in the northern portion of the project site is considered low-quality because the current western terminus of the drainage is a relatively small culvert that carries the flow under Bass Lake Road. The culvert does not allow for large wildlife passage, and a tall (20 foot plus) road prism and the heavily travelled Bass Lake Road are the only way for large wildlife to continue west. As such, wildlife use of this corridor is likely minimal. Furthermore, with use of span bridges, the proposed project has been designed to preserve the wildlife corridor along the intermittent drainage in the northern portion of the project site.
Woodland Habitat and Oak Trees	
1. At the time of subdivision application, a certified arborist's report shall be submitted and include the following with respect to oak and other native trees: a. Based upon air photos and a ground survey on a base map of 1" = 50' scale or larger; b. Location of dripline for all trees 6 inches dbh, or greater, and groves of trees; c. Size (dbh) and species determination list of all trees 6 inches dbh or greater within the project area; d. Trees impacted by the proposed project; e. Location of planting areas for compensation trees; f. Health of trees and any recommendations for trimming and/or removal for health and safety purposes requires no compensation; and g. Management plan for the long-term conservation of oak woodland habitat in the subdivision area.	An Arborist Report was prepared for the proposed project by California Tree and Landscaping Consulting, Inc. on August 31, 2022, which included an inventory of all existing on-site trees. Madrone also completed an Oak Resources Technical Report (ORTR) in compliance with the County's Oak Resources Management Plan (ORMP) and Oak Resources Conservation Ordinance (ORCO) requirements. Additionally, see responses to General Plan Policies 7.4.4.2 and 7.4.5.1.
2. Oak tree groves and oak woodland habitat shall be conserved within the Plan area principally by avoidance. PD Combining Zone District shall be	As discussed in Chapter 4.3, Biological Resources, of this EIR, the proposed project would result in temporary and permanent impacts to oak

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employed as a means of clustering residential density away from oak tree groves. Groves may be included within residential lots only if homes are constructed within a designated building envelope that avoids the grove(s), or the grove is contained within a conservation setback as previously described. Any tree in a grove impacted by construction activity shall be subject to a 1:1 compensation ratio, with a minimum 5-gallon tree of like species.	resources. However, consistent with BLHSP Woodland Habitat and Oak Trees Policy 2, as part of the Rezone associated with the proposed project, the PD Combining District suffix would be added to the site's new zoning designations. In addition, the project has been designed to cluster residential uses away from the existing on-site oak resources. Specifically, the proposed residential cottages in the northern portion of the project site would be set back from the existing intermittent drainage and the associated oak woodland. In addition, with respect to compensation for trees impacted by construction activity, as discussed in Chapter 4.3, Biological Resources, of this EIR, subsequent to the adoption of the BLHSP, the County adopted the ORMP and ORCO and the implementing ordinance, which allows greater flexibility in mitigating potential impacts to oak resources. In any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence. The proposed project would comply with the provisions of the ORMP. For example, applicants are now allowed to pay in-lieu fees rather than, or in addition to, planting compensation trees. Pursuant to Mitigation Measure 4.3-12(a), the project applicant shall have the option to plant replacement trees on- or off-site and/or pay in-lieu fees. Based on the above, the BLHSP tree policies are not directly applicable to the proposed project, as they have been superseded by the County's ORMP with which the proposed project is required to comply through Mitigation Measure 4.3-12(a).
4. Impacted trees (non-grove) shall be replaced by like oak species and a minimum 5-gallon tree at a ratio of 2:1.	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.
6. All compensation trees shall be planted within the public street right-of-way landscape easements, open space areas, parks, park-and-ride lot areas, and other lands owned by the public, homeowners associations or	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the

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encumbered by conservation easements.	BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.
7. Compensation trees shall be planted in a manner and location prescribed in the arborist's report.	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.
8. Where tree protection is required, the property owner shall be required to provide financial security in an amount identified by an arborist. The security shall be forfeited and utilized for ongoing tree maintenance programs if the tree is impacted as defined herein.	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.
9. Fencing (chain link, ski fencing, or other suitable material) shall be provided as a physical barrier to alert construction workers and property owners of the protection. The fencing shall be installed one foot outside the dripline of any single tree or grove which is in close proximity to, and potentially affected by construction activity. A sign shall be posted which describes the trees as protected and subject to forfeiture of a security deposit.	In compliance with this standard, tree protection fencing would be installed around oak trees identified for preservation, as recommended by the project arborist report.
10. The survival rate of compensation trees shall be 90 percent for a period of 5 years from the date of planting. To ensure this survival goal, the following measures shall be provided: a. To guarantee survival through the first 3 years following planting, a maintenance bond, cash, or other financial encumbrance acceptable to the County and the EDHCSD shall be provided based on a cost estimate provided by the arborist's report. b. The tree survival program shall be administered by the EDHCSD and be funded through the LLAD. c. The LLAD shall fund, and the CSD shall administer the ongoing planting program defined in the arborist's report. d. Survival for years 3 through 5 following planting shall be ensured by a LLAD administered by the EDHCSD. Tree impact forfeiture money will be diverted to this district per the above policy.	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.

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11. In addition to the oak tree compensation program, a minimum of four (4) trees of any native species shall be planted on each lot within the Plan area in conjunction with construction and prior to occupancy of each dwelling. Trees shall be a minimum container size of 5 gallons.	See response to BLHSP Woodland Habitat and Oak Trees Policy 2 above. As discussed therein, subsequent to the adoption of the BLHSP, the County adopted its ORMP and ORCO, and in any instance where the BLHSP provisions conflict with the standards or requirements of the County's ORMP and ORCO, the ORMP and ORCO provisions shall take precedence.
12. Irrigation within the driplines of existing oak trees is prohibited, except by means of drip systems which focus upon the target vegetation.	The El Dorado County Planning and Building Department reviews all new development projects for conformance with water landscape standards. County review would ensure that drip systems would not interfere with existing oak trees.
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Policy 3.2.16 When evaluating environmental impacts discovered during the Initial Study process, LAFCO will identify such impacts as potentially significant and adverse if: • Build-out of the proposed project may cause service levels to decline below established standards, costs of service provision to rise substantially to the detriment of service levels, or cause those currently receiving service to receive reduced or inadequate services especially when such change may cause adverse health and safety or other physical impacts; • Build-out of the proposed project may cause the infrastructure capacity of a service provider to exceed planned and safe limits especially when such change may cause adverse health and safety or other physical impacts; • The proposed project includes or plans for infrastructure capacity, especially water and sewer lines, that exceed the needs of the proposed project and may be used to serve areas not planned for development, especially those containing prime agricultural land, mineral, sensitive plant and wildlife or other important resources; • The proposed plan could cause health and safety or other physical impacts because a service provider is	The proposed project's environmental effects are discussed throughout this EIR, and thus, this EIR addresses the criteria included in LAFCo Policy 3.2.16. For example, the ability of EID to provide water and sanitary sewer services to the proposed project is discussed throughout Chapter 4.13, Utilities and Service Systems, and the potential for the proposed project to adversely impact protected animal or plant species is discussed in Chapter 4.3, Biological Resources. In addition, the proposed project's potential to cause significant adverse cumulative impacts when considered in conjunction with other recent, present and reasonably foreseeable projects is addressed at the end of each analysis chapter. It should be noted that the potential for the proposed project to induce substantial unplanned growth is discussed in Chapter 5, Statutorily Required Sections.

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incapable of providing service, the proposal has an illogical boundary, or elements needed to provide service (water supply, treatment facilities, equipment, energy) are not available, or stressed beyond capacity. • The proposed project is substantially inconsistent with applicable Sphere of Influence Plans, long range and area service plans, phased land use plans of any city or county, or resource conservation plans of the state or federal government. o In the case of Sphere of Influence and area of service plans, the Environmental Coordinator reviews the appropriate plans and determines whether the level of significance warrants additional review. In the case of public agency land use or resource plans, the affected agency shall provide specific information regarding the nature and substance of the project's potential impacts upon its plans or programs. • The proposed project may induce substantial growth on important agricultural and open space lands because it would: o Permit the extension of, or require, infrastructure such as flood control levees or water diversions, electrical, water or sewer lines, especially trunk lines, roadways or other public facilities that would permit new development in a substantial area currently constrained from development; o Be adversely and substantially inconsistent with the agricultural, open space, resource conservation or preservation, growth management, trip reduction, air quality improvement or other plans, policies or Ordinances of the General, Community, Specific	

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	or other Plan of the land use jurisdiction responsible for the project site or vicinity. o Cause significant adverse cumulative impacts when considered in conjunction with other recent, present and reasonably foreseeable projects; o Result in substantial noncontiguous development which, in turn, results in adverse physical impacts; o Have no need for service and the proposed project adversely affects important public resources or the public health and safety; o Adversely impact animal or plant species either listed as, or determined to be, endangered, rare, or threatened as provided in 15380; or o Be identified as potentially significant when completing the Initial Study checklist adopted as Exhibit A of LAFCO's CEQA procedures.	
Policy 3.3.2.2	If service cannot be provided without expanding service capacity or constructing infrastructure (other than at parcel connections to service), then the following information shall be provided: (a) A description of any required facility or infrastructure expansions or other necessary capital improvements; (b) The likely schedule for completion of the expanded capacity project, the viability of the needed project, and the relation of the subject project to the overall project and project time line; (c) A list of required administrative and legislated processes, such as CEQA review or State Water Resources Board allocation permits, including assessment of likelihood of approval of any permits and existence of pending or threatened legal or administrative challenges if known; (d) The planned total additional capacity;	The specific descriptions of the required utility infrastructure improvements associated with the proposed project are discussed in Chapter 4.13, Utilities and Service Systems, of this EIR. As discussed therein, the new water and sewer infrastructure would be designed and constructed in accordance with the applicable standards set forth in the EID Water, Sewer, and Recycled Water Design and Construction Standards, ensuring the new water and sewer lines are constructed in conformance with proper materials and sizing.

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Policy		Policy Consistency
	(e) The size and location of needed capital improvements; (f) The proposed project cost, financing plan and financing mechanisms including a description of the persons or properties who will be expected to bear project costs; and (g) Any proposed alternative projects if the preferred project cannot be completed (include information in letters "a" through "f" for each proposed alternative).	
Policy 3.9.3:	Lands to be annexed which are within an adopted Sphere of Influence shall be physically contiguous to the boundaries of the annexing agency except under one of the following circumstances (56119): (a) Existing developed areas where LAFCO determines that interests of public health, safety, and welfare would best be served by the extension of the service, or which represent clear or present health or safety hazards that could be mitigated by the proposal and city or district facilities are present and sufficient for service. (b) Existing developed areas where city or district facilities are present and sufficient for service, and where the Commission determines that the annexation will not induce growth.	The nearest existing water line is a 24-inch water main located in Bass Lake Road, approximately 2,000 feet north of the project site. Existing sewer facilities do not exist within the immediate vicinity of the project site. The nearest existing sewer facility is the 18-inch South Uplands Trunk Sewer-Gravity Main, located in Russi Ranch Road, approximately 1.6 miles to the west of the project site. The existing sewer line travels through the Silva Valley and EDH trunk lines to the EDH WWTP on Latrobe Road. In order to receive service from EID, the project site would need to be annexed into the EID service area, subject to El Dorado LAFCo approval, and would include construction of off-site improvements to connect to the aforementioned utility lines. As discussed in Chapter 4.13, Utilities and Service Systems, of this EIR, and based on the WSA prepared for the proposed project, EID would have sufficient water supplies under normal, dry, and multiple dry year conditions to serve the proposed project. In addition, the additional wastewater flow from the proposed project to the public sewer system would be within the current capacity of the WWTP. Following approval and consistent with LAFCo Policy 3.9.3, the annexation would draw the amended EID service boundaries contiguous with the project site boundaries.
Policy 6.2.1	The annexation must provide for the most efficient delivery of services. The most efficient services are those provided at the lowest cost and highest service level. In the case of similar providers with the same level of service, the one that delivers the same service at the lowest cost will be considered to be most efficient.	See responses to General Plan Policy 5.2.1.5 and General Plan Policy 5.1.2.1.
Policy 6.2.2	The annexation shall be modified, conditioned or disapproved if	See response to General Plan Policy 5.2.1.5.

Appendix N: El Dorado County General Plan and BLHSP Policy Discussion		
Policy		**Policy Consistency**
	it permits the more efficient delivery of one or more services to the detriment of other services.	
Policy 6.2.4	The annexing agency must demonstrate that levels of service for existing and potential customers within its service boundaries will not be lowered, or costs of service increased, if the annexation is approved (56668). If any adverse impacts may occur, the applicant or annexing agency must provide, for LAFCO consideration, a written justification for project approval despite the negative impacts.	See response to General Plan Policy 5.2.1.5.

APPENDIX O

Environmental Noise & Vibration Assessment

Town & Country Village El Dorado

El Dorado County, California

BAC Job # 2022-091

Prepared For:

Raney Planning & Management, Inc.

Attn: Megane Browne-Allard
1501 Sports Drive, Suite A
Sacramento, CA 95834

Prepared By:

Bollard Acoustical Consultants, Inc.



Dario Gotchet, Principal Consultant

June 4, 2024

BOLLARD
Acoustical Consultants

Bollard Acoustical Consultants, Inc. P.O. Box 7968, Auburn, CA. 95604 Phone: (530) 537-2328 bacnoise.com

Introduction

The Town & Country Village El Dorado development (project) is located in El Dorado County, approximately 500 feet north of U.S. Highway 50 (US 50), east of Bass Lake Road in the El Dorado Hills area. The approximately 60.5-acre site is identified by APNs: 119-080-012, 119-080-021 and 119-080-023. The project site is located in the southern central portion of the Bass Lake Hills Specific Plan (BLHSP). The northern portion of the project site is located within the El Dorado Hills Community Region of the El Dorado County General Plan, and the southern portion of the site is located within the Rural Region. Existing land uses within the immediate project vicinity include undeveloped land and rural residences to the north and south, rural residences to the west, and undeveloped land to the east. The project area with aerial imagery is shown in Figure 1. The development areas plan for the project is provided in Figure 2. The proposed overall site plan for the project is shown in Figure 3.

The project site would consist of two areas: the proposed Project Development Area and the proposed Program Study Area (both Areas shown in Figure 2 of this report). The Project Development Area consists of the northernmost and southernmost 30.3 acres of the project site, and would be developed with two hotels, retail services, two restaurants, a museum, an event center, residential cottages for employee housing (56 cottages), residential cottages that may be rented on a daily or extended stay basis (an additional 56 cottages), and associated parking areas. The Program Study Area consists of the central and easternmost 30.2 acres of the project site, and may include further development in the future such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the proposed zoning districts. The project also includes two alternatives for off-site wastewater disposal.

The purposes of this assessment are to quantify the existing noise and vibration environments, identify potential noise and vibration impacts resulting from the project, identify appropriate mitigation measures, and provide a quantitative and qualitative analysis of impacts associated with the project. Specifically, impacts are identified if project-related activities would cause a substantial increase in ambient noise or vibration levels at existing sensitive land uses in the project vicinity, or if project-generated noise or vibration levels would exceed applicable federal, state, or local standards at existing or proposed sensitive uses.

It should be noted that the proposed Project Development Area is evaluated in this assessment at a project level based on the detailed drawings submitted to the County as part of a planned development and a tentative subdivision map application package. However, the proposed Program Study Area is evaluated in this assessment at a program level based on potential allowable uses, building areas, and required parking described in the BLHSP Amendment document.

Noise and Vibration Fundamentals

Noise

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20

times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness. Noise levels associated with common noise sources are provided in Figure 4.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}). The L_{eq} is the foundation of the day-night average and day-evening-night average noise descriptors, DNL and CNEL, and show very good correlation with community response to noise. DNL and CNEL are based on the average noise level over a 24-hour day, with a 5-decibel weighting applied to noise occurring during evening hours (CNEL only), and a 10-decibel weighting applied to noise occurring during nighttime hours (both DNL and CNEL). Because DNL and CNEL represent a 24-hour average, it tends to disguise short-term variations in the noise environment.

Vibration

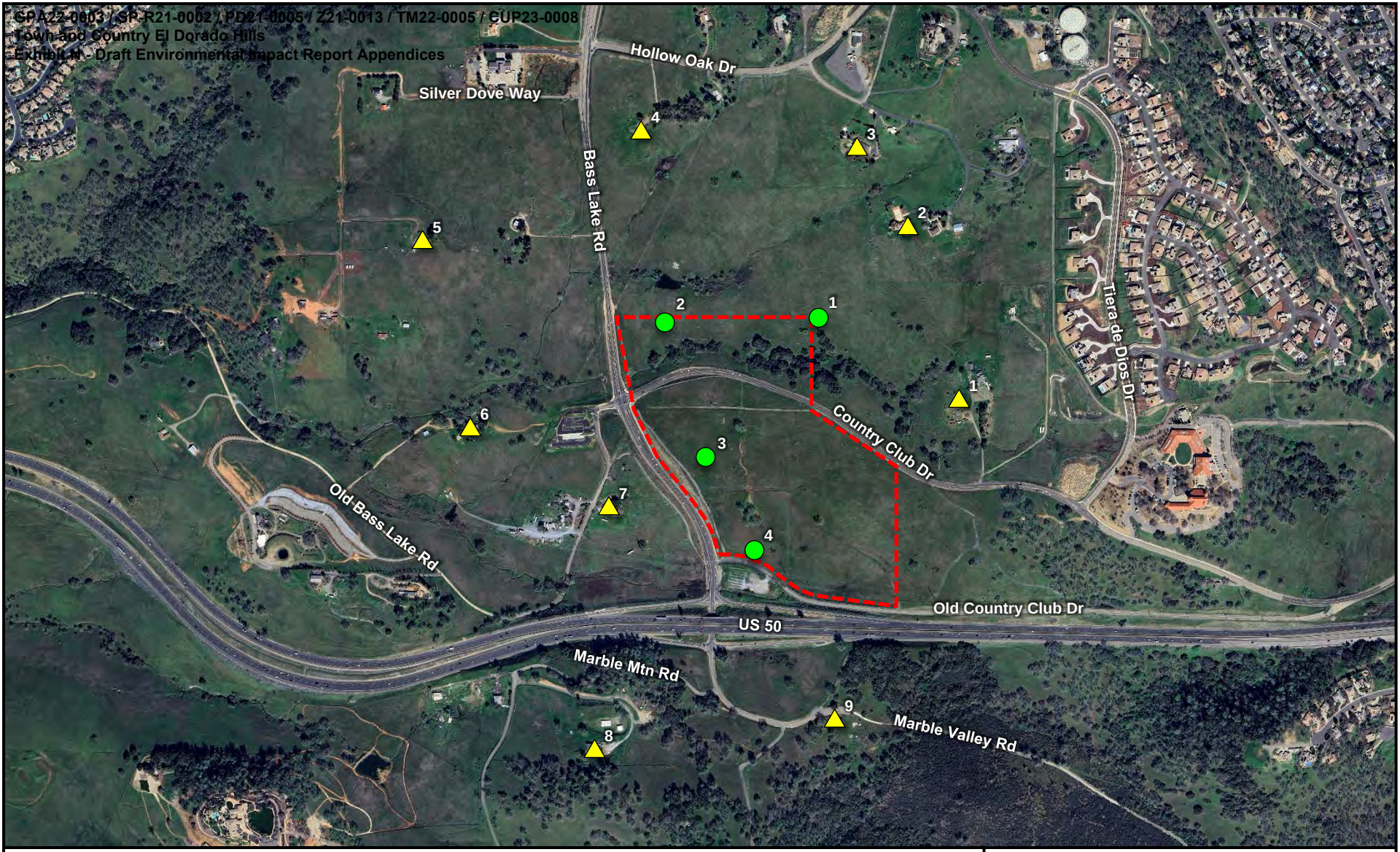
Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that noise is generally considered to be pressure waves transmitted through air, while vibration is usually associated with transmission through the ground or structures. As with noise, vibration consists of an amplitude and frequency. A person's response to vibration will depend on their individual sensitivity as well as the amplitude and frequency of the source.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of velocity in inches per second peak particle velocity (IPS, PPV) or root-mean-square (VdB, RMS). Standards pertaining to perception as well as damage to structures have been developed for vibration in terms of peak particle velocity as well as RMS velocities.

As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate. Differences in subsurface geologic conditions and distance from the source of vibration will result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes will decrease with increasing distance.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases.

According to the Transportation and Construction-Induced Vibration Guidance Manual (Caltrans, April 2020), operation of construction equipment and construction techniques generate ground vibration. Traffic traveling on roadways can also be a source of such vibration. At high enough amplitudes, ground vibration has the potential to damage structures and/or cause cosmetic damage. Ground vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. However, traffic, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.



Legend

- Project Area Boundary (Approximate)
- Long-Term Noise & Short-Term Vibration Measurement Sites
- Noise-Sensitive Receivers (Rural Residences)

N

Scale (Feet)

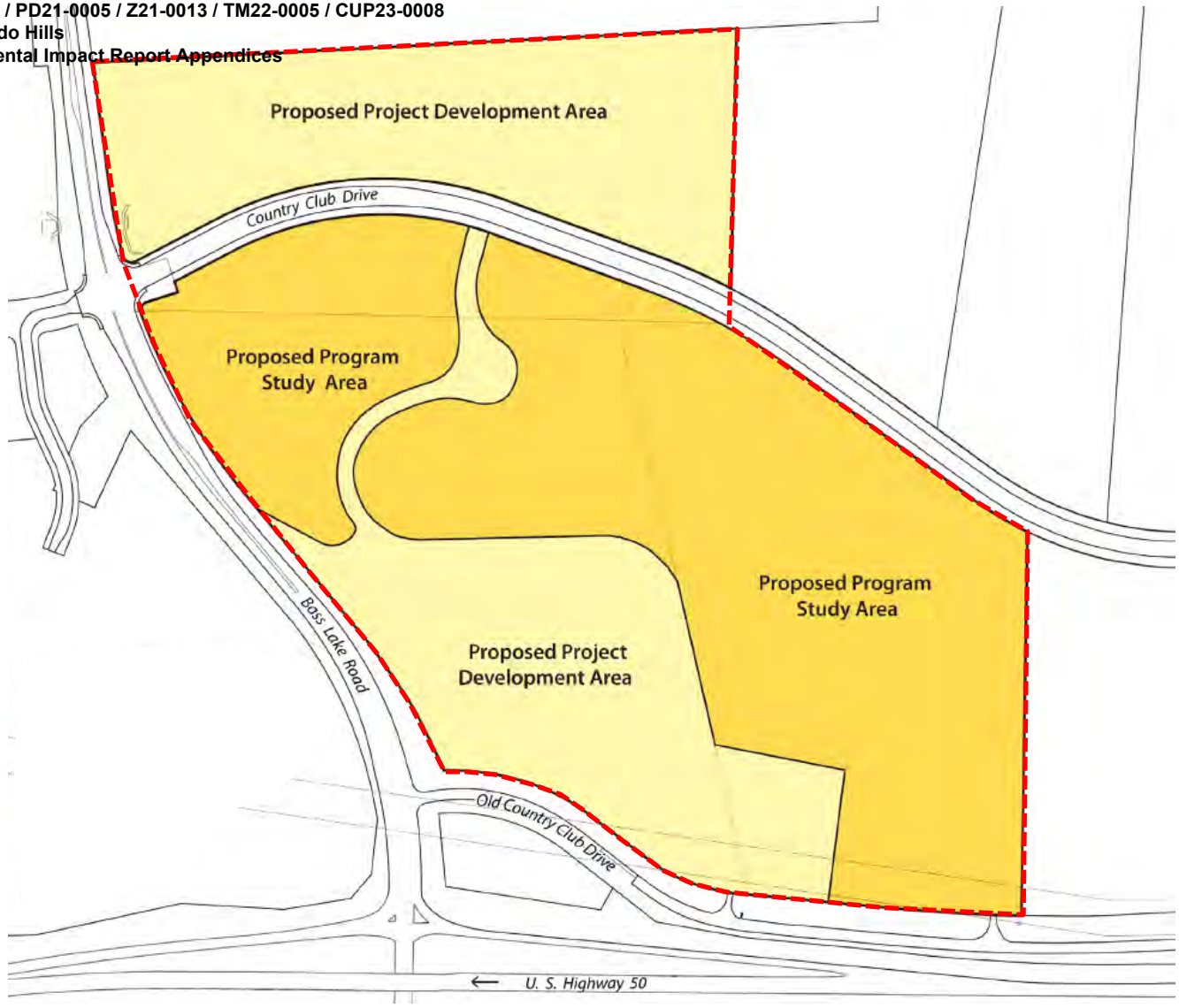
0 500 1,000

Town & Country Village El Dorado
El Dorado County, CA

Project Area

Figure 1

BOLLARD Acoustical Consultants



Legend

Project Area Boundary

N

Scale (Feet)

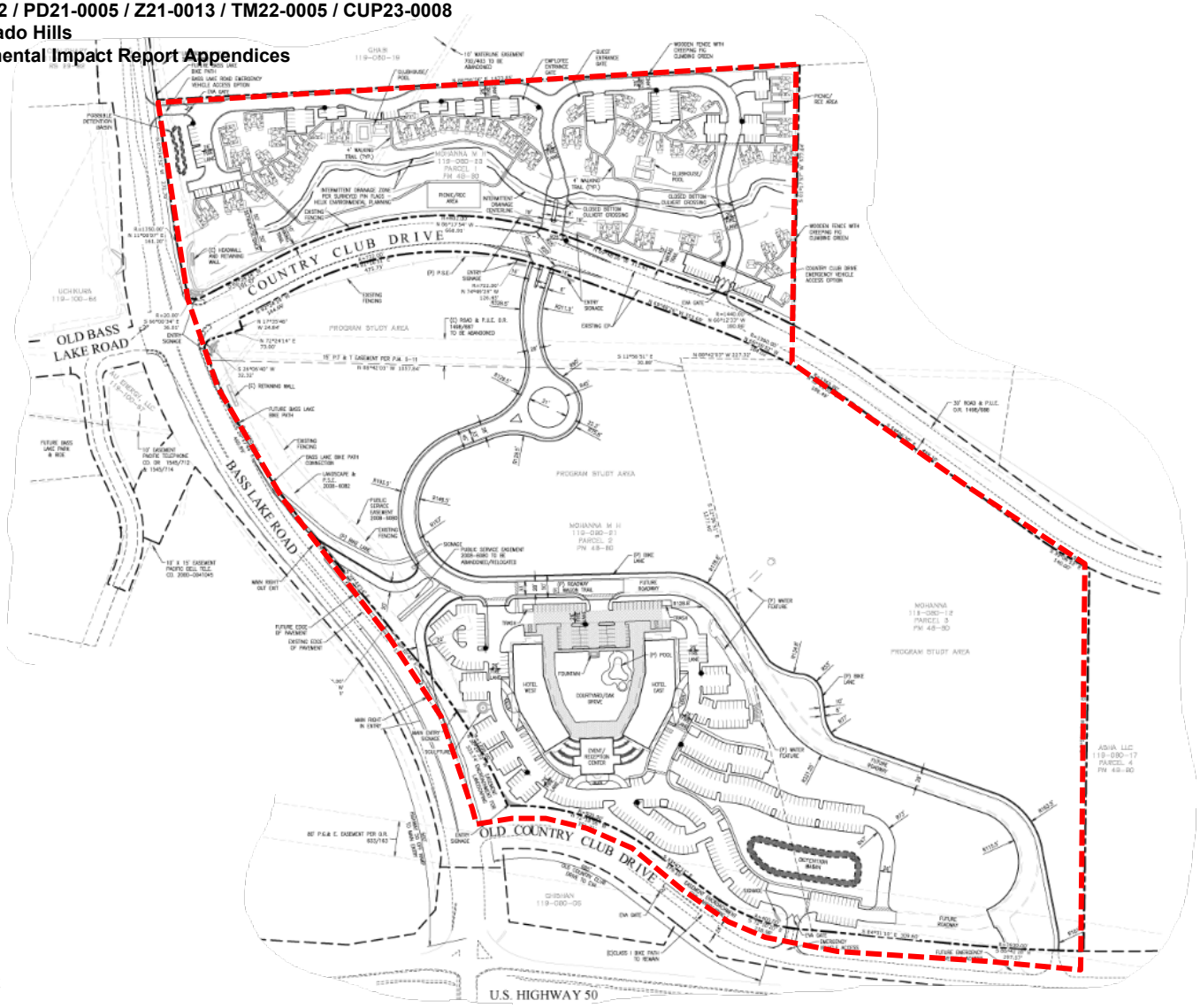
0 200 400

Town & Country Village El Dorado
El Dorado County, CA

Development & Program Study Areas

Figure 2

BOLLARD Acoustical Consultants



Site plan dated 3/15/2024

Legend

Project Area Boundary

N

Scale (Feet)

0 200 400

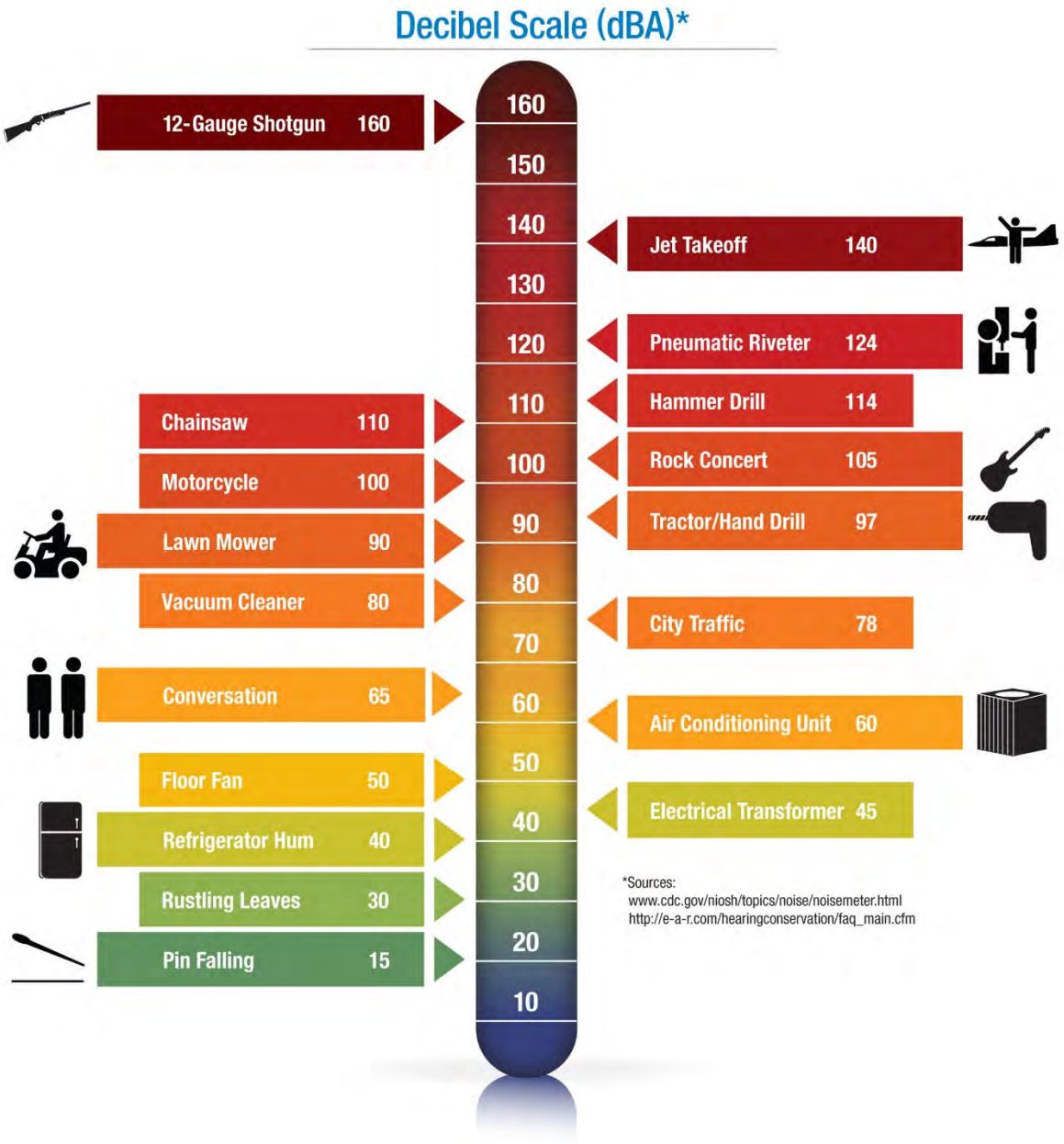
Town & Country Village El Dorado
El Dorado County, CA

Overall Site Plan

Figure 3

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Figure 4
Noise Levels Associated with Common Noise Sources



Environmental Setting – Existing Ambient Noise and Vibration Environment

Existing Land Uses in the Project Vicinity

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities.

The closest existing off-site noise-sensitive receptors which would potentially be affected by the project consist of rural residences, identified as receivers 1-9 in Figure 1. Existing agricultural land uses are also located within the project vicinity; however, such uses are typically not considered to be noise-sensitive, but rather noise-generating.

Existing Traffic Noise Levels along Project Area Roadway Network

To predict traffic noise levels along existing roadway networks with multiple segments, modelling is commonly used rather than monitoring. The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify existing traffic noise levels at the existing sensitive land uses nearest to the project area roadway network. The FHWA Model was also used to quantify the distances to the 60, 65 and 70 dB DNL traffic noise contours for these roadways. The FHWA Model predicts hourly average (L_{eq}) values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop DNL values from L_{eq} values.

Existing traffic data in the form of AM and PM peak hour intersection turning movements were provided by the project transportation consultant, T. Kear Transportation Planning & Management (T. Kear). Those data were converted to Average Daily Traffic (ADT) segment volumes by applying a factor of 5 to the sum of AM and PM peak hour conditions. Other inputs were obtained from BAC observations and noise measurement data. The existing traffic noise levels at the distances representing the nearest sensitive land uses to the project area roadways and distances from the centerlines of selected roadways to the 60 dB, 65 dB and 70 dB DNL contours are summarized in Table 1. The Table 1 data includes offsets where appropriate to account for the presence of existing traffic noise barriers. Appendix B contains the FHWA Model inputs for existing conditions.

Table 1
Existing Traffic Noise Levels at Nearest Receptors and Distances to DNL Contours

#	Roadway	Segment Description	DNL at Nearest Sensitive Receptor	Distance to Contour (ft)		
				70 dB DNL	65 dB DNL	60 dB DNL
1	Alexandrite Dr	North of Green Valley Rd	32	0	1	2
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63	17	36	78
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61	19	41	88
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59	19	42	89
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59	15	31	68
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59	16	34	74
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58	17	36	77
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58	17	36	77
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59	19	42	90
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60	19	42	90
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	53	20	42	91
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	56	42	91	196
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	52	43	92	198
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	55	43	92	198
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55	45	98	210
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55	45	98	210
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	51	45	98	210
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	47	28	61	132
19	Brannan Wy	West of Bass Lake Rd	47	2	4	8
20	Bridlewood Dr	East of Bass Lake Rd	54	4	9	20
21	Cambridge Rd	South of Green Valley Rd	61	12	25	55
22	Cambridge Rd	North of Merrychase Dr	63	24	52	111
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	55	24	52	112
24	Church Pl	North of Country Club Dr	31	0	1	2
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	42	12	25	54
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	41	12	25	54
27	Country Club Dr	Project Dwy 3 to Church Pl	45	12	25	54
28	Country Club Dr	Church Pl to Morrison Rd	45	12	25	54
29	Country Club Dr	Morrison Rd to El Norte Rd	57	11	23	50
30	Country Club Dr	El Norte Rd to Merrychase Dr	59	9	19	41
31	Country Club Dr	East of Merrychase Dr	58	8	17	36
32	El Norte Rd	North of Country Club Dr	44	2	4	8
33	Flying C Rd	South of US 50 EB Ramp	44	4	9	19
34	Green Valley Rd	West of Silver Springs Pkwy	60	56	121	261
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59	18	39	85
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61	19	42	90
37	Green Valley Rd	East of Cambridge Rd	60	17	37	81
38	Hawk View Rd	West of Bass Lake Rd	46	1	3	6
39	Hawk View Rd	East of Bass Lake Rd	16	0	0	0
40	Hollow Oak Dr	East of Bass Lake Rd	46	6	13	29
41	Madera Wy	East of Bass Lake Rd	55	5	11	24
42	Magnolia Hills Dr	South of Bass Lake Rd	54	4	9	19

Table 1
Existing Traffic Noise Levels at Nearest Receptors and Distances to DNL Contours

#	Roadway	Segment Description	DNL at Nearest Sensitive Receptor	Distance to Contour (ft)		
				70 dB DNL	65 dB DNL	60 dB DNL
43	Marble Valley Rd	South of US 50 EB Ramp	45	3	7	15
44	Merrychase Dr	Country Club Dr to Cambridge Rd	59	12	25	55
45	Morrison Rd	North of Country Club Dr	53	6	13	28
46	Old Bass Lake Rd	West of Bass Lake Rd	38	1	2	5
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21	0	1	2
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	21	0	1	2
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19	0	0	1
50	Peridot Dr	North of Green Valley Rd	51	3	6	12
51	Serrano Pkwy	North of Bass Lake Rd	56	12	25	54
52	Sienna Ridge Rd	South of Bass Lake Rd	51	4	9	19
53	Sienna Ridge Rd	East of Bass Lake Rd	19	0	0	0
54	Silva Valley Pkwy	North of Tong Rd	64	44	95	206
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51	44	95	206
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	51	46	98	212
57	Silver Dove Wy	West of Bass Lake Rd	27	0	1	2
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	54	8	18	39
59	Tong Rd	East of Silva Valley Pkwy	25	0	1	1
60	Trinidad Dr	South of Country Club Dr	46	2	4	9
61	US 50 EB Ramp	East of Silva Valley Pkwy	48	31	68	146
62	US 50 EB Ramp	East of Bass Lake Rd	45	15	31	68
63	US 50 WB Ramp	West of Silva Valley Pkwy	49	31	68	145
64	US 50 WB Ramp	West of Bass Lake Rd	51	39	85	183
65	Whistling Wy	South of Bass Lake Rd	37	1	1	3
66	White Rock Rd	South of US 50 EB Ramp	53	56	121	260
67	Woodleigh Ln	East of Bass Lake Rd	55	5	11	24

Source: FHWA-RD-77-108, T. Kear and BAC

Existing Overall Ambient Noise Environment within the Project Vicinity

The existing ambient noise environment in the project vicinity is defined primarily by traffic on U.S. 50 and Bass Lake Road. To generally quantify existing ambient noise environment within the project vicinity, BAC conducted long-term (72-hour) ambient noise level measurements at four (4) locations July 19th-21st, 2023. The long-term ambient noise survey locations are identified as sites 1-4 in Figure 1. Photographs of the noise survey locations are provided in Appendix C.

Larson Davis Laboratories (LDL) Model LxT precision integrating sound level meters were used to complete the long-term noise level survey. The meters were calibrated immediately before with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all specifications of the American National Standards Institute requirements for Type 1 sound level meters (ANSI S1.4). The complete results of the ambient noise surveys are presented in Appendices D and E and are summarized in Table 2.

Table 2
Summary of Long-Term Ambient Noise Survey Results – July 19-21, 2023[1]

Site Description[2]	Date	CNEL (dB)	Average Measured Hourly Noise Levels (dB)[3]					
			Daytime		Evening		Nighttime	
			L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
Site 1: Northeast project area	7/19/23	49	46	59	46	64	41	53
	7/20/23	50	46	60	45	59	42	52
	7/21/23	50	46	60	45	58	43	54
Site 2: Northwest project area	7/19/23	55	51	66	53	75	47	62
	7/20/23	55	51	68	51	68	48	63
	7/21/23	56	52	70	50	65	48	61
Site 3: West project area	7/19/23	58	54	64	52	70	51	63
	7/20/23	59	54	68	52	66	51	63
	7/21/23	59	55	67	52	66	52	64
Site 4: Southwest project area	7/19/23	64	61	74	58	76	56	73
	7/20/23	65	62	78	59	77	57	71
	7/21/23	64	62	76	58	75	57	72

[1] Detailed summaries of the noise monitoring results are provided in Appendices D and E.
[2] Long-term ambient noise monitoring locations are identified in Figure 1.
[3] Daytime: 7:00 AM to 7:00 PM Evening: 7:00 PM to 10:00 PM Nighttime: 10:00 PM to 7:00 AM

Source: BAC 2023

Noise level measurements obtained at BAC site 1, located near the northeast boundary of the project area, are believed to be representative of the existing ambient noise level environment at residential receivers 1-3. Long-term noise survey site 2, located within the northwest portion of the project area, was selected to be representative of the existing ambient noise level environment at receivers 4 and 5. Noise level measurements obtained at BAC site 3, located within the western portion of the project area, are believed to be representative of the existing ambient noise level environment at residential receivers 6 and 7. Finally, BAC noise survey site 4, located within the southwest portion of the project area, was selected to be representative of the existing ambient noise level environment at receivers 8 and 9.

As shown in Table 2, measured day-evening-night average levels (CNEL) and average measured hourly noise levels (L_{eq} and L_{max}) were consistent at the survey sites during the 72-hour monitoring period (i.e., relatively small range of measured values).

Existing Ambient Vibration Environment in Project Vicinity

During BAC site visits on July 18th and 22nd, 2023, vibration levels were below the threshold of perception within the project area. Nonetheless, to quantify existing vibration levels in the project vicinity, BAC conducted short-term (10-minute) vibration surveys on July 22nd, 2023, at the locations identified in Figure 1 (sites 1-4).

A Larson-Davis Laboratories Model LxT precision integrating sound level meter equipped with a vibration transducer was used to complete the measurements. The results are summarized in Table 3.

Table 3
Summary of Short-Term Ambient Vibration Survey Results – July 22nd, 2023

Survey Location	Time	Average Measured Vibration Level (VdB)
Site 1: Northeast project area	11:01 a.m.	30
Site 2: Northwest project area	11:21 a.m.	31
Site 3: West project area	12:19 p.m.	30
Site 4: Southwest project area	11:59 a.m.	33

Source: BAC 2023

Table 3 data indicate that average measured average vibration levels within the project vicinity were well below the 65 VdB threshold of human perception, which is consistent with the BAC staff observations.

Regulatory Setting: Criteria for Acceptable Noise and Vibration Exposure

Federal

There are no federal noise or vibration criteria which would be directly applicable to this project. However, El Dorado County does not currently have adopted standards for groundborne vibration. As a result, the following federal vibration criteria was applied to the project.

Federal Transit Administration

El Dorado County does not currently have adopted standards for groundborne vibration. As a result, the vibration impact criteria developed by the Federal Transit Administration (FTA) were applied to the project. The FTA criteria applicable to damage and annoyance from vibration typically associated with construction activities are presented in Tables 4 and 5.

Table 4
FTA Criteria for Assessing Vibration Damage to Structures

Building Category	Level (VdB)[1]
I. Reinforced-concrete, steel or timber (no plaster)	102
II. Engineered concrete and masonry (no plaster)	98
III. Non-engineered timber and masonry buildings	94
IV. Buildings extremely susceptible to vibration damage	90

[1] RMS velocity in decibels (VdB) re 1 micro-inch/second

Source: 2018 FTA Noise and Vibration Manual, Table 7-5

Table 5
FTA Groundborne Vibration Impact Criteria for General Assessment

Land Use Category	Impact Levels (VdB)		
	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Buildings where vibration would interfere with interior ops.	65[d]	65[d]	65[d]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

a. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
c. "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
d. This criterion limit is based on levels that are acceptable for most moderately-sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

Source: 2018 FTA Noise Impact and Vibration Assessment, Table 6-3

State of California

California Environmental Quality Act (CEQA)

The State of California has established regulatory criteria that are applicable to this assessment. Specifically, Appendix G of the State of California Environmental Quality Act (CEQA) Guidelines are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. According to Appendix G of the CEQA guidelines, the project would result in a significant noise or vibration impact if the following occur:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or other applicable standards of other agencies.

B. Generation of excessive groundborne vibration or groundborne noise levels.

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

It should be noted that audibility is not a test of significance according to CEQA. If this were the case, any project which added any audible amount of noise to the environment would be considered significant according to CEQA. Because every physical process creates noise, the use of audibility alone as significance criteria would be unworkable. CEQA requires a substantial increase in noise levels before noise impacts are identified, not simply an audible change.

Local

El Dorado County General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan contains the County's noise-related policies. The specific policies which are generally applicable to this project are reproduced below:

Policy 6.5.1.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6 (General Plan Table 6-1) or the performance standards of Table 7 (General Plan Table 6-2), an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 7 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 6 and Table 7, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

Policy 6.5.1.6 New noise-sensitive uses shall not be allowed where the noise level, due to non-transportation noise sources, will exceed the noise level standards of Table 7 unless effective noise mitigation measures have been incorporated into the development design to achieve those standards.

Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 7 for noise-sensitive uses.

Policy 6.5.1.8 New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 6 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 6.

Policy 6.5.1.9 Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6 at existing noise-sensitive land uses.

Policy 6.5.1.11 The standards outlined in Tables 8, 9 and 10 (General Plan Tables 6-3, 6-4, 6-5) shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally-recognized holidays. Further, the standards outlined in Tables 8 through 10 shall not apply to public projects to alleviate traffic congestion and safety hazards.

Policy 6.5.1.12 When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration:

a) Where existing or projected future traffic noise levels are less than 60 dB DNL at the outdoor activity areas of residential uses, an increase of more than 5 dBA DNL (or CNEL) caused by a new transportation noise source will be considered significant.

b) Where existing or projected future traffic noise levels range between 60 and 65 dBA DNL (or CNEL) at the outdoor activity areas of residential uses, an increase of more than 3 dBA DNL (or CNEL) caused by a new transportation noise source will be considered significant; and

c) Where existing or projected future traffic noise levels are greater than 65 dBA DNL (or CNEL) at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA DNL (or CNEL) caused by a new transportation noise source will be considered significant.

Policy 6.5.1.13 When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration:

a) In areas in which ambient noise levels are in accordance with the standards in Table 7, increases in ambient noise levels caused by new non-transportation noise sources that exceed 5 dBA shall be considered significant; and

b) In areas in which ambient noise levels are not in accordance with the standards in Table 7, increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

Table 6
Maximum Allowable Noise Exposure for Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] DNL/CNEL, dB	Interior Spaces DNL/CNEL, dB	Interior Spaces L_{eq}, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60[3]	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

[1] In Community Regions and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB DNL shall be applied at the building facade, in addition to a 60 dB DNL criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB DNL shall be applied at a 100-foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB DNL may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

[2] As determined for a typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB DNL/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB DNL/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-1

Table 7
Noise Level Performance Protection Standards for Noise-Sensitive Land Uses Affected by Non-Transportation Sources

	Daytime 7 am – 7 pm		Evening 7 pm – 10 pm		Nighttime 10 pm – 7 am	
Noise Level Descriptor	**Community**	**Rural**	**Community**	**Rural**	**Community**	**Rural**
Hourly, L_{eq}	55	50	50	45	45	40
Maximum, L_{max}	70	60	60	55	55	50

-Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

-The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

-In Community Regions the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise-sensitive land use as defined in Objective 6.5.1.

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-2

Table 8
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Community Regions and Adopted Plan Areas – Construction Noise

		Noise Level (dB)	
Land Use Designation[1]	**Time Period**	**L_{eq}**	**L_{max}**
Higher-Density Residential (MFR, HDR, MDR)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65
	10 pm – 7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am – 7 pm	70	90
	10 pm – 7 am	65	75
Industrial (I)	Any Time	80	90

[1] Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-3

Table 9
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Rural Centers – Construction Noise

		Noise Level (dB)	
Land Use Designation	**Time Period**	**L_{eq}**	**L_{max}**
All Residential (MFR, HDR, MDR)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65
	10 pm – 7 am	40	55
Commercial and Public Facilities (C, TR, PF)	7 am – 7 pm	65	75
	10 pm – 7 am	60	70
Industrial (I)	Any Time	70	80
Open Space (OS)	7 am – 7 pm	55	75
	7 pm – 10 pm	50	65

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-4

Table 10
Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Rural Regions and Adopted Plan Areas – Construction Noise

		Noise Level (dB)	
Land Use Designation	**Time Period**	**L_{eq}**	**L_{max}**
All Residential (LDR)	7 am – 7 pm	50	60
	7 pm – 10 pm	45	55
	10 pm – 7 am	40	50
Commercial and Public Facilities (C, TR, PF)	7 am – 7 pm	65	75
	10 pm – 7 am	60	70
Industrial (I)	Any Time	70	80
Rural Land, Natural Resources, Open Space, Agricultural Lands (RR, NR, OS, AL)	7 am – 7 pm	65	75
	7 pm – 10 pm	60	70

Source: El Dorado County General Plan, Public Health & Safety Element, Table 6-5

El Dorado County General Plan Non-Transportation Noise Criteria Applied to Project

According to the provided project description, and subsequently verified after a review of Figure LU-1 of the El Dorado County General Plan (Land Use Diagram), the northern portion of the project area, or north of Country Club Drive, is located within the Community Region of the El Dorado County General Plan. The central and southern portions of the project area, or south of Country Club Drive, are located within the Rural Region of the General Plan. Finally, the project area is located within the BLHSP.

Based on the information above, the County's non-transportation noise level limits and associated criteria for Community Regions identified in Table 7 were applied to project on-site operations noise affecting residential receivers 1-5. Additionally, the noise level limits and associated criteria for Rural Regions identified in Table 7 were applied to project on-site operations noise affecting residential receivers 6-9.

El Dorado County Municipal Code

Section 130.37.020 of the El Dorado County Municipal Code contains an exemption for noise associated with construction, which would be applicable to project on-site construction activities. The applicable code section is reproduced below.

130.37.020 Exemptions.

I. Construction (e.g., construction, alteration or repair activities) during daylight hours provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order.

Bass Lake Hills Specific Plan

The project area is located within the Bass Lake Hills Specific Plan (BLHSP). Chapter 7.1 of the BLHSP contains noise criteria for the plan area, which are reproduced below.

7.1 Noise Standards.

1. Interior and exterior noise levels for transportation sources shall not exceed levels contained in the General Plan Noise Element.

2. Tentative subdivisions which propose lots within the 65 dB DNL contours lines shown along U.S. Highway 50 and Bass Lake Road in (BLHSP) Figure 7-1, shall submit acoustical analyses consistent with General Plan Noise Element policies and procedures.

3. Setbacks, berms, and/or other noise attenuation measures capable of reducing street and highway noise levels to standards contained in the General Plan Noise Element shall be provided where required in all residential areas and schools. Prohibiting the creation of additional housing units within the 65 dB CNEL noise contour shall occur as an alternative to using sound walls to mitigate noise related impacts. A setback of at least 50 feet for residential units from Bass Lake Road shall be provided.

4. All noise attenuation structures and landscaping shall adhere to a common design theme outlined in (BLHSP) Section 8.6.1.

Impacts and Mitigation Measures

Thresholds of Significance

For the purposes of this assessment, a noise and vibration impact is considered significant if the project would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or other applicable standards of other agencies; or

- Generation of excessive groundborne vibration or groundborne noise levels; or

- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The nearest airport to the project area is Cameron Airpark (a public use airport), located approximately 2.75 miles to the northeast. Because the project area is not within the vicinity of a private airstrip, an airport land use plan, or within two miles of a public airport, the last threshold listed above is not discussed further.

The following criteria based on standards established by the Federal Transit Administration (FTA), El Dorado County General Plan, El Dorado County Municipal Code, and Bass Lake Hills Specific Plan were used to evaluate the significance of environmental noise and vibration resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise criteria presented in the El Dorado County General Plan, El Dorado County Municipal Code, or Bass Lake Hills Specific Plan.

- A significant impact would be identified if off-site traffic noise exposure or on-site operations generated by the project would substantially increase noise levels at existing sensitive receptors in the vicinity. A substantial increase would be identified relative to the noise level increase significance criteria established in Policies 6.5.1.12 (transportation noise sources) and 6.2.1.13 (non-transportation noise sources) of the El Dorado County General Plan.

- A significant impact would be identified if project construction activities or proposed on-site operations would expose existing sensitive receptors to excessive groundborne

vibration levels. Specifically, an impact would be identified if groundborne vibration levels due to these sources would exceed the FTA vibration impact criteria.

Noise Impacts Associated with Project-Generated Increases in Off-Site Traffic

With development of the project, traffic volumes on the local roadway network will increase. Those increases in daily traffic volumes will result in a corresponding increase in traffic noise levels at existing uses located along those roadways. Impacts 1 through 4 evaluate increases in off-site traffic noise levels which would result from the project.

Impact 1: Increases in Existing (2023) Traffic Noise Levels due to the Project

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify increases in existing traffic noise levels at the existing sensitive land uses nearest to the project area roadway network. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop DNL values from L_{eq} values.

Traffic data in the form of peak hour intersection turning movements were obtained from documentation prepared by the project transportation consultant (T. Kear). Those data were converted to Average Daily Traffic (ADT) segment volumes by applying a factor of 5 to the sum of AM and PM peak hour conditions. Other inputs were obtained from BAC observations and noise measurement data. Appendices B and F contain the FHWA Model inputs for 2023 Existing No Project and 2023 Existing Plus Project conditions, respectively. The 2023 Existing No Project and 2023 Existing Plus Project traffic noise levels at the distances representing the nearest existing sensitive land uses to the roadway segments analyzed within the project roadway network are summarized in Table 11. Table 11 also shows the thresholds for determination of a significant traffic noise increase, whether the roadway segment contains sensitive uses, and whether or not significant noise impacts are identified for each segment.

Factors such as roadway elevation, curvature, grade, and shielding from local topography or structures, or elevated receivers may affect actual traffic noise propagation. Along roadway segments where existing noise barriers are present, the degree of shielding provided by those barriers was estimated and included in the Table 11 results.

Table 11
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2023 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	E 2023 + Project	Increase (dB)				
1	Alexandrite Dr	North of Green Valley Rd	32.2	32.2	0.0	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	62.9	62.9	0.0	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.0	61.0	0.0	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.3	59.3	0.0	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	58.9	58.9	0.0	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.5	59.5	0.0	5.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.3	58.3	0.0	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.3	58.3	0.0	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.3	59.3	0.1	5.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.4	60.4	0.1	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	53.4	53.5	0.1	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	56.2	56.3	0.1	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	51.8	51.8	0.1	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	55.4	55.5	0.1	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.0	55.8	0.7	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.0	55.8	0.8	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	51.3	51.7	0.4	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	46.8	47.4	0.6	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	46.7	46.7	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.1	54.2	0.1	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	60.6	60.6	0.0	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	62.6	62.6	0.0	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	54.8	55.2	0.4	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	42.0	42.9	0.8	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	41.0	41.1	0.2	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	44.8	45.0	0.2	5.0	No	**Yes**	No

Table 11
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2023 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	E 2023 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	45.5	45.6	0.2	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	57.3	57.5	0.2	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	58.7	58.9	0.2	5.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	57.8	57.9	0.1	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.5	43.6	0.1	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	43.7	43.7	0.0	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	59.7	59.7	0.0	5.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	58.9	58.9	0.0	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.2	61.2	0.0	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.5	60.5	0.0	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	46.4	47.0	0.5	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	15.8	15.8	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.0	46.0	0.0	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.3	55.3	0.0	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	53.6	0.0	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	45.2	45.2	0.0	5.0	No	**Yes**	No
44	Merrychase Dr	Country Club Dr to Cambridge Rd	58.9	58.9	0.0	5.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	53.1	53.1	0.0	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	37.5	37.5	0.0	5.0	No	**Yes**	No
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.7	50.7	0.0	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.0	56.1	0.1	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.1	51.1	0.0	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	18.8	18.8	0.0	5.0	No	**Yes**	No
54	Silva Valley Pkwy	North of Tong Rd	64.1	64.1	0.1	3.0	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.2	51.2	0.1	5.0	No	**Yes**	No

Table 11
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2023 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	E 2023 + Project	Increase (dB)				
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	51.4	51.4	0.1	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	26.8	0.0	5.0	No	**Yes**	No
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	53.9	53.9	0.0	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	24.7	24.7	0.0	5.0	No	**Yes**	No
60	Trinidad Dr	South of Country Club Dr	46.4	46.4	0.0	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	47.8	47.9	0.1	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	45.3	45.6	0.4	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	48.5	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.4	51.8	0.3	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	36.6	36.6	0.0	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	53.2	53.2	0.0	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.3	55.3	0.0	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

As stated previously, the FHWA Model does not account for non-traffic ambient noise sources such as nearby wildlife or other anthropogenic noise sources within an area. Consideration of such sources typically results in higher ambient noise levels (i.e., existing no project) than those predicted by the FHWA Model alone.

As indicated in Table 11, project-generated traffic noise level increases would not result in significant noise impacts at existing sensitive receptors located along the project area roadway network in the 2023 Existing No Project vs. 2023 Existing Plus Project conditions analysis. As a result, this impact is identified as being ***less than significant***.

Impact 2: Increases in Existing (2033) Traffic Noise Levels due to the Project

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify increases in existing traffic noise levels at the existing sensitive land uses nearest to the project area roadway network. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop DNL values from L_{eq} values.

Traffic data in the form of peak hour intersection turning movements were provided by the project transportation consultant (T. Kear). Those data were converted to Average Daily Traffic (ADT) segment volumes by applying a factor of 5 to the sum of AM and PM peak hour conditions. Other inputs were obtained from BAC observations and noise measurement data. Appendices G and H contain the FHWA Model inputs for 2033 Existing No Project and 2033 Existing Plus Project conditions, respectively. The 2033 Existing No Project and 2033 Existing Plus Project traffic noise levels at the distances representing the nearest existing sensitive land uses to the roadway segments analyzed within the project roadway network are summarized in Table 12. Table 12 also shows the thresholds for determination of a significant traffic noise increase, whether the roadway segment contains sensitive uses, and whether or not significant noise impacts are identified for each segment.

As mentioned previously, factors such as roadway elevation, curvature, grade, and shielding from local topography or structures, or elevated receivers may affect actual traffic noise propagation. Along roadway segments where existing noise barriers are present, the degree of shielding provided by those barriers was estimated and included in the Table 12 results.

Table 12
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2033 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2033	E 2033 + Project	Increase (dB)				
1	Alexandrite Dr	North of Green Valley Rd	32.6	32.6	0.0	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63.2	63.2	0.0	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.3	61.3	0.0	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.5	59.5	0.0	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59.5	59.5	0.0	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.9	59.9	0.0	5.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.7	58.7	0.0	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.7	58.7	0.0	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.7	59.8	0.0	5.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.9	60.9	0.0	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	54.4	54.5	0.1	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	57.2	57.3	0.1	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	52.8	52.9	0.1	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	56.5	56.5	0.1	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.8	56.1	0.3	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.8	56.2	0.3	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	52.1	52.4	0.3	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	48.0	48.4	0.4	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	48.8	48.8	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.6	54.7	0.1	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	61.0	61.0	0.0	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	63.2	63.7	0.6	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	55.2	55.2	0.0	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	43.6	44.2	0.6	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	42.5	42.6	0.1	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	46.4	46.5	0.1	5.0	No	**Yes**	No

Table 12
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2033 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2033	E 2033 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	47.0	47.2	0.1	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	58.6	58.8	0.1	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	60.4	60.5	0.1	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	58.7	58.7	0.1	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.7	43.8	0.1	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	45.0	45.0	0.0	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	60.1	60.1	0.0	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59.1	59.1	0.0	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.5	61.5	0.0	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.7	60.7	0.0	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	53.7	53.8	0.1	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	34.0	34.0	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.6	46.6	0.0	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.9	55.9	0.0	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	53.6	0.0	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	51.4	51.4	0.0	5.0	No	**Yes**	No
44	Merrychase Dr	Country Club Dr to Cambridge Rd	59.4	59.4	0.0	5.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	55.6	55.6	0.0	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	51.0	51.0	0.0	5.0	No	**Yes**	No
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.9	50.7	0.0	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.5	56.5	0.1	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.4	51.4	0.0	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	33.4	33.4	0.0	5.0	No	**Yes**	No
54	Silva Valley Pkwy	North of Tong Rd	64.7	64.7	0.1	3.0	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.9	51.9	0.1	5.0	No	**Yes**	No

Table 12
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2033 Existing Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) E 2033 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	52.6	52.6	0.0	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	26.8	0.0	5.0	No	**Yes**	No
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	54.8	54.8	0.0	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	49.0	49.0	0.0	5.0	No	**Yes**	No
60	Trinidad Dr	South of Country Club Dr	46.6	46.6	0.0	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	49.5	49.6	0.1	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	46.4	46.7	0.3	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	48.5	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.5	52.2	0.7	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	37.9	37.9	0.0	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	54.9	54.9	0.0	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.5	55.5	0.0	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Table 12 data indicate that project-generated traffic noise level increases would not result in significant noise impacts at existing sensitive receptors located along the project area roadway network in the 2033 Existing No Project vs. 2033 Existing Plus Project conditions analysis. As a result, this impact is identified as being ***less than significant***.

Impact 3: Increases in Cumulative (2040) Traffic Noise Levels due to the Project

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify increases in future (cumulative) traffic noise levels at the nearest existing sensitive land uses to the project area roadway network. This analysis first assesses whether a cumulative roadway noise impact would occur by comparing the cumulative with project conditions to existing conditions. If a cumulative roadway noise impact is identified, it is further evaluated to assess whether the proposed project would make a cumulatively considerable contribution to the cumulative impact. This process is completed through a comparison of the roadway noise associated with the cumulative with project scenario against the cumulative no-project scenario.

Tables 13 and 14 compares 2040 Cumulative Plus Project traffic noise levels against 2023 and 2033 Existing No Project traffic noise levels (respectively) and includes a determination regarding whether the corresponding increase in traffic noise exposure over time is considerable. Table 15 compares 2040 Cumulative Plus Project traffic noise levels against 2040 Cumulative No Project conditions to determine if the project's contribution to the cumulative noise environment is considerable. Appendices B, G, I and J contain the FHWA Model inputs for 2023 Existing, 2033 Existing, 2040 Cumulative and 2040 Cumulative Plus Project and No Project conditions.

Table 13
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2023	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
1	Alexandrite Dr	North of Green Valley Rd	32.2	32.7	0.6	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	62.9	63.4	0.5	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.0	61.5	0.5	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.3	59.8	0.5	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	58.9	59.9	1.0	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.5	60.2	0.8	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.3	59.1	0.8	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.3	59.1	0.8	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.3	60.6	1.3	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.4	61.5	1.1	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	53.4	55.1	1.7	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	56.2	57.9	1.7	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	51.8	53.2	1.4	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	55.4	57.1	1.7	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.0	57.8	2.8	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.0	57.8	2.8	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	51.3	54.1	2.8	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	46.8	50.1	3.3	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	46.7	52.1	5.3	5.0	**Yes**	**Yes**	**Yes**
20	Bridlewood Dr	East of Bass Lake Rd	54.1	55.2	1.1	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	60.6	61.3	0.7	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	62.6	63.5	1.0	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	54.8	55.4	0.6	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	42.0	47.7	5.7	5.0	**Yes**	**Yes**	**Yes**
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	41.0	45.7	4.8	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	44.8	46.7	1.8	5.0	No	**Yes**	No

Table 13
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	C 2040 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	45.5	48.2	2.7	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	57.3	59.8	2.5	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	58.7	61.7	2.9	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	57.8	59.3	1.5	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.5	44.2	0.7	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	43.7	45.5	1.8	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	59.7	60.3	0.6	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	58.9	59.2	0.2	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.2	61.7	0.5	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.5	60.9	0.4	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	46.4	55.2	8.7	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	15.8	34.3	18.5	5.0	**Yes**	**Yes**	**Yes**
40	Hollow Oak Dr	East of Bass Lake Rd	46.0	46.7	0.8	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.3	56.2	0.9	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	53.8	0.1	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	45.2	51.1	5.9	5.0	**Yes**	**Yes**	**Yes**
44	Merrychase Dr	Country Club Dr to Cambridge Rd	58.9	59.6	0.7	5.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	53.1	56.7	3.6	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	37.5	54.6	17.0	5.0	**Yes**	**Yes**	**Yes**
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.7	50.9	0.3	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.0	57.1	1.1	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.1	51.5	0.3	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	18.8	35.8	17.1	5.0	**Yes**	**Yes**	**Yes**
54	Silva Valley Pkwy	North of Tong Rd	64.1	65.2	1.1	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.2	52.4	1.3	5.0	No	**Yes**	No

Table 13
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2023 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2023	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	51.4	53.3	1.9	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	44.8	18.1	5.0	**Yes**	**Yes**	**Yes**
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	53.9	55.4	1.5	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	24.7	51.6	26.9	5.0	**Yes**	**Yes**	**Yes**
60	Trinidad Dr	South of Country Club Dr	46.4	46.7	0.3	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	47.8	46.7	0.0	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	45.3	48.7	3.4	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	47.2	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.4	53.7	2.2	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	36.6	38.6	2.0	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	53.2	55.7	2.5	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.3	55.7	0.4	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Table 14
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
1	Alexandrite Dr	North of Green Valley Rd	32.6	32.7	0.2	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63.2	63.4	0.2	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.3	61.5	0.2	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.5	59.8	0.3	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59.5	59.9	0.4	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.9	60.2	0.3	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.7	59.1	0.4	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.7	59.1	0.4	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.7	60.6	0.8	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.9	61.5	0.6	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	54.4	55.1	0.7	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	57.2	57.9	0.7	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	52.8	53.2	0.4	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	56.5	57.1	0.6	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.8	57.8	2.0	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.8	57.8	2.0	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	52.1	54.1	2.0	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	48.0	50.1	2.1	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	48.8	52.1	3.3	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.6	55.2	0.6	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	61.0	61.3	0.3	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	63.2	63.5	0.3	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	55.2	55.4	0.2	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	43.6	47.7	4.1	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	42.5	45.7	3.2	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	46.4	46.7	0.3	5.0	No	**Yes**	No

Table 14
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) C 2040 + Project	Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
28	Country Club Dr	Church Pl to Morrison Rd	47.0	48.2	1.2	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	58.6	59.8	1.2	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	60.4	61.7	1.3	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	58.7	59.3	0.6	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.7	44.2	0.5	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	45.0	45.5	0.4	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	60.1	60.3	0.2	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59.1	59.2	0.1	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.5	61.7	0.3	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.7	60.9	0.2	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	53.7	55.2	1.4	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	34.0	34.3	0.3	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.6	46.7	0.1	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.9	56.2	0.3	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	53.8	0.1	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	51.4	51.1	0.0	5.0	No	**Yes**	No
44	Merrychase Dr	Country Club Dr to Cambridge Rd	59.4	59.6	0.2	5.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	55.6	56.7	1.1	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	51.0	54.6	3.6	5.0	No	**Yes**	No
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.9	50.9	0.1	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.5	57.1	0.7	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.4	51.5	0.0	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	33.4	35.8	2.5	5.0	No	**Yes**	No
54	Silva Valley Pkwy	North of Tong Rd	64.7	65.2	0.5	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.9	52.4	0.5	5.0	No	**Yes**	No

Table 14
Predicted Traffic Noise Level Increases at Existing Sensitive Receptors – 2033 Existing vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	52.6	53.3	0.7	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	44.8	18.1	5.0	**Yes**	**Yes**	**Yes**
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	54.8	55.4	0.6	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	49.0	51.6	2.5	5.0	No	**Yes**	No
60	Trinidad Dr	South of Country Club Dr	46.6	46.7	0.1	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	49.5	46.7	0.0	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	46.4	48.7	2.2	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	47.2	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.5	53.7	2.2	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	37.9	38.6	0.6	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	54.9	55.7	0.8	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.5	55.7	0.3	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Table 15
Predicted Traffic Noise Level Increases at Existing Receptors – 2040 Cumulative vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) C 2040	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
1	Alexandrite Dr	North of Green Valley Rd	32.7	32.7	0.0	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63.3	63.4	0.1	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.4	61.5	0.2	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.6	59.8	0.2	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59.8	59.9	0.1	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	60.1	60.2	0.1	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.9	59.1	0.2	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.9	59.1	0.2	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	60.3	60.6	0.3	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	61.2	61.5	0.3	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	54.8	55.1	0.3	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	57.6	57.9	0.3	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	53.2	53.2	0.0	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	57.1	57.1	0.0	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	56.1	57.8	1.7	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	56.1	57.8	1.7	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	52.4	54.1	1.7	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	48.7	50.1	1.5	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	52.1	52.1	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.7	55.2	0.5	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	61.3	61.3	0.0	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	63.5	63.5	0.0	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	55.4	55.4	0.0	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	44.1	47.7	3.6	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	43.1	45.7	2.7	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	46.9	46.7	0.0	5.0	No	**Yes**	No

Table 15
Predicted Traffic Noise Level Increases at Existing Receptors – 2040 Cumulative vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) C 2040	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
28	Country Club Dr	Church Pl to Morrison Rd	47.6	48.2	0.6	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	59.0	59.8	0.8	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	60.9	61.7	0.8	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	58.9	59.3	0.4	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.8	44.2	0.4	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	45.5	45.5	0.0	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	60.3	60.3	0.0	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59.2	59.2	0.0	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.7	61.7	0.0	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.9	60.9	0.0	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	54.7	55.2	0.5	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	34.3	34.3	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.7	46.7	0.0	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	56.2	56.2	0.0	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.8	53.8	0.0	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	52.6	51.1	0.0	5.0	No	**Yes**	No
44	Merrychase Dr	Country Club Dr to Cambridge Rd	59.6	59.6	0.0	5.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	56.7	56.7	0.0	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	54.3	54.6	0.2	5.0	No	**Yes**	No
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.9	50.9	0.0	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.7	57.1	0.5	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.5	51.5	0.0	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	36.5	35.8	0.0	5.0	No	**Yes**	No
54	Silva Valley Pkwy	North of Tong Rd	64.8	65.2	0.3	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	52.2	52.4	0.2	5.0	No	**Yes**	No

Table 15
Predicted Traffic Noise Level Increases at Existing Receptors – 2040 Cumulative vs. 2040 Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) C 2040	Predicted DNL (dB) C 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	53.0	53.3	0.2	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	44.8	44.8	0.0	5.0	No	**Yes**	No
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	55.3	55.4	0.1	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	51.4	51.6	0.2	5.0	No	**Yes**	No
60	Trinidad Dr	South of Country Club Dr	46.7	46.7	0.0	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	46.3	46.7	0.4	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	47.1	48.7	1.6	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	47.2	47.2	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	52.0	53.7	1.7	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	38.6	38.6	0.0	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	55.5	55.7	0.2	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.5	55.7	0.2	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

As indicated in Tables 13 and 14, project-generated traffic is calculated to exceed applicable El Dorado County General Plan impact significance criteria along a portion of analyzed roadway segments containing noise-sensitive receptors. However, the project-generated increases along those roadway segments are not calculated to have a cumulatively considerable contribution to the cumulative impact relative to General Plan impact significance criteria (Table 15).

Based on the analyses presented above, off-site traffic noise level impacts related to increases in traffic resulting from the implementation of the project are identified as being ***less than significant***.

Impact 4: Increases in Super Cumulative (2040) Traffic Noise Levels due to the Project

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify increases in future (cumulative) traffic noise levels at the nearest existing sensitive land uses to the project area roadway network. As mentioned previously, this analysis first assesses whether a cumulative roadway noise impact would occur by comparing the cumulative with project conditions to existing conditions. If a cumulative roadway noise impact is identified, it is further evaluated to assess whether the proposed project would make a cumulatively considerable contribution to the cumulative impact. This process is completed through a comparison of the roadway noise associated with the cumulative with project scenario against the cumulative no-project scenario.

Tables 16 and 17 compares 2040 Super Cumulative Plus Project traffic noise levels against 2023 and 2033 Existing No Project traffic noise levels (respectively) and includes a determination regarding whether the corresponding increase in traffic noise exposure over time is considerable. Table 18 compares 2040 Super Cumulative Plus Project traffic noise levels against 2040 Super Cumulative No Project conditions to determine if the project's contribution to the cumulative noise environment is considerable. Appendices B, G, K and L contain the FHWA Model inputs for 2023 Existing, 2033 Existing, 2040 Super Cumulative and 2040 Super Cumulative Plus Project and No Project conditions.

Table 16
Predicted Traffic Noise Level Increases at Existing Receptors – 2023 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	SC 2040 + Project	Increase (dB)				
1	Alexandrite Dr	North of Green Valley Rd	32.2	34.1	1.9	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	62.9	63.1	0.2	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.0	61.3	0.3	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.3	59.6	0.3	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	58.9	59.8	0.9	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.5	60.2	0.7	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.3	59.0	0.8	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.3	59.1	0.9	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.3	60.3	1.0	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.4	61.4	1.0	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	53.4	54.8	1.4	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	56.2	57.7	1.5	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	51.8	52.9	1.1	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	55.4	56.9	1.4	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.0	58.1	3.0	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.0	58.1	3.1	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	51.3	54.4	3.1	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	46.8	52.8	6.0	5.0	**Yes**	**Yes**	**Yes**
19	Brannan Wy	West of Bass Lake Rd	46.7	46.7	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.1	55.1	1.0	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	60.6	61.4	0.9	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	62.6	64.2	1.6	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	54.8	58.0	3.2	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	42.0	47.4	5.3	5.0	**Yes**	**Yes**	**Yes**
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	41.0	45.3	4.3	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	44.8	46.7	1.9	5.0	No	**Yes**	No

Table 16
Predicted Traffic Noise Level Increases at Existing Receptors – 2023 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2023	SC 2040 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	45.5	47.5	2.0	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	57.3	59.0	1.7	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	58.7	60.2	1.4	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	57.8	58.9	1.2	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.5	44.8	1.3	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	43.7	51.5	7.8	5.0	**Yes**	**Yes**	**Yes**
34	Green Valley Rd	West of Silver Springs Pkwy	59.7	60.3	0.6	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	58.9	59.1	0.2	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.2	61.6	0.4	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.5	60.8	0.4	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	46.4	53.1	6.7	5.0	**Yes**	**Yes**	**Yes**
39	Hawk View Rd	East of Bass Lake Rd	15.8	15.8	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.0	46.1	0.1	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.3	56.1	0.8	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	54.0	0.4	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	45.2	62.1	16.9	3.0	**Yes**	**Yes**	**Yes**
44	Merrychase Dr	Country Club Dr to Cambridge Rd	58.9	60.5	1.7	3.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	53.1	56.7	3.6	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	37.5	58.1	20.6	5.0	**Yes**	**Yes**	**Yes**
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.7	51.0	0.3	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.0	57.7	1.7	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.1	51.5	0.4	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	18.8	38.4	19.6	5.0	**Yes**	**Yes**	**Yes**
54	Silva Valley Pkwy	North of Tong Rd	64.1	65.7	1.6	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.2	53.7	2.5	5.0	No	**Yes**	No

Table 16
Predicted Traffic Noise Level Increases at Existing Receptors – 2023 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2023	Predicted DNL (dB) SC 2040 + Project	Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	51.4	53.9	2.6	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	45.2	18.4	5.0	**Yes**	**Yes**	**Yes**
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	53.9	55.4	1.6	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	24.7	56.4	31.7	5.0	**Yes**	**Yes**	**Yes**
60	Trinidad Dr	South of Country Club Dr	46.4	48.1	1.6	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	47.8	46.8	0.0	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	45.3	48.9	3.6	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	48.4	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.4	56.2	4.8	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	36.6	39.9	3.3	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	53.2	56.3	3.1	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.3	55.8	0.5	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Table 17
Predicted Traffic Noise Level Increases at Existing Receptors – 2033 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) SC 2040 + Project	Predicted DNL (dB) Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
1	Alexandrite Dr	North of Green Valley Rd	32.6	34.1	1.5	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63.2	63.1	0.0	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.3	61.3	0.0	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.5	59.6	0.1	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59.5	59.8	0.4	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	59.9	60.2	0.3	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.7	59.0	0.4	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	58.7	59.1	0.5	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	59.7	60.3	0.6	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	60.9	61.4	0.5	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	54.4	54.8	0.4	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	57.2	57.7	0.5	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	52.8	52.9	0.1	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	56.5	56.9	0.4	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	55.8	58.1	2.3	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	55.8	58.1	2.3	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	52.1	54.4	2.3	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	48.0	52.8	4.8	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	48.8	46.7	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.6	55.1	0.5	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	61.0	61.4	0.4	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	63.2	64.2	1.0	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	55.2	58.0	2.7	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	43.6	47.4	3.8	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	42.5	45.3	2.8	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	46.4	46.7	0.3	5.0	No	**Yes**	No

Table 17
Predicted Traffic Noise Level Increases at Existing Receptors – 2033 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			E 2033	SC 2040 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	47.0	47.5	0.4	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	58.6	59.0	0.4	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	60.4	60.2	0.0	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	58.7	58.9	0.3	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	43.7	44.8	1.1	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	45.0	51.5	6.4	5.0	**Yes**	**Yes**	**Yes**
34	Green Valley Rd	West of Silver Springs Pkwy	60.1	60.3	0.2	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59.1	59.1	0.0	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.5	61.6	0.1	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.7	60.8	0.2	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	53.7	53.1	0.0	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	34.0	15.8	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.6	46.1	0.0	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	55.9	56.1	0.2	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	53.6	54.0	0.4	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	51.4	62.1	10.7	3.0	**Yes**	**Yes**	**Yes**
44	Merrychase Dr	Country Club Dr to Cambridge Rd	59.4	60.5	1.2	3.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	55.6	56.7	1.1	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	51.0	58.1	7.1	5.0	**Yes**	**Yes**	**Yes**
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	50.9	51.0	0.2	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	56.5	57.7	1.3	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.4	51.5	0.1	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	33.4	38.4	5.0	5.0	**Yes**	**Yes**	**Yes**
54	Silva Valley Pkwy	North of Tong Rd	64.7	65.7	1.0	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	51.9	53.7	1.8	5.0	No	**Yes**	No

Table 17
Predicted Traffic Noise Level Increases at Existing Receptors – 2033 Existing vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) E 2033	Predicted DNL (dB) SC 2040 + Project	Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	52.6	53.9	1.4	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	26.8	45.2	18.4	5.0	**Yes**	**Yes**	**Yes**
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	54.8	55.4	0.6	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	49.0	56.4	7.3	5.0	**Yes**	**Yes**	**Yes**
60	Trinidad Dr	South of Country Club Dr	46.6	48.1	1.5	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	49.5	46.8	0.0	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	46.4	48.9	2.5	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.5	48.4	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	51.5	56.2	4.7	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	37.9	39.9	1.9	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	54.9	56.3	1.4	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.5	55.8	0.3	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Table 18
Predicted Traffic Noise Level Increases at Receptors – 2040 Super Cumulative vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			SC 2040	SC 2040 + Project	Increase (dB)				
1	Alexandrite Dr	North of Green Valley Rd	34.1	34.1	0.0	5.0	No	**Yes**	No
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	63.0	63.1	0.1	3.0	No	**Yes**	No
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	61.1	61.3	0.2	3.0	No	**Yes**	No
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	59.4	59.6	0.2	5.0	No	**Yes**	No
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	59.7	59.8	0.1	5.0	No	**Yes**	No
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	60.1	60.2	0.1	3.0	No	**Yes**	No
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	58.8	59.0	0.2	5.0	No	**Yes**	No
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	59.0	59.1	0.2	5.0	No	**Yes**	No
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	60.0	60.3	0.3	3.0	No	**Yes**	No
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	61.1	61.4	0.3	3.0	No	**Yes**	No
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	54.5	54.8	0.4	5.0	No	**Yes**	No
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	57.3	57.7	0.4	5.0	No	**Yes**	No
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	52.9	52.9	0.0	5.0	No	**Yes**	No
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	56.9	56.9	0.0	5.0	No	**Yes**	No
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	56.6	58.1	1.5	5.0	No	**Yes**	No
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	56.6	58.1	1.6	5.0	No	**Yes**	No
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramp	52.8	54.4	1.6	5.0	No	**Yes**	No
18	Bass Lake Rd	US 50 WB Ramp to US 50 EB Ramp	52.1	52.8	0.7	5.0	No	**Yes**	No
19	Brannan Wy	West of Bass Lake Rd	46.7	46.7	0.0	5.0	No	**Yes**	No
20	Bridlewood Dr	East of Bass Lake Rd	54.6	55.1	0.5	5.0	No	**Yes**	No
21	Cambridge Rd	South of Green Valley Rd	61.4	61.4	0.0	3.0	No	**Yes**	No
22	Cambridge Rd	North of Merrychase Dr	64.2	64.2	0.0	3.0	No	**Yes**	No
23	Cambridge Rd	US 50 EB Ramp to US 50 WB Ramp	58.0	58.0	0.0	5.0	No	**Yes**	No
24	Church Pl	North of Country Club Dr	30.8	30.8	0.0	5.0	No	**Yes**	No
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	43.2	47.4	4.1	5.0	No	**Yes**	No
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	42.2	45.3	3.1	5.0	No	**Yes**	No
27	Country Club Dr	Project Dwy 3 to Church Pl	46.1	46.7	0.6	5.0	No	**Yes**	No

Table 18
Predicted Traffic Noise Level Increases at Receptors – 2040 Super Cumulative vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB)			Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
			SC 2040	SC 2040 + Project	Increase (dB)				
28	Country Club Dr	Church Pl to Morrison Rd	46.7	47.5	0.8	5.0	No	**Yes**	No
29	Country Club Dr	Morrison Rd to El Norte Rd	58.1	59.0	0.9	5.0	No	**Yes**	No
30	Country Club Dr	El Norte Rd to Merrychase Dr	59.0	60.2	1.2	3.0	No	**Yes**	No
31	Country Club Dr	East of Merrychase Dr	58.5	58.9	0.4	5.0	No	**Yes**	No
32	El Norte Rd	North of Country Club Dr	44.5	44.8	0.3	5.0	No	**Yes**	No
33	Flying C Rd	South of US 50 EB Ramp	51.5	51.5	0.0	5.0	No	**Yes**	No
34	Green Valley Rd	West of Silver Springs Pkwy	60.2	60.3	0.0	3.0	No	**Yes**	No
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	59.1	59.1	0.0	5.0	No	**Yes**	No
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	61.5	61.6	0.0	3.0	No	**Yes**	No
37	Green Valley Rd	East of Cambridge Rd	60.8	60.8	0.0	3.0	No	**Yes**	No
38	Hawk View Rd	West of Bass Lake Rd	52.4	53.1	0.8	5.0	No	**Yes**	No
39	Hawk View Rd	East of Bass Lake Rd	15.8	15.8	0.0	5.0	No	**Yes**	No
40	Hollow Oak Dr	East of Bass Lake Rd	46.1	46.1	0.0	5.0	No	**Yes**	No
41	Madera Wy	East of Bass Lake Rd	56.1	56.1	0.0	5.0	No	**Yes**	No
42	Magnolia Hills Dr	South of Bass Lake Rd	54.0	54.0	0.0	5.0	No	**Yes**	No
43	Marble Valley Rd	South of US 50 EB Ramp	62.1	62.1	0.0	3.0	No	**Yes**	No
44	Merrychase Dr	Country Club Dr to Cambridge Rd	60.5	60.5	0.0	3.0	No	**Yes**	No
45	Morrison Rd	North of Country Club Dr	56.7	56.7	0.0	5.0	No	**Yes**	No
46	Old Bass Lake Rd	West of Bass Lake Rd	58.0	58.1	0.1	5.0	No	**Yes**	No
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	21.3	21.3	0.0	5.0	No	**Yes**	No
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	20.9	20.9	0.0	5.0	No	**Yes**	No
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	19.4	19.4	0.0	5.0	No	**Yes**	No
50	Peridot Dr	North of Green Valley Rd	51.0	51.0	0.0	5.0	No	**Yes**	No
51	Serrano Pkwy	North of Bass Lake Rd	57.4	57.7	0.3	5.0	No	**Yes**	No
52	Sienna Ridge Rd	South of Bass Lake Rd	51.5	51.5	0.0	5.0	No	**Yes**	No
53	Sienna Ridge Rd	East of Bass Lake Rd	38.4	38.4	0.0	5.0	No	**Yes**	No
54	Silva Valley Pkwy	North of Tong Rd	65.4	65.7	0.3	1.5	No	**Yes**	No
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramp	53.5	53.7	0.2	5.0	No	**Yes**	No

Table 18
Predicted Traffic Noise Level Increases at Receptors – 2040 Super Cumulative vs. 2040 Super Cumulative Plus Project Conditions

#	Roadway	Segment Description	Predicted DNL (dB) SC 2040	SC 2040 + Project	Increase (dB)	Significance Threshold (dB)[1]	Threshold Exceeded?	Sensitive Receptors Present?[2]	Significant Impact Identified?[3]
56	Silva Valley Pkwy	US 50 WB Ramp to US 50 EB Ramp	53.8	53.9	0.2	5.0	No	**Yes**	No
57	Silver Dove Wy	West of Bass Lake Rd	45.2	45.2	0.0	5.0	No	**Yes**	No
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	55.3	55.4	0.1	5.0	No	**Yes**	No
59	Tong Rd	East of Silva Valley Pkwy	56.3	56.4	0.1	5.0	No	**Yes**	No
60	Trinidad Dr	South of Country Club Dr	48.1	48.1	0.0	5.0	No	**Yes**	No
61	US 50 EB Ramp	East of Silva Valley Pkwy	46.4	46.8	0.4	5.0	No	**Yes**	No
62	US 50 EB Ramp	East of Bass Lake Rd	47.4	48.9	1.5	5.0	No	**Yes**	No
63	US 50 WB Ramp	West of Silva Valley Pkwy	48.4	48.4	0.0	5.0	No	**Yes**	No
64	US 50 WB Ramp	West of Bass Lake Rd	55.4	56.2	0.9	5.0	No	**Yes**	No
65	Whistling Wy	South of Bass Lake Rd	39.9	39.9	0.0	5.0	No	**Yes**	No
66	White Rock Rd	South of US 50 EB Ramp	56.1	56.3	0.1	5.0	No	**Yes**	No
67	Woodleigh Ln	East of Bass Lake Rd	55.6	55.8	0.2	5.0	No	**Yes**	No

[1] Significance thresholds established in General Plan Policy EC-1.2.
[2] Sensitive receptors as defined in General Plan Policy EC-1.2.
[3] A significant impact is identified only along segments where the project-related traffic noise level increase would exceed applicable significance threshold AND where sensitive receptors are present along the roadway segment.

Source: FHWA-RD-77-108, T. Kear and BAC

Tables 16 and 17 data indicate that project-generated traffic is calculated to exceed applicable El Dorado County General Plan impact significance criteria along a portion of analyzed roadway segments containing noise-sensitive receptors. However, the project-generated increases along those roadway segments are not calculated to have a cumulatively considerable contribution to the cumulative impact relative to General Plan impact significance criteria (Table 18).

Based on the analyses presented above, off-site traffic noise level impacts related to increases in traffic resulting from the implementation of the project are identified as being ***less than significant***.

Noise Impacts from Project Development Area at Existing Noise-Sensitive Uses

According to the project description, the proposed Project Development Area consists of the northernmost and southernmost 30.3 acres of the project site, and would be developed with two hotels, retail services, two restaurants, a museum, an event center, associated parking, 56 residential cottages for employee housing, and an additional 56 residential cottages that may be rented on a daily or extended stay basis. The locations of each of the identified components within the proposed Project Development Area are shown in Figure 3. A brief description of each component and anticipated noise sources associated with those uses is provided below.

Hotels

The hotel component of the proposed Project Development Area would consist of two, five-story structures totaling 160,000 square feet. Both hotels would share centralized facilities in the Event Center, including two restaurants. The ground floor of each hotel would include retail uses and personal services that would operate seven days a week from 8:00 a.m. to 8:00 p.m. The second floor of each hotel would include guest rooms, as well as large outdoor balconies with space for tables and seating, and access to a shared swimming pool. The remaining floors of each hotel would be comprised of guest rooms. Each hotel would contain 150 guest rooms, for a total of 300 guest rooms. The primary noise sources associated with this component have been identified as on-site passenger vehicle circulation, parking area movements, truck delivery activities, on-site truck circulation, outdoor pool activities, and mechanical equipment (HVAC).

Event Center/Museum

The Event Center/Museum would be a three-story structure consisting of 21,000 sf. The first floor of the Event Center/Museum would consist of two restaurants. The restaurants would operate from 7:00 a.m. to 10:00 p.m., with a maximum capacity of 120 patrons at each restaurant. The second floor would be a venue for weddings, receptions, conferences, and family gatherings. The event center would operate between one and two days per week from 8:00 a.m. to 12:00 a.m. with a variable capacity of between 50 and 300 persons. A museum would be located on the third floor, which would be open for visitors one to two days per week from 10:00 a.m. to 5:00 p.m., with 50 to 100 anticipated visitors per day. The primary noise sources associated with this component have been identified as on-site passenger vehicle circulation, parking area movements, outdoor event amplified music, event guest speech, truck delivery activities, on-site truck circulation, and mechanical equipment (HVAC).

Residential Cottages

The northernmost 7.9-acre portion of the proposed Project Development Area, located north of Country Club Drive, would be developed with a total of 112 residential cottage units; 56 units would be deed restricted for hotel employee housing, and the remaining 56 units would be available for rent on a daily or extended stay basis. Each cottage unit would be comprised of two stories, including a separate bedroom, bathroom, full kitchen facilities, and an outdoor deck. The primary noise sources associated with this component have been identified as on-site passenger vehicle circulation, parking area movements, outdoor pool activities, and mechanical equipment (HVAC).

County Noise Level Criteria Applied to Project On-Site Operations

As noted in the Regulatory Setting section of this report, the northern portion of the project area is located within the Community Region of the El Dorado County General Plan. The central and southern portions of the project area, or south of Country Club Drive, are located within the Rural Region of the General Plan. As a result, the County's non-transportation noise level limits and associated criteria for Community Regions identified in Table 7 of this report were applied to project on-site operations noise affecting residential receivers 1-5. Additionally, the noise level limits and associated criteria for Rural Regions identified in Table 7 were applied to project on-site operations noise affecting residential receivers 6-9. In Community Regions, the County's exterior noise level limits are to be applied at property line of a receiving residential property. In Rural Areas, the County's noise level limits are to be applied at a point 100' away from the residence. The locations of residential receivers 1-9 are shown in Figure 1.

In terms of increases in ambient noise levels from project on-site operations, a significant impact would be identified if those activities would substantially increase noise levels at existing sensitive receptors in the vicinity. A substantial increase would be identified relative to the noise level increase significance criteria applicable to non-transportation noise sources established in Policy 6.2.1.13 of the El Dorado County General Plan.

Impact 5: On-Site Vehicle Noise at Existing Sensitive Uses – Project Development Area

According to the provided over all site plan, passenger vehicle access points to the Project Development Area will be located off Bass Lake Road and Country Club Drive. The locations of the passenger vehicle access points are shown in Figure 2.

To quantify on-site traffic circulation noise levels at nearby existing residential uses, BAC utilized the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with trip generation data prepared by the project transportation consultant (T. Kear). According to that data, the Project Development Area is estimated to generate 2,110 total daily trips (137 AM peak hours trips, 185 PM peak hour trips).

Assuming on-site vehicle speeds of 30 mph, and assuming that worst-case estimated peak hour trips could occur within a component during a busy daytime, evening or nighttime hour, project on-site passenger vehicle circulation noise exposure at residential receivers 1-9 was calculated and the results of those calculations are presented in Tables 19 and 20.

Table 19
Predicted On-Site Vehicle Circulation Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2]	Applied County Standard, L_{eq} (dB)[3]		
		Daytime	Evening	Nighttime
1	37	**55**	**50**	**45**
2	32	**55**	**50**	**45**
3	33	**55**	**50**	**45**
4	32	**55**	**50**	**45**
5	30	**55**	**50**	**45**
6	32	**50**	**45**	**40**
7	37	**50**	**45**	**40**
8	31	**50**	**45**	**40**
9	36	**50**	**45**	**40**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted worst-case peak hour noise level (Leq) from on-site passenger vehicle circulation route of nearest proposed component.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 20
Predicted On-Site Vehicle Circulation Noise Levels at Residential Uses – Maximum L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2]	Applied County Standard, L_{max} (dB)[3]		
		Daytime	Evening	Nighttime
1	47	**70**	**60**	**55**
2	42	**70**	**60**	**55**
3	43	**70**	**60**	**55**
4	42	**70**	**60**	**55**
5	40	**70**	**60**	**55**
6	42	**60**	**55**	**50**
7	47	**60**	**55**	**50**
8	41	**60**	**55**	**50**
9	46	**60**	**55**	**50**

[1] Residential receiver locations are shown in Figure 1.
[2] Highest predicted noise level from on-site passenger vehicle circulation route of nearest proposed component.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

As shown in Tables 19 and 20, project on-site passenger vehicle circulation noise exposure is predicted to comply with the applicable El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at residential receivers 1-9.

Table 2 of this report contains the results from the BAC long-term ambient noise survey at sites 1-4, which are believed to be representative of the existing ambient noise environments at residential receivers 1-9. Using the lowest average measured noise levels at each monitoring

location during the survey, ambient plus project on-site passenger vehicle noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 21 and 22.

Table 21
Increases in Ambient L_{eq} Noise Levels at Residential Uses – On-Site Vehicle Circulation

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.5	0.6	1.4	**5.0**	**5.0**	**5.0**
2	0.2	0.2	0.5	**5.0**	**5.0**	**5.0**
3	0.2	0.3	0.6	**5.0**	**5.0**	**5.0**
4	0.1	0.1	0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 22
Increases in Ambient L_{max} Noise Levels at Residential Uses – On-Site Vehicle Circulation

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.3	0.3	1.1	**5.0**	**5.0**	**3.0**
2	0.1	0.1	0.4	**5.0**	**5.0**	**3.0**
3	0.1	0.1	0.5	**5.0**	**5.0**	**3.0**
4	0.0	0.0	0.1	**5.0**	**3.0**	**3.0**
5	0.0	0.0	0.0	**5.0**	**3.0**	**3.0**
6	0.0	0.0	0.0	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.1	**3.0**	**3.0**	**3.0**
8	0.0	0.0	0.0	**3.0**	**3.0**	**3.0**
9	0.0	0.0	0.0	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Tables 21 and 22 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area on-site passenger vehicle circulation is predicted to satisfy applicable El Dorado County exterior noise level standards at the nearest existing residential uses (receivers 1-9), and because noise exposure from those activities is not calculated to significantly increase ambient noise levels at those uses relative to applicable County increase significance criteria, this impact is identified as being ***less than significant***.

Impact 6: Parking Area Noise at Existing Sensitive Uses – Project Development Area

As a means of determining potential noise exposure due to commercial parking lot activities, Bollard Acoustical Consultants, Inc. (BAC) utilized specific parking lot noise level measurements conducted by BAC. Specifically, a series of individual noise measurements were conducted of multiple vehicle types arriving and departing a parking area, including engines starting and stopping, car doors opening and closing, and persons conversing as they entered and exited the vehicles. The results of those measurements revealed that individual parking lot movements generated mean noise levels of approximately 70 dB SEL at a reference distance of 50 feet. The maximum noise level associated with parking lot activity typically did not exceed 65 dB L_{max} at the same reference distance.

To compute hourly average (L_{eq}) noise levels generated by parking lot activities, the approximate number of hourly operations in any given area and distance to the effective noise center of those activities is required. For the purposes of this analysis, it was conservatively assumed that the closest 200 parking stalls from the Hotels/Event Center/Museum components of the project to a receiver could fill or empty during a given peak hour (worst-case). It was further assumed that the closest 40 parking stalls proposed within the Residential Cottages component of the project to a receiver could fill or empty during a given peak hour (worst-case). The hourly average noise level generated by parking lot movements is computed using the following formula:

$$Peak\ Hour\ L_{eq} = 70+10*log\ (N) – 35.6$$

Where 70 is the mean Sound Exposure Level (SEL) for an automobile parking lot arrival or departure, N is the number of parking lot operations in a given hour, and 35.6 is 10 times the logarithm of the number of seconds in an hour. Using the information provided above, the provided site plans, and assuming standard spherical spreading loss (-6 dB per doubling of distance), parking area noise exposure at residential receivers 1-9 was calculated and the results of those calculations are presented in Tables 23 and 24.

Table 23
Predicted Parking Area Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2]	Applied County Standard, L_{eq} (dB)[3]		
		Daytime	Evening	Nighttime
1	32	**55**	**50**	**45**
2	31	**55**	**50**	**45**
3	27	**55**	**50**	**45**
4	26	**55**	**50**	**45**
5	25	**55**	**50**	**45**
6	28	**50**	**45**	**40**
7	35	**50**	**45**	**40**
8	27	**50**	**45**	**40**
9	32	**50**	**45**	**40**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted combined hourly average noise level from parking areas as outlined in this section.
[3] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.

Source: BAC 2024

Table 24
Predicted Parking Area Noise Levels at Residential Uses – Maximum L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2]	Applied County Standard, L_{max} (dB)[3]		
		Daytime	Evening	Nighttime
1	44	**70**	**60**	**55**
2	50	**70**	**60**	**55**
3	44	**70**	**60**	**55**
4	43	**70**	**60**	**55**
5	42	**70**	**60**	**55**
6	44	**60**	**55**	**50**
7	48	**60**	**55**	**50**
8	40	**60**	**55**	**50**
9	45	**60**	**55**	**50**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted highest maximum noise level from parking areas as outlined in this section.
[3] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.

Source: BAC 2024

Tables 23 and 24 data indicate that project parking area noise exposure is predicted to comply with the applicable El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at residential receivers 1-9.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project parking area noise level increases during daytime, evening and nighttime

hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tabled 25 and 26.

Table 25
Increases in Ambient L_{eq} Noise Levels at Residential Uses – Parking Area Movements

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.2	0.2	0.5	**5.0**	**5.0**	**5.0**
2	0.1	0.2	0.4	**5.0**	**5.0**	**5.0**
3	0.1	0.1	0.2	**5.0**	**5.0**	**5.0**
4	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.1	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 26
Increases in Ambient L_{max} Noise Levels at Residential Uses – Parking Area Movements

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.1	0.2	0.7	**5.0**	**5.0**	**3.0**
2	0.5	0.6	2.0	**5.0**	**5.0**	**3.0**
3	0.1	0.2	0.7	**5.0**	**5.0**	**3.0**
4	<0.1	<0.1	0.1	**5.0**	**3.0**	**3.0**
5	<0.1	<0.1	0.1	**5.0**	**3.0**	**3.0**
6	<0.1	<0.1	0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.1	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Tables 25 and 26 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area parking area movements is predicted to satisfy applicable El Dorado County exterior noise level standards at the nearest existing residential uses (receivers 1-9), and because noise exposure from those activities is not calculated to significantly increase ambient noise levels at those uses relative to applicable County increase significance criteria, this impact is identified as being ***less than significant***.

Impact 7: On-Site Delivery Truck Circulation Noise at Existing Sensitive Uses – Project Development Area

It is expected that the Event Center/Museum and Hotel components of the Project Development Area will receive deliveries of product from medium-duty vendor trucks/vans and heavy trucks. The locations of the Event Center/Museum and Hotel components are shown in Figure 2.

On-site truck passbys are expected to be relatively brief and will occur at low speeds. To predict noise levels generated by on-site truck circulation, BAC utilized file data obtained from measurements conducted by BAC of heavy and medium duty truck passbys. According to BAC file data, single-event heavy truck passby noise levels are approximately 74 dB L_{max} and 83 dB SEL at a reference distance of 50 feet. BAC file data also indicate that single-event medium truck passby noise levels are approximately 66 dB L_{max} and 76 SEL at a reference distance of 50 feet.

For the purposes of predicting hourly average noise levels for comparison against the County's hourly average (L_{eq}) noise level standard, it was assumed that the Event Center/Museum and Hotel components of the project could conservatively have a total of 2 heavy truck and 2 medium duty truck deliveries during the same worst-case hour. Based on the hourly delivery truck assumptions above, and SEL's of 83 and 76 dB per passby, the combined hourly average noise level generated by project on-site delivery truck circulation computes to 51 dB L_{eq} at a reference distance of 50 feet from the passby route during the worst-case hour of deliveries (maximum noise level of 74 dB L_{max}).

Assuming standard spherical spreading loss (-6 dB per doubling of distance), project on-site delivery truck circulation noise exposure at residential receivers 1-9 was calculated and the results of those calculations are presented in Tables 27 and 28.

Table 27
Predicted On-Site Truck Circulation Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2]	Applied County Standard, L_{eq} (dB)[3]		
		Daytime	Evening	Nighttime
1	28	**55**	**50**	**45**
2	23	**55**	**50**	**45**
3	22	**55**	**50**	**45**
4	21	**55**	**50**	**45**
5	<20	**55**	**50**	**45**
6	22	**50**	**45**	**40**
7	31	**50**	**45**	**40**
8	21	**50**	**45**	**40**
9	27	**50**	**45**	**40**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted combined hourly average noise level from nearest on-site truck circulation route.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 28
Predicted On-Site Truck Circulation Noise Levels at Residential Uses – Hourly L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2]	Applied County Standard, L_{max} (dB)[3]		
		Daytime	Evening	Nighttime
1	51	**70**	**60**	**55**
2	46	**70**	**60**	**55**
3	45	**70**	**60**	**55**
4	44	**70**	**60**	**55**
5	42	**70**	**60**	**55**
6	45	**60**	**55**	**50**
7	54	**60**	**55**	**50**
8	44	**60**	**55**	**50**
9	49	**60**	**55**	**50**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted maximum noise level from nearest on-site truck circulation route.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

As indicated in Table 27, project on-site truck circulation noise exposure is predicted to comply with the applicable El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) exterior noise level standards at residential receivers 1-9. However, project on-site delivery truck circulation noise exposure is predicted to exceed the applicable El Dorado County nighttime maximum (L_{max}) exterior noise level standard at residential receiver 7 (Table 28).

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project on-site truck circulation noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 29 and 30.

Table 29
Increases in Ambient L_{eq} Noise Levels at Residential Uses – On-Site Truck Circulation

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.1	0.1	0.2	**5.0**	**5.0**	**5.0**
2	<0.1	<0.1	0.1	**5.0**	**5.0**	**5.0**
3	<0.1	<0.1	0.1	**5.0**	**5.0**	**5.0**
4	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 30
Increases in Ambient L_{max} Noise Levels at Residential Uses – On-Site Truck Circulation

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.6	0.8	2.6	**5.0**	**5.0**	**3.0**
2	0.2	0.2	0.9	**5.0**	**5.0**	**3.0**
3	0.2	0.2	0.8	**5.0**	**5.0**	**3.0**
4	<0.1	<0.1	0.1	**5.0**	**3.0**	**3.0**
5	<0.1	<0.1	0.1	**5.0**	**3.0**	**3.0**
6	0.1	<0.1	0.1	**3.0**	**3.0**	**3.0**
7	0.4	0.3	0.5	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Tables 29 and 30 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area on-site delivery truck circulation is predicted to exceed the applicable El Dorado County nighttime maximum (L_{max}) exterior noise level standard at residential receiver 7 (Table 28), this impact is identified as being **potentially significant**.

Mitigation Measure 7:

To comply with the El Dorado County General Plan nighttime maximum (L_{max}) noise level standard at residential receiver 7, the following noise mitigation measure is offered:

MM 7: All on-site truck circulation at the project site shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).

Significance of Impact after Implementation of MM 7: *Less than Significant*

Impact 8: Truck Delivery Activity Noise at Existing Sensitive Uses – Project Development Area

As mentioned previously, it is expected that the Event Center/Museum and Hotel components of the Project Development Area will receive deliveries of product from medium-duty vendor trucks/vans and heavy trucks. The locations of the Event Center/Museum and Hotel components are shown in Figure 2.

The primary noise sources associated with delivery activities are trucks stopping (air brakes), trucks backing into position (back-up alarms), and pulling away from the unloading area (revving engines). BAC file data indicate that noise levels associated with medium-duty truck (including side-step vans) and heavy-duty truck deliveries are approximately 65 dB L_{max} and 83 dB SEL at a distance of 100 feet. For the purposes of predicting hourly average noise levels for comparison against the County's hourly average (L_{eq}) noise level standard, it was assumed that the Event Center/Museum and Hotel components could conservatively have a total of 2 heavy truck and 2 medium duty truck deliveries during the same worst-case hour. Based on the hourly delivery trucks assumptions above, and an SEL of 83 dB, the hourly average noise level computes to 53 dB L_{eq} at a reference distance of 100 feet during the worst-case hour of deliveries (maximum noise level of 65 dB L_{max}).

Assuming standard spherical spreading loss (-6 dB per doubling of distance), project truck delivery activity noise exposure at residential receivers 1-9 was calculated and the results of those calculations are presented in Tables 31 and 32.

Table 31
Predicted Truck Delivery Activity Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2]	Applied County Standard, L_{eq} (dB)[3]		
		Daytime	Evening	Nighttime
1	33	**55**	**50**	**45**
2	29	**55**	**50**	**45**
3	26	**55**	**50**	**45**
4	26	**55**	**50**	**45**
5	26	**55**	**50**	**45**
6	29	**50**	**45**	**40**
7	37	**50**	**45**	**40**
8	29	**50**	**45**	**40**
9	32	**50**	**45**	**40**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted combined hourly average noise level from nearest delivery area (assumed to be areas immediately adjacent to hotel or event center buildings).
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 32
Predicted Truck Delivery Activity Noise Levels at Residential Uses – Hourly L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2]	Applied County Standard, L_{max} (dB)[3]		
		Daytime	Evening	Nighttime
1	44	**70**	**60**	**55**
2	40	**70**	**60**	**55**
3	38	**70**	**60**	**55**
4	37	**70**	**60**	**55**
5	37	**70**	**60**	**55**
6	40	**60**	**55**	**50**
7	49	**60**	**55**	**50**
8	41	**60**	**55**	**50**
9	43	**60**	**55**	**50**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted maximum noise level from nearest delivery area (assumed to be areas immediately adjacent to hotel or event center buildings).
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Tables 31 and 32 data indicate that project truck delivery activity noise exposure is predicted to comply with the applicable El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at residential receivers 1-9.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project truck delivery activity noise level increases during daytime, evening and

nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 33 and 34.

Table 33
Increases in Ambient L_{eq} Noise Levels at Residential Uses –Truck Delivery Activity

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.2	0.2	0.6	**5.0**	**5.0**	**5.0**
2	0.1	0.1	0.3	**5.0**	**5.0**	**5.0**
3	<0.1	0.1	0.1	**5.0**	**5.0**	**5.0**
4	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 34
Increases in Ambient L_{max} Noise Levels at Residential Uses – Truck Delivery Activity

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.1	0.2	0.7	**5.0**	**5.0**	**3.0**
2	0.1	0.1	0.3	**5.0**	**5.0**	**3.0**
3	<0.1	<0.1	0.2	**5.0**	**5.0**	**3.0**
4	<0.1	<0.1	<0.1	**5.0**	**3.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**3.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Tables 33 and 34 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area truck delivery activities is predicted to satisfy applicable El Dorado County exterior noise level standards at the nearest existing residential uses (receivers 1-9), and because noise exposure from those activities is not calculated to significantly increase ambient noise levels at those uses relative to applicable County increase significance criteria, this impact is identified as being ***less than significant***. It should be noted that **Mitigation Measure 7 (MM 7)** states that all on-site truck circulation (i.e.,

truck deliveries) within the Project Development Area shall be restricted during nighttime hours (10:00 p.m. to 7:00 a.m.).

Impact 9: Mechanical Equipment (HVAC) Noise at Existing Sensitive Uses – Project Development Area

Mechanical equipment plans for buildings proposed within the Project Development Area were not available at the time of writing this report. However, the heating, ventilating, and air conditioning (HVAC) requirements for the proposed Event Center/Museum and Hotel component buildings will most likely be met using packaged roof-mounted systems and/or condensers. It is further expected that the HVAC requirements for the Residential Cottages component of the project will be met with ground level equipment (condensers) installed adjacent to the structures.

It is the experience of BAC in previously completed noise studies that hotel buildings typically have HVAC units for main corridors/larger spaces and smaller-sized condenser units for individual rooms. As a means of estimating potential noise exposure due to rooftop HVAC units from the Event Center/Museum and Hotel buildings, BAC utilized reference file data collected for previous studies. BAC reference file data for HVAC systems indicate that a 12.5-ton packaged unit can be expected to generate an A-weighted sound power level of 85 dB. To quantify noise exposure from the individual rooftop-mounted condenser units, BAC utilized manufacturer-published sound level data for a smaller-sized condenser model (Carrier Model CH14NB-024), which indicate a reference sound power level of 76 dB. Finally, to quantify noise exposure from HVAC equipment associated with the Residential Cottages, BAC utilized sound level data for a condenser model commonly used for single-family residences (Rheem Model RA1630), which has a manufacturer-published sound power level of 74 dB.

Based on the mechanical equipment assumptions and sound power data referenced above, and assuming standard spherical spreading loss (-6 dB per doubling of distance), project HVAC equipment noise exposure at residential receivers 1-9 was calculated. The results of those calculations are presented in Table 35. Because mechanical equipment operation typically generates sustained, steady-state noise levels, impacts of project mechanical equipment are appropriately assessed in this study relative to the County's hourly average (L_{eq}) noise level criteria.

Table 35
Predicted HVAC Equipment Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2]	Applied County Standard, L_{eq} (dB)[3]		
		Daytime	Evening	Nighttime
1	32	**55**	**50**	**45**
2	28	**55**	**50**	**45**
3	26	**55**	**50**	**45**
4	25	**55**	**50**	**45**
5	24	**55**	**50**	**45**
6	27	**50**	**45**	**40**
7	33	**50**	**45**	**40**
8	27	**50**	**45**	**40**
9	30	**50**	**45**	**40**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted combined noise level from closest Event Center/Museum or Hotel building (five roof-mounted 12.5-ton HVAC units and 50 roof-mounted condenser units) and closest 10 Cottages (10 residential condenser units).
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

As shown in Table 35, project HVAC equipment noise exposure is predicted to comply with the applicable El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) exterior noise level standards at residential receivers 1-9.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project HVAC equipment noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Table 36.

Table 36
Increases in Ambient L_{eq} Noise Levels at Residential Uses – HVAC Equipment

Receiver	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	0.2	0.2	0.5	**5.0**	**5.0**	**5.0**
2	0.1	0.1	0.2	**5.0**	**5.0**	**5.0**
3	<0.1	<0.1	0.1	**5.0**	**5.0**	**5.0**
4	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	<0.1	0.1	0.1	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Table 36 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area HVAC equipment is predicted to satisfy applicable El Dorado County exterior noise level standards at the nearest existing residential uses (receivers 1-9), and because noise exposure from those operations is not calculated to significantly increase ambient noise levels at those uses relative to applicable County increase significance criteria, this impact is identified as being ***less than significant***.

Impact 10: Outdoor Event Crowd Noise at Existing Sensitive Uses – Project Development Area

According to the project description, the second floor of the Event Center/Museum building will include a south-facing large outdoor balcony intended for weddings, receptions, conferences and family gatherings. The north side of the second floor will provide access to the oak grove terraces where dining and outdoor music events will take place. The Event Center is proposed to operate one to two days per week from 8:00 a.m. to 12:00 a.m. (midnight) with a maximum capacity of 300 persons.

To quantify event-generated crowd noise, BAC utilized reference file data for persons speaking in casual, normal, and raised voices (casual = 52 dB per person at 3 feet; normal voice = 57 dB per person at 3 feet; raised voice = 64 dB per person at 3 feet), and file data for persons clapping. Using the BAC file data provided above, conservatively assuming 50% of a 300-person crowd is conversing simultaneously (150 people speaking, 150 people listening), and assuming standard spherical spreading loss (-6 dB per doubling of distance), data were projected from the nearest proposed outdoor event area to residential receivers 1-9 (Tables 37 and 38).

Table 37
Predicted Outdoor Event Crowd Noise Levels at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2,3]	Applied County Standard, L_{eq} (dB)[4]		
		Daytime	Evening	Nighttime
1	35	**50**	**45**	**40**
2	31	**50**	**45**	**40**
3	29	**50**	**45**	**40**
4	28	**50**	**45**	**40**
5	28	**50**	**45**	**40**
6	31	**45**	**40**	**35**
7	32	**45**	**40**	**35**
8	32	**45**	**40**	**35**
9	35	**45**	**40**	**35**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted hourly average crowd noise level from nearest proposed outdoor event area.
[3] Predicted noise levels include negative offsets ranging from -5 dB to -10 dB where screening would be present.
[4] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned (adjusted).

Source: BAC 2024

Table 38
Predicted Outdoor Event Crowd Noise Levels at Residential Uses – Hourly L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2,3]	Applied County Standard, L_{max} (dB)[4]		
		Daytime	Evening	Nighttime
1	57	65	55	50
2	53	65	55	50
3	51	65	55	50
4	50	65	55	50
5	50	65	55	50
6	53	55	50	45
7	54	55	50	45
8	54	55	50	45
9	57	55	50	45

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted maximum crowd noise level from nearest proposed outdoor event area.
[3] Predicted noise levels include negative offsets ranging from -5 dB to -10 dB where screening would be present.
[4] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned (adjusted).
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 6-2 of the El Dorado County General Plan states that the County's noise level limits shall be downward adjusted by five (5) dB for noises consisting primarily of speech or music, which would apply to project event crowd noise. As shown in Table 38, project event crowd noise exposure is predicted to exceed the applicable downward adjusted El Dorado County daytime, evening and nighttime maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project outdoor event crowd noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 39 and 40.

Table 39
Increases in Ambient L_{eq} Noise Levels at Residential Uses – Outdoor Event Crowds

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.1	0.1	0.3	**5.0**	**5.0**	**5.0**
2	<0.1	<0.1	<0.1	**5.0**	**5.0**	**5.0**
3	<0.1	<0.1	<0.1	**5.0**	**5.0**	**5.0**
4	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**5.0**	**3.0**
6	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
7	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 40
Increases in Ambient L_{max} Noise Levels at Residential Uses – Outdoor Event Crowds

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	**Daytime**	**Evening**	**Nighttime**	**Daytime**	**Evening**	**Nighttime**
1	0.7	0.9	2.8	**5.0**	**5.0**	**3.0**
2	0.1	0.1	0.5	**5.0**	**5.0**	**3.0**
3	0.1	0.1	0.3	**5.0**	**5.0**	**3.0**
4	<0.1	<0.1	<0.1	**5.0**	**3.0**	**3.0**
5	<0.1	<0.1	<0.1	**5.0**	**3.0**	**3.0**
6	0.2	0.1	0.2	**3.0**	**3.0**	**3.0**
7	1.1	0.8	1.4	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	0.1	**3.0**	**3.0**	**3.0**
9	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**

Source: BAC 2024

The calculated increases in ambient noise levels shown in Tables 39 and 40 would comply with the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area outdoor event crowds is predicted to exceed the applicable El Dorado County maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers (Table 38), this impact is identified as being **potentially significant**.

Mitigation Measure 10:

MM 10: To satisfy applicable El Dorado County General Plan daytime, evening and nighttime maximum (L_{max}) noise level standards at the closest residential receivers, the following noise mitigation measures are offered:

A. **Noise Barriers:** The placement of permanent or temporary noise barriers would be an effective method to reduce event crowd noise at nearby residential receivers. The degree of effectiveness of noise barriers is dependent upon location, height and final elevation relative to nearby receivers, and would need to be assessed using construction drawings.

B. **Shielding/Setbacks:** A site design that integrates shielding and/or setbacks from the outdoor event area could also be an effective method to reduce event crowd noise at nearby residential receivers. The effectiveness would depend on degree of shielding and/or setback distances relative to nearby receivers, and would need to be assessed using construction drawings.

C. **Outdoor Event Restrictions:** Restrictions on outdoor events, specifically with regards to allowable hours/time of day, would be effective in avoiding the potential of outdoor event crowd noise exceeding applicable General Plan noise level criteria (e.g., outdoor events restricted during nighttime hours).

D. **Mitigated Outdoor Event Crowd Noise Study:** Implementation of some or all of the mitigation measures identified above, or mitigation measures of equal effectiveness, would be effective in reducing outdoor event crowd noise to a state of compliance with appliable County General Plan noise level criteria. However, the specific noise level reduction provided by mitigation measures is difficult to quantify at this time, as one or a combination of measures may be implemented. As a result, to ensure that the mitigation measure(s) implemented are sufficient in reducing event crowd noise to a state of compliance with applicable General Plan noise level criteria at nearby affected residential receivers, a noise study that references construction drawings (when available) and the selected mitigation measures shall be completed by a qualified noise consultant. Specifically, the noise study shall contain an analysis of outdoor event crowd noise (using construction plans) with implementation of mitigation measures as appropriate to ensure for compliance with applicable General Plan noise level criteria at nearby existing residential receivers.

Significance of Impact after Implementation of MM 10: *Less than Significant*

Impact 11: Outdoor Event Amplified Music/Speech at Existing Sensitive Uses – Project Development Area

As mentioned previously, the second floor of the Event Center/Museum building will include a south-facing large outdoor balcony intended for weddings, receptions, conferences and family gatherings. The north side of the second floor will provide access to the oak grove terraces where

dining and outdoor music events will take place. The Event Center is proposed to operate one to two days per week from 8:00 a.m. to 12:00 a.m. (midnight). Based on the information above, it is expected that amplified music/speech could be played within the two outdoor event areas (Event Center outdoor balcony and oak terrace areas).

To quantify the noise levels generated from project-generated amplified music/speech within the Event Center second story outdoor balcony area, BAC utilized reference sound level data from previous noise studies prepared for similar event spaces. It is the experience of BAC that typical noise levels from amplified music/speech at wedding receptions, such as the event type that could occur within the Event Center second floor outdoor balcony, range from 75 dB to 80 dB (average, L_{eq}) and from 80 dB to 85 dB (maximum, L_{max}) at a distance of 50 feet from the sound system speakers. These reference noise levels are believed to be conservative levels at which amplified music/speech could occur during a wedding reception. However, information on the type of music events that are proposed within the outdoor oak terrace areas is not contained within the Project Description. Nonetheless, for the purpose of this analysis, the reference sound level data for a wedding reception sound system was utilized to quantify outdoor event amplified music/speech within the oak terrace areas.

Using the BAC file data provided above, and assuming standard spherical spreading loss (-6 dB per doubling of distance), amplified music/speech noise levels were projected from the effective noise center of the nearest proposed outdoor event area to residential receivers 1-9. The results of those projections are summarized in Tables 41 and 42.

Table 41
Predicted Outdoor Event Amplified Music/Speech Noise at Residential Uses – Hourly L_{eq}

Receiver[1]	Predicted Noise Level, L_{eq} (dB)[2,3]	Applied County Standard, L_{eq} (dB)[4]		
		Daytime	Evening	Nighttime
1	47	50	45	40
2	38	50	45	40
3	36	50	45	40
4	35	50	45	40
5	35	50	45	40
6	43	45	40	35
7	54	45	40	35
8	49	45	40	35
9	52	45	40	35

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted hourly average noise level from nearest proposed outdoor event area (reference: 80 dB Leq at 50 feet).
[3] Predicted noise levels include negative offsets ranging from -5 dB to -10 dB where screening would be present.
[4] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned (adjusted).
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 42
Predicted Outdoor Event Amplified Music/Speech Noise at Residential Uses – Hourly L_{max}

Receiver[1]	Predicted Noise Level, L_{max} (dB)[2,3]	Applied County Standard, L_{max} (dB)[4]		
		Daytime	Evening	Nighttime
1	52	**65**	**55**	**50**
2	43	**65**	**55**	**50**
3	41	**65**	**55**	**50**
4	40	**65**	**55**	**50**
5	40	**65**	**55**	**50**
6	48	**55**	**50**	**45**
7	59	**55**	**50**	**45**
8	54	**55**	**50**	**45**
9	57	**55**	**50**	**45**

[1] Residential receiver locations are shown in Figure 1.
[2] Predicted maximum noise level from nearest proposed outdoor event area (reference: 85 dB Lmax at 50 feet).
[3] Predicted noise levels include negative offsets ranging from -5 dB to -10 dB where screening would be present.
[4] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned (adjusted).
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 6-2 of the El Dorado County General Plan states that the County's noise level limits shall be downward adjusted by five (5) dB for noises consisting primarily of speech or music, which would apply to project event crowd noise. As shown in Tables 41 and 42, project outdoor event amplified music/speech noise exposure is predicted to exceed the applicable downward adjusted El Dorado County daytime, evening, and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus project outdoor event amplified music/speech noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 43 and 44.

Table 43
Increases in Ambient L_{eq} Noise Levels at Residential Uses – Event Amplified Music/Speech

	Increase in Ambient Noise Levels, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	3.4	3.9	6.7	**5.0**	**5.0**	**5.0**
2	0.6	0.8	1.8	**5.0**	**5.0**	**5.0**
3	0.4	0.5	1.2	**5.0**	**5.0**	**5.0**
4	0.1	0.1	0.3	**5.0**	**5.0**	**3.0**
5	0.1	0.1	0.3	**5.0**	**5.0**	**3.0**
6	0.3	0.5	0.6	**3.0**	**3.0**	**3.0**
7	3.0	4.1	4.8	**3.0**	**3.0**	**3.0**
8	0.3	0.6	0.9	**3.0**	**3.0**	**3.0**
9	0.6	1.1	1.6	**3.0**	**3.0**	**3.0**

Red = exceedance of County increase significance criteria

Source: BAC 2024

Table 44
Increases in Ambient L_{max} Noise Levels at Residential Uses – Event Amplified Music/Speech

	Increase in Ambient Noise Levels, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	0.7	0.9	2.9	**5.0**	**5.0**	**3.0**
2	0.1	0.1	0.5	**5.0**	**5.0**	**3.0**
3	0.1	0.1	0.3	**5.0**	**5.0**	**3.0**
4	0.0	0.0	0.0	**5.0**	**3.0**	**3.0**
5	0.0	0.0	0.0	**5.0**	**3.0**	**3.0**
6	0.1	0.1	0.1	**3.0**	**3.0**	**3.0**
7	1.2	0.8	1.4	**3.0**	**3.0**	**3.0**
8	0.0	0.0	0.1	**3.0**	**3.0**	**3.0**
9	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**

Source: BAC 2024

As shown in Table 43, a portion of the calculated increases in ambient hourly average (L_{eq}) noise levels would exceed the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Because noise exposure from Project Development Area outdoor event amplified music/speech is predicted to exceed the applicable El Dorado County daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers (Tables 41 and 42), and because increases in ambient evening and nighttime noise levels from those activities are calculated to exceed applicable General Plan increase

significance criteria at a portion of those sensitive receivers (Table 43), this impact is identified as being **potentially significant**.

Mitigation Measure 11:

MM 11: To satisfy applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) noise level standards and General Plan increase exceedance criteria at the closest residential receivers, the following noise mitigation measures are offered:

A. **Noise Barriers:** The placement of permanent or temporary noise barriers would be an effective method to reduce outdoor event amplified music noise at nearby residential receivers. The degree of effectiveness of noise barriers is dependent upon location, height and final elevation relative to nearby receivers, and would need to be assessed using construction drawings.

B. **Shielding/Setbacks:** A site design that integrates shielding and/or setbacks from the outdoor event area could also be an effective method to reduce event amplified music at nearby residential receivers. The effectiveness would depend on degree of shielding and/or setback distances relative to nearby receivers, and would need to be assessed using construction drawings.

C. **Event Sound System Configurations:** The loudness of a sound system is highly variable upon volume level, speaker placement, and speaker orientation/directionality relative to receivers. Implementation of a sound system loudness restriction (i.e., 70 dB at 50 feet), required speaker placement (i.e., setbacks/screening) and speaker facing would be effective measures to reduce outdoor event amplified music levels at nearby receivers.

D. **Outdoor Event Restrictions:** Restrictions on outdoor events, specifically with regards to allowable hours of event and/or time of day, would be effective in avoiding the potential of outdoor event amplified music exceeding applicable General Plan noise level criteria (e.g., outdoor events restricted during nighttime hours).

E. **Mitigated Outdoor Event Music Noise Study:** Implementation of some or all of the mitigation measures identified above, or mitigation measures of equal effectiveness, would be effective in reducing outdoor event amplified music to a state of compliance with appliable County General Plan noise level criteria. However, the specific noise level reduction provided by mitigation measures is difficult to quantify at this time, as one or a combination of measures may be implemented. As a result, to ensure that the mitigation measure(s) implemented are sufficient in reducing event amplified music to a state of compliance with applicable General Plan noise level criteria at nearby affected residential receivers, a noise study that references construction drawings (when available) and the selected mitigation measures (as appropriate) shall be completed by a qualified noise consultant. Specifically, the noise study shall contain an analysis

of outdoor event amplified music (using construction plans) with implementation of mitigation measures as appropriate to ensure for compliance with applicable General Plan noise level criteria at nearby existing residential receivers.

Significance of Impact after Implementation of MM 11: *Less than Significant*

Impact 12: Cumulative Operations Noise at Existing Sensitive Uses – Project Development Area

The calculated cumulative hourly average (L_{eq}) and highest predicted maximum (L_{max}) noise levels from analyzed Project Development Area noise sources at residential receivers 1-9 is presented in Tables 45 through 50. It should be noted that due to the logarithmic nature of the decibel scale, the sum of two noise values which differ by 10 dB equates to an overall increase in noise levels of 0.4 dB. When the noise sources are equivalent, the sum would result in an overall increase in noise levels of 3 dB.

Table 45
Calculated Cumulative Operations Noise Levels at Residential Uses – Daytime Hourly L_{eq}

Receiver	Predicted Noise Levels, L_{eq} (dB)							Calculated Cumulative, L_{eq} (dB)	Applied County Daytime Standard, L_{eq} (dB)[1]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd		
1	37	32	28	33	32	47	30	48	**55**
2	32	31	23	29	28	38	21	40	**55**
3	33	27	22	26	26	36	19	39	**55**
4	32	26	21	26	25	35	18	38	**55**
5	30	25	19	26	24	35	18	37	**55**
6	32	28	22	29	27	43	28	44	**50**
7	37	35	31	37	33	54	37	54	**50**
8	31	27	21	29	27	49	32	50	**50**
9	36	32	27	32	30	52	35	53	**50**

[1] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 46
Calculated Cumulative Operations Noise Levels at Residential Uses – Evening Hourly L_{eq}

Receiver	Predicted Noise Levels, L_{eq} (dB)							Calculated Cumulative, L_{eq} (dB)	Applied County Evening Standard, L_{eq} (dB)[1]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd		
1	37	32	28	33	32	47	30	48	**50**
2	32	31	23	29	28	38	21	40	**50**
3	33	27	22	26	26	36	19	39	**50**
4	32	26	21	26	25	35	18	38	**50**
5	30	25	19	26	24	35	18	37	**50**
6	32	28	22	29	27	43	28	44	**45**
7	37	35	31	37	33	54	37	54	**45**
8	31	27	21	29	27	49	32	50	**45**
9	36	32	27	32	30	52	35	53	**45**

[1] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 47
Calculated Cumulative Operations Noise Levels at Residential Uses – Nighttime Hourly L_{eq}

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Calculated Cumulative, L_{eq} (dB)	Applied County Nighttime Standard, L_{eq} (dB)[1]
1	37	32	28	33	32	47	30	48	**45**
2	32	31	23	29	28	38	21	40	**45**
3	33	27	22	26	26	36	19	39	**45**
4	32	26	21	26	25	35	18	38	**45**
5	30	25	19	26	24	35	18	37	**45**
6	32	28	22	29	27	43	28	44	**40**
7	37	35	31	37	33	54	37	54	**40**
8	31	27	21	29	27	49	32	50	**40**
9	36	32	27	32	30	52	35	53	**40**

[1] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 48
Highest Predicted Operations Noise Levels at Residential Uses – Daytime Maximum L_{max}

	Predicted Noise Levels, L_{max} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Highest Predicted, L_{max} (dB)	Applied County Daytime Standard, L_{max} (dB)[1]
1	47	44	51	44	--	52	52	52	**70**
2	42	50	46	40	--	43	43	50	**70**
3	43	44	45	38	--	41	41	45	**70**
4	42	43	44	37	--	40	40	44	**70**
5	40	42	42	37	--	40	40	42	**70**
6	42	44	45	40	--	48	50	50	**60**
7	47	48	54	49	--	59	59	59	**60**
8	41	40	44	41	--	54	54	54	**60**
9	46	45	49	43	--	57	57	57	**60**

[1] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.

Source: BAC 2024

Table 49
Highest Predicted Operations Noise Levels at Residential Uses – Evening Maximum L_{max}

	Predicted Noise Levels, L_{max} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Highest Predicted, L_{max} (dB)	Applied County Evening Standard, L_{max} (dB)[1]
1	47	44	51	44	--	52	52	52	**60**
2	42	50	46	40	--	43	43	50	**60**
3	43	44	45	38	--	41	41	45	**60**
4	42	43	44	37	--	40	40	44	**60**
5	40	42	42	37	--	40	40	42	**60**
6	42	44	45	40	--	48	50	50	**55**
7	47	48	54	49	--	59	59	59	**55**
8	41	40	44	41	--	54	54	54	**55**
9	46	45	49	43	--	57	57	57	**55**

[1] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 50
Highest Predicted Operations Noise Levels at Residential Uses – Nighttime Maximum L_{max}

	Predicted Noise Levels, L_{max} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Highest Predicted, L_{max} (dB)	Applied County Nighttime Standard, L_{max} (dB)[1]
1	47	44	51	44	--	52	52	52	**55**
2	42	50	46	40	--	43	43	50	**55**
3	43	44	45	38	--	41	41	45	**55**
4	42	43	44	37	--	40	40	44	**55**
5	40	42	42	37	--	40	40	42	**55**
6	42	44	45	40	--	48	50	50	**50**
7	47	48	54	49	--	59	59	59	**50**
8	41	40	44	41	--	54	54	54	**50**
9	46	45	49	43	--	57	57	57	**50**

[1] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

As shown in Tables 45 through 50, cumulative (and highest predicted) noise levels from Project Development Area on-site operations are calculated to exceed applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus cumulative project noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 51 and 52.

Table 51
Calculated Cumulative Increases in Ambient L_{eq} Noise Levels at Residential Uses

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	3.9	4.5	7.5	**5.0**	**5.0**	**5.0**
2	1.0	1.3	2.7	**5.0**	**5.0**	**5.0**
3	0.7	0.9	2.0	**5.0**	**5.0**	**5.0**
4	0.2	0.3	0.5	**5.0**	**5.0**	**3.0**
5	0.2	0.2	0.4	**5.0**	**5.0**	**3.0**
6	0.4	0.6	0.8	**3.0**	**3.0**	**3.0**
7	3.2	4.3	5.0	**3.0**	**3.0**	**3.0**
8	0.3	0.6	0.9	**3.0**	**3.0**	**3.0**
9	0.6	1.1	1.7	**3.0**	**3.0**	**3.0**

Red = exceedance of County increase significance criteria

Source: BAC 2024

Table 52
Highest Increases Ambient L_{max} Noise Levels at Residential Uses

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	0.7	0.9	2.9	**5.0**	**5.0**	**3.0**
2	0.5	0.6	2.0	**5.0**	**5.0**	**3.0**
3	0.2	0.2	0.8	**5.0**	**5.0**	**3.0**
4	0.0	0.0	0.1	**5.0**	**3.0**	**3.0**
5	0.0	0.0	0.1	**5.0**	**3.0**	**3.0**
6	0.2	0.1	0.2	**3.0**	**3.0**	**3.0**
7	1.2	0.8	1.4	**3.0**	**3.0**	**3.0**
8	0.0	0.0	0.1	**3.0**	**3.0**	**3.0**
9	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**

Source: BAC 2024

Table 51 data indicate that cumulative increases in ambient hourly average (L_{eq}) noise levels from Project Development Area on-site operations are calculated to exceed applicable General Plan Policy 6.5.1.13 daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) increase significance criteria at a portion of the closest residential receivers.

Because cumulative (and highest predicted) noise level exposure from Project Development Area on-site operations are calculated to exceed applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at a portion of the closest residential receivers (Tables 45 through 50), and because cumulative increases in ambient daytime, evening and nighttime noise levels from those activities are calculated to exceed applicable General Plan increase significance criteria at a portion of those sensitive receivers (Table 51), this impact is identified as being **potentially significant**.

Mitigation Measure 12:

To satisfy applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) noise level standards and General Plan increase significance criteria at the closest residential receivers, the following noise mitigation measure is offered:

MM 12: The project shall include implementation of Mitigation Measures 7, 10 and 11 as outlined in this report.

The implementation of Mitigation Measures 10 and 11 (pertaining to Event Crowd noise and Event Music) would reduce calculated cumulative (and highest predicted) daytime and evening Program Development Area operations noise levels to a state of compliance with applicable General Plan daytime and evening noise level standards at the closest residential receivers. Further, the implementation of Mitigation Measures 10 and 11 would also reduce those associated increases in daytime and evening ambient noise levels to a state of compliance with applicable General Plan daytime and evening increase significance criteria at the nearby residential receivers. As mentioned previously in this report, the specific noise level reduction resulting from implementation of Mitigation Measures 10 and 11 is difficult to quantify at this time, as one or more of the identified measures may be implemented. Thus, mitigated noise levels resulting from implementation of Mitigation Measures 10 and 11 cannot be predicted at this time.

However, the mitigated noise levels resulting from implementation of Mitigation Measure 7 (pertaining to a nighttime restriction for on-site truck activities) can be quantified at this time. Tables 53 and 54 show the calculated mitigated cumulative (and highest predicted) noise levels from Project Development Area on-site operations with implementation of Mitigation Measure 7. Similarly, Tables 55 and 56 show the calculated mitigated cumulative (and highest predicted) increases in ambient noise levels associated with Project Development Area on-site operations with implementation of Mitigation Measure 7.

Significance of Impact after Implementation of MM 12: *Less than Significant*

Table 53
Calculated Cumulative Operations Noise Levels at Residential Uses – Nighttime Hourly L_{eq} – Mitigated[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Calculated Cumulative, L_{eq} (dB)	Applied County Nighttime Standard, L_{eq} (dB)[2]
1	37	32	--	--	32	NA	NA	39	**45**
2	32	31	--	--	28	NA	NA	35	**45**
3	33	27	--	--	26	NA	NA	34	**45**
4	32	26	--	--	25	NA	NA	34	**45**
5	30	25	--	--	24	NA	NA	32	**45**
6	32	28	--	--	27	NA	NA	34	**40**
7	37	35	--	--	33	NA	NA	40	**40**
8	31	27	--	--	27	NA	NA	34	**40**
9	36	32	--	--	30	NA	NA	38	**40**

[1] Includes implementation of Mitigation Measure 7.
[2] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 54
Highest Predicted Operations Noise Levels at Residential Uses – Nighttime Maximum L_{max} – Mitigated[1]

	Predicted Noise Levels, L_{max} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Event Music	Event Crowd	Highest Predicted, L_{max} (dB)	Applied County Nighttime Standard, L_{max} (dB)[2]
1	47	44	--	--	--	NA	NA	47	**55**
2	42	50	--	--	--	NA	NA	50	**55**
3	43	44	--	--	--	NA	NA	44	**55**
4	42	43	--	--	--	NA	NA	43	**55**
5	40	42	--	--	--	NA	NA	42	**55**
6	42	44	--	--	--	NA	NA	44	**50**
7	47	48	--	--	--	NA	NA	48	**50**
8	41	40	--	--	--	NA	NA	41	**50**
9	46	45	--	--	--	NA	NA	46	**50**

[1] Includes implementation of Mitigation Measure 7.
[2] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 55
Calculated Cumulative Increases in Ambient L_{eq} Noise Levels at Residential Uses – Mitigated[1]

Receiver	Increase in Ambient Nighttime Noise Level, L_{eq} (dB)	Applied General Plan Nighttime Increase Significance Criterion, L_{eq} (dB)
1	2.1	**5.0**
2	1.0	**5.0**
3	0.9	**5.0**
4	0.2	**3.0**
5	0.1	**3.0**
6	0.1	**3.0**
7	0.3	**3.0**
8	<0.1	**3.0**
9	0.1	**3.0**

[1] Includes implementation of Mitigation Measure 7.

Source: BAC 2024

Table 56
Highest Increases Ambient L_{max} Noise Levels at Residential Uses – Mitigated[1]

Receiver	Increase in Ambient Nighttime Noise Level, L_{max} (dB)	Applied General Plan Nighttime Increase Significance Criterion, L_{max} (dB)
1	1.1	**3.0**
2	2.0	**3.0**
3	0.7	**3.0**
4	0.1	**3.0**
5	0.1	**3.0**
6	0.1	**3.0**
7	0.1	**3.0**
8	<0.1	**3.0**
9	<0.1	**3.0**

[1] Includes implementation of Mitigation Measure 7.

Source: BAC 2024

Noise Impacts Associated with Program Study Area Land Uses

The proposed Program Study Area consists of the central and easternmost 30.2 acres of the project site, and may include further development in the future such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the proposed zoning districts. The location of the proposed Program Study Area is shown in Figures 2 and 3.

The primary noise sources associated with the land uses identified above typically consist of on-site passenger vehicle circulation, passenger vehicle parking movements, on-site truck circulation, truck delivery activities, and mechanical equipment (i.e., HVAC). However, detailed plans illustrating locations of specific land use components (and associated noise sources) within the Program Study Area have not yet been developed. It is expected that detailed development plans for all land use components within the Program Study Area will be reviewed at a future date as part of the County's project approval process. As a result, the following section provides generalized impact discussions of land use operations noise exposure from the Program Study Area at existing noise-sensitive uses (previously identified residential receivers 1-9).

Impact 13: On-Site Passenger Vehicle Circulation Noise at Existing Sensitive Uses – Program Study Area

As a means of determining potential noise exposure due to Program Study Area on-site passenger vehicle circulation, BAC utilized the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with trip generation data prepared by the project transportation consultant (T. Kear). According to that data, the Program Study Area is estimated to generate 12,044 total daily trips (922 AM peak hours trips, 916 PM peak hour trips).

The closest existing noise-sensitive use to the Program Study Area maintains a separation of approximately 200 feet (property line of residential receiver 1). Assuming on-site vehicle speeds of 30 mph, and assuming that worst-case estimated peak hour trips could occur within the Program Study Area during a busy daytime, evening or nighttime hour, project on-site passenger vehicle circulation noise levels are predicted to be 52 dB L_{eq} and 62 dB L_{max} at distance of 200 feet.

Based on the analysis provided above, and depending upon the site design (i.e., locations of vehicle circulation routes), noise exposure associated with on-site passenger vehicle circulation within the Program Study Area could potentially exceed applicable El Dorado County General Plan hourly average (L_{eq}) and/or maximum (L_{max}) exterior noise level standards at nearby existing noise-sensitive uses. Further, noise level exposure from those operations could potentially significantly exceed existing ambient conditions at nearby noise-sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 13:

The following specific options for mitigation of Program Study Area on-site traffic circulation noise levels at existing noise-sensitive receptors should be considered to the extent reasonable and feasible:

A. **Reduction in On-Site Traffic Volumes:** Because one of the most important factors in traffic noise generation is vehicle volumes, a reduction in traffic noise levels can be increased by reducing the overall volume of traffic which would be generated by the Program Study Area. It should be noted, however, that a 3 dB reduction in traffic noise levels would require a 50% reduction in projected traffic volumes. So, this measure would require a substantial decrease in traffic volume to achieve an appreciable decrease in traffic noise levels. As a result, it is unlikely that this measure would be a feasible means of fully mitigating this noise impact.

B. **Reduction in On-Site Vehicle Speeds:** Another factor in the generation of traffic noise is vehicle speed. Higher speeds translate to higher traffic noise levels. However, vehicle speed limits are set based on speed surveys, safety considerations, and other factors, and cannot be arbitrarily reduced to achieve lower traffic noise levels. Further, this analysis includes assumed on-site vehicle speeds of 30 mph, which is already fairly low. As a result, this measure would not likely be a feasible means of mitigating this noise impact.

C. **Construction of Noise Barriers:** Appreciable reductions in traffic noise levels can be achieved through the construction of traffic noise barriers. However, at locations where openings or gaps in the barriers would be required for driveway openings or to maintain safe sight distances, the effectiveness of noise barriers is severely compromised. Furthermore, the construction of traffic noise barriers can be extremely costly, potentially rendering this measure infeasible.

D. **Use of Setbacks:** A 4.5 dB decrease in traffic noise levels can be achieved for each doubling of distance between the roadway centerline and affected noise-sensitive receiver. However, based on the size of the Program Study Area (i.e., site constraints), this measure may not be viable for a portion of the closest residential receivers.

E. **Noise-Reducing Pavement:** Noise-reducing pavement types, such as rubberized asphalt, have been shown to provide an appreciable noise level reduction relative to other pavement types (approximately 3-4 dB over conventional asphalt overlays). However, due to the close proximity of a portion of the closest residential receivers and the associated predicted on-site traffic noise levels, the benefits of noise-reducing paving materials, even if feasible, may be insufficient to fully mitigate this impact.

Some of the aforementioned noise mitigation measures may be utilized to provide appreciable on-site traffic circulation noise level decreases. However, because such measures may be infeasible from a cost, site constraint, engineering or safety standpoint, or may not fully mitigate noise impacts, the successful implementation of these measures cannot be guaranteed. As a result, this impact is considered significant and unavoidable.

Significance of Impact MM 13: *Significant and Unavoidable*

Impact 14: Parking Area Noise at Existing Sensitive Uses – Program Study Area

As a means of determining potential noise exposure due to Commercial Mixed-Use parking lot activities, Bollard Acoustical Consultants, Inc. (BAC) utilized specific parking lot noise level measurements conducted by BAC. Specifically, a series of individual noise measurements were conducted of multiple vehicle types arriving and departing a parking area, including engines starting and stopping, car doors opening and closing, and persons conversing as they entered and exited the vehicles. The results of those measurements revealed that individual parking lot movements generated mean noise levels of 65 dB SEL at a reference distance of 50 feet.

For a conservative assessment of Program Study Area parking area noise generation, it was assumed that an individual parking area could accommodate up to 200 vehicles. It was also assumed that the parking area could fill or empty during any given peak hour. Parking area noise exposure was determined using the following equation:

$$Peak\ Hour\ L_{eq} = 65+10*log\ (N) – 35.6$$

Where 65 is the SEL for a single automobile parking operation at a reference distance of 50 feet, N is the number of parking area operations in a peak hour, and 35.6 is 10 times the logarithm of the number of seconds in an hour. The closest existing noise-sensitive use to the Program Study Area maintains a separation of approximately 200 feet (property line of residential receiver 1). When projected to a distance of 200 feet, parking area noise levels are calculated to be 45 dB L_{eq} and 58 dB L_{max}.

Based on the analysis provided above, and depending upon the site design (i.e., locations and capacities of parking areas), noise exposure associated with parking area movements within the Program Study Area could potentially exceed applicable El Dorado County General Plan hourly average (L_{eq}) and/or maximum (L_{max}) exterior noise level standards at nearby existing noise-sensitive uses. Further, noise level exposure from those operations could potentially significantly exceed existing ambient conditions at nearby noise-sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 14:

To ensure for satisfaction of applicable El Dorado County General Plan noise level standards and General Plan increase significance criteria at nearby off-site residential receivers, the following noise mitigation measure is offered:

MM 14: A noise impact study that addresses Program Study Area parking area activities shall be completed by a qualified noise consultant once site-specific development plans are completed. The noise impact study shall include an analysis of parking area noise exposure at nearby existing noise-sensitive receivers. The analysis shall include associated mitigation measures (as appropriate) to reduce parking area noise levels to a state of compliance with applicable El Dorado County General Plan daytime, evening and nighttime exterior noise level criteria and General Plan increase significance criteria at nearby existing noise-sensitive receptors. Specific

mitigation measures could include a site design that integrates setbacks and/or intervening shielding.

Significance of Impact after Implementation of MM 14: *Less than Significant*

Impact 15: On-Site Truck Circulation Noise at Existing Sensitive Uses – Program Study Area

It is expected that the future components of the Program Study Area will receive deliveries of product from medium-duty vendor trucks/vans and heavy trucks. An analysis of on-site truck circulation noise exposure was presented in **Impact 7**. As stated in that impact discussion, BAC file data indicate that single-event heavy truck passby noise levels are approximately 74 dB L_{max} and 83 dB SEL at a reference distance of 50 feet. BAC file data also indicate that single-event medium truck passby noise levels are approximately 66 dB L_{max} and 76 SEL at a reference distance of 50 feet.

To estimate on-site delivery truck circulation noise level exposure within the Program Study Area, it was assumed that the Area could receive 2 heavy truck and 2 medium truck deliveries during a busy hour of deliveries. Given the BAC file data and delivery assumptions above, on-site truck circulation noise levels are calculated to be 51 dB L_{eq} and 74 dB L_{max} at a distance of 50 feet. The closest existing noise-sensitive use to the Program Study Area maintains a separation of approximately 200 feet (property line of residential receiver 1). When projected to a distance of 200 feet, on-site truck circulation noise levels are calculated to be 39 dB L_{eq} and 62 dB L_{max}.

Based on the analysis provided above, and depending upon the site design (i.e., locations of truck circulation routes), noise exposure associated with on-site delivery truck circulation within the Program Study Area could potentially exceed applicable El Dorado County General Plan hourly average (L_{eq}) and/or maximum (L_{max}) exterior noise level standards at nearby existing noise-sensitive uses. Further, noise level exposure from those operations could potentially significantly exceed existing ambient conditions at nearby noise-sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 15:

To ensure for satisfaction of applicable El Dorado County General Plan noise level standards and General Plan increase significance criteria at nearby off-site residential receivers, the following noise mitigation measure is offered:

MM 15: A noise impact study that addresses Program Study Area on-site delivery truck circulation shall be completed by a qualified noise consultant once site-specific development plans are completed. The noise impact study shall include an analysis of on-site delivery truck circulation noise exposure at nearby existing noise-sensitive receivers. The analysis shall include associated mitigation measures (as appropriate) to reduce on-site delivery truck circulation noise levels to a state of compliance with applicable El Dorado County General Plan daytime, evening and nighttime exterior noise level criteria and General Plan increase significance criteria at nearby existing noise-sensitive receptors. Specific mitigation measures could

include a site design that integrates setbacks, intervening shielding, and/or operations restrictions.

Significance of Impact after Implementation of MM 15: *Less than Significant*

Impact 16: Truck Delivery Activity Noise at Existing Sensitive Uses – Program Study Area

As mentioned previously, it is expected that the future components of the Program Study Area will receive deliveries of product from medium-duty vendor trucks/vans and heavy trucks. An analysis of truck delivery activity noise exposure was presented in **Impact 8**. As stated in that impact discussion, BAC file data indicate that noise levels associated with medium-duty truck (including side-step vans) and heavy-duty truck deliveries are approximately 65 dB L_{max} and 83 dB SEL at a distance of 100 feet.

To estimate truck delivery activity noise level exposure within the Program Study Area, it was assumed that the Area could receive 2 heavy truck and 2 medium truck deliveries during a busy hour of deliveries. Given the BAC file data and delivery assumptions above, truck delivery activity noise levels are calculated to be 53 dB L_{eq} and 65 dB L_{max} at a distance of 100 feet. The closest existing noise-sensitive use to the Program Study Area maintains a separation of approximately 200 feet (property line of residential receiver 1). When projected to a distance of 200 feet, truck delivery activity noise levels are calculated to be 47 dB L_{eq} and 59 dB L_{max}.

Based on the analysis provided above, and depending upon the site design (i.e., locations of delivery loading/unloading areas), noise exposure associated with truck delivery activities within the Program Study Area could potentially exceed applicable El Dorado County General Plan hourly average (L_{eq}) and/or maximum (L_{max}) exterior noise level standards at nearby existing noise-sensitive uses. Further, noise level exposure from those activities could potentially significantly exceed existing ambient conditions at nearby noise-sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 16:

To ensure for satisfaction of applicable El Dorado County General Plan noise level standards and General Plan increase significance criteria at nearby off-site residential receivers, the following noise mitigation measure is offered:

MM 16: A noise impact study that addresses Program Study Area truck delivery activities shall be completed by a qualified noise consultant once site-specific development plans are completed. The noise impact study shall include an analysis of truck delivery activity noise exposure at nearby existing noise-sensitive receivers. The analysis shall include associated mitigation measures (as appropriate) to reduce truck delivery activity noise levels to a state of compliance with applicable El Dorado County General Plan daytime, evening and nighttime exterior noise level criteria and General Plan increase significance criteria at nearby existing noise-sensitive receptors. Specific mitigation measures could include a site design that integrates setbacks, intervening shielding, and/or operations restrictions.

Significance of Impact after Implementation of MM 16: *Less than Significant*

Impact 17: HVAC Equipment Noise at Existing Sensitive Uses – Program Study Area

An analysis of mechanical equipment (HVAC) equipment noise exposure was presented in **Impact 9.** As stated in that impact discussion, noise levels associated with the mechanical equipment analyzed in this report (i.e., HVAC and condenser units) can be expected to generate an A-weighted sound power levels ranging from 74 dB to 85 dB.

The closest existing noise-sensitive use to the Program Study Area maintains a separation of approximately 200 feet (property line of residential receiver 1). Depending upon the site design (i.e., locations of buildings and heating/cooling requirements), noise exposure associated with HVAC equipment within the Program Study Area could potentially exceed applicable El Dorado County General Plan hourly average (L_{eq}) and/or maximum (L_{max}) exterior noise level standards at nearby existing noise-sensitive uses. Further, noise level exposure from that equipment could potentially significantly exceed existing ambient conditions at nearby noise-sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 17:

To ensure for satisfaction of applicable El Dorado County General Plan noise level standards and General Plan increase significance criteria at nearby off-site residential receivers, the following noise mitigation measure is offered:

MM 17: A noise impact study that addresses Program Study Area mechanical equipment (HVAC) shall be completed by a qualified noise consultant once site-specific development plans are completed. The noise impact study shall include an analysis of HVAC equipment noise exposure at nearby existing noise-sensitive receivers. The analysis shall include associated mitigation measures (as appropriate) to reduce HVAC equipment noise levels to a state of compliance with applicable El Dorado County General Plan daytime, evening and nighttime exterior noise level criteria and General Plan increase significance criteria at nearby existing noise-sensitive receptors. Specific mitigation measures could include the use of building parapets to screen equipment, locating equipment within isolated mechanical equipment rooms, equipment specifications, and/or equipment setbacks.

Significance of Impact after Implementation of MM 17: *Less than Significant*

Noise Impacts Associated with Full Buildout On-Site Operations

Impact 18: Full Buildout On-Site Operations Noise at Existing Sensitive Uses – Project Development Area and Program Study Area

Individual analyses of on-site operations noise exposure associated with the Project Development Area and Program Study Area were presented in **Impacts 5 through 18**. As concluded in **Impacts 5 through 12**, noise impacts associated with Project Development Area on-site

operations at nearby existing sensitive receivers were identified as being less than significant. As presented in **Impacts 14 through 17**, noise impacts associated with Program Study Area on-site operations noise at nearby sensitive receivers were also determined to be less than significant. However, as outlined in **Impact 13**, noise impacts associated with Program Study Area on-site passenger vehicle circulation were identified as being significant and unavoidable.

Given the project operations assumptions and reference noise level data presented in **Impacts 13 through 17**, Program Study Area on-site operations noise levels were projected at residential receivers 1-9. The results of those projections at those receivers are presented in Tables 57 through 62.

Table 57
Summary of Projected Program Study Area Noise Levels at Residential Uses – Daytime Hourly L_{eq}[1]

Receiver	Predicted Noise Levels, L_{eq} (dB)					Calculated Cumulative, L_{eq} (dB)	Applied County Daytime Standard, L_{eq} (dB)[3]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]		
1	52	45	39	47	NA	54	**55**
2	41	31	25	33	NA	42	**55**
3	39	28	22	30	NA	40	**55**
4	39	28	22	30	NA	40	**55**
5	39	28	22	30	NA	40	**55**
6	41	31	24	33	NA	42	**50**
7	47	39	33	41	NA	49	**50**
8	37	26	20	28	NA	38	**50**
9	41	31	25	33	NA	42	**50**

[1] Calculated cumulative noise levels from Program Study Area operations at residential receivers 1-9.
[2] Due to the variability of configurations, Program Study Area HVAC noise levels cannot be accurately predicted at this time.
[3] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.

Source: BAC 2024

Table 58
Summary of Projected Program Study Area Noise Levels at Residential Uses – Evening Hourly L_{eq}[1]

Receiver	Predicted Noise Levels, L_{eq} (dB)					Calculated Cumulative, L_{eq} (dB)	Applied County Evening Standard, L_{eq} (dB)[3]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]		
1	52	45	39	47	NA	54	**50**
2	41	31	25	33	NA	42	**50**
3	39	28	22	30	NA	40	**50**
4	39	28	22	30	NA	40	**50**
5	39	28	22	30	NA	40	**50**
6	41	31	24	33	NA	42	**45**
7	47	39	33	41	NA	49	**45**
8	37	26	20	28	NA	38	**45**
9	41	31	25	33	NA	42	**45**

[1] Calculated cumulative noise levels from Program Study Area operations at residential receivers 1-9.
[2] Due to the variability of configurations, Program Study Area HVAC noise levels cannot be accurately predicted at this time.
[3] Applicable County exterior noise levels standards for “Community” and “Rural” areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 59
Summary of Projected Program Study Area Noise Levels at Residential Uses – Nighttime Hourly L_{eq}[1]

Receiver	Predicted Noise Levels, L_{eq} (dB)					Calculated Cumulative, L_{eq} (dB)	Applied County Nighttime Standard, L_{eq} (dB)[3]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]		
1	52	45	39	47	NA	54	**45**
2	41	31	25	33	NA	42	**45**
3	39	28	22	30	NA	40	**45**
4	39	28	22	30	NA	40	**45**
5	39	28	22	30	NA	40	**45**
6	41	31	24	33	NA	42	**40**
7	47	39	33	41	NA	49	**40**
8	37	26	20	28	NA	38	**40**
9	41	31	25	33	NA	42	**40**

[1] Calculated cumulative noise levels from Program Study Area operations at residential receivers 1-9.
[2] Due to the variability of configurations, Program Study Area HVAC noise levels cannot be accurately predicted at this time.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 60
Summary of Projected Program Study Area Noise Levels at Residential Uses – Daytime Maximum L_{max}[1]

Receiver	Predicted Noise Levels, L_{max} (dB)					Highest Projected, L_{max} (dB)	Applied County Daytime Standard, L_{max} (dB)[2]
	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC		
1	62	58	62	59	--	62	**70**
2	51	44	48	45	--	51	**70**
3	49	40	44	41	--	49	**70**
4	49	40	44	41	--	49	**70**
5	49	40	44	41	--	49	**70**
6	51	43	47	44	--	51	**60**
7	57	52	56	53	--	57	**60**
8	47	38	42	39	--	47	**60**
9	51	44	48	45	--	51	**60**

[1] Highest projected noise levels from Program Study Area operations at residential receivers 1-9.
[2] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 61
Summary of Projected Program Study Area Noise Levels at Residential Uses – Evening Maximum L_{max}[1]

	Predicted Noise Levels, L_{max} (dB)						
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Highest Projected, L_{max} (dB)	Applied County Evening Standard, L_{max} (dB)[2]
1	62	58	62	59	--	62	**60**
2	51	44	48	45	--	51	**60**
3	49	40	44	41	--	49	**60**
4	49	40	44	41	--	49	**60**
5	49	40	44	41	--	49	**60**
6	51	43	47	44	--	51	**55**
7	57	52	56	53	--	57	**55**
8	47	38	42	39	--	47	**55**
9	51	44	48	45	--	51	**55**

[1] Highest projected noise levels from Program Study Area operations at residential receivers 1-9.
[2] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 62
Summary of Projected Program Study Area Noise Levels at Residential Uses – Nighttime Maximum L_{max}[1]

	Predicted Noise Levels, L_{max} (dB)						
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC	Highest Projected, L_{max} (dB)	Applied County Nighttime Standard, L_{max} (dB)[2]
1	62	58	62	59	--	62	**55**
2	51	44	48	45	--	51	**55**
3	49	40	44	41	--	49	**55**
4	49	40	44	41	--	49	**55**
5	49	40	44	41	--	49	**55**
6	51	43	47	44	--	51	**50**
7	57	52	56	53	--	57	**50**
8	47	38	42	39	--	47	**50**
9	51	44	48	45	--	51	**50**

[1] Highest projected noise levels from Program Study Area operations at residential receivers 1-9.
[2] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

As shown in Tables 57 through 62, cumulative (and highest predicted) noise levels from Program Study Area on-site operations are calculated to exceed portions of applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at some of the closest residential receivers.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus cumulative Program Study Area generated ambient noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 63 and 64.

Table 63
Calculated Cumulative Increases in Ambient L_{eq} Noise Levels – Program Study Area

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)[1]		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	8.7	9.6	13.3	**5.0**	**5.0**	**5.0**
2	1.5	1.8	3.6	**5.0**	**5.0**	**5.0**
3	0.9	1.2	2.5	**5.0**	**5.0**	**5.0**
4	0.3	0.4	0.8	**5.0**	**5.0**	**3.0**
5	0.3	0.4	0.8	**5.0**	**5.0**	**3.0**
6	0.3	0.4	0.5	**3.0**	**3.0**	**3.0**
7	1.1	1.7	2.0	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	0.1	**3.0**	**3.0**	**3.0**
9	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**

[1] Applied County increase significance criteria based on results from BAC ambient noise survey.
Red = exceedance of County increase significance criteria

Source: BAC 2024

Table 64
Highest Increases Ambient L_{max} Noise Levels – Program Study Area

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)[1]		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	4.8	5.5	10.4	**5.0**	**5.0**	**3.0**
2	0.6	0.8	2.5	**5.0**	**5.0**	**3.0**
3	0.4	0.5	1.8	**5.0**	**5.0**	**3.0**
4	0.1	0.1	0.3	**5.0**	**3.0**	**3.0**
5	0.1	0.1	0.3	**5.0**	**3.0**	**3.0**
6	0.2	0.1	0.3	**3.0**	**3.0**	**3.0**
7	0.8	0.5	1.0	**3.0**	**3.0**	**3.0**
8	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**
9	<0.1	<0.1	<0.1	**3.0**	**3.0**	**3.0**

[1] Applied County increase significance criteria based on results from BAC ambient noise survey.
Red = exceedance of County increase significance criteria

Source: BAC 2024

Tables 63 and 64 data indicate that cumulative (and highest predicted) increases in ambient hourly average (L_{eq}) and maximum (L_{max}) noise levels from Program Study Area on-site operations are calculated to exceed applicable General Plan Policy 6.5.1.13 daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) increase significance criteria at residential receiver 1.

The calculated cumulative (and highest predicted) noise levels and resulting ambient noise level increases from unmitigated Project Development Area on-site operations at nearby residential receivers 1-9 are contained in Tables 45 through 52, presented earlier in this report. The calculated cumulative (and highest predicted) noise levels and resulting ambient noise level increases from *combined* Project Development Area and Program Study Area on-site operations at nearby residential receivers 1-9 are contained in the following Tables 65 through 70.

Table 65
Calculated Combined Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Daytime Hourly L_{eq}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Calculated Cumulative, L_{eq} (dB)	Applied County Daytime Standard, L_{eq} (dB)[3]
1	52	46	40	48	32	47	30	55	**55**
2	41	34	27	35	28	38	21	44	**55**
3	40	30	25	31	26	36	19	42	**55**
4	40	30	24	31	25	35	18	42	**55**
5	40	30	24	31	24	35	18	42	**55**
6	41	33	26	34	27	43	28	46	**50**
7	47	41	35	43	33	54	32	55	**50**
8	38	29	23	32	27	49	32	50	**50**
9	42	35	29	36	30	52	35	53	**50**

[1] Calculated cumulative noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 66
Calculated Combined Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Evening Hourly L_{eq}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Calculated Cumulative, L_{eq} (dB)	Applied County Evening Standard, L_{eq} (dB)[3]
1	52	46	40	48	32	47	30	55	**50**
2	41	34	27	35	28	38	21	44	**50**
3	40	30	25	31	26	36	19	42	**50**
4	40	30	24	31	25	35	18	42	**50**
5	40	30	24	31	24	35	18	42	**50**
6	41	33	26	34	27	43	28	46	**45**
7	47	41	35	43	33	54	32	55	**45**
8	38	29	23	32	27	49	32	50	**45**
9	42	35	29	36	30	52	35	53	**45**

[1] Calculated cumulative noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 67
Calculated Combined Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Nighttime Hourly L_{eq}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Calculated Cumulative, L_{eq} (dB)	Applied County Nighttime Standard, L_{eq} (dB)[3]
1	52	46	40	48	32	47	30	55	**45**
2	41	34	27	35	28	38	21	44	**45**
3	40	30	25	31	26	36	19	42	**45**
4	40	30	24	31	25	35	18	42	**45**
5	40	30	24	31	24	35	18	42	**45**
6	41	33	26	34	27	43	28	46	**40**
7	47	41	35	43	33	54	32	55	**40**
8	38	29	23	32	27	49	32	50	**40**
9	42	35	29	36	30	52	35	53	**40**

[1] Calculated cumulative noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 68
Highest Predicted Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Daytime Maximum L_{max}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Highest Predicted, L_{max} (dB)	Applied County Daytime Standard, L_{max} (dB)[3]
1	62	58	62	59	--	52	52	62	**70**
2	51	50	48	45	--	43	43	51	**70**
3	49	44	45	41	--	41	41	49	**70**
4	49	43	44	41	--	40	40	49	**70**
5	49	42	44	41	--	40	40	49	**70**
6	51	44	47	44	--	48	50	51	**60**
7	57	52	56	53	--	59	54	59	**60**
8	47	40	44	41	--	54	54	54	**60**
9	51	45	49	45	--	57	57	57	**60**

[1] Highest predicted noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.

Source: BAC 2024

Table 69
Highest Predicted Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Evening Maximum L_{max}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Highest Predicted, L_{max} (dB)	Applied County Evening Standard, L_{max} (dB)[3]
1	62	58	62	59	--	52	52	62	**60**
2	51	50	48	45	--	43	43	51	**60**
3	49	44	45	41	--	41	41	49	**60**
4	49	43	44	41	--	40	40	49	**60**
5	49	42	44	41	--	40	40	49	**60**
6	51	44	47	44	--	48	50	51	**55**
7	57	52	56	53	--	59	54	59	**55**
8	47	40	44	41	--	54	54	54	**55**
9	51	45	49	45	--	57	57	57	**55**

[1] Highest predicted noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Table 70
Highest Predicted Unmitigated Project Development Area & Program Study Area Noise Levels at Residential Uses – Nighttime Maximum L_{max}[1]

	Predicted Noise Levels, L_{eq} (dB)								
Receiver	On-Site Pass Circ	Parking Area	On-Site Truck Circ.	Truck Deliveries	HVAC[2]	Event Music[2]	Event Crowd[2]	Highest Predicted, L_{max} (dB)	Applied County Nighttime Standard, L_{max} (dB)[3]
1	62	58	62	59	--	52	52	62	**55**
2	51	50	48	45	--	43	43	51	**55**
3	49	44	45	41	--	41	41	49	**55**
4	49	43	44	41	--	40	40	49	**55**
5	49	42	44	41	--	40	40	49	**55**
6	51	44	47	44	--	48	50	51	**50**
7	57	52	56	53	--	59	54	59	**50**
8	47	40	44	41	--	54	54	54	**50**
9	51	45	49	45	--	57	57	57	**50**

[1] Highest predicted noise levels from unmitigated Project Development Area operations & projected Program Study Area operations at residential receivers 1-9.
[2] Project Development Area noise levels only.
[3] Applicable County exterior noise levels standards for "Community" and "Rural" areas as assigned.
Red = exceedance of a County noise level standard

Source: BAC 2024

Tables 65 through 70 data indicate that cumulative (and highest predicted) noise levels from combined Project Development Area and Program Study Area on-site operations are calculated to exceed portions of applicable El Dorado County General Plan daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) exterior noise level standards at some of the closest residential receivers.

Using the lowest average measured noise levels at each monitoring location during the survey, ambient plus combined Project Development Area and Program Study Area generated ambient noise level increases during daytime, evening and nighttime hours were calculated at residential receivers 1-9. The results of those calculations are presented in Tables 71 and 72.

Table 71
Calculated Cumulative Increases in Ambient L_{eq} Noise Levels – Combined Areas

	Increase in Ambient Noise Level, L_{eq} (dB)			Applied General Plan Increase Significance Criterion, L_{eq} (dB)[1]		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	9.5	10.4	14.2	**5.0**	**5.0**	**5.0**
2	2.3	2.7	5.0	**5.0**	**5.0**	**5.0**
3	1.6	1.9	3.7	**5.0**	**5.0**	**5.0**
4	0.5	0.6	1.2	**5.0**	**5.0**	**3.0**
5	0.5	0.6	1.1	**5.0**	**5.0**	**3.0**
6	0.6	1.0	1.2	**3.0**	**3.0**	**3.0**
7	3.7	5.0	5.7	**3.0**	**3.0**	**3.0**
8	0.3	0.6	1.0	**3.0**	**3.0**	**3.0**
9	0.6	1.2	1.8	**3.0**	**3.0**	**3.0**

[1] Applied County increase significance criteria based on results from BAC ambient noise survey.
Red = exceedance of County increase significance criteria

Source: BAC 2024

Table 72
Highest Increases Ambient L_{max} Noise Levels – Combined Areas

	Increase in Ambient Noise Level, L_{max} (dB)			Applied General Plan Increase Significance Criterion, L_{max} (dB)[1]		
Receiver	Daytime	Evening	Nighttime	Daytime	Evening	Nighttime
1	4.8	5.5	10.4	**5.0**	**5.0**	**3.0**
2	0.6	0.8	2.5	**5.0**	**5.0**	**3.0**
3	0.4	0.5	1.8	**5.0**	**5.0**	**3.0**
4	0.1	0.1	0.3	**5.0**	**3.0**	**3.0**
5	0.1	0.1	0.3	**5.0**	**3.0**	**3.0**
6	0.2	0.1	0.3	**3.0**	**3.0**	**3.0**
7	1.2	0.8	1.4	**3.0**	**3.0**	**3.0**
8	0.0	0.0	0.1	**3.0**	**3.0**	**3.0**
9	0.1	0.1	0.2	**3.0**	**3.0**	**3.0**

[1] Applied County increase significance criteria based on results from BAC ambient noise survey.
Red = exceedance of County increase significance criteria

Source: BAC 2024

As shown in Tables 71 and 72, cumulative (and highest predicted) increases in ambient hourly average (L_{eq}) and maximum (L_{max}) noise levels from Program Study Area on-site operations are calculated to exceed applicable General Plan Policy 6.5.1.13 daytime, evening and nighttime hourly average (L_{eq}) and maximum (L_{max}) increase significance criteria at a portion of the closest residential receivers.

As mentioned previously, detailed plans illustrating locations of specific land use components (and associated on-site operations noise sources) within the Program Study Area have not yet been developed. It is expected that detailed development plans for all land use components within the Program Study Area will be reviewed at a future date as part of the County's project approval process. Regardless of the impact determinations for individual on-site operations noise sources previously identified in **Impacts 5 through 18**, and depending on the Program Study Area site design, *and* based on the predicted noise levels presented in this impact discussion (Tables 57 through 72), combined on-site operations noise level exposure associated with full buildout of the project (i.e., Project Development Area and Program Study Area) could exceed applicable El Dorado County General Plan daytime, evening or nighttime exterior noise level standards and/or General Plan increase significance criteria at nearby existing sensitive uses. As a result, this impact is identified as being **potentially significant**.

Mitigation Measure 18:

The following specific mitigation measure should be implemented:

MM 18: A noise impact study that addresses combined on-site operations noise level exposure associated with full buildout of the project (i.e., Project Development Area and Program Study Area) shall be completed by a qualified noise consultant once site-specific development plans for the Program Study Area are completed. The noise impact study shall include an analysis on-site operations noise exposure associated with full project buildout at nearby existing noise-sensitive receivers. The analysis shall include associated mitigation measures (as appropriate) to reduce full project buildout on-site operations noise levels to a state of compliance with applicable El Dorado County General Plan daytime, evening and nighttime exterior noise level criteria and General Plan increase significance criteria at nearby existing noise-sensitive receptors.

The implementation of Mitigation Measure 18 as outlined above would result in the identification of specific noise mitigation measures designed to reduce noise levels associated with full buildout of the project (i.e., Project Development Area and Program Study Area). However, as concluded in the **Impact 13** discussion, noise impacts associated with on-site passenger vehicle circulation within the Program Study Area were identified as being significant and unavoidable. While some of the identified noise mitigation measures for **Impact 13** could be utilized to provide appreciable noise level decreases, it is recognized that such measures could be infeasible from a cost, site constraint, engineering or safety standpoint, or may not fully mitigate the noise impacts to a state of compliance with applicable County noise level criteria. Thus, the successful implementation of the mitigation measures identified in **Impact 13** cannot be guaranteed. Further, depending on the Program Study Area site design, it is possible that implementation of measures (should they be warranted) may not fully mitigate combined noise level exposure from on-site operations

associated with full build out of the project (i.e., Project Development Area and Program Study Area) to a state of compliance with applicable County noise level criteria at nearby existing sensitive uses. Due to the identified uncertainties, this impact is considered significant and unavoidable.

Significance of Impact MM 18: *Significant and Unavoidable*

Noise Impacts Associated with Construction of Project Infrastructure

The project would include necessary potable water, sewer/wastewater, and stormwater drainage infrastructure to serve the proposed project. The project would also include the construction of a bike path bridge over Bass Lake Road. Brief descriptions of the proposed infrastructure projects are provided below.

- **Potable Water** – The nearest existing water line is a 24-inch water main located in Bass Lake Road, approximately 2,000 feet north of the project site (see Figure 5). Approximately 3,900 linear feet of new 12-inch water line is proposed to connect to the existing 24-inch line and extend south along the east side of Bass Lake Road to the project site.

- **Sewer/Wastewater** – Two alternatives are proposed for wastewater disposal. Alternative 1 proposes the construction of a new BLHSP sewer main connecting the project area to the existing South Uplands Trunk Gravity-Sewer Main located on Russi Ranch Drive. Alternative 2 proposes an on-site septic sewer system as an interim solution for the development of the Project Development Area.

- **Bike Path Bridge** – A future Class 1 bike path bridge crossing of Bass Lake Road is proposed by the project at the primary access and would connect to the Park-and-Ride facility west of Bass Lake Road.

Impact 19: Infrastructure Construction Noise at Existing Sensitive Uses

Heavy equipment associated with project infrastructure construction activities would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the work area would also vary depending upon the proximity of equipment activities to that point.

The nearest existing noise-sensitive use to the potable water infrastructure work area has been identified as a residence constructed along Tierra de Dios Drive, which maintains a separation of approximately 250 feet from the area. The closest existing noise-sensitive use to a sewer/wastewater infrastructure work area (either alternative) has been identified as a residence constructed along Tong Road, which maintains a separation of approximately 200 feet from the area. Finally, the nearest existing noise-sensitive use to the bike path bridge work area has been identified as a residence constructed along Old Bass Lake Road, which maintains a separation of approximately 400 feet from the area.

Table 73 includes the range of maximum (L_{max}) noise levels for equipment commonly used in construction projects at full-power operation at a distance of 50 feet. It should be noted that not all of these construction activities would be required of the proposed off-site infrastructure improvements. Table 73 data also include predicted maximum equipment noise levels at the nearest identified existing noise-sensitive uses to an infrastructure work area, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

Table 73
Reference and Projected Noise Levels for Typical Construction Equipment

Equipment	Typical Maximum Noise Level at 50 Feet (dB)	Predicted Maximum Noise Levels Nearest Receptors (dB)		
		Water 250 ft	Sewer 200 ft	Bike Bridge 400 ft
Backhoe	80	66	68	62
Compactor	82	68	70	64
Concrete mixer truck	85	71	73	67
Concrete pump	82	68	70	64
Concrete vibrator	76	62	64	58
Crane, mobile	83	69	71	65
Dozer	85	71	73	67
Dump truck	82	68	70	64
Flatbed truck	84	70	72	66
Front end loader	80	66	68	62
Paver	85	71	73	67
Pump	77	63	65	59
Saw	76	62	64	58
Shovel	82	68	70	64
Pickup truck	84	70	72	66
	Low	62	64	58
	High	71	73	67
	Average	67	68	62

Source: 2018 FTA Noise and Vibration Impact Assessment Manual, Table 7-1 and BAC

As noted in the Regulatory Setting Section of this report, Policy 6.5.1.11 of the El Dorado County General Plan exempts noise sources associated with construction provided such activities take place between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 8:00 p.m. on weekends, and on federally recognized holidays. For the purposes of this analysis, it is reasonably assumed that all noise-generating project infrastructure construction and activities would occur pursuant to General Plan Policy 6.5.1.11 and would thereby be exempt from all applicable County noise level criteria.

However, noise from project infrastructure construction activities would increase ambient noise levels in the project vicinity. In terms of determining the temporary noise increase due to project-related infrastructure construction activities, an impact would occur if those activities would exceed increase significance criteria established in General Plan Policy 6.5.1.13. Measurements obtained at BAC noise monitoring sites 1 and 3 are believed to be generally representative of the ambient noise level environments at the nearest identified existing sensitive uses to the potable water, sewer/wastewater, and bike bridge infrastructure areas. Pursuant to Policy 6.5.1.13

criteria, and based on the results from the BAC ambient noise level survey, the increase significance criterion of 5 dB was appropriately applied at the closest existing noise-sensitive use to the potable water and sewer/wastewater infrastructure work areas. Additionally, the Policy 6.5.1.13 increase significance criterion of 3 dB was appropriately applied at the closest existing noise-sensitive use to the bike bridge infrastructure work area.

Using the highest average measured hourly maximum noise levels during construction hours exempted by General Plan Policy 6.5.1.11, and the highest predicted construction equipment maximum noise levels shown in Table 73, ambient plus project infrastructure construction noise level increases were calculated at the closest existing noise-sensitive uses. The results of those calculations indicate that increases in ambient maximum noise levels from infrastructure construction activities would range from 3.2 dB L_{max} to 4.3 dB L_{max} at the closest noise-sensitive uses to the potable water and sewer/wastewater infrastructure work areas, and be 0.5 dB L_{max} at the closest noise-sensitive use to the bike bridge infrastructure work area. The calculated ambient maximum noise level increases above would be below the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Based on the analysis and results provided above, this impact is identified as being ***less than significant***. Nonetheless, to the reduce the potential for annoyance at nearby noise-sensitive uses, the following measures should be incorporated into project infrastructure construction operations:

- All on-site noise-generating construction activities shall occur within the hours and days identified in Policy 6.5.1.11 of the El Dorado County General Plan.
- All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.
- All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive uses.
- Project area and site access road speed limits shall be established and enforced during the construction period.
- Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.

Noise Impacts Associated with Construction of Project Land Uses

Impact 20: On-Site Project Construction Noise at Existing Sensitive Uses

During project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the project work area would also vary depending upon the proximity of equipment activities to that point. The nearest existing noise-sensitive uses to the Project Development Area have been identified as residential receivers 2 and 7. The closest existing noise-sensitive uses to the Program Study Area have been identified as residential receivers 1 and 7.

Tables 74 and 75 include the range of maximum (L_{max}) noise levels for equipment commonly used in construction projects at full-power operation at a distance of 50 feet. It should be noted that not all of these construction activities would be required of the proposed off-site infrastructure improvements. Tables 74 and 75 data also include predicted maximum equipment noise levels at the nearest identified existing noise-sensitive uses to the project areas, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

Table 74
Construction Equipment Reference and Predicted Noise Levels – Project Development Area

Equipment Description	Reference Noise Level at 50 Feet, L_{max} (dB)	Predicted Noise Level at Receiver, L_{max} (dB)	
		Receiver 2 900 ft	Receiver 7 500 ft
Air compressor	80	55	60
Backhoe	80	55	60
Ballast equalizer	82	57	62
Ballast tamper	83	58	63
Compactor	82	57	62
Concrete mixer	85	60	65
Concrete pump	82	57	62
Concrete vibrator	76	51	56
Crane, mobile	83	58	63
Dozer	85	60	65
Excavator	85	60	65
Generator	82	57	62
Grader	85	60	65
Impact wrench	85	60	65
Loader	80	55	60
Paver	85	60	65
Pneumatic tool	85	60	65
Pump	77	52	57
Saw	76	51	56
Scarifier	83	58	63
Scraper	85	60	65
Shovel	82	57	62
Spike driver	77	52	57
Tie cutter	84	59	64
Tie handler	80	55	60
Tie inserter	85	60	65
Truck	84	59	64
	Low	51	56
	High	60	65
	Average	55	61

Source: 2018 FTA Noise and Vibration Impact Assessment Manual, Table 7-1 and BAC

Table 75
Construction Equipment Reference and Predicted Noise Levels – Program Study Area

Equipment Description	Reference Noise Level at 50 Feet, L_{max} (dB)	Predicted Noise Level at Receiver, L_{max} (dB)	
		Receiver 1 600 ft	Receiver 7 500 ft
Air compressor	80	58	60
Backhoe	80	58	60
Ballast equalizer	82	60	62
Ballast tamper	83	61	63
Compactor	82	60	62
Concrete mixer	85	63	65
Concrete pump	82	60	62
Concrete vibrator	76	54	56
Crane, mobile	83	61	63
Dozer	85	63	65
Excavator	85	63	65
Generator	82	60	62
Grader	85	63	65
Impact wrench	85	63	65
Loader	80	58	60
Paver	85	63	65
Pneumatic tool	85	63	65
Pump	77	55	57
Saw	76	54	56
Scarifier	83	61	63
Scraper	85	63	65
Shovel	82	60	62
Spike driver	77	55	57
Tie cutter	84	62	64
Tie handler	80	58	60
Tie inserter	85	63	65
Truck	84	62	64
	Low	54	56
	High	63	65
	Average	59	61

Source: 2018 FTA Noise and Vibration Impact Assessment Manual, Table 7-1 and BAC

As noted in the Regulatory Setting Section of this report, Policy 6.5.1.11 of the El Dorado County General Plan exempts noise sources associated with construction provided such activities take place between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 8:00 p.m. on weekends, and on federally recognized holidays. For the purposes of this analysis, it is reasonably assumed that all noise-generating project construction and activities would occur pursuant to General Plan Policy 6.5.1.11 and would thereby be exempt from all applicable County noise level criteria.

However, noise from project construction activities would increase ambient noise levels in the project vicinity. In terms of determining the temporary noise increase due to project-related infrastructure construction activities, an impact would occur if those activities would exceed increase significance criteria established in General Plan Policy 6.5.1.13. Measurements obtained

at BAC noise monitoring sites 1 and 3 are believed to be generally representative of the ambient noise level environments at residential receivers 1, 2 and 7. Pursuant to Policy 6.5.1.13 criteria, and based on the results from the BAC ambient noise level survey, the increase significance criterion of 5 dB was appropriately applied at residential receivers 1 and 2. Additionally, the Policy 6.5.1.13 increase significance criterion of 3 dB was appropriately applied at residential receiver 7.

Using the highest average measured hourly maximum noise levels during construction hours exempted by General Plan Policy 6.5.1.11, and the highest predicted construction equipment maximum noise levels shown in Tables 74 and 75, ambient plus project construction noise level increases were calculated at the closest existing noise-sensitive uses. The results of those calculations indicate that increases in ambient maximum noise levels from project construction activities would range from 0.4 dB L_{max} to 0.8 dB L_{max} at residential receivers 1 and 2, and be 0.3 dB L_{max} at residential receiver 7. The calculated ambient maximum noise level increases above would be below the applicable increase significance criteria contained in General Plan Policy 6.5.1.13.

Based on the analysis and results provided above, this impact is identified as being ***less than significant***. Nonetheless, to the reduce the potential for annoyance at nearby noise-sensitive uses, the following measures should be incorporated into project infrastructure construction operations:

- All on-site noise-generating construction activities shall occur within the hours and days identified in Policy 6.5.1.11 of the El Dorado County General Plan.
- All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.
- All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive uses.
- Project area and site access road speed limits shall be established and enforced during the construction period.
- Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.

Vibration Impacts Associated with Construction of Project Infrastructure

Impact 21: Infrastructure Construction Vibration at Existing Sensitive Uses

During project infrastructure construction, heavy equipment would be used, which would generate localized vibration in the immediate vicinity of the construction. The nearest existing sensitive structure to the potable water infrastructure work area has been identified as a residence constructed along Tierra de Dios Drive, which maintains a separation of approximately 250 feet from the area. The closest existing sensitive structure to a sewer/wastewater infrastructure work area (either alternative) has been identified as a residence constructed along Tong Road, which maintains a separation of approximately 200 feet from the area. Finally, the nearest existing sensitive structure to the bike path bridge work area has been identified as a residence constructed along Old Bass Lake Road, which maintains a separation of approximately 400 feet from the area.

Table 76 includes the range of vibration levels for equipment commonly used in general construction projects at a distance of 25 feet. Table 76 data also include projected equipment vibration levels at the nearest identified existing sensitive structures (i.e., residences) to an infrastructure work area.

Table 76
Reference and Projected Construction Vibration Source Amplitudes – Infrastructure

Equipment	Reference Maximum Vibration Level at 25 feet, VdB (rms)	Projected Maximum Vibration Level, VdB (rms)[1]		
		Water 250 ft	Sewer 200 ft	Bike Bridge 400 ft
Vibratory Roller	94	60	62	58
Hoe Ram	87	58	59	56
Large bulldozer	87	58	59	56
Caisson drilling	87	58	59	56
Loaded trucks	86	57	58	55
Jackhammer	79	56	57	55
Small bulldozer	58	<55	<55	<55

[1] RMS velocity in decibels (VdB) re 1 micro-inch/second.

Source: 2018 FTA Transit Noise and Vibration Impact Assessment Manual and BAC

As shown in Table 76, vibration levels generated from project infrastructure construction activities are below the FTA threshold for damage to engineered structures (98 VdB) at a distance of 25 feet from those activities. In addition, the construction-related vibration levels shown in Table 76 are predicted to be below the human threshold of perception (65 VdB) at the nearest structures. Based on the analysis provided above, project infrastructure construction activities are not expected to result in excessive groundborne vibration levels at nearby existing structures.

Because vibration levels due to project infrastructure construction are expected to be satisfactory relative to the applicable FTA vibration impact criteria for damage to structures and annoyance, this impact is considered to be ***less than significant***.

Vibration Impacts Associated with Construction of Project Land Uses

Impact 22: Project Land Use Construction Vibration at Existing Sensitive Uses

During on-site construction of project land uses, heavy equipment would be used for grading, excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of the construction. The nearest existing sensitive structure to the Project Development Area and Program Study Area has been identified as residential receiver 7.

Table 77 includes the range of vibration levels for equipment commonly used in general construction projects at a distance of 25 feet. Table 77 also includes projected equipment vibration levels at the nearest identified existing sensitive structure (i.e., residential receiver 7) to a project land use area.

Table 77
Reference and Projected Construction Vibration Source Amplitudes – Project Land Uses

Equipment	Reference Maximum Vibration Level at 25 feet, VdB (rms)	Projected Maximum Vibration Level, VdB (rms)[1]	
		Project Development Area 550 ft	Program Study Area 500 ft
Vibratory Roller	94	57	57
Hoe Ram	87	56	56
Large bulldozer	87	56	56
Caisson drilling	87	56	56
Loaded trucks	86	56	56
Jackhammer	79	<55	<55
Small bulldozer	58	<55	<55

[2] RMS velocity in decibels (VdB) re 1 micro-inch/second.

Source: 2018 FTA Transit Noise and Vibration Impact Assessment Manual and BAC

Table 77 data indicate that vibration levels generated from project land use construction activities are below the FTA threshold for damage to engineered structures (98 VdB) at a distance of 25 feet from those activities. In addition, the construction-related vibration levels shown in Table 77 are predicted to be below the human threshold of perception (65 VdB) at the nearest structures. Based on the analysis provided above, project land use construction activities are not expected to result in excessive groundborne vibration levels at nearby existing structures.

Results from the ambient vibration level monitoring within the project area (Table 3) indicate that measured average vibration levels were below the strictest FTA thresholds for damage to structures and thresholds for annoyance. Therefore, it is expected that the project would not result in the exposure of persons to excessive groundborne vibration levels at proposed uses of the project. Finally, based on a review of information contained in the project description, it is not expected that the project will have equipment that generates appreciable vibration.

Because vibration levels due to project land use construction are expected to be satisfactory relative to the applicable FTA vibration impact criteria for damage to structures and annoyance,

and because the project is not expected to expose persons of proposed uses to excessive groundborne vibration levels, this impact is considered to be ***less than significant***.

Noise Impacts Upon the Development

The California Supreme Court issued an opinion in *California Building Industry Association v. Bay Area Air Quality Management District (2015)* holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents. Nevertheless, El Dorado County has policies that address existing/future conditions affecting the proposed project, which are discussed in the following section.

Future Traffic Noise Levels at Project Development Area Land Uses

Issue 1: Future Exterior Traffic Noise Levels – Project Development Area

The FHWA Model was used with future traffic data to predict future U.S. 50, Bass Lake Road and Country Club Drive traffic noise levels at the proposed uses of the Project Development Area. Specifically, future average daily traffic volumes (ADT's) for Bass Lake Road and Country Club Drive were calculated by applying a factor of 5 to the sum of AM and PM peak hour turning movements for 2040 Super Cumulative Plus Project conditions, which were received from the project transportation consultant (T. Kear). Future average daily traffic volumes (ADT's) for U.S. 50 were estimated by assuming a 50% increase in the future relative to existing conditions. Existing traffic data for U.S. 50 were obtained from published Caltrans traffic counts.

Predicted future traffic noise levels at the nearest proposed noise-sensitive uses of the Project Development Area are summarized in Table 78. A complete listing of the FHWA model inputs and results are provided in Appendix M.

Table 78
Predicted Future Exterior Traffic Noise Levels at Project Development Area[1]

Roadway	Component	Receiver Description	Offset (dB)[2]	Future Exterior DNL (dB)
U.S. 50	Event Center	Common Outdoor Area – Courtyard	-10	57
		Nearest 1st Floor Building Facades		68
		Nearest Upper-Floor Building Facades	3	71
	Hotel East	Nearest 1st Floor Building Facades		68
		Nearest 3rd & 4th Floor Building Facades	3	71
		Nearest 5th & 6th Floor Building Facades	5	73
	Hotel West	Nearest 1st Floor Building Facades		68
		Nearest 3rd & 4th Floor Building Facades	3	71
		Nearest 5th & 6th Floor Building Facades	5	73
Bass Lake Rd	Event Center	Common Outdoor Area – Courtyard	-10	49
		Nearest 1st Floor Building Facades		61
		Nearest Upper-Floor Building Facades	3	64
	Hotel West	Nearest 1st Floor Building Facades		63
		Nearest 3rd & 4th Floor Building Facades	3	66
		Nearest 5th & 6th Floor Building Facades	5	68
	Cottages	Common Outdoor Area – Pool	-3	53
		Nearest 1st Floor Building Facades		67
		Nearest Upper-Floor Building Facades	2	69
Country Club Dr	Cottages	Common Outdoor Area – Pool		60
		Nearest 1st Floor Building Facades		62
		Nearest Upper-Floor Building Facades	2	64

[1] Complete listings of FHWA model inputs are provided as Appendix M.
[2] Positive offsets applied at upper-floors locations to account for reduced ground absorption of sound at elevated locations. Negative offsets applied where screening of the receiver location would occur from proposed intervening structures.

Source: BAC 2024

As indicated in Table 78, future U.S. 50, Bass Lake Road and Country Club Drive traffic noise level exposure at the Project Development Area common outdoor areas proposed nearest to the roadways is predicted to comply with the El Dorado County General Plan 60 dB DNL exterior noise level standard for residential and transient lodging uses. As a result, consideration of additional design measures to reduce future traffic noise level exposure a state of compliance with the General Plan 60 dB DNL exterior noise level standard within the Project Development Area common outdoor areas would not be warranted.

Issue 2: Future Interior Traffic Noise Levels – Project Development Area

Based upon years of experience and testing conducted by BAC, standard building construction (i.e., stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), typically results in an exterior to interior noise reduction of approximately 25 dB with windows closed and approximately 15 dB with windows open. Therefore, provided that future traffic noise levels do not exceed 70 dB DNL at proposed exterior building facades within the

Project Development Area, standard construction would normally be adequate to ensure compliance with the El Dorado County General Plan 45 dB DNL interior noise level standard.

Based on the data presented in Table 78 of this report (**Issue 1**), standard construction practices are expected to be adequate to reduce future Bass Lake Road and Country Club Drive traffic noise levels to a state of compliance with the General Plan 45 dB DNL interior noise level standard within the analyzed buildings of the Project Development Area. Nonetheless, mechanical ventilation (air conditioning) should be provided to those buildings to allow the occupants to close doors and windows as desired for additional acoustical isolation. However, the Table 78 data indicate that construction upgrades would be warranted to reduce future U.S. 50 traffic noise levels to a state of compliance with the General Plan 45 dB DNL interior noise level standard within the Project Development Area.

Based on the analysis provided above, the following design measures are recommended:

1. At locations where building facades within the Project Development Area are predicted to exceed future U.S. 50 traffic noise environments of 70 dBA DNL (i.e., Event Center, Hotel East, Hotel West), building construction plans (once available) shall be reviewed by a qualified acoustical consultant to ensure that appropriate construction upgrades (typically higher-rated STC values for windows) are specified to ensure compliance with the County's 45 dB DNL interior noise standard.

2. Mechanical ventilation (air conditioning) should be provided to all buildings within the Project Development Area to allow the occupants to close doors and windows as desired for additional acoustical isolation and to achieve compliance with applicable General Plan interior noise level criteria.

Future Traffic Noise Levels at Program Study Area Land Uses

Detailed plans illustrating locations of specific land use components within the Program Study Area have not yet been developed. It is expected that detailed development plans for all land use components within the Program Study Area will be reviewed at a future date as part of the County's project approval process. As a result, the following section provides generalized impact discussions of future traffic noise level exposure at the land uses proposed within the Program Study Area.

Issue 3: Future Exterior Traffic Noise Levels – Program Study Area

The FHWA Model was used with future plus project traffic data to predict distances to future traffic noise contours for the roadways that would affect development within the Program Study Area. Detailed FHWA Model inputs for the roadways are provided in Appendix N. The results are summarized in Table 79.

Table 79
Predicted Future Exterior Traffic Noise Level Contours at Program Study Area[1]

Roadway	Distance to Program Study Area (ft)	Predicted DNL at Program Study Area (dB)	Contour Distance (ft)		
			60 DNL	65 DNL	70 DNL
U.S. 50	225	75	2,211	1,026	221
Bass Lake Road	50	72	337	156	73
Country Club Dr	50	60	50	23	11

[1] Complete listings of FHWA model inputs are provided as Appendix N.

Source: BAC 2024

As indicated in Table 79, predicted future U.S. 50, Bass Lake Road and Country Club Drive traffic noise level exposure could potentially exceed the El Dorado County General Plan 60 dBA DNL exterior noise level standard for residential and transient lodging uses at the common outdoor areas proposed within the Program Study Area. Based on the analysis provided above, one of the following two design measures are recommended:

1. Outdoor areas of residential and transient lodging uses proposed within the Program Study Area shall be located beyond the 60 dB DNL noise contour distances shown in Table 79.

   OR

2. At locations where outdoor areas within the Program Study Area are proposed in future traffic noise environments exceeding 60 dB DNL, a noise impact noise study that addresses future traffic noise level exposure at those locations shall be completed by a qualified noise consultant once site-specific development plans are completed. The noise impact study shall include an analysis of future exterior traffic noise exposure at the outdoor areas of the affected uses of the Program Study Area. The analysis shall include associated mitigation measures (as appropriate) to reduce future traffic noise levels to a state of compliance with applicable El Dorado County General Plan exterior noise level criteria at sensitive outdoor areas within the Program Study Area. Specific mitigation measures could include a site design that integrates setbacks, noise barriers, and/or intervening shielding.

Issue 4: Future Interior Traffic Noise Levels – Program Study Area

Based upon years of experience and testing conducted by BAC, standard building construction (stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), typically results in an exterior to interior noise reduction of at least 25 dBA with windows closed and approximately 15 dB with windows open. Therefore, provided predicted future traffic noise exposure within the Program Study Area does not exceed 70 dBA DNL, standard construction would be adequate to reduce interior noise levels to a state of compliance with the El Dorado County General Plan 45 dBA DNL interior noise level standard.

As indicated in Table 79 of this report (**Issue 3**), future Country Club Drive traffic noise levels are not predicted to exceed 70 dBA DNL at the Program Study Area. However, based on the Table 79 data, it is probable that future U.S. 50 and Bass Lake Road traffic noise exposure could exceed the County's 45 dBA DNL interior noise level standard without mitigation. Based on the analysis provided above, the following design measure is recommended:

1. At locations where building facades within the Program Study Area are proposed in future traffic noise environments exceeding 70 dBA DNL, project plans shall be reviewed by a qualified acoustical consultant to ensure that appropriate construction upgrades (typically higher-rated STC values for windows) are specified to ensure compliance with the County's 45 dB DNL interior noise standard.

Project Development Area On-Site Operations Noise at Sensitive Program Study Area Land Uses

Issue 5: Project Development Area On-Site Operations Noise at Program Study Area

Analyses of Project Development Area on-site operations noise levels at existing noise-sensitive uses within the project vicinity were presented in **Impacts 5 through 12**. The primary noise sources associated with the Project Development Area are anticipated to be on-site vehicle circulation, parking area movements, on-site truck circulation, truck delivery activities, event amplified music/speech, event crowds and mechanical equipment (i.e., HVAC).

Detailed plans illustrating locations of specific land use components (specifically noise-sensitive uses) within the Program Study Area have not yet been developed. Based on the proximity of the Project Development Area to the Program Study Area, it is possible that Project Development Area on-site operations noise could potentially exceed applicable El Dorado County non-transportation noise level limits at sensitive receptors of the Program Study Area. As a result, the following design measure is recommended:

1. A site-specific noise impact study that addresses Project Development Area on-site operations noise affecting noise-sensitive uses proposed within the Program Study Area shall be completed by a qualified noise consultant once site-specific development plans for the Program Study Area are completed. The noise impact study shall include an analyses of Program Development Area on-site operations noise exposure at proposed noise-sensitive uses of the Program Study Area. The analyses shall include associated mitigation measures (as appropriate) to reduce Project Development Area noise levels to a state of compliance with applicable El Dorado County General Plan non-transportation noise level limits at proposed sensitive receptors within the Program Study Area. Such measures could include, but are not limited to, increasing setbacks between sensitive uses and on-site operations, construction of noise barriers where appropriate, operations restrictions, and incorporation of upgraded building construction.

Issue 6: Program Study Area On-Site Operations Noise at Project Development Area

Analyses of Program Study Area on-site operations noise levels at existing noise-sensitive uses within the project vicinity were presented in **Impacts 13 through 17**. The primary noise sources

associated with the Program Study Area are anticipated to be on-site vehicle circulation, parking area movements, on-site truck circulation, truck delivery activities, and mechanical equipment (i.e., HVAC).

Detailed plans illustrating locations of specific land use components (specifically noise-sensitive uses) within the Program Study Area have not yet been developed. Based on the proximity of the Program Study Area to the Project Development Area, it is possible that Program Study Area on-site operations noise could potentially exceed applicable El Dorado County non-transportation noise level limits at sensitive receptors of the Project Development Area. As a result, the following design measure is recommended:

1. A site-specific noise impact study that addresses Program Study Area on-site operations noise affecting noise-sensitive uses proposed within the Project Development Area shall be completed by a qualified noise consultant once site-specific development plans for the Program Study Area are completed. The noise impact study shall include an analyses of Program Study Area on-site operations noise exposure at proposed noise-sensitive uses of the Project Development Area. The analyses shall include associated mitigation measures (as appropriate) to reduce Program Study Area noise levels to a state of compliance with applicable El Dorado County General Plan non-transportation noise level limits at proposed sensitive receptors within the Project Development Area. Such measures could include, but are not limited to, increasing setbacks between sensitive uses and on-site operations, construction of noise barriers where appropriate, operations restrictions, and incorporation of upgraded building construction.

This concludes BAC's noise and vibration assessment for the Town & Country Village El Dorado Development in El Dorado County, California. Please contact BAC at (530) 537-2328 or dariog bacnoise.com if you have any comments or questions regarding this report.

Appendix A
Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

IIC Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

STC Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

BOLLARD
Acoustical Consultants

Appendix B
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 01 2023 Existing No Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	110	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,075	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	4,900	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,045	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	7,920	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	9,005	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	9,525	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	9,555	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	12,050	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	12,080	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	12,285	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	12,290	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	12,485	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	12,495	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	13,670	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	13,670	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	13,675	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	6,805	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	350	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,460	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,285	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	9,590	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	8,055	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	3,405	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	3,405	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Church Pl	3,405	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	3,400	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	3,040	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	2,280	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	3,405	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,135	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	2,220	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	11,415	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,075	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	12,180	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	10,245	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	425	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	10	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	980	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	1,935	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,305	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	525	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	6,490	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	1,255	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	90	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	660	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	5,700	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,175	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	5	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	13,225	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	13,225	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	13,845	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	30	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	3,440	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	10	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	455	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	6,945	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	1,370	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,505	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	6,085	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	230	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	14,490	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	1,915	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.









Legend

A: Site 1: Facing southwest towards project area
B: Site 2: Facing southwest towards intersection of Country Club Dr and Bass Lake Road
C: Site 3: Facing south towards intersection of U.S. 50 and Bass Lake Road
D: Site 4: Facing south towards intersection of U.S. 50 and Bass Lake Road

Town & Country Village El Dorado
El Dorado County, CA

BAC Field Survey Photographs

Appendix D-1
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	37	50	35	32
1:00 AM	36	55	33	29
2:00 AM	35	47	33	28
3:00 AM	36	51	35	29
4:00 AM	39	52	39	34
5:00 AM	44	55	44	40
6:00 AM	46	59	45	43
7:00 AM	50	62	49	43
8:00 AM	44	54	42	38
9:00 AM	42	53	41	38
10:00 AM	46	62	43	41
11:00 AM	44	58	43	40
12:00 PM	45	59	44	41
1:00 PM	44	59	43	40
2:00 PM	46	61	44	41
3:00 PM	47	65	45	42
4:00 PM	45	57	44	42
5:00 PM	46	57	44	41
6:00 PM	45	58	44	41
7:00 PM	47	63	45	42
8:00 PM	46	72	43	41
9:00 PM	43	56	42	40
10:00 PM	42	61	41	38
11:00 PM	39	47	38	35

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	50	42	46	47	43	46	46	35	41
Lmax (Maximum)	65	53	59	72	56	64	61	47	53
L50 (Median)	49	41	44	45	42	44	45	33	38
L90 (Background)	43	38	41	42	40	41	43	28	34

Computed CNEL, dB	49
% Daytime Energy	67%
% Evening Energy	16%
% Nighttime Energy	17%

GPS Coordinates	38°39'40.66"N
	121°01'37.08"W

BOLLARD
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Appendix D-2
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	38	50	36	33
1:00 AM	35	52	33	28
2:00 AM	35	52	33	28
3:00 AM	38	49	37	33
4:00 AM	40	50	39	36
5:00 AM	45	52	44	41
6:00 AM	49	64	48	45
7:00 AM	48	58	47	45
8:00 AM	45	56	44	41
9:00 AM	43	55	42	39
10:00 AM	44	54	43	40
11:00 AM	44	57	43	40
12:00 PM	45	64	42	40
1:00 PM	45	58	44	40
2:00 PM	45	64	43	40
3:00 PM	47	71	43	40
4:00 PM	48	69	44	41
5:00 PM	47	59	45	43
6:00 PM	46	59	45	42
7:00 PM	46	56	45	42
8:00 PM	45	54	44	41
9:00 PM	45	66	43	40
10:00 PM	41	53	41	38
11:00 PM	40	50	40	37

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	48	43	46	46	45	45	49	35	42
Lmax (Maximum)	71	54	60	66	54	59	64	49	52
L50 (Median)	47	42	44	45	43	44	48	33	39
L90 (Background)	45	39	41	42	40	41	45	28	35

Computed CNEL, dB	50
% Daytime Energy	64%
% Evening Energy	13%
% Nighttime Energy	22%

GPS Coordinates	38°39'40.66"N
	121°01'37.08"W

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Acoustical Consultants

Appendix D-3
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	39	53	37	34
1:00 AM	36	45	35	32
2:00 AM	37	48	35	31
3:00 AM	38	51	37	33
4:00 AM	42	59	41	38
5:00 AM	46	60	45	42
6:00 AM	48	61	47	46
7:00 AM	48	59	47	45
8:00 AM	46	67	44	41
9:00 AM	43	57	41	38
10:00 AM	44	57	43	40
11:00 AM	44	56	43	41
12:00 PM	45	61	44	41
1:00 PM	45	60	44	41
2:00 PM	44	55	43	40
3:00 PM	47	68	45	42
4:00 PM	46	60	45	42
5:00 PM	47	61	46	43
6:00 PM	47	60	46	43
7:00 PM	46	55	45	42
8:00 PM	45	62	44	42
9:00 PM	44	56	43	41
10:00 PM	42	55	41	39
11:00 PM	42	54	41	38

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	48	43	46	46	44	45	48	36	43
Lmax (Maximum)	68	55	60	62	55	58	61	45	54
L50 (Median)	47	41	44	45	43	44	47	35	40
L90 (Background)	45	38	41	42	41	41	46	31	37

Computed CNEL, dB	50
% Daytime Energy	62%
% Evening Energy	13%
% Nighttime Energy	25%

GPS Coordinates	38°39'40.66"N
	121°01'37.08"W

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Acoustical Consultants

Appendix D-4
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	43	66	36	31
1:00 AM	41	58	33	28
2:00 AM	39	58	33	27
3:00 AM	40	55	35	30
4:00 AM	44	58	41	36
5:00 AM	51	62	49	43
6:00 AM	52	64	51	47
7:00 AM	52	66	51	46
8:00 AM	51	64	49	44
9:00 AM	50	65	48	43
10:00 AM	51	67	49	44
11:00 AM	51	64	49	44
12:00 PM	52	65	49	44
1:00 PM	51	73	49	44
2:00 PM	51	67	49	44
3:00 PM	52	67	50	45
4:00 PM	51	63	50	45
5:00 PM	51	64	50	45
6:00 PM	51	65	49	43
7:00 PM	51	71	49	44
8:00 PM	55	85	49	44
9:00 PM	50	71	47	41
10:00 PM	50	76	44	38
11:00 PM	44	57	39	35

Statistical Summary	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	52	50	51	55	50	53	52	39	47
Lmax (Maximum)	73	63	66	85	71	75	76	55	62
L50 (Median)	51	48	49	49	47	48	51	33	40
L90 (Background)	46	43	44	44	41	43	47	27	35

Computed CNEL, dB	55
% Daytime Energy	61%
% Evening Energy	21%
% Nighttime Energy	18%

GPS Coordinates	38°39'39.72"N
	121°01'51.00"W

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Appendix D-5
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	42	58	36	32
1:00 AM	41	63	33	28
2:00 AM	40	61	33	27
3:00 AM	42	61	36	32
4:00 AM	45	66	41	37
5:00 AM	51	66	49	43
6:00 AM	54	67	53	49
7:00 AM	53	64	51	48
8:00 AM	52	66	50	45
9:00 AM	52	68	50	44
10:00 AM	51	69	49	44
11:00 AM	51	63	49	44
12:00 PM	51	68	49	43
1:00 PM	51	72	49	43
2:00 PM	51	71	48	43
3:00 PM	51	69	49	43
4:00 PM	52	72	49	44
5:00 PM	52	69	50	44
6:00 PM	51	63	50	44
7:00 PM	50	63	49	44
8:00 PM	50	64	49	43
9:00 PM	52	77	47	42
10:00 PM	46	62	43	37
11:00 PM	45	63	41	36

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	53	51	51	52	50	51	54	40	48
Lmax (Maximum)	72	63	68	77	63	68	67	58	63
L50 (Median)	51	48	49	49	47	48	53	33	40
L90 (Background)	48	43	44	44	42	43	49	27	36

Computed CNEL, dB	55
% Daytime Energy	65%
% Evening Energy	14%
% Nighttime Energy	21%

GPS Coordinates	38°39'39.72"N
	121°01'51.00"W

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Appendix D-6
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	44	59	39	34
1:00 AM	40	58	37	34
2:00 AM	39	51	36	32
3:00 AM	41	57	38	33
4:00 AM	47	61	44	39
5:00 AM	52	76	50	45
6:00 AM	54	68	52	49
7:00 AM	53	69	51	47
8:00 AM	51	67	49	45
9:00 AM	52	76	48	43
10:00 AM	53	74	50	45
11:00 AM	51	67	49	44
12:00 PM	52	75	49	45
1:00 PM	50	62	49	43
2:00 PM	51	67	49	44
3:00 PM	52	69	50	45
4:00 PM	52	70	50	45
5:00 PM	51	71	50	45
6:00 PM	51	67	50	44
7:00 PM	50	65	49	43
8:00 PM	51	67	49	43
9:00 PM	49	61	48	42
10:00 PM	47	61	45	39
11:00 PM	45	58	42	37

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	53	50	52	51	49	50	54	39	48
Lmax (Maximum)	76	62	70	67	61	65	76	51	61
L50 (Median)	51	48	50	49	48	48	52	36	43
L90 (Background)	47	43	45	43	42	43	49	32	38

Computed CNEL, dB	56
% Daytime Energy	67%
% Evening Energy	11%
% Nighttime Energy	22%

GPS Coordinates	38°39'39.72"N
	121°01'51.00"W

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Appendix D-7
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	46	61	43	36
1:00 AM	45	67	42	33
2:00 AM	45	61	41	29
3:00 AM	45	57	44	35
4:00 AM	50	69	49	44
5:00 AM	55	66	54	51
6:00 AM	57	67	56	53
7:00 AM	57	63	57	55
8:00 AM	55	61	55	53
9:00 AM	54	60	53	51
10:00 AM	54	63	53	51
11:00 AM	53	66	53	50
12:00 PM	53	61	53	50
1:00 PM	53	68	52	49
2:00 PM	53	63	52	50
3:00 PM	54	69	53	50
4:00 PM	53	66	53	50
5:00 PM	53	64	52	50
6:00 PM	53	68	52	50
7:00 PM	53	68	52	49
8:00 PM	53	77	51	49
9:00 PM	51	64	50	47
10:00 PM	49	61	48	44
11:00 PM	47	62	45	40

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	57	53	54	53	51	52	57	45	51
Lmax (Maximum)	69	60	64	77	64	70	69	57	63
L50 (Median)	57	52	53	52	50	51	56	41	47
L90 (Background)	55	49	51	49	47	48	53	29	41

Computed CNEL, dB	58
% Daytime Energy	63%
% Evening Energy	11%
% Nighttime Energy	26%

GPS Coordinates	38°39'41.46"N
	121°01'49.01"W

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Appendix D-8
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	46	63	43	37
1:00 AM	42	56	40	31
2:00 AM	42	58	39	31
3:00 AM	46	61	44	37
4:00 AM	50	64	49	44
5:00 AM	55	65	54	51
6:00 AM	58	78	56	54
7:00 AM	58	67	57	55
8:00 AM	56	68	56	54
9:00 AM	54	71	54	51
10:00 AM	53	61	53	51
11:00 AM	53	66	53	50
12:00 PM	52	62	52	50
1:00 PM	53	70	52	49
2:00 PM	52	63	51	48
3:00 PM	53	76	51	48
4:00 PM	53	69	52	49
5:00 PM	53	69	53	50
6:00 PM	54	69	53	50
7:00 PM	53	63	52	50
8:00 PM	52	61	51	49
9:00 PM	52	74	51	47
10:00 PM	50	63	48	44
11:00 PM	49	64	47	42

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	58	52	54	53	52	52	58	42	51
Lmax (Maximum)	76	61	68	74	61	66	78	56	63
L50 (Median)	57	51	53	52	51	51	56	39	47
L90 (Background)	55	48	50	50	47	49	54	31	41

Computed CNEL, dB	59
% Daytime Energy	63%
% Evening Energy	11%
% Nighttime Energy	26%

GPS Coordinates	38°39'41.46"N
	121°01'49.01"W

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Appendix D-9
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	47	65	44	38
1:00 AM	44	60	42	36
2:00 AM	45	58	43	35
3:00 AM	46	64	44	38
4:00 AM	52	68	49	44
5:00 AM	56	69	55	52
6:00 AM	57	67	56	54
7:00 AM	58	67	57	56
8:00 AM	56	70	55	53
9:00 AM	54	67	54	51
10:00 AM	54	69	54	51
11:00 AM	54	61	53	51
12:00 PM	53	60	53	51
1:00 PM	53	70	52	50
2:00 PM	53	69	53	50
3:00 PM	54	68	53	51
4:00 PM	54	66	54	52
5:00 PM	54	63	54	51
6:00 PM	54	70	54	51
7:00 PM	53	63	52	50
8:00 PM	52	68	52	49
9:00 PM	52	67	51	48
10:00 PM	50	69	49	45
11:00 PM	48	60	47	43

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	58	53	55	53	52	52	57	44	52
Lmax (Maximum)	70	60	67	68	63	66	69	58	64
L50 (Median)	57	52	54	52	51	52	56	42	48
L90 (Background)	56	50	51	50	48	49	54	35	43

Computed CNEL, dB	59
% Daytime Energy	64%
% Evening Energy	10%
% Nighttime Energy	26%

GPS Coordinates	38°39'41.46"N
	121°01'49.01"W

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Appendix D-10
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	52	77	48	39
1:00 AM	52	79	46	37
2:00 AM	50	68	46	33
3:00 AM	50	61	49	38
4:00 AM	55	68	53	48
5:00 AM	59	76	58	55
6:00 AM	62	80	61	58
7:00 AM	62	71	61	59
8:00 AM	62	73	61	58
9:00 AM	60	70	60	57
10:00 AM	61	76	60	57
11:00 AM	61	75	60	57
12:00 PM	61	76	61	58
1:00 PM	62	79	60	57
2:00 PM	61	72	61	58
3:00 PM	62	75	61	58
4:00 PM	61	73	61	58
5:00 PM	61	71	60	58
6:00 PM	60	76	59	56
7:00 PM	59	75	58	54
8:00 PM	58	80	56	53
9:00 PM	56	73	54	50
10:00 PM	55	75	53	47
11:00 PM	52	70	50	44

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	62	60	61	59	56	58	62	50	56
Lmax (Maximum)	79	70	74	80	73	76	80	61	73
L50 (Median)	61	59	60	58	54	56	61	46	51
L90 (Background)	59	56	58	54	50	52	58	33	44

Computed CNEL, dB	64
% Daytime Energy	75%
% Evening Energy	9%
% Nighttime Energy	17%

GPS Coordinates	38°39'24.11"N
	121°01'44.65"W

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Appendix D-11
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	51	69	48	40
1:00 AM	49	66	46	33
2:00 AM	49	64	46	33
3:00 AM	51	66	49	38
4:00 AM	55	69	53	47
5:00 AM	59	74	58	55
6:00 AM	63	87	61	58
7:00 AM	62	73	62	59
8:00 AM	62	77	61	59
9:00 AM	61	77	61	58
10:00 AM	62	81	61	58
11:00 AM	62	78	61	58
12:00 PM	63	91	61	58
1:00 PM	62	75	61	58
2:00 PM	62	81	61	58
3:00 PM	62	78	61	58
4:00 PM	61	74	61	58
5:00 PM	61	75	61	58
6:00 PM	61	79	60	56
7:00 PM	59	72	58	55
8:00 PM	57	72	57	54
9:00 PM	60	85	55	51
10:00 PM	55	74	53	48
11:00 PM	53	70	51	45

Statistical Summary									
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	63	61	62	60	57	59	63	49	57
Lmax (Maximum)	91	73	78	85	72	77	87	64	71
L50 (Median)	62	60	61	58	55	57	61	46	52
L90 (Background)	59	56	58	55	51	53	58	33	44

Computed CNEL, dB	65
% Daytime Energy	73%
% Evening Energy	9%
% Nighttime Energy	18%

GPS Coordinates	38°39'24.11"N
	121°01'44.65"W

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Appendix D-12
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023

Hour	Leq	Lmax	L50	L90
12:00 AM	52	71	49	41
1:00 AM	49	64	46	37
2:00 AM	50	65	47	37
3:00 AM	51	72	49	39
4:00 AM	56	72	54	49
5:00 AM	60	75	59	55
6:00 AM	61	78	60	58
7:00 AM	62	71	61	59
8:00 AM	62	77	61	59
9:00 AM	62	84	61	58
10:00 AM	62	79	61	58
11:00 AM	61	72	61	58
12:00 PM	62	76	61	59
1:00 PM	61	73	61	58
2:00 PM	62	77	61	58
3:00 PM	62	77	61	59
4:00 PM	62	74	61	58
5:00 PM	61	73	61	58
6:00 PM	61	76	60	57
7:00 PM	59	82	58	55
8:00 PM	58	69	57	54
9:00 PM	57	73	56	52
10:00 PM	58	85	54	50
11:00 PM	53	65	51	46

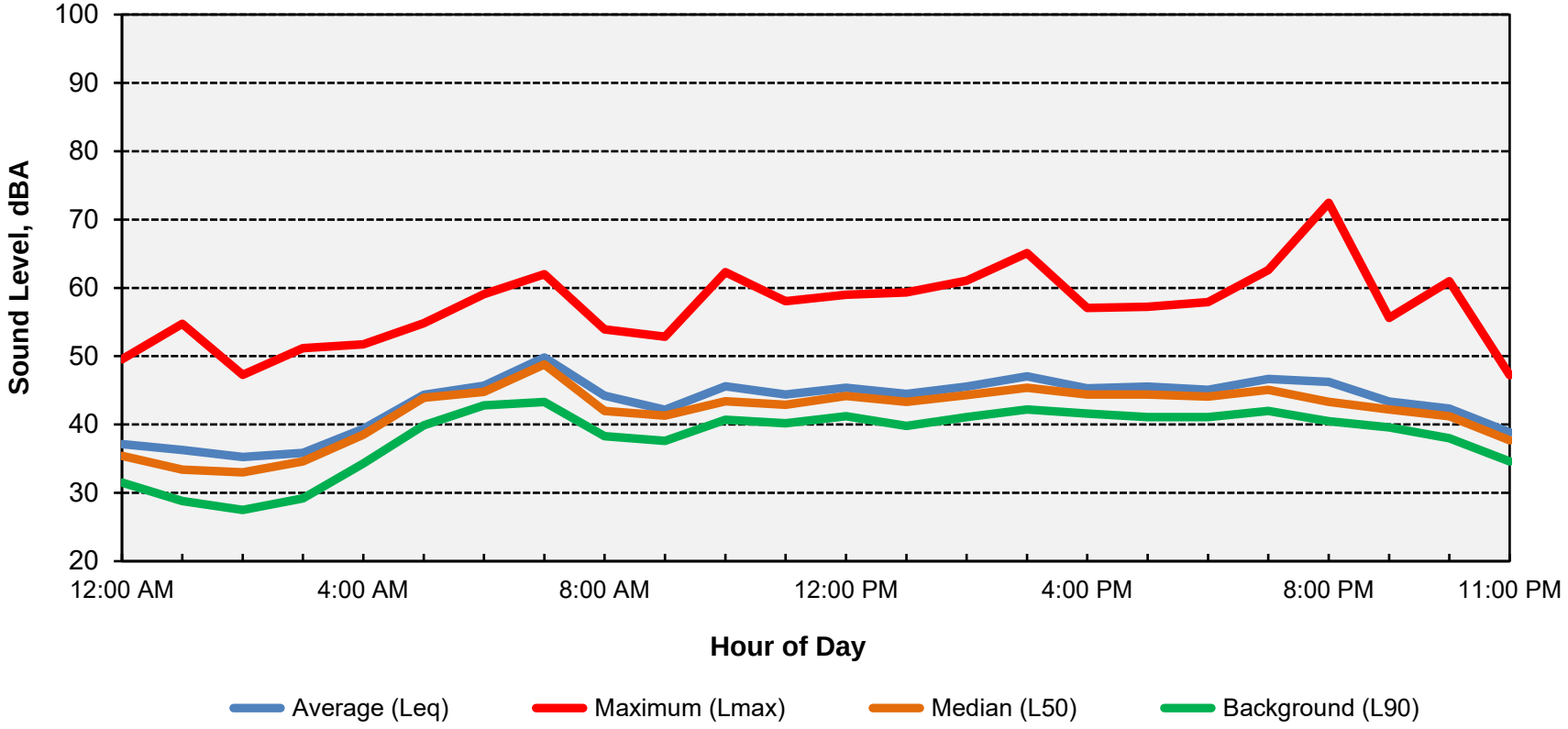
Statistical Summary	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	62	61	62	59	57	58	61	49	57
Lmax (Maximum)	84	71	76	82	69	75	85	64	72
L50 (Median)	61	60	61	58	56	57	60	46	52
L90 (Background)	59	57	58	55	52	53	58	37	46

Computed CNEL, dB	64
% Daytime Energy	75%
% Evening Energy	8%
% Nighttime Energy	17%

GPS Coordinates	38°39'24.11"N
	121°01'44.65"W

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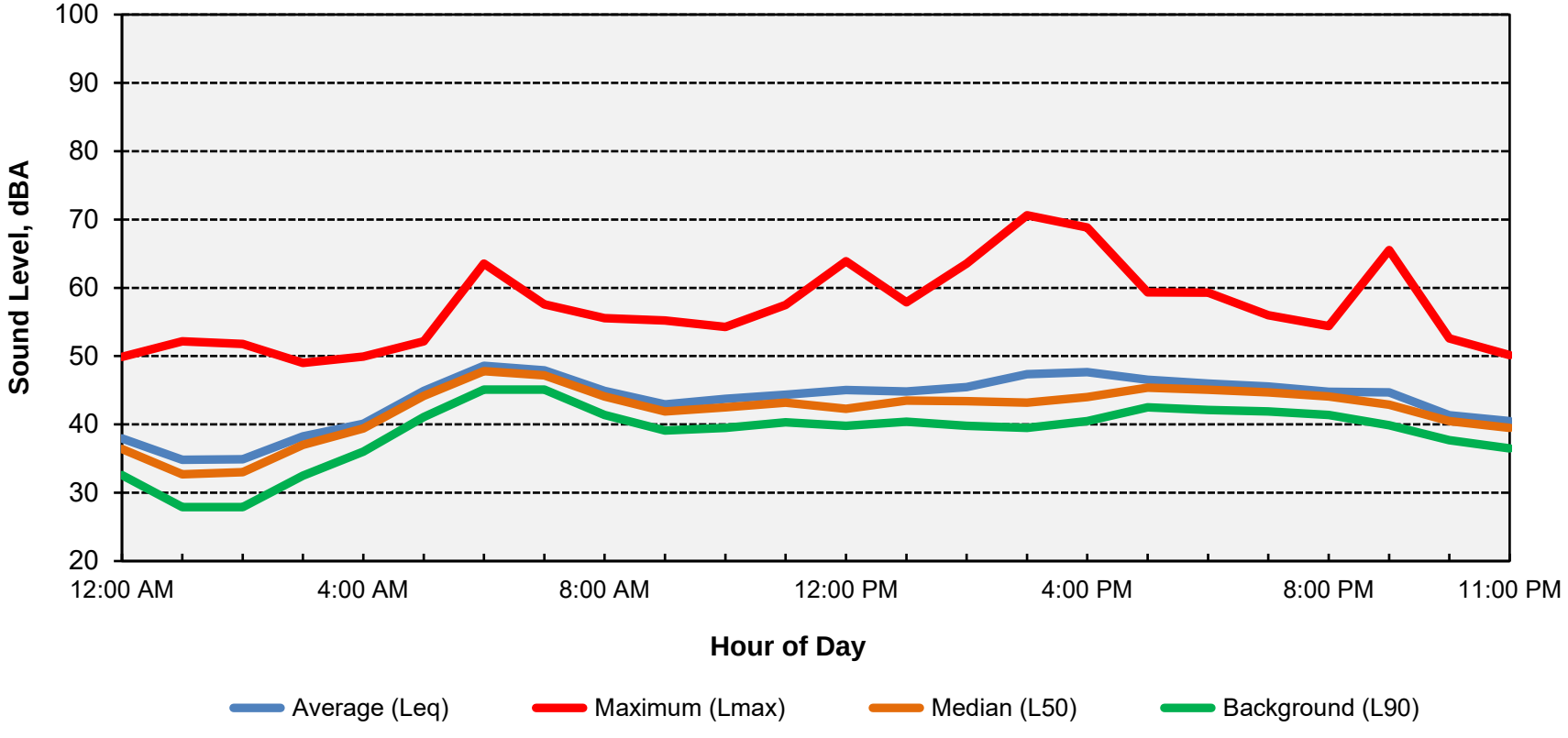
Appendix E-1
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023



Computed CNEL: 49 dBA

BOLLARD
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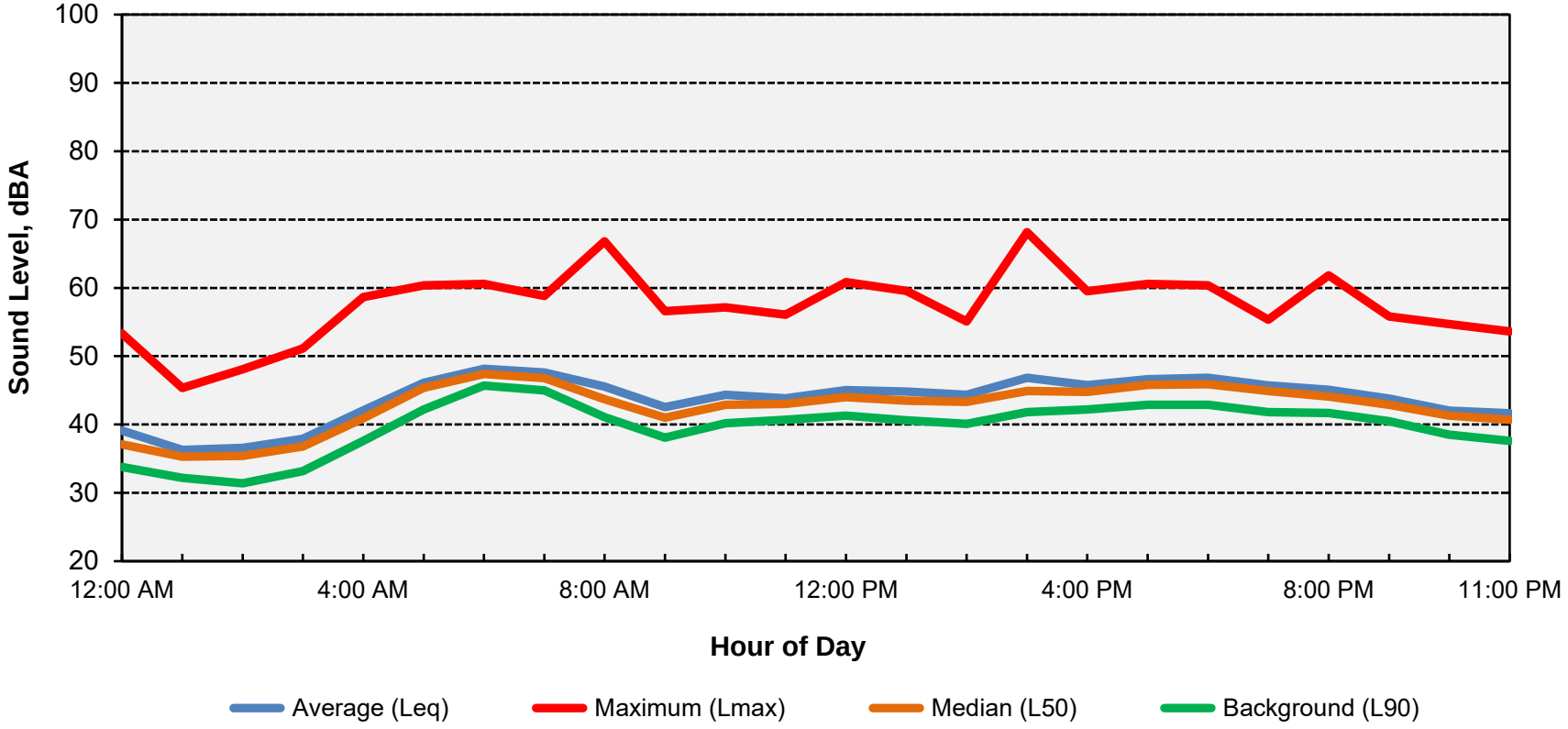
Appendix E-2
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023



Computed CNEL: 50 dBA

BOLLARD
Acoustical Consultants

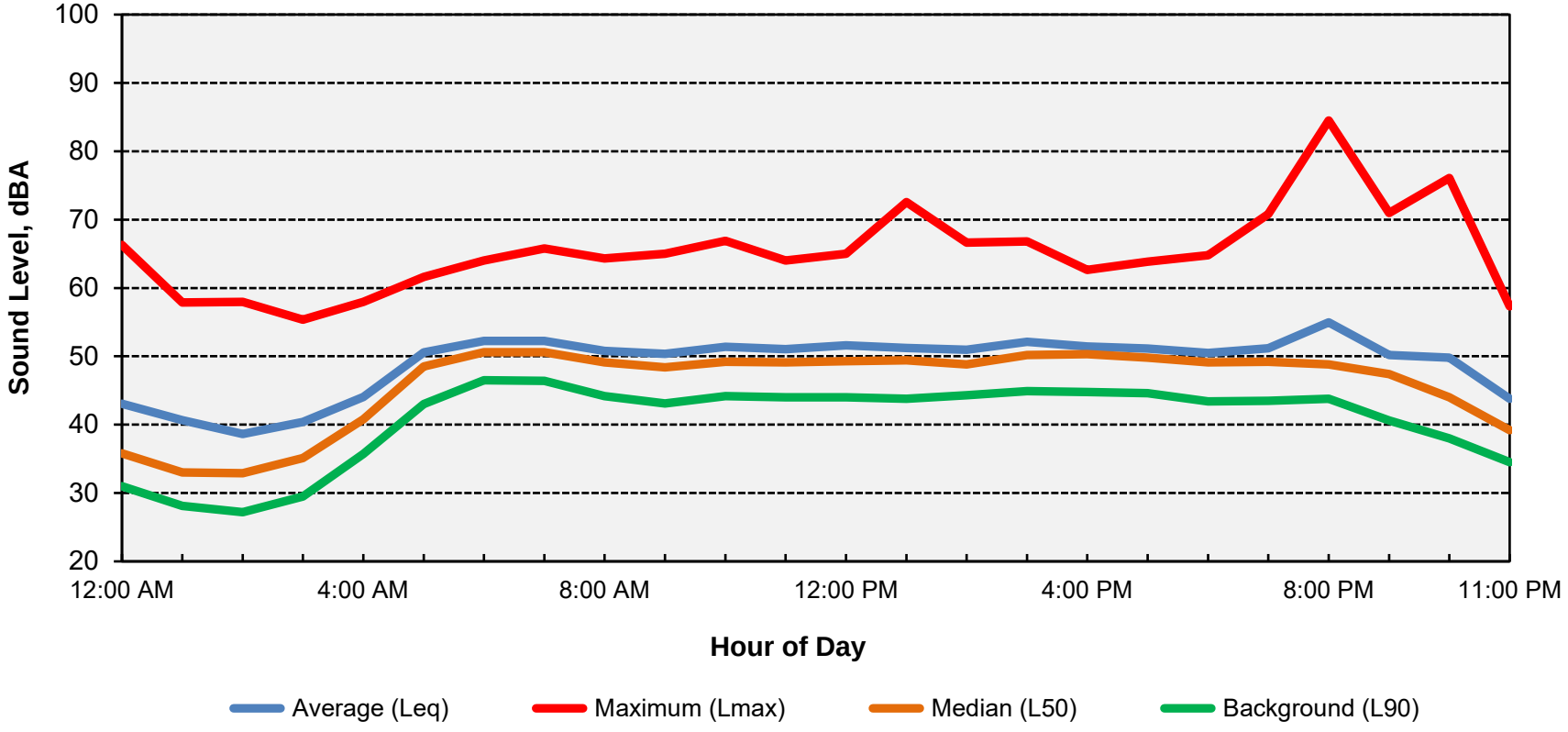
Appendix E-3
Long-Term Ambient Noise Monitoring Results - Site 1
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023



Computed CNEL: 50 dBA

BOLLARD
Acoustical Consultants

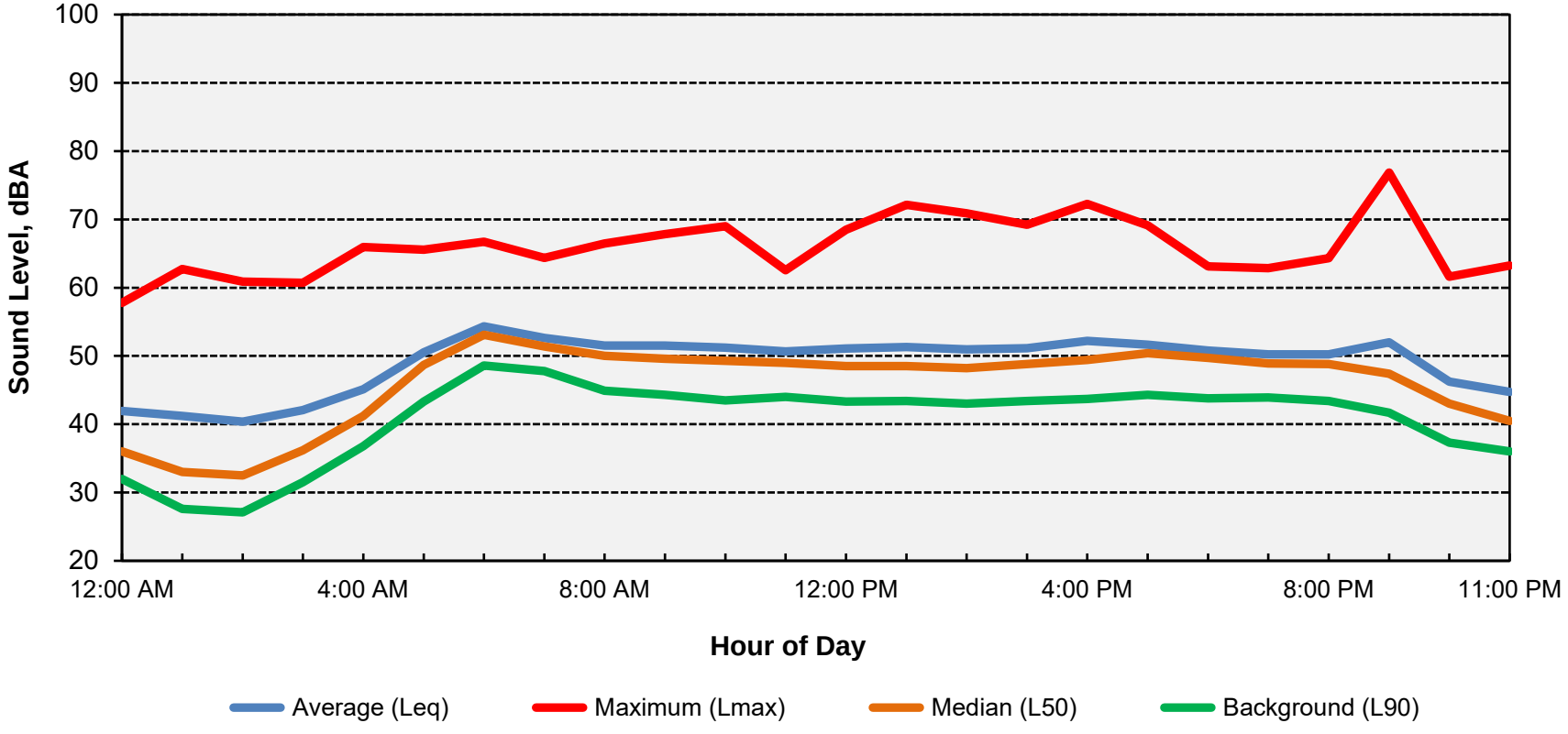
Appendix E-4
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023



Computed CNEL: 55 dBA

BOLLARD
Acoustical Consultants

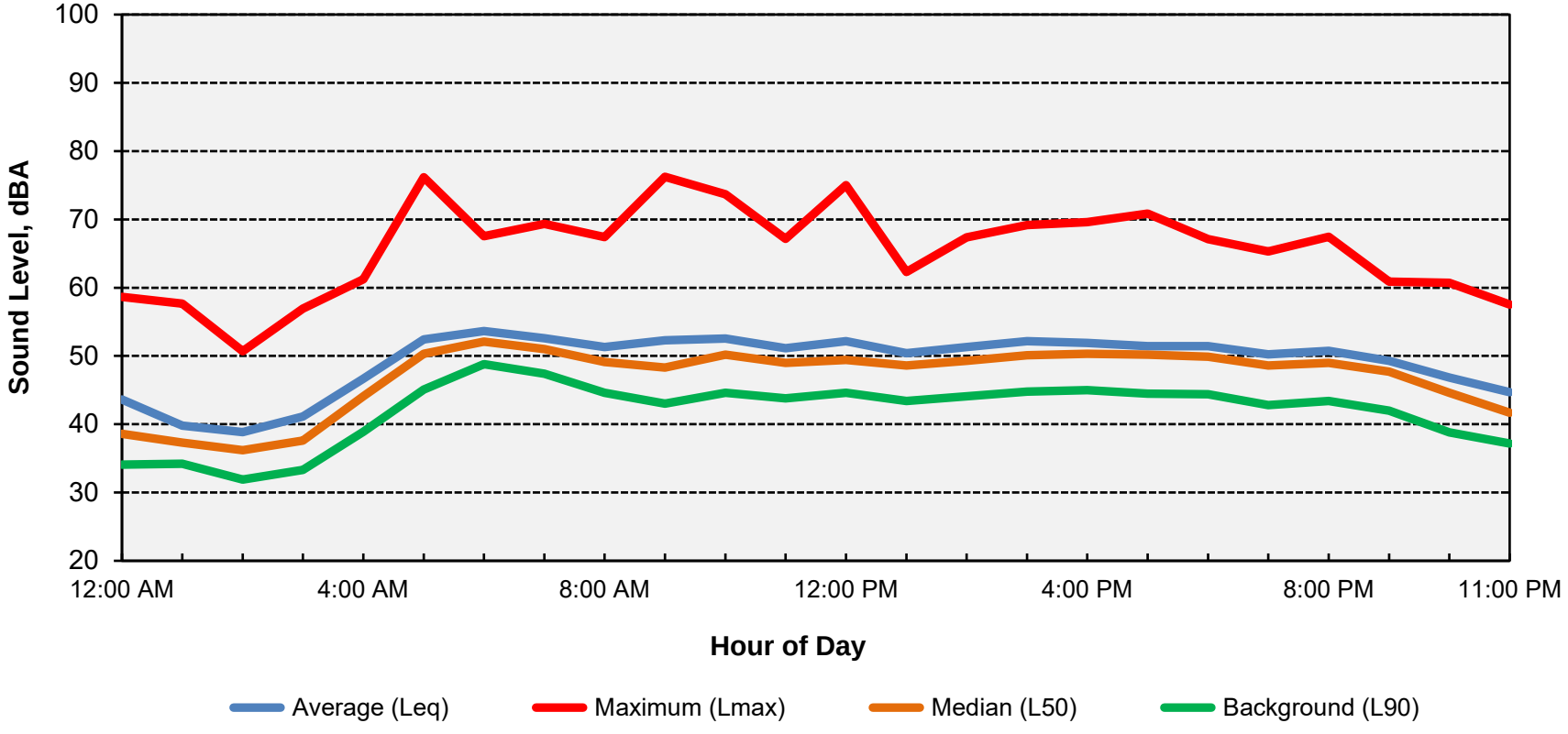
Appendix E-5
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023



Computed CNEL: 55 dBA

BOLLARD
Acoustical Consultants

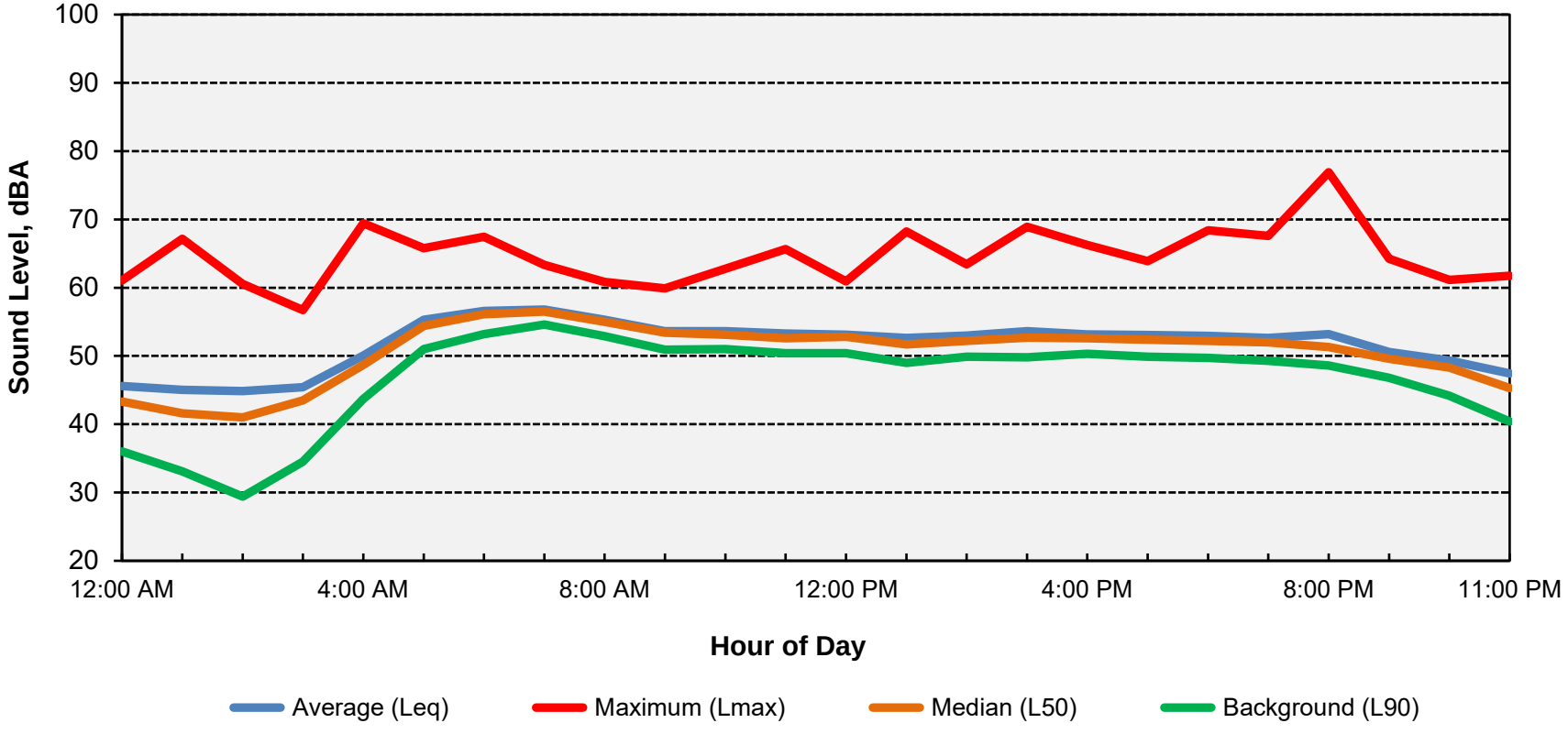
Appendix E-6
Long-Term Ambient Noise Monitoring Results - Site 2
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023



Computed CNEL: 56 dBA

BOLLARD
Acoustical Consultants

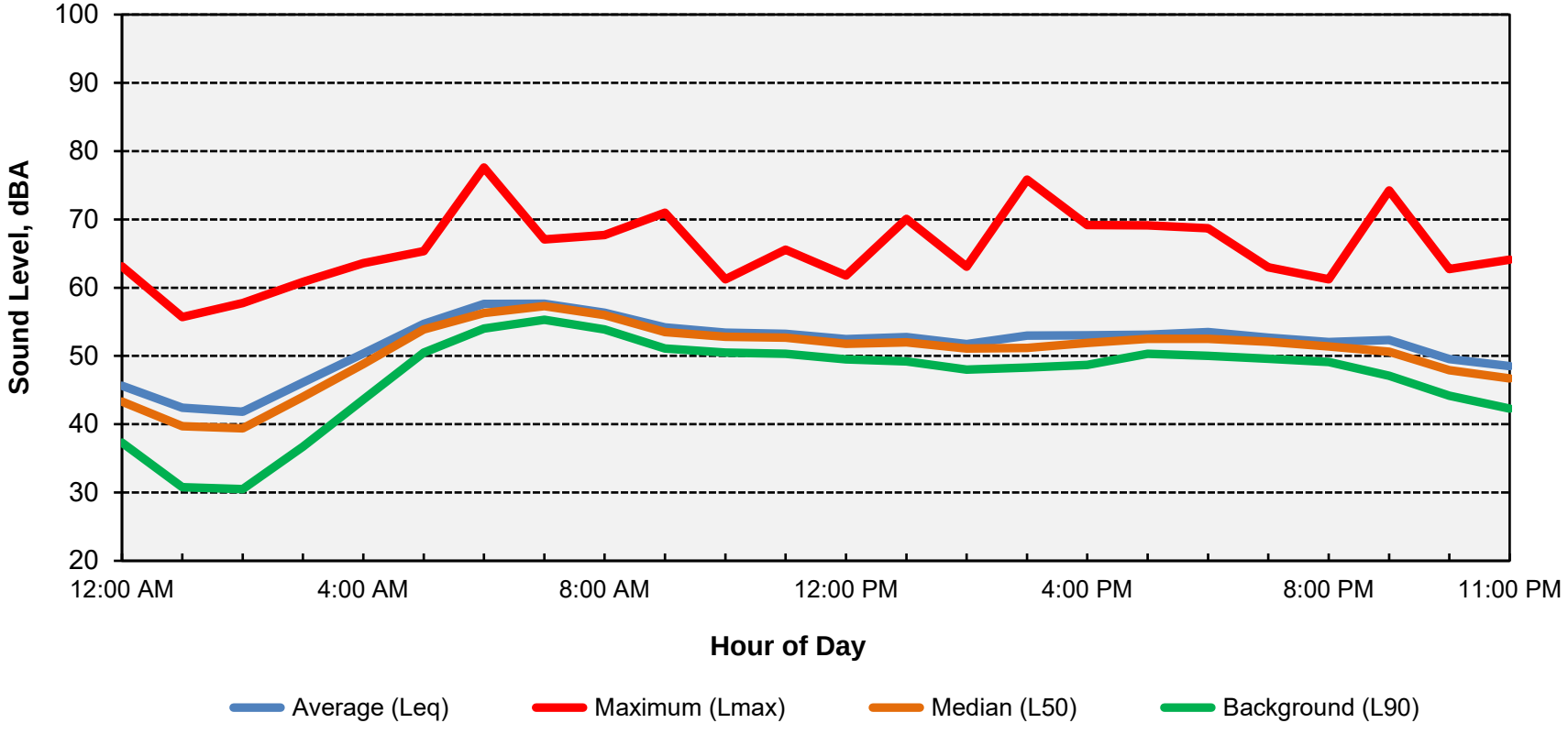
Appendix E-7
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023



Computed CNEL: 58 dBA

BOLLARD
Acoustical Consultants

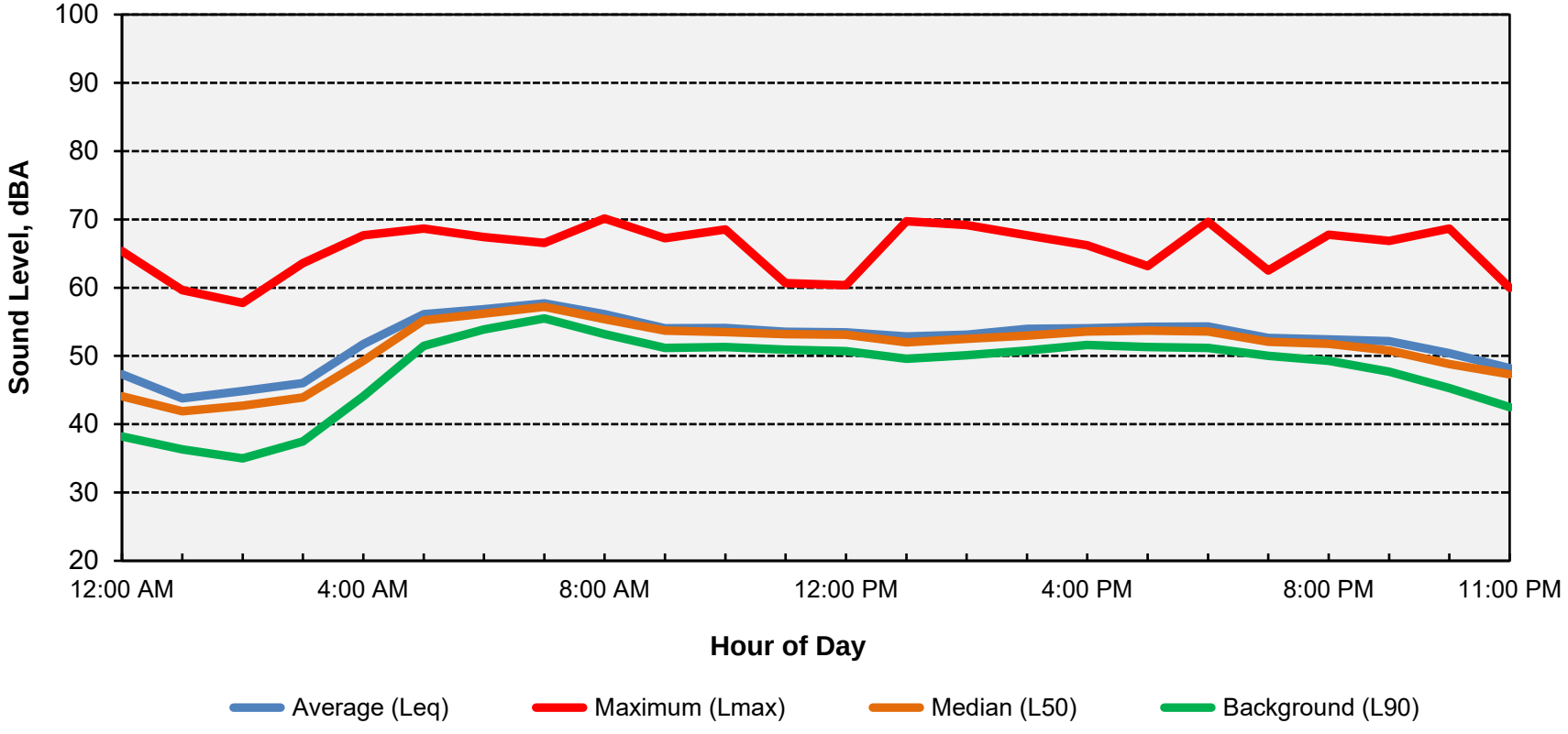
Appendix E-8
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023



Computed CNEL: 59 dBA

BOLLARD
Acoustical Consultants

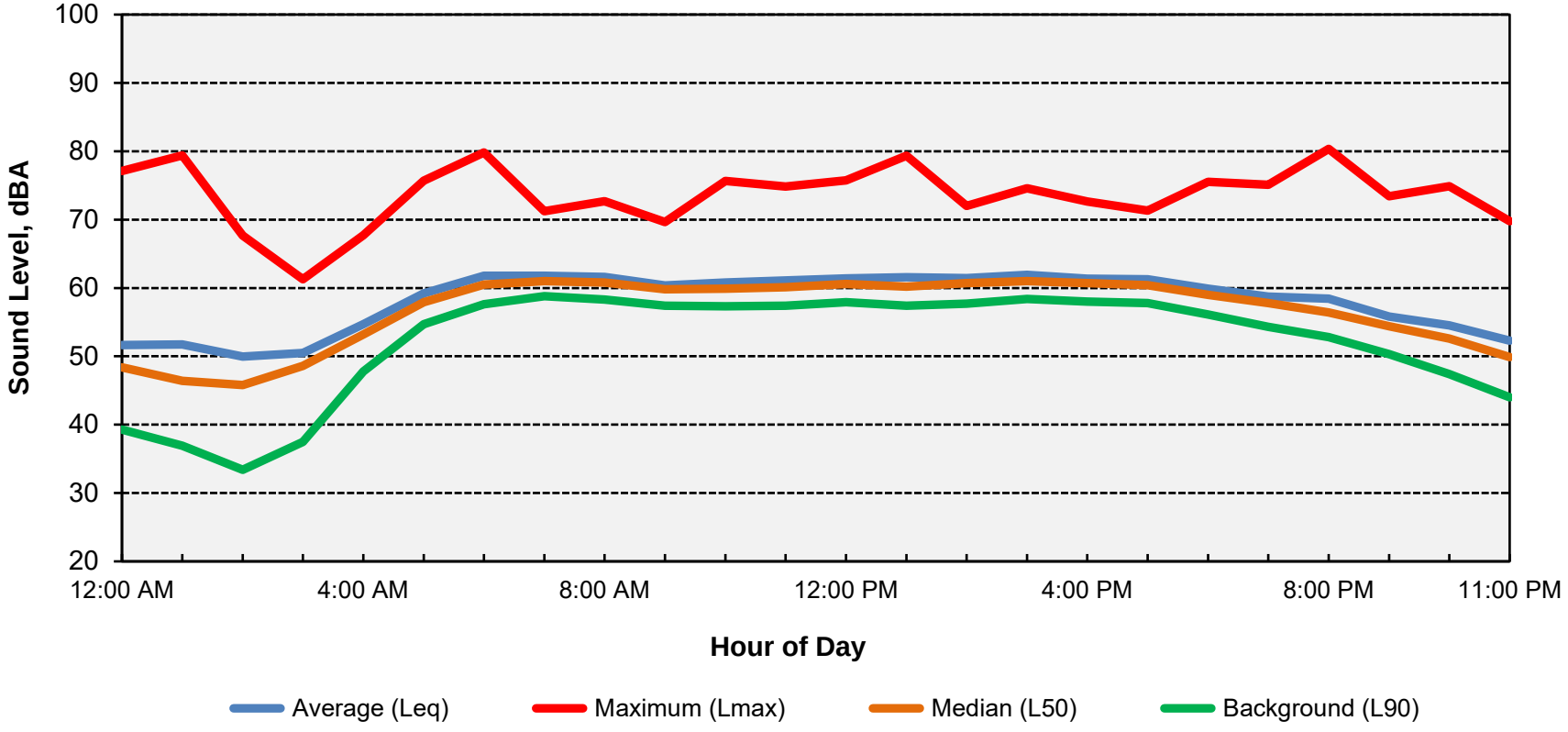
Appendix E-9
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023



Computed CNEL: 59 dBA

BOLLARD
Acoustical Consultants

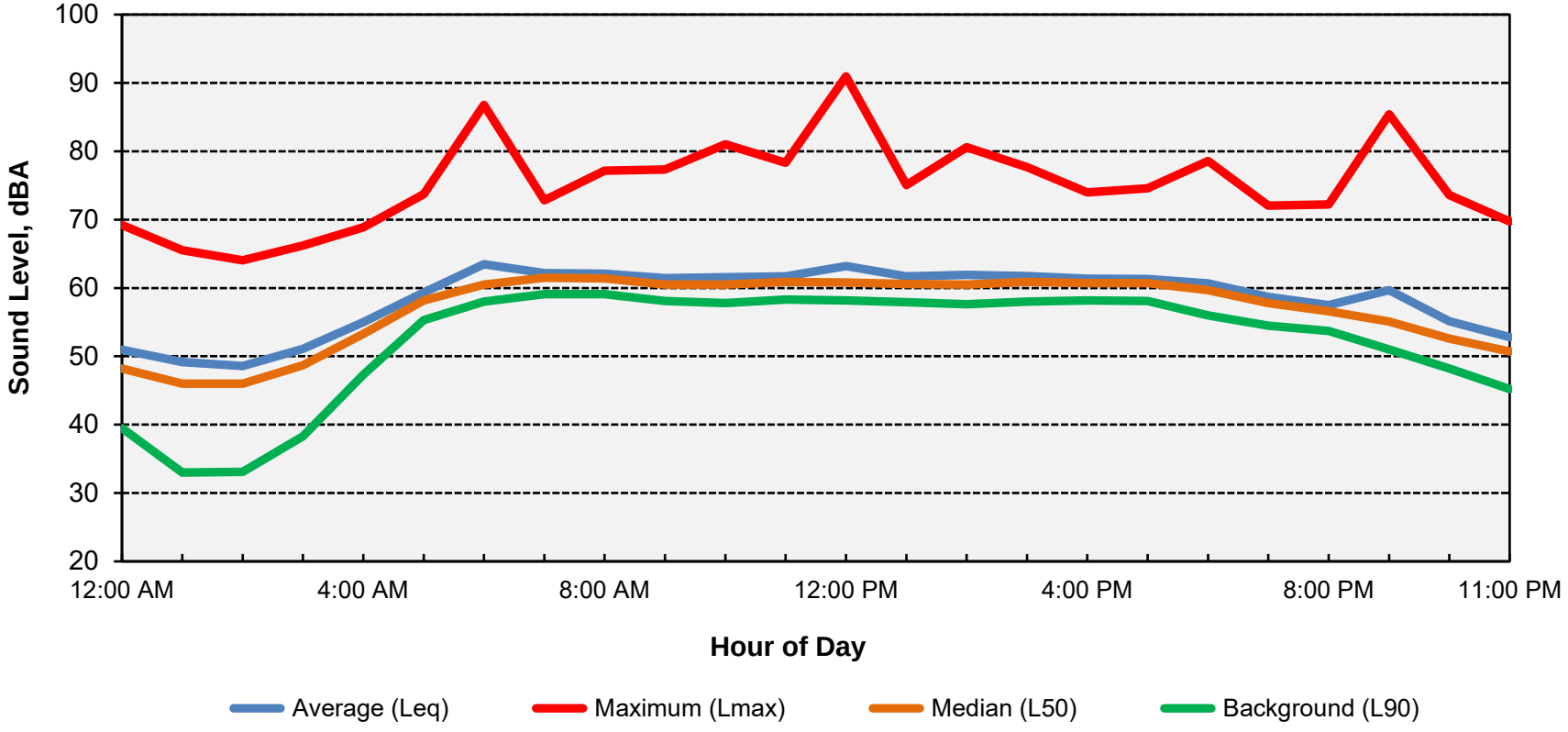
Appendix E-10
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Wednesday, July 19, 2023



Computed CNEL: 64 dBA

BOLLARD
Acoustical Consultants

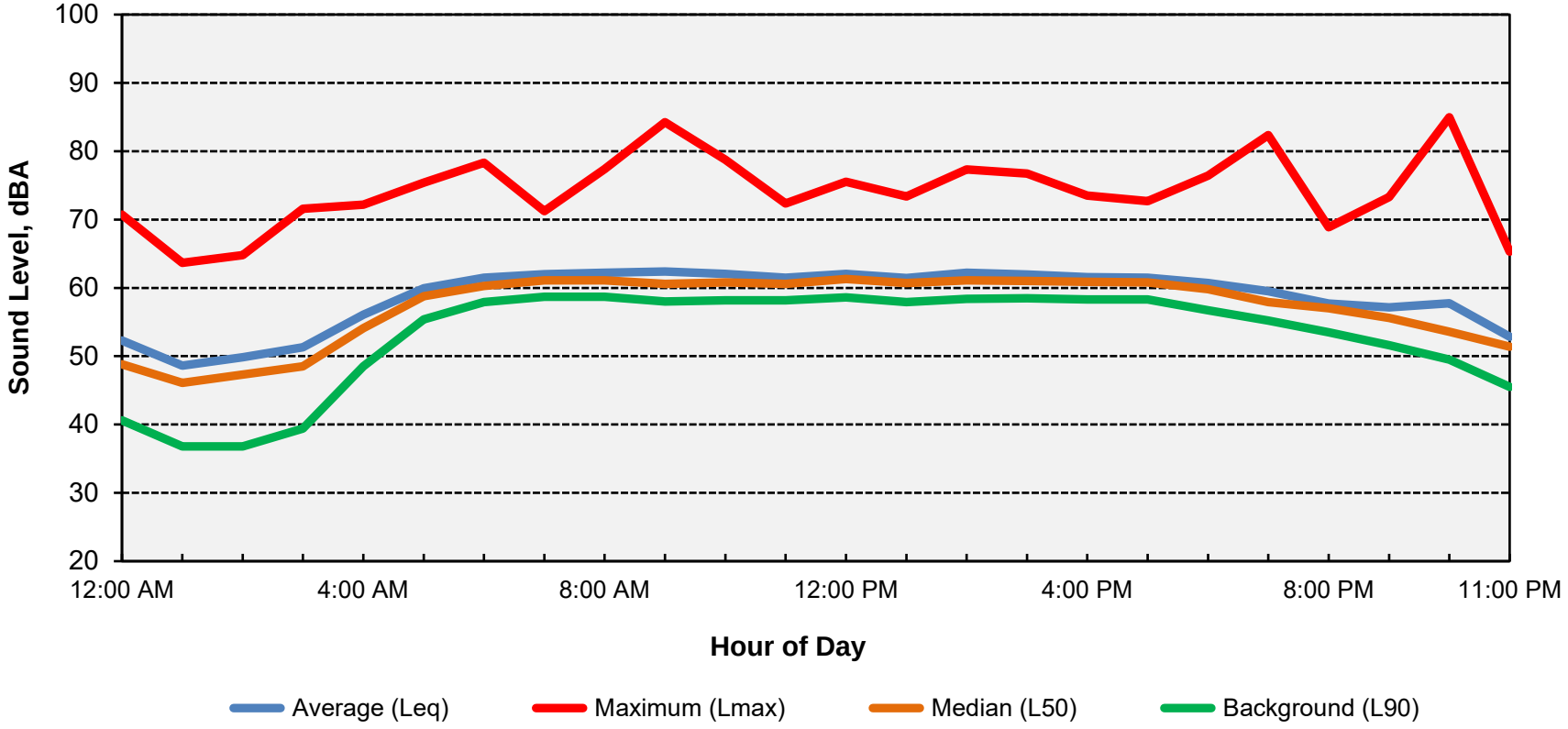
Appendix E-11
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Thursday, July 20, 2023



Computed CNEL: 65 dBA

BOLLARD
Acoustical Consultants

Appendix E-12
Long-Term Ambient Noise Monitoring Results - Site 3
Town & Country Village El Dorado - El Dorado County, California
Friday, July 21, 2023



Computed CNEL: 64 dBA

BOLLARD
Acoustical Consultants

Appendix F
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 02 2023 Existing+Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	110	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,085	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	4,920	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,065	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	7,950	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	9,035	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	9,585	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	9,615	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	12,200	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	12,230	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	12,490	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	12,495	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	12,690	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	12,700	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	16,095	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	16,350	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	14,990	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	7,795	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	350	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,490	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,285	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	9,590	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	8,910	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	4,140	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	3,535	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	3,535	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	3,530	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	3,170	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	2,395	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	3,470	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,150	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	2,220	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	11,425	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,075	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	12,190	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	10,255	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	480	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	10	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	980	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	1,935	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,305	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	525	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	6,490	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	1,255	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	90	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	660	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	5,820	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,175	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	5	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	13,415	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	13,415	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	14,025	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	30	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	3,450	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	10	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	455	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	7,140	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	1,500	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,505	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	6,555	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	230	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	14,655	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	1,925	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix G
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 03 2033 Existing No Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	120	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,370	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,185	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,330	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	8,935	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	9,890	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	10,405	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	10,490	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	13,330	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	13,520	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	15,440	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	15,465	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	15,875	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	15,885	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	16,370	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	16,370	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	16,375	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	9,020	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	560	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,645	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,645	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	11,055	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	8,920	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	4,890	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	4,890	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	4,890	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	4,885	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	4,095	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	3,315	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,155	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,185	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	3,045	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	12,535	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,535	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	12,920	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	10,725	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	2,290	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	660	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,135	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,185	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,305	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	2,175	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	7,270	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,250	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	1,985	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	690	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	6,260	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,330	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	145	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	15,135	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	15,660	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	18,310	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	30	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,255	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	2,745	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	475	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	10,300	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	1,795	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,505	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	6,195	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	315	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	21,340	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	1,985	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix H
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 04 2033 Existing+Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	120	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,380	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,205	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,350	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	8,965	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	9,920	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	10,465	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	10,550	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	13,480	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	13,670	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	15,645	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	15,670	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	16,080	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	16,090	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	17,430	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	17,685	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	17,690	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	9,850	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	560	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,675	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,645	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	12,555	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	8,920	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	5,625	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	5,020	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	5,020	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	5,015	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	4,225	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	3,430	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,220	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,200	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	3,045	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	12,545	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,535	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	12,930	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	10,735	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	2,345	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	660	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,135	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,185	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,305	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	2,175	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	7,270	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,250	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	1,985	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	660	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	6,350	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,330	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	145	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	15,325	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	15,850	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	18,490	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	30	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,265	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	2,745	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	475	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	10,495	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	1,925	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,505	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	7,210	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	315	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	21,505	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	1,995	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix I
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 05 2040 Cumulative No Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	125	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,470	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,285	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,470	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	9,605	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	10,420	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	10,955	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	11,090	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	15,035	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	14,640	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	16,925	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	16,905	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	17,350	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	18,435	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	17,605	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	17,605	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	17,610	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	10,400	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	1,195	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,675	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,875	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	11,910	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	9,300	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	5,520	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	5,520	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	5,520	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	5,515	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	4,500	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	3,730	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,390	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,215	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	3,365	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	13,115	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,705	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	13,610	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	11,215	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	2,855	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	710	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,170	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,355	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,345	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	2,875	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	7,570	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,895	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	4,320	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	700	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	6,595	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,350	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	300	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	15,795	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	16,705	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	20,430	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	1,925	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,795	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	4,675	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	485	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	4,870	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	2,075	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	2,605	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	6,935	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	365	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	24,865	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	2,005	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix J
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 06 2040 Cumulative+Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	125	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,570	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,485	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,670	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	9,905	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	10,720	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	11,465	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	11,600	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	16,095	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	15,700	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	18,310	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	18,290	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	17,350	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	18,435	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	25,795	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	25,960	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	25,965	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	14,570	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	1,195	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,890	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	3,875	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	11,940	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	9,300	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	12,660	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	10,235	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	5,205	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	6,375	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	5,360	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	4,485	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,825	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,320	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	3,365	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	13,215	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,705	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	13,710	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	11,315	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	3,180	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	710	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,170	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,355	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,345	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	2,025	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	7,600	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,895	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	4,535	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	700	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	7,325	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,350	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	255	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	16,985	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	17,680	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	21,455	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	1,925	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,895	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	4,890	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	485	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	5,350	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	3,005	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	2,605	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	10,210	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	365	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	25,750	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	2,105	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix K
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 07 2040 Super Cumulative No Project (V2)
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	170	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,175	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,025	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,220	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	9,400	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	10,345	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	10,860	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	11,130	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	14,255	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	14,285	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	15,725	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	15,880	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	16,095	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	17,410	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	19,380	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	19,380	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	19,385	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	22,800	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	350	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,625	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	4,025	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	13,880	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	16,765	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	4,515	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	4,530	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	4,530	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	4,525	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	3,605	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	2,425	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,005	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,435	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	13,375	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	13,070	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,615	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	13,135	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	11,035	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	1,670	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	10	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,000	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,310	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,415	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	25,785	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	9,515	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,880	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	10,055	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	715	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	7,805	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,375	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	455	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	18,020	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	22,805	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	24,075	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	2,085	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,830	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	14,575	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	665	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	5,075	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	2,235	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,420	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	15,090	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	490	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	28,420	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	2,050	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix L
FHWA Highway Traffic Noise Prediction Model Inputs
Town and Country Village El Dorado
File Name: 08 2040 Super Cumulative+Project
Run Date: 5/14/2024

Segment ID	Roadway	Roadway Segment	ADT	Day %	Night %	Medium Truck %	Heavy Truck %	Speed	Distance to Receptor (ft)	Offset (dB)
1	Alexandrite Dr	North of Green Valley Rd	170	80	20	1	1	25	120	-5
2	Bass Lake Rd	Green Valley Rd to Woodleigh Ln	4,275	80	20	2	1	40	50	0
3	Bass Lake Rd	Woodleigh Ln to Magnolia Hills Dr	5,225	80	20	2	1	40	75	0
4	Bass Lake Rd	Magnolia Hills Dr to Silver Springs Pkwy	5,420	80	20	2	1	40	100	0
5	Bass Lake Rd	Bass Lake Rd to Madera Wy	9,700	80	20	2	1	45	80	-5
6	Bass Lake Rd	Madera Wy to Bridlewood Dr	10,645	80	20	2	1	45	80	-5
7	Bass Lake Rd	Bridlewood Dr to Whistling Wy	11,370	80	20	2	1	45	100	-5
8	Bass Lake Rd	Whistling Wy to Serrano Pkwy	11,640	80	20	2	1	45	100	-5
9	Bass Lake Rd	Serrano Pkwy to Brannan Wy	15,315	80	20	2	1	45	100	-5
10	Bass Lake Rd	Brannan Wy to Hawk View Rd	15,345	80	20	2	1	45	85	-5
11	Bass Lake Rd	Hawk View Rd to Sienna Ridge Rd	17,110	80	20	2	1	45	250	-5
12	Bass Lake Rd	Sienna Ridge Rd to Hollow Oak Dr	17,265	80	20	2	1	45	350	0
13	Bass Lake Rd	Hollow Oak Dr to Silver Dove Wy	16,095	80	20	2	1	45	700	0
14	Bass Lake Rd	Silver Dove Wy to Country Club Dr	17,410	80	20	2	1	45	400	0
15	Bass Lake Rd	Country Club Dr to Project Dwy 1	27,570	80	20	2	1	45	450	0
16	Bass Lake Rd	Project Dwy 1 to Old Country Club Dr	27,735	80	20	2	1	45	450	0
17	Bass Lake Rd	Old Country Club Dr to US 50 WB Ramps	27,740	80	20	2	1	45	800	0
18	Bass Lake Rd	US 50 WB Ramps to US 50 EB Ramps	26,970	80	20	2	1	45	1000	0
19	Brannan Wy	West of Bass Lake Rd	350	80	20	1	1	25	60	0
20	Bridlewood Dr	East of Bass Lake Rd	1,835	80	20	1	1	25	50	0
21	Cambridge Rd	South of Green Valley Rd	4,025	80	20	2	1	35	50	0
22	Cambridge Rd	North of Merrychase Dr	13,880	80	20	2	1	35	75	0
23	Cambridge Rd	US 50 EB Ramps to US 50 WB Ramps	16,765	80	20	2	2	35	250	0
24	Church Pl	North of Country Club Dr	35	80	20	1	1	25	150	0
25	Country Club Dr	Bass Lake Rd to Project Dwy 2	11,670	80	20	1	1	35	850	0
26	Country Club Dr	Project Dwy 2 to Project Dwy 3	9,245	80	20	1	1	35	1000	0
27	Country Club Dr	Project Dwy 3 to Chruch Pl	5,255	80	20	1	1	35	550	0
28	Country Club Dr	Church Pl to Morrison Rd	5,385	80	20	1	1	35	500	0
29	Country Club Dr	Morrison Rd to El Norte Rd	4,465	80	20	1	1	35	75	0
30	Country Club Dr	El Norte Rd to Merrychase Dr	3,180	80	20	1	1	35	50	0
31	Country Club Dr	East of Merrychase Dr	4,440	80	20	1	1	25	50	0
32	El Norte Rd	North of Country Club Dr	1,540	80	20	1	1	25	100	-5
33	Flying C Rd	South of US 50 EB Ramps	13,375	80	20	1	1	35	230	-5
34	Green Valley Rd	West of Silver Springs Pkwy	13,170	80	20	2	1	55	275	0
35	Green Valley Rd	Silver Springs Pkwy to Bass Lake Rd	11,615	80	20	2	1	45	100	-5
36	Green Valley Rd	Bass Lake Rd to Cambridge Rd	13,235	80	20	2	1	45	75	-5
37	Green Valley Rd	East of Cambridge Rd	11,135	80	20	2	1	45	75	-5
38	Hawk View Rd	West of Bass Lake Rd	1,995	80	20	1	1	35	50	-5
39	Hawk View Rd	East of Bass Lake Rd	10	80	20	1	1	25	300	-5
40	Hollow Oak Dr	East of Bass Lake Rd	1,000	80	20	1	1	40	250	0
41	Madera Wy	East of Bass Lake Rd	2,310	80	20	1	1	25	50	0
42	Magnolia Hills Dr	South of Bass Lake Rd	1,415	80	20	1	1	25	50	0
43	Marble Valley Rd	South of US 50 EB Ramps	25,785	80	20	1	1	35	150	0
44	Merrychase Dr	Country Club Dr to Cambridge Rd	9,515	80	20	1	1	25	65	0
45	Morrison Rd	North of Country Club Dr	2,880	80	20	1	1	35	80	0
46	Old Bass Lake Rd	West of Bass Lake Rd	10,285	80	20	1	1	35	150	0
47	Old Country Club Rd	Bass Lake Rd to Project Dwy 4	25	80	20	2	1	35	800	0
48	Old Country Club Rd	Project Dwy 4 to Project Dwy 5	25	80	20	2	1	35	850	0
49	Old Country Club Rd	Project Dwy 5 to Country Club Dr	25	80	20	2	1	35	500	-5
50	Peridot Dr	North of Green Valley Rd	715	80	20	1	1	25	50	0
51	Serrano Pkwy	North of Bass Lake Rd	8,355	80	20	2	1	45	100	-5
52	Sienna Ridge Rd	South of Bass Lake Rd	2,375	80	20	2	1	35	75	-5
53	Sienna Ridge Rd	East of Bass Lake Rd	455	80	20	1	1	25	120	-5
54	Silva Valley Pkwy	North of Tong Rd	19,210	80	20	2	1	45	110	0
55	Silva Valley Pkwy	Tong Rd to US 50 WB Ramps	23,780	80	20	2	1	45	800	0
56	Silva Valley Pkwy	US 50 WB Ramps to US 50 EB Ramps	25,100	80	20	2	1	45	800	0
57	Silver Dove Wy	West of Bass Lake Rd	2,085	80	20	1	1	25	250	0
58	Silver Springs Pkwy	Green Valley Rd to Bass Lake Rd	4,930	80	20	2	1	45	100	-5
59	Tong Rd	East of Silva Valley Pkwy	14,805	80	20	1	1	35	250	0
60	Trinidad Dr	South of Country Club Dr	665	80	20	1	1	25	75	0
61	US 50 EB Ramps	East of Silva Valley Pkwy	5,555	80	20	2	2	45	950	0
62	US 50 EB Ramps	East of Bass Lake Rd	3,165	80	20	2	2	55	650	0
63	US 50 WB Ramps	West of Silva Valley Pkwy	3,420	80	20	2	2	60	850	0
64	US 50 WB Ramps	West of Bass Lake Rd	18,365	80	20	2	2	55	680	0
65	Whistling Wy	South of Bass Lake Rd	490	80	20	1	1	25	100	-5
66	White Rock Rd	South of US 50 EB Ramps	29,305	80	20	2	1	50	740	0
67	Woodleigh Ln	East of Bass Lake Rd	2,150	80	20	1	1	25	50	0

Notes: 1. Noise-sensitive uses considered in this analysis are residential, school, church and hospitals.
2. Offsets applied where shielding/screening of the sensitive outdoor area is present.

Appendix M-1
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: U.S. 50

Traffic Data:

Year: Future
Daily Traffic Volume: 109,500
Percent Daytime Traffic: 75
Percent Nighttime Traffic: 25
Percent Medium Trucks (2 axle): 3
Percent Heavy Trucks (3 axle): 4
Assumed Vehicle Speed (mph): 70
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Component	**Receiver Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
Event Center	Courtyard/Oak Grove	800	-10	55	45	50	57
	Nearest 1st floor facades	600		67	57	62	68
	Nearest upper-floor facades	600	3	70	60	65	71
Hotel East	Nearest 1st floor facades	650		66	57	61	68
	Nearest 3rd & 4th floor facades	650	3	69	60	64	71
	Nearest 5th & 6th floor facades	650	5	71	62	66	73
Hotel West	Nearest 1st floor facades	650		66	57	61	68
	Nearest 3rd & 4th floor facades	650	3	69	60	64	71
	Nearest 5th & 6th floor facades	650	5	71	62	66	73

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	221
70	476
65	1026
60	2211

Notes:
1. Future ADT for roadway was estimated by assuming a 50% increase relative to existing (2022) conditions. Existing ADT obtained from published 2022 Caltrans traffic counts (73,000 ADT). Truck percentages derived from Caltrans truck data (2022).
2. Positive offsets applied at upper-floor locations to account for reduced ground absorption of sound at elevated positions. Negative offsets applied where screening of receiver would result from contruction of proposed intervening structures.

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Appendix M-2
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: Bass Lake Road

Traffic Data:

Year: Future (2040 Super Cumulative Project)
Daily Traffic Volume: 27,735
Percent Daytime Traffic: 80
Percent Nighttime Traffic: 20
Percent Medium Trucks (2 axle): 2
Percent Heavy Trucks (3 axle): 1
Assumed Vehicle Speed (mph): 45
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Component	**Receiver Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
Event Center	Courtyard/Oak Grove	375	-10	48	39	41	49
	Nearest 1st floor facades	300		60	51	52	61
	Nearest upper-floor facades	300	3	63	54	55	64
Hotel West	Nearest 1st floor facades	200		62	54	55	63
	Nearest 3rd & 4th floor facades	200	3	65	57	58	66
	Nearest 5th & 6th floor facades	200	5	67	59	60	68

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	34
70	73
65	156
60	337

Notes:
1. Future (2040 Super Cumulative Plus Project) ADT for roadway was conservatively estimated by applying a factor of 5 to the sum of AM and PM peak hour turing movements Traffic data prepared by T. Kear.
2. Positive offsets applied at upper-floor locations to account for reduced ground absorption of sound at elevated positions. Negative offsets applied where screening of receiver would result from contruction of proposed intervening structures.

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Appendix M-3
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: Bass Lake Road

Traffic Data:

Year: Future (2040 Super Cumulative Project)
Daily Traffic Volume: 17,410
Percent Daytime Traffic: 80
Percent Nighttime Traffic: 20
Percent Medium Trucks (2 axle): 2
Percent Heavy Trucks (3 axle): 1
Assumed Vehicle Speed (mph): 45
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Component	**Receiver Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
Cottages	Nearest common area - pool	450	-3	52	43	45	53
	Nearest 1st floor facades	90		65	57	58	67
	Nearest upper-floor facades	90	2	67	59	60	69

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	25
70	53
65	115
60	247

Notes:
1. Future (2040 Super Cumulative Plus Project) ADT for roadway was conservatively estimated by applying a factor of 5 to the sum of AM and PM peak hour turing movements Traffic data prepared by T. Kear.
2. Positive offsets applied at upper-floor locations to account for reduced ground absorption of sound at elevated positions. Negative offsets applied where screening of receiver would result from contruction of proposed intervening structures.

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Appendix M-4
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: Country Club Drive

Traffic Data:

Year: Future (2040 Super Cumulative Project)
Daily Traffic Volume: 11,670
Percent Daytime Traffic: 80
Percent Nighttime Traffic: 20
Percent Medium Trucks (2 axle): 1
Percent Heavy Trucks (3 axle): 1
Assumed Vehicle Speed (mph): 35
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Component	**Receiver Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
Cottages	Nearest common area - pool	100		60	47	52	60
	Nearest 1st floor facades	80		61	48	53	62
	Nearest upper-floor facades	80	2	63	50	55	64

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	10
70	22
65	46
60	100

Notes:
1. Future (2040 Super Cumulative Plus Project) ADT for roadway was conservatively estimated by applying a factor of 5 to the sum of AM and PM peak hour turing movements Traffic data prepared by T. Kear.
2. Positive offsets applied at upper-floor locations to account for reduced ground absorption of sound at elevated positions.

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Appendix N-1
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: U.S. 50

Traffic Data:

Year: Future
Daily Traffic Volume: 109,500
Percent Daytime Traffic: 75
Percent Nighttime Traffic: 25
Percent Medium Trucks (2 axle): 3
Percent Heavy Trucks (3 axle): 4
Assumed Vehicle Speed (mph): 70
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Location	Description	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Distance to Program Study Area	225		73	64	68	75

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	221
70	476
65	1,026
60	2,211

Notes: 1. Future ADT for roadway was estimated by assuming a 50% increase relative to existing (2022) conditions. Existing ADT obtained from published 2022 Caltrans traffic counts (73,000 ADT). Truck percentages derived from Caltrans truck data (2022).

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Appendix N-2
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: Bass Lake Road

Traffic Data:

Year: Future (2040 Super Cumulative Project)
Daily Traffic Volume: 27,735
Percent Daytime Traffic: 80
Percent Nighttime Traffic: 20
Percent Medium Trucks (2 axle): 2
Percent Heavy Trucks (3 axle): 1
Assumed Vehicle Speed (mph): 45
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Location	Description	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Distance to Program Study Area	50		71	63	64	72

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	34
70	73
65	156
60	337

Notes: 1. Future (2040 Super Cumulative Plus Project) ADT for roadway was conservatively estimated by applying a factor of 5 to the sum of AM and PM peak hour turing movements Traffic data prepared by T. Kear.

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Appendix N-3
FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

BAC Job Number: 2022-091
Project Name: Town & Country Village El Dorado
Roadway Name: Country Club Drive

Traffic Data:

Year: Future (2040 Super Cumulative Project)
Daily Traffic Volume: 11,670
Percent Daytime Traffic: 80
Percent Nighttime Traffic: 20
Percent Medium Trucks (2 axle): 1
Percent Heavy Trucks (3 axle): 1
Assumed Vehicle Speed (mph): 35
Intervening Ground Type (hard/soft): **Soft**

Traffic Noise Levels:

				DNL (dB)			
Location	Description	Distance	Offset (dB)	Autos	Medium Trucks	Heavy Trucks	Total
1	Distance to Program Study Area	50		64	51	56	60

Traffic Noise Contours (No Calibration Offset):

DNL Contour, dB	Distance from Centerline, (ft)
75	5
70	11
65	23
60	50

Notes: 1. Future (2040 Super Cumulative Plus Project) ADT for roadway was conservatively estimated by applying a factor of 5 to the sum of AM and PM peak hour turing movements Traffic data prepared by T. Kear.

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APPENDIX P

P21150

CEQA Transportation Impact Study

Town and Country Village
Bass Lake Hills, California

Prepared for:
County of El Dorado, California,
Raney Planning and Management, and
Mohanna Development Co.

Prepared By

T. KEAR
TRANSPORTATION PLANNING
& MANAGEMENT, INC.
2838 Zamora Lane
Davis, CA 95616
www.tkearinc.com

Contact: Tom Kear, tkear@tkearinc.com, (916) 340-4811



March 12, 2024
Revised April 22, 2024

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REVISION HISTORY

Description	Date	Notes
Draft	March 12, 2024	Draft CEQA TIS.
	April 22, 2024	Addressed peer review comments to clarify trip gen data, clarify sources for baseline data in Table 3, and address minor typos.

EXECUTIVE SUMMARY

This California Environmental Quality Act (CEQA) transportation impact study (TIS) evaluates the Town and Country Village Project to identify any potential project impacts as **significant** or **less-than-significant** under CEQA. It addresses potential impacts related to:

- Anticipated vehicle miles of travel[1] (VMT),
- Anticipated impacts to transit, bicycle, and pedestrian circulation, and
- Safety related impacts evaluated through a review of accident history.

A separate local transportation analysis "LTA" will be provided under a separate cover to address vehicle level-of-service and compliance with General Plan circulation element policies.

Project Description

The Town & Country Village El Dorado Project consists of two development areas: the **Project-Development** area and the **Program-Study** area. The Project-Development area consists of 25.8-acres and includes two hotels, retail services, restaurants, a museum, an event center, parking, residential cottages for hotel employee housing and residential cottages that will be rented on a daily or extended stay basis by the hotels. The Program-Study area consists of an additional 34.7-acres to be developed in the future and may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes, cottages, and other uses allowed with proposed rezoning.

The Project-Development area is evaluated based on specific Project-Development area land uses and is evaluated under existing (2023), and cumulative. Project-level entitlements being sought for the Project-Development area include General Plan and Specific Plan amendments, rezoning, a development agreement, a planned development permit, and tentative map. The Program-Study area is evaluated at a programmatic-level based on more generalized housing and commercial uses that would be allowed with the proposed rezoning. The Program-Study area is only evaluated under cumulative conditions.

[1] VMT is often incorrectly referred to in the past tense: "vehicle miles traveled" when referring to the future. For future tense discussions the appropriate terminology is "vehicle miles of travel".

Programmatic-level entitlements being sought for the Program-Study area include General Plan and Specific Plan amendments, and rezoning.

The Project-Development and Program-Study areas are located proximate to the intersection of Bass Lake Road and Country Club Drive, within the Bass Lake Hills Specific Plan (BLHSP) in western El Dorado County. **Figure ES-1** below shows the relative size and location of the two areas. Three parcels are involved: APN 119-080-012, 119-080-021, and 119-080-023. These parcels currently have a General Plan land use designation under the BLHSP of L.2-PD and L.7-PD which allow for 0.2 dwelling units per acre south of Country Club Drive and 0.7 dwelling units per acre north of Country Club Drive. Current zoning for all three parcels is Residential Estate 10-Acre (RE-10) which allows for a minimum lot size of 10 acres. The El Dorado Hills Community Region boundary currently runs along Country Club Drive, with the area to the south of Country Club Drive considered as a Rural Region. The Project-Development and Program-Study areas will require amendments to the BLHSP, General Plan, and moving the Community Region boundary.

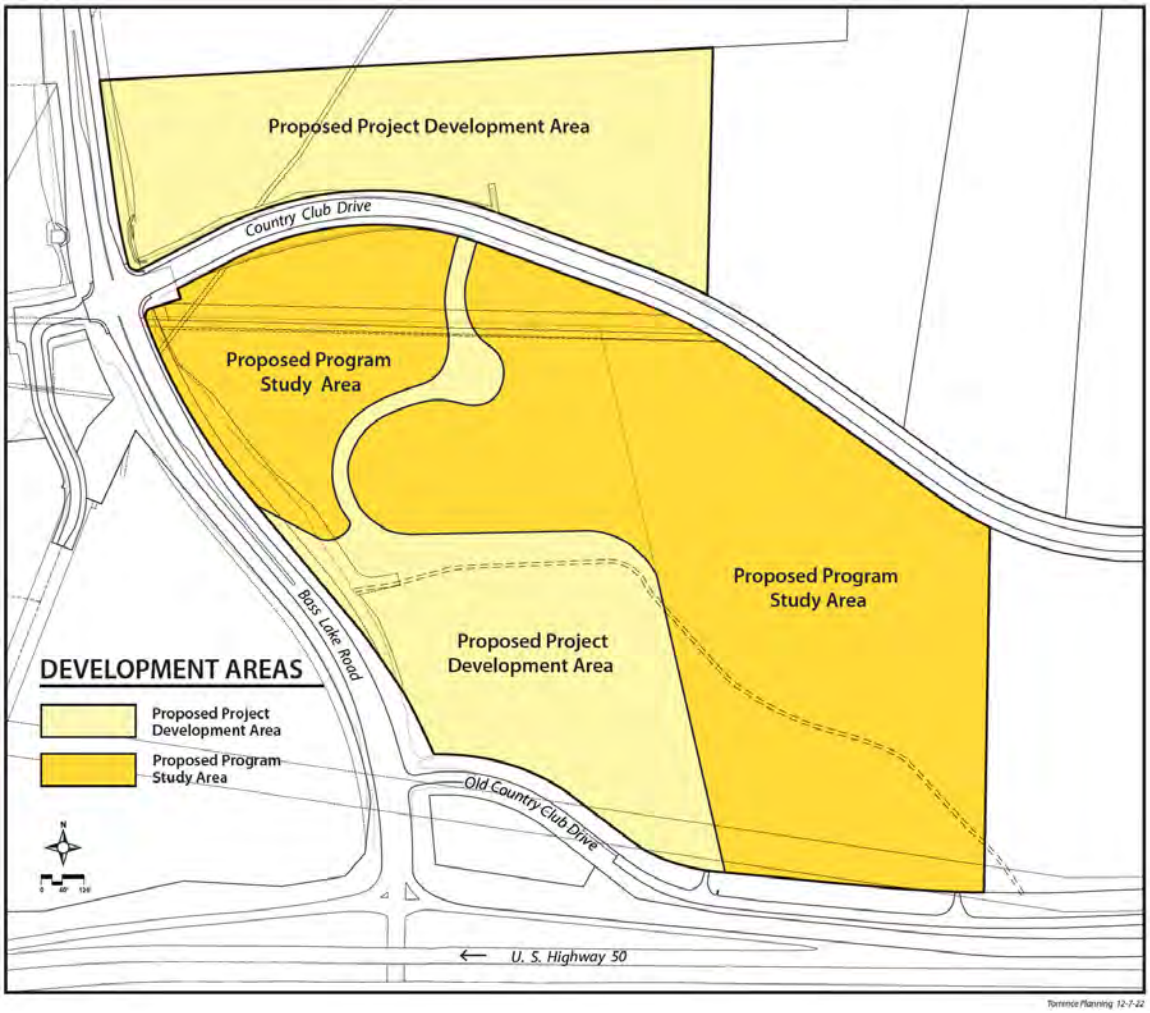


Figure ES-1. Project and Program-Study areas

VMT CEQA Findings

With implementation of Senate Bill (SB) 743, local agencies such as El Dorado County must analyze project transportation impacts under CEQA based on VMT. The El Dorado County Board of Supervisors adopted applicable methodology guidance and thresholds (resolution 141-2020)[2] which refine and implement methodology and threshold guidance from the Governor's Office of Planning and Research[3]. The method and tools used in this analysis are based on and consistent with El Dorado County resolution 141-2020.

Based on a comparison of the significance threshold and anticipated Project-Development area and Program-Study area VMT:

- The Project-Development area hotel has a **less-than-significant** CEQA impact on VMT. This includes the 300 hotel rooms, 112 cottages (56 units publicly available through the hotel, and 56 units received as employee housing), the event center, restaurants, and ancillary retail within the hotel(s).
- The residential portion of the Program-Study Area has a **significant-unavoidable** CEQA impact on VMT. This differs from the Employee housing because there is not VMT reduction for the elimination of commute trips.
- The retail portion of the Program-Study Area has a **less-than-significant** CEQA impact on VMT.

Mitigation for the Program-Study area residential units can be based on measures identified by CAPCOA[4] that are already designed into the Project, specifically the substantial densification relative to surrounding land uses, the mixed-use nature of the Project, and bicycle connectivity. Additional VMT mitigation, such as implementing transit service, is not feasible, nor would it reduce the impact to a less-than-significant level.

Transit, Bicycle, and Pedestrian CEQA Findings

The Project-Development and Program-Study areas do not interfere with existing or proposed transit service, bicycle facilities, or pedestrian facilities. The Project-Development and Program-Study areas have a **less-than-significant** Impact on transit, bicycle, and pedestrian facilities.

[2] EDC (2020) Resolution 141-2020, Adopting the El Dorado County "Vehicle Miles Traveled" Thresholds of Significance for Purposes of Analyzing Transportation Impacts under the California Environmental Quality Act, adopted by the Board of Supervisors on October 6, 2020.
[3] OPR (2018) Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.
[4] CAPCOA (2021) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution Control Officers Association.

Collision History CEQA Findings

The most collision-prone facility accessing the Project-Development and Program-Study areas is Bass Lake Rd between the US 50 eastbound offramp and Country Club Dr. Individual intersections along this segment do not meet the crash experience signal warrant, and the overall collision rate of 0.80 collisions per million vehicle miles of travel is well below the statewide average of 1.03 collisions per million vehicle miles of travel. Based on these results the Project-Development and Program-Study areas is anticipated to have a **less-than-significant** impact on collision history.

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1.0 INTRODUCTION

This California Environmental Quality Act (CEQA) transportation impact study (TIS) evaluates the Town and Country Village Project to identify any potential project impacts as **significant** or **less-than-significant** under CEQA. It addresses potential impacts related to:

- Anticipated vehicle miles of travel[5] (VMT),
- Anticipated impacts to transit, bicycle, and pedestrian circulation, and
- Safety related impacts evaluated through a review of collision history.

A separate local transportation analysis "LTA" will be provided under a separate cover to address vehicle level-of-service and compliance with General Plan circulation element policies.

This report starts with a project description tailored to the VMT, transit, bicycle, pedestrian, and collision history elements addressed herein. Followed by evaluation sections for those elements. Findings are presented within each of those technical sections and in the executive summary.

Two appendices are included with technical details: **Appendix A** provides VMT calculation details. **Appendix B** provides details on NCHRP 684 adjustments to the Institute of Transportation Engineers (ITE) trip generation estimates, those ITE estimates are provided as an informational item.

2.0 PROJECT-DEVELOPMENT AREA and PROGRAM-STUDY AREA DESCRIPTION

2.1 Overview

The Town & Country Village El Dorado Project consists of two development areas: the **Project-Development** area and the **Program-Study** area. The Project-Development area consists of 25.8-acres and includes two hotels, retail services, restaurants, a museum, an event center, parking, residential cottages for hotel employee housing and residential cottages that will be rented on a daily or extended stay basis by the hotels. The Program-Study area consists of an additional 34.7-acres to be developed in the future and may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes, cottages, and other uses allowed with proposed rezoning.

The Project-Development area is evaluated based on specific Project-Development area land uses and is evaluated under existing (2023), and cumulative conditions under the

[5] VMT is often incorrectly referred to in the past tense: "vehicle miles traveled" when referring to the future. For future tense discussions the appropriate terminology is "vehicle miles of travel".

California Environmental Quality Act. Project-level entitlements being sought for the Project-Development area include General Plan and Specific Plan amendments, rezoning, a Development Agreement, a Planned Development permit, and a tentative map. The Program-Study area is evaluated at a programmatic-level based on more generalized housing and commercial uses that would be allowed with the proposed rezoning. The Program-Study area is only evaluated under cumulative conditions. Programmatic-level entitlements being sought for the Program-Study area include General Plan and Specific Plan amendments, and rezoning.

The Project-Development and Program-Study areas are located proximate to the intersection of Bass Lake Road and Country Club Drive, within the Bass Lake Hills Specific Plan (BLHSP) in western El Dorado County. **Figure 1** below shows the relative size and location of the two areas. Three parcels are involved: APN 119-080-012, 119-080-021, and 119-080-023. These parcels currently have a General Plan land use designation under the BLHSP of L.2-PD and L.7-PD which allow for 0.2 dwelling units per acre south of Country Club Drive and 0.7 dwelling units per acre north of Country Club Drive. Current zoning for all three parcels is Residential Estate 10-Acre (RE-10) which allows for a minimum lot size of 10 acres. The El Dorado Hills Community Region boundary currently runs along Country Club Drive, with the area to the south of Country Club Drive considered as a Rural Region. The Project-Development and Program-Study areas will require amendments to the BLHSP, General Plan, and moving the Community Region boundary.

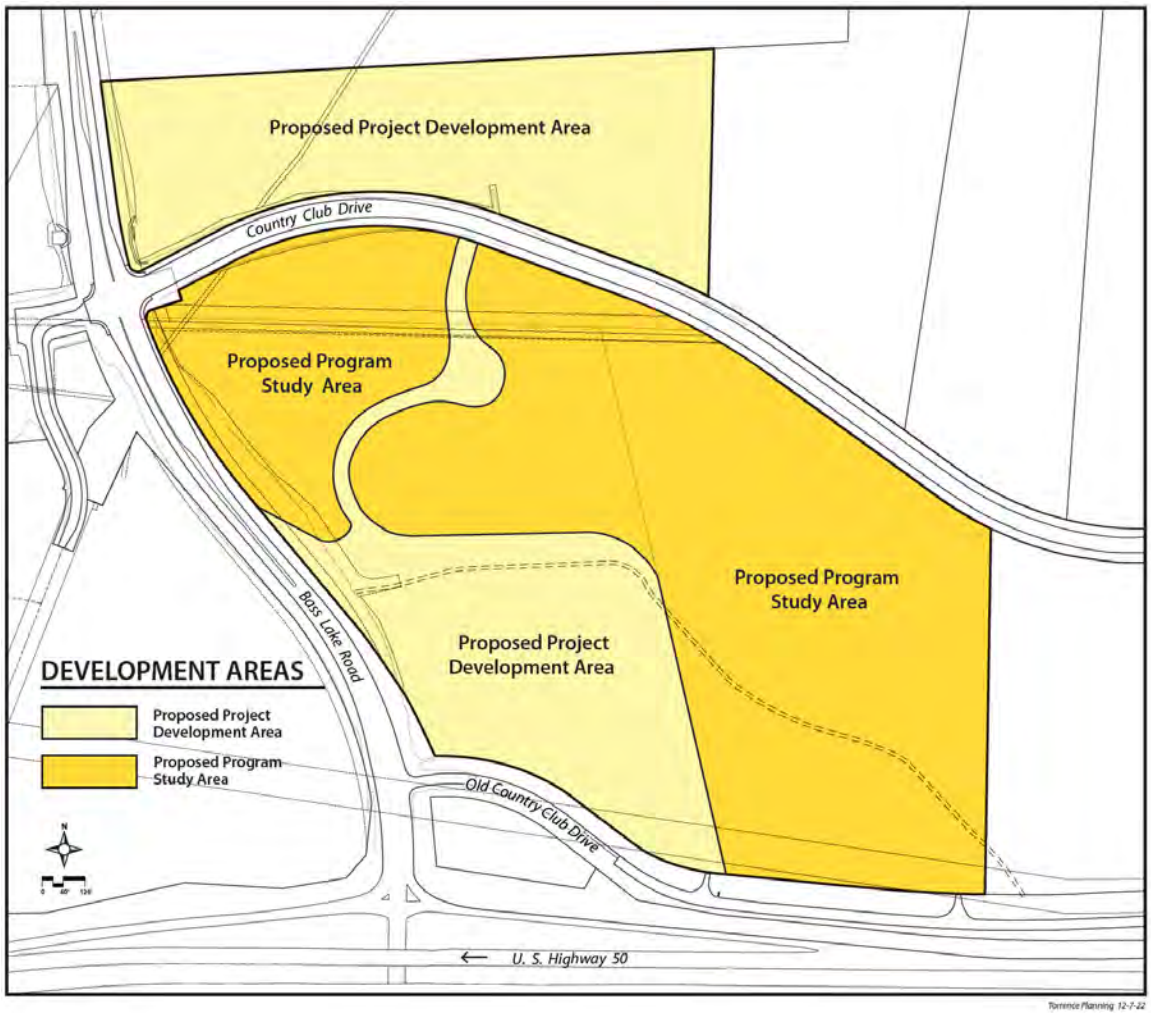


Figure 1. Project and Program-Study areas

2.2 Project-Development Area Land Uses

A preliminary site plan for the Project-Development area is provided as **Figure 2**. Key components of the Project-Development area development include two 150-room hotels, boutique retail shops, restaurants, an event center, a historic museum, recreational amenities and parking (all of which are considered as incidental uses with the proposed resort-hotel). Additional components include 56 residential cottages for employee housing and 56 residential cottages that may be rented on a daily or extended stay basis, and a class 1 bicycle path located on the historic Clarksville Toll Road.

The hotel component of the Project-Development area consists of two 5-story structures totaling 160,000 square feet. Both hotels share centralized facilities in the event center including two restaurants. The ground floor of each hotel will feature retail boutique shops focusing on local arts and crafts that promote the El Dorado County agricultural-tourism and Gold Country history. Boutique personal services such as beauty salons and spas will also be located on the first floor. The wedding venue/event center/museum are accommodated in a separate 3-story structure of 21,000 square feet shared between the two hotels.

112 cottages are to be located north of Country Club Drive. 56 of the cottage units will be reserved for hotel employee-housing and 56 remaining cottage units may be rented on a daily or an extended stay basis. The cottages are designed as individual two-story units measuring 560 square feet and contain a separate bedroom as well as a bathroom, full kitchen facilities and an outdoor deck. Duet or triplex building configuration may also be included in this area with the same features as previously described. On-site amenities will include a clubhouse, swimming pools, recreation areas, and meandering hiking trails. Deed restrictions will ensure that 56 cottages are used exclusively for hotel employee housing.

2.3 Program-Study Area Land Uses

The Program-Study area consists of 34.2-acres and may include a mix of uses such as hotels, senior housing units, medical facilities, townhomes, and cottages. These uses are anticipated to include 90,000 square feet of commercial land use and 702 dwelling units as follows:

- 6 acres of commercial land reserved for mixed use senior housing with 150 age restricted dwelling units and 10,000 square feet of commercial space.
- 9.3 acres of commercial land reserved for 200 apartments/condominiums and 80,000 square feet of commercial units.
- 15.3 acres of multi-family residential land reserved for 352 dwelling units.
- Open space.

There is not a specific development application for the Program-Study area at this time.

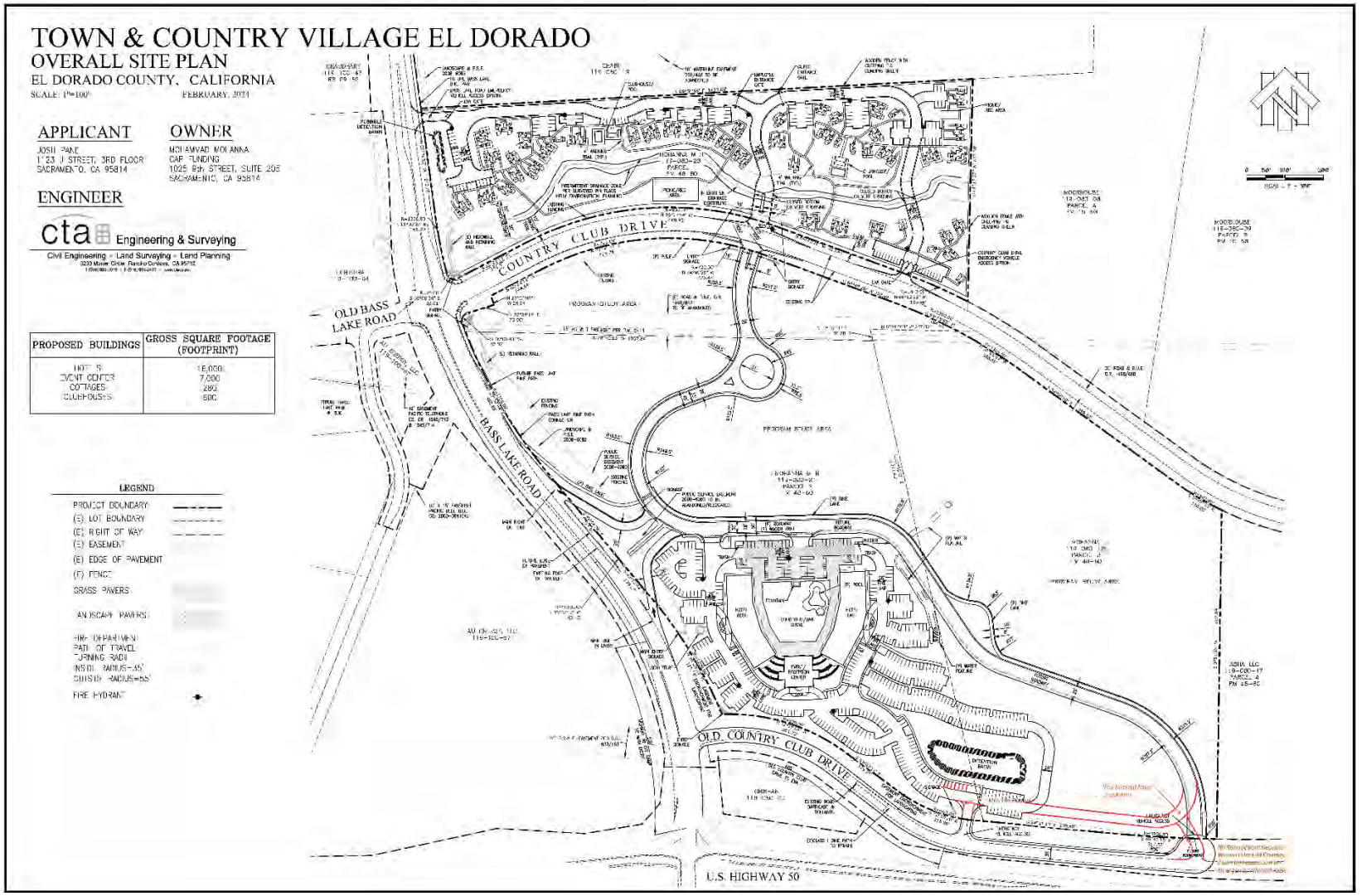


Figure 2. Preliminary Project-Development area site plan

2.4 Parking and Access

Proposed parking for the Project-Development area consists of 577 spaces for the 2 traditional hotels, 56 employee housing units, 56 guest cottages and the convention facilities. Additional parking may be accommodated off-site via reciprocal parking agreements and shuttle buses. (Note that the County and State encourage parking be minimized in order to discourage single occupancy vehicle use.) Future development of the Program-Study area will require additional, Program-Study area specific analysis when development applications are filed for those areas; with parking and internal circulation being part of that additional analysis.

Proposed access points for both the Project-Development area and the Program-Study area are shown in **Figure 3**. Primary access to the hotel and event center will be via a right-in/right-out driveway to Bass Lake Road and a full access driveway to Country Club Drive. Primary access to the 112 cottages will be via a full access driveway to Country Club Drive (aligned with the hotel access). Additional access to the Program-Study area will be provided via an additional full access driveway to Country Club Drive near the eastern edge of the Project-Study area.

The applicant is interested in two driveways accessing "Old Country Club Drive" along the southern edge of the Project-Development and Program-Study areas. These are currently limited to emergency vehicle access (EVA) only (and thus not analyzed) because Old Country Club Drive was converted to a class 1 bike path when Country Club Drive was realigned to its present location to improve safety at the Bass Lake Rd interchange. The potential impact of the two proposed driveways accessing Old Country Club Drive will be considered in an appendix to the local transportation analysis (under a separate cover). County staff anticipate that they will recommend against allowing driveways accessing Old Country Club Drive, with the decision ultimately falling on the Board of Supervisors if the applicant pursues that design element further.

Additional emergency vehicle access (EVA) only gates will be provided to Bass Lake Road and Country Club Drive from the northwest and southeast corner of the cottages.

2.5 Bicycle Access

Proposed Project-Development and Program-Study area bicycle access is shown in **Figure 4**. The Project-Development and Program-Study areas propose to augment the existing class 1 bike trail on the "Old Country Club Drive" alignment with additional trails running through the Project-Development and Program-Study areas. The Project-Development and Program-Study areas will also be required to construct frontage improvements on Bass Lake Road to the road's ultimate configuration. Those improvements include a class 1 bike trail on the Project-Development and Program-Study areas' Bass Lake Road frontage, and widening of Bass Lake Road from two-lanes to four lanes between US-50

and Country Club Drive[6]. In addition, the Program-Study area proposes to add a grade-separate crossing of Bass Lake Road connecting the class 1 trail through the Project-Development and Program-Study areas to the future extension of Country Club Drive toward Silva Valley Parkway.

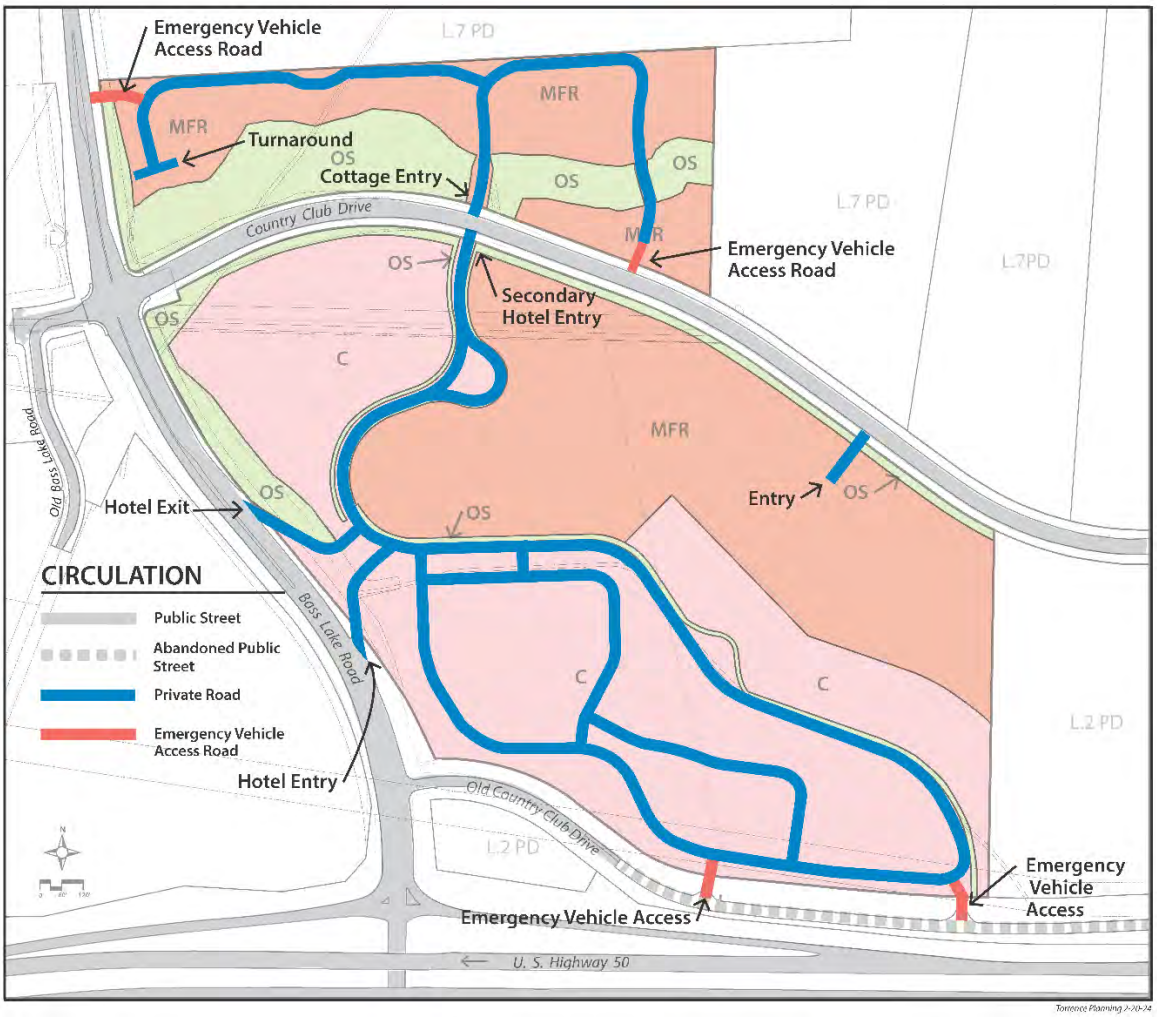


Figure 3. Project-Development area and Program-Study area access points from development application

[6] Note that widening of Bass Lake Road from two-lanes to four lanes between US-50 and Country Club Drive was not referenced in the written Project description but was communicated verbally during telephone call with the applicant. Such widening would be required to maintain level-of-service E or better conditions on this segment of Bass Lake Road and will be a condition of approval for the Project with issuance of the first building permit.

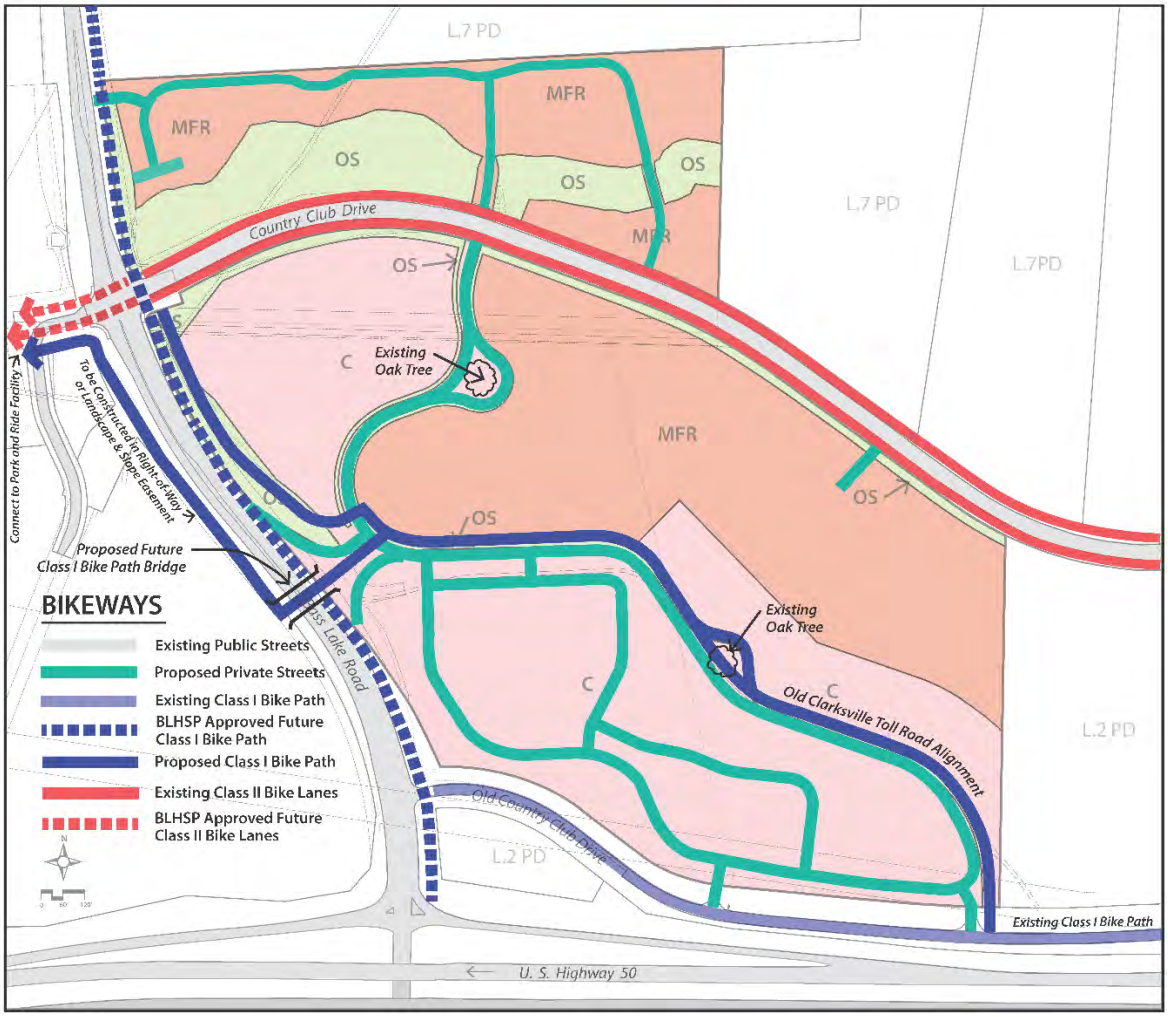


Figure 4. Project-Development area and Program-Study area bicycle connections from development application

2.6 Project and Program-Study Area Trip Generation

Project trip generation is presented based on two sources. First is the standard for traffic operations analysis of land development projects which is Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021). Second is the actual number of external trips assigned by the TDM. **The TDM trip generation data are what is used in this VMT analysis**. ITE methods generally overstate trip generation and are appropriate for making conservative estimates of how Project-Development and Program-Study area traffic may impact traffic operations in the vicinity of the Project-Development and Program-Study areas but overstate traffic relative to what would be reasonable for annual average VMT impacts. ITE methods are discussed here as level-of-service analysis in the local transportation analysis report is based on ITE trip generation in order to be conservative.

ITE trip Generation

Table 1 shows anticipated trip generation. After the initial ITE estimates, adjustments were made to account internal trip capture during the AM and PM peak hours:

- For the 56 employee housing units in the Project area a conservative estimate was made that 50% of the employee housing units would have one employee trip from home to work and one return trip each day; it was further assumed that 75% of those trips would occur during the daytime, and 25% would be night shift or swing shift.
- The NCHRP 684 methodology was used to estimate internal capture between the commercial, residential, and hotel land uses in the Project and Program-Study areas. NCHRP 684 calculations are provided in **Appendix B**.

In total, the ITE methodology resulted in 14,154 daily vehicle trips. That estimate includes internal trip capture[7] for the AM and PM peak hours, but to be conservative assumes no internal capture for the remaining 22 hours of the day. Because the ITE estimates are used in the traffic operations analysis (which is reported under a separate cover), the most conservative trip generation estimates are chosen, which are often about 10% higher than typical rates. These estimates also include pass-by trips[8] which the TDM does not account for. In total ITE rates for commercial mixed-use projects might on the order of 20%-30% higher than TDM trip generation rates.

TDM Trip Generation

The travel demand model uses its own criteria to estimate trip generation and internalization. As described above, its estimates are generally lower than those from ITE methods. TDM estimates are calibrated to local conditions and the model as a whole goes through an extensive validation and peer review process before being adopted by the board of supervisors. TDM estimates are generally lower because they can account for internal trip capture throughout the day rather than just during peak hours, because they are intended to represent annual average conditions rather than worst case conditions, and, because (in trip-based models such as the El Dorado County TDM) they do not count pass-by trips as new vehicle trips.

The TDM assigned 11,322 daily vehicle trips to the road network for the Project-Development and the Program-Study areas. This is about 20% lower than the ITE trip generation estimate and appears reasonable.

[7] Internal trip capture refers to trips that are anticipated to never leave the Project-Development and Program-Study areas, such as a home-based shopping trip from one of the employee cottages to on-site retail. Internal trips need to be backed out of the ITE trip generation estimates for each land use.
[8] Pass-by trips reflect trips already on the road that might stop for convenience, such as gas or coffee stops. Those trips need to be accounted for when analyzing traffic operations at a Project driveway but would be redundant if added to the network for purposes of estimating road volumes across the region.

Table 1. 926 Single-Family Dwelling Units Trip Generation

Description	ITE Land Use	Quantity	Units	Measure	Daily	AM Total	AM Inbound	AM Outbound	PM Total	PM Inbound	PM Outbound	Notes
Project-Development Area (Project)												
Resort Hotel: (300 rooms, 56 cottages, 46 ksf restaurants/commercial/conference)	330	356	rooms	rate	n/a	0.41	63%	37%	0.5	50%	50%	"Peak Hour of Generator" AM: Average Rate, PM: Fitted Curve Daily: (average of AM & PM)*10
				trips	1,630	146	92	54	180	90	90	
Hotel Adjustment for Employee Housing: Assume 50% of HH have 1 employee working per day (75% on day shift)					-56	-28	-21	-7	-28	-7	-21	
Subtotal Project Hotel					1,574	118	71	47	152	83	69	
Single-Family Detached Housing: (56 cottages as employee housing)	210	56	DU	rate	10.57	0.84	264	74%	1.08	0.64	36%	"Peak Hour of Generator" AM, PM, Daily: Fitted Curve
				trips	592	47	12	35	61	39	22	
Housing Adjustment for Employee Housing: Assume 50% of HH have 1 employee working per day (75% on day shift)					-56	-28	-7	-21	-28	-21	-7	
Subtotal Project Housing					536	19	5	14	33	18	15	
Project Subtotal					**2,110**	**137**	**76**	**61**	**185**	**101**	**84**	
Program-Study Area (Program)												
Mixed Use Site: Age Restricted Attached Housing	252	150	DU	rate	3.24	0.29	45%	55%	0.3	54%	46%	"Peak Hour of Generator" AM, PM, Daily: Average Rate
				trips	486	44	20	24	45	24	21	
Mixed Use Site: Retail	822	10	ksf	rate	65.17	7.60	50%	50%	13.24	54%	46%	"Peak Hour of Generator" AM, PM: Average Rate Daily: Fitted Curve
				trips	652	76	38	38	132	71	61	
Multi-Family Residential	220	552	DU	rate	6.74	0.47	24%	76%	0.57	62%	38%	"Peak Hour of Generator" AM, PM, Daily: Average Rate
				trips	3,712	259	62	197	315	195	120	
Retail	821	80	ksf	rate	94.64	7.06	52%	48%	9.72	49%	51%	"Peak Hour of Generator" AM, PM: Average Rate Daily: fitted Curve
				trips	7,570	565	294	271	778	381	397	
NCHRP 684 Adjustment (Project + Program)					-376	-22	-11	-11	-354	-177	-177	
Program Subtotal					**12,044**	**922**	**403**	**519**	**916**	**494**	**422**	
Town and Country Village Project-Development Plus Program-Study Areas												
Project + Program Total					**14,154**	**1,059**	**479**	**580**	**1,101**	**595**	**506**	

Notes:

Land use 330 (Resort Hotel), daily rates are based on ten times the average of the AM and PM peak hour rates.

To be conservative, trip generation rates were based on the higher of either the average rate or the rate based on the fitted curve as published by the Institute of Transportation Engineers.

3.0 VMT ANALYSIS

With implementation of Senate Bill (SB) 743, local agencies such as El Dorado County must analyze project transportation impacts under CEQA based on VMT. The El Dorado County Board of Supervisors adopted applicable methodology guidance and thresholds (resolution 141-2020)[9] which refine and implement methodology and threshold guidance from the Governor's Office of Planning and Research[10]. The method and tools used in this analysis are based on and consistent with El Dorado County resolution 141-2020.

3.1 VMT Modeling Methodology and CEQA Significance Thresholds

Vehicle Miles of Travel (VMT) was analyzed based on the El Dorado County Travel Demand Model (TDM). The TDM is based on an expanded version of the SACMET travel demand model originally developed by the Sacramento Area Council of Governments (SACOG). The model covers the entire County with significant additional road network and land use detail added within neighboring portions of Sacramento County. The TDM is a traditional trip based, four-step (trip generation, distribution, mode choice, and assignment) travel demand model with a 2018 base year and 2040 horizon year. Trip productions and attractions are estimated at the transportation analysis zone (TAZ) level. Within the city, TAZs are roughly neighborhood size areas for which population socioeconomic data is tabulated. (TAZs are larger in less populated rural portions of the County). Trips are estimated by trip purpose based on eight purposes:

- Home-based work
- Home-based shop
- Home-based school
- Home-based other
- Work-other
- Other-other
- Commercial two axle
- Commercial 3+ axle

As trips are estimated and processed by the model, they start as an estimate of non-directional daily trip demand between trip "productions" and "attractions" for each trip type. Those data are factored into direction trips between origins and destinations for four time periods (AM, mid-day, PM, and evening). That origin-destination (OD) data is what the model assigns to the road network to estimate volumes. The assignment is done using an optimization process that minimizes travel time between OD pairs. There is an important but subtle distinction between trip productions and attractions vs origins and destinations. "Home-based" trips are always "produced" by the residential land use and attracted to other land uses. Through careful tracking and application of the matrices which store trip production-attraction, attraction-production, and origin-destination data it is possible to track and assign trips to the residential and commercial land uses throughout the County (and beyond) that generate those trips and the resulting VMT. The production-attraction and

[9] EDC (2020) Resolution 141-2020, Adopting the El Dorado County "Vehicle Miles Traveled" Thresholds of Significance for Purposes of Analyzing Transportation Impacts under the California Environmental Quality Act, adopted by the Board of Supervisors on October 6, 2020.
[10] OPR (2018) Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

origin-destination data are preserved in large matrices which can be leveraged to disaggregate the model's VMT estimates into VMT by trip purpose for evaluating residential, office, retail, and other project types.

The TDM includes 674 TAZs (25 of which represent external gateways) connected by just over 7000 road segments. Each TAZ is represented by a centroid corresponding to the approximate center of travel activity with the TAZ. Each road segment includes relevant characteristics (location, uncongested speed, number of lanes, capacity, etc.) that allow the model to estimate travel times as trips are assigned to the network. **Figure 5** depicts the model road network with red dots reflecting gateways to other regions and the Project-Development and Program-Study areas shown as a red star. **Figure 6** then shows a closer view of area around the Project-Development and Program-Study areas.

A three-step process for the baseline and cumulative analysis years was used to estimate El Dorado County, Project-Development and Program-Study area VMT per resident, employee, and/or service population (residents plus employees)[11] depending on the land use type.

Step 1. This step estimated TAZ-to-TAZ distances from "skims" on the loaded networks generated by the TDM. The loaded networks account for any increases in trip distance that may result from congestion. Model gateway trip lengths were adjusted based on **Table 2** to ensure that the full trip length for travel outside of El Dorado County was accounted for. The lengths for intrazonal trips (which have their origin and destination within the same TAZ) were estimated as half of the distance to the nearest neighboring TAZ, which is the industry standard practice.

Step 2 This step estimated production to attraction and attraction to production trip matrices by period and purpose, then combined those data with the Task 1 distance skims to estimate VMT between different land uses and store those data in matrices. At the end of this step, the VMT results are available at a very disaggregated level. The production to attraction and attraction to production trip matrices are derived from person tables factored to vehicle trip tables using the formula from the El Dorado County travel demand model.

Step 3 This step aggregated the period specific VMT matrices back into daily matrices by trip purpose, then reported back various combinations of the matrix row totals (production based VMT) and column totals (attraction based VMT) by TAZ and trip purpose. The specific values reported differ for residential, Retail, and office/other land uses.

The resulting tables are then combined with TAZ level population and employment data to estimate per capita VMT for the County and the Project. The TDM is based on the CUBE software package by Bentley Systems. Scripts used in each calculation step, and TAZ level results, are provided in **Appendix A**.

[11] Service population (residents + employees) can be used where tools cannot allocate VMT to one group or the other.

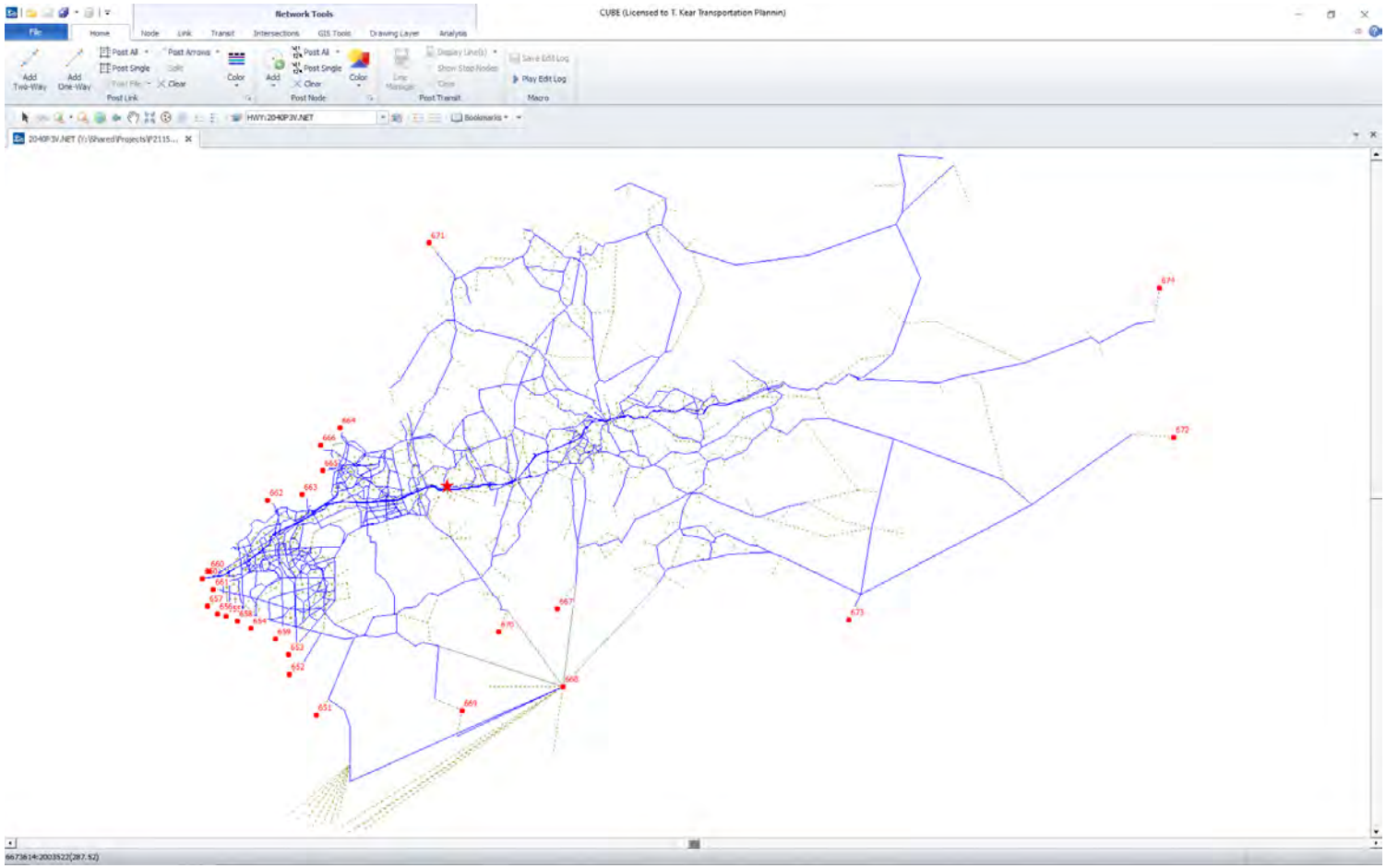


Figure 5. Travel demand model network gateways shown as red dots, and Project-Development and Program-Study areas TAZs location shown as a red star

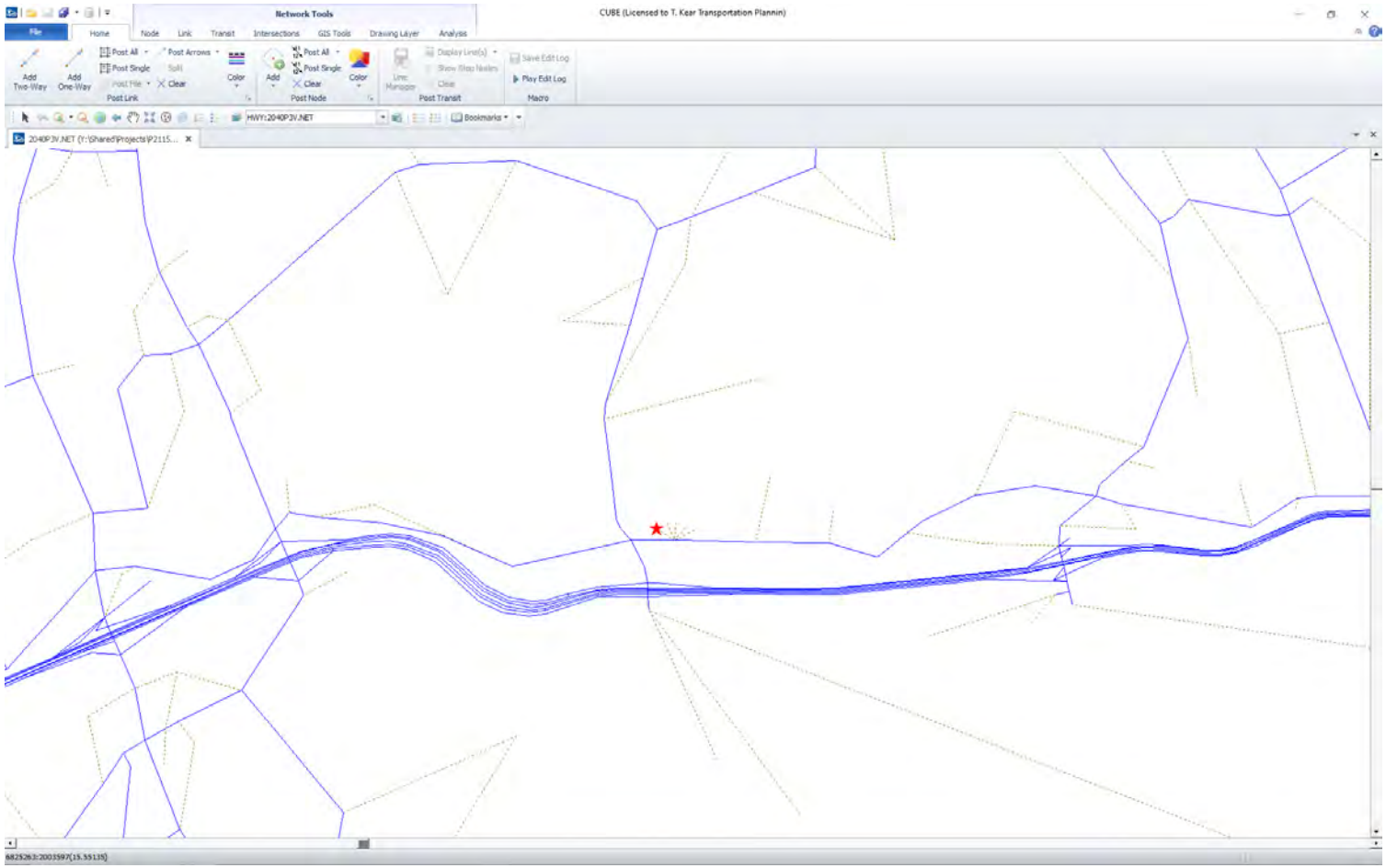


Figure 6. Closeup view of Bass Lake Hills with Project-Development and Program-Study areas shown as a red star

Table 2. Average trip-length adjustments for TDM gateways

ID	Gateway Location	Average Additional Travel Distance (miles)	
		Internal to External (IX) Trips	External to Internal (XI) Trips
650	US 50 (to/from the west)	12.41	13.08
651	Dillard Rd	4.11	3.96
652	Sloughhouse Rd	0.00	0.00
653	Grant Line Rd/Sunrise Blvd	31.33	20.39
654	Excelsior Rd	11.07	10.38
655	Bradshaw Rd	11.32	8.80
656	Mayhew Rd	0.00	0.00
657	Jackson Rd (SR 16)	6.91	6.40
658	Local access between Bradshaw Rd and Excelsior Rd	0.00	0.00
659	Eagles Nest Rd	0.00	0.00
660	Folsom Blvd	7.73	7.19
661	Kiefer Blvd	8.88	8.54
662	Sunrise Blvd	5.47	6.14
663	Hazel Ave	8.16	5.41
664	Folsom Auburn Rd	10.17	12.66
665	Greenback Ln	5.43	5.17
666	Oak Ave	6.97	7.44
667	SR 49 (to/from the south)	0.00	0.00
668	Jackson Rd/Latrobe Rd/SR 49/Omo Ranch Rd	15.96	14.21
669	Jackson Rd	0.00	0.00
670	Latrobe Rd	0.00	0.00
671	SR 49 (to/from the north)	18.61	16.28
672	SR 88	0.00	0.00
673	N. South Rd	3.73	3.82
674	US 50 (to/from the east)	19.21	18.38

Note: Internal to External (IX) trips are trips that begin inside the El Dorado County model area and end outside. External to Internal (XI) trips are trips that begin outside the El Dorado County model area and end inside. Source: California Statewide Travel Demand Model.

Source: California Statewide Travel Demand Model as cited by Fehr and Peers in the Central El Dorado Hills Specific Plan VMT Analysis Memorandum dated January 5, 2021.

VMT Significance Thresholds

VMT thresholds set an identifiable metric by which the Project's effect on VMT is determined to be significant or less-than-significant. Land use specific thresholds are based on methodology and thresholds adopted by the El Dorado County Board of Supervisors (resolution 141-2020)[12] and guidance from the Governor's Office of Planning and Research (OPR)[13]:

- Residential: 15% below baseline county-wide VMT per resident,
- Retail: no net increase in County Wide VMT per service population, and
- Other (including hotel, office, industrial, etc.): 15% below baseline regional or city VMT employee.

When a trip-based method is used to analyze a residential project, the focus is on home-based trips (home-based work, shop, school, other). Similarly, when a trip-based method is used to analyze an "other" project, the focus should be on home-based work trips (i.e., commute trips). Retail projects consider all VMT. VMT is defined by OPR to limit the analysis to the distance traveled by passenger vehicles, specifically cars and light trucks. Heavy trucks may be included for modeling convenience and computational ease but are not required. However, the vehicle types included should be consistent across both the tools used to set the significance threshold and evaluate the Project.

As noted by the Governor's Office of Planning and Research, adding local-serving retail[14] into the urban fabric improves retail destination proximity. Local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies may presume such development creates a less-than-significant impact. (Regional serving retail on the other hand can substitute longer trips for shorter ones, which may lead to a significant impact.) Note that the Town and Country Village project is assumed to have regional serving retail for purposes of this analysis.

The Governor's Office of Planning and Research advises lead agencies to evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

[12] EDC (2020) Resolution 141-2020, Adopting the El Dorado County "Vehicle Miles Traveled" Thresholds of Significance for Purposes of Analyzing Transportation Impacts under the California Environmental Quality Act, adopted by the Board of Supervisors on October 6, 2020.
[13] OPR (2018) Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018, Governor's Office of Planning and Research, Sacramento, CA.
[14] Many cities and counties define local-serving and regional-serving retail in their zoning codes. Generally, however, retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.

For this Project, 2018 baseline, Project-Development area and Program-Study area estimates for 2018 and 2040 were computed in terms of VMT per resident (residential), employee (hotel) and service population (retail). In addition to the home-based work VMT specified by OPR, the analysis also included work-other, and a portion of the other-other that were produced by the Project. (The production-attraction and attraction-production trip matrices were combined, then allocated to home-based and work-based trip types based on each TAZ's ratio between those trip types.) Commercial vehicle trips, and through vehicle trips, were not allocated back to the Project level per OPR guidance.

For modeling purposes, the Project-Development and Program-Study areas were placed in empty TAZs (#632-#636) which were positioned appropriately on the model road network with their access to Country Club Drive, near Bass Lake Rd. For non-residential uses, the TDM used employment data rather than square footage as its primary input. Employment was based on estimates generated by Economic Planning Systems, Inc and provided by Raney Planning and Management, Inc. For residential land uses, the TDM used dwelling units as its primary input. Land uses were as follows:

Project-Development Area:

- Residential (112 cottages): 56 were input as multi-family dwelling units for employees, with the remainder considered as part of the hotel.
- Hotel (300 rooms, event center and ancillary retail): 111 "other" employees and 34 retail employees.

Program-Study Area:

- Residential: 702 multi-family dwelling units.
- Retail (90,000 sqft): 180 retail employees.

Note that employment estimates are based on population and employment projections developed by Economic Planning Systems, Inc. (EPS) for use in economic and environmental analysis of the Town and Country Village Project. (**Table 3**)

VMT Modeling Results

TAZ level VMT estimates are provided in **Appendix E**, which also identifies TAZs located inside and outside of El Dorado County for purposes of data aggregation. Results are summarized in **Table 4**. Note that in keeping with OPR and El Dorado County guidance, the baseline VMT per resident, baseline VMT per employee, and baseline VMT per service population estimates for El Dorado County are derived for this analysis using the same tools that are employed to analyze the Project. Those baseline VMT calculations are aggregated from TAZ level results as documented in **Appendix E**.

Table 3. Population and Employment estimates from EPS

DRAFT

Table A-2
Town & Country Village
Fiscal Impact Analysis
Land Use Summary at Buildout

Land Use	Acres	Development Totals: Residential Units	Development Totals: Commercial Bldg. Sq. Ft.	Development Totals: Hotel Rooms	Sq. Ft. per Employee / Persons per Household [1]	Project Population/Employment: Residents	Project Population/Employment: Employees	Project Population/Employment: Persons Served [2]
Proposed Project Development Area								
Residential Land Uses					*Persons per Household*			
Multifamily Residential	7.9	56	-	-	2.45	137	-	
Workforce Housing/Cottages	[3]	56	-	-	2.45	137	-	
Total Residential Land Uses	**7.9**	**112**	**-**	**-**		**274**	**-**	
Nonresidential Land Uses					*Sq. Ft. per Employee*			
Hotel	14.3	-	134,400	300	1,500	-	90	
Hotel Retail	[4]	-	25,600	-	750	-	34	
Wedding Venue/Event Center	[4]	-	21,000	-	1,000	-	21	
Total Nonresidential Land Uses	**14.3**	**-**	**181,000**	**300**		**-**	**145**	
Open Space	**4.4**							
Circulaton	**3.7**							
Total Proposed Project Development Area	**30.3**	**112**	**181,000**	**300**		**274**	**145**	**347**
Program Study Area								
Residential Land Uses					*Persons per Household*			
Multifamily Residential	15.1	352	-	-	2.45	862	-	
Residential Mixed Use - Multifamily	6.9	200	-	-	2.45	490	-	
Residential Mixed Use - Senior Housing	5.0	150	-	-	1.20	180	-	
Total Residential Land Uses	**27.0**	**702**	**-**	**-**		**1,532**	**-**	
Nonresidential Land Uses					*Sq. Ft. per Employee*			
Commercial Mixed Use	[5]	-	90,000	-	500	-	180	
Total Nonresidential Land Uses	**-**	**-**	**90,000**	**-**		**-**	**180**	
Open Space	**3.2**							
Total Program Study Area	**30.2**	**702**	**90,000**	**-**		**1,532**	**180**	**1,622**
Total All Uses	**60.5**	**814**	**271,000**	**300**		**1,807**	**325**	**1,969**

Source: MH Mohanna Development; California Department of Finance; EPS.

[1] Persons per household for all units except Senior Housing is based on the countywide average persons per household for all residential units in the County, based on information provided by the California Department of Finance as of January 2023. Persons per household for Senior Housing is assumed to be approximately one half of the persons per household for a standard residential unit.
[2] Persons served is defined as total population plus half of total employees for the purposes of the Fiscal Impact Analysis and Public Facilities Financing Plan Analyses.
[3] Workforce Housing/Cottage acreage is included in Multifamily Residential acreage.
[4] Hotel Retail and Wedding Venue/Event Center acreage is included in total Hotel acreage.
[5] Commercial Mixed Use acreage is included in Residential Mixed Use acreages.

red by EPS 11/8/2023

Table 4. VMT per employee results

Land Use	Baseline	Significance Threshold	Project
Thresholds			
2018 countywide average **home-based** VMT per resident. (Source: Derived by this analysis using the same tools that were employed to analyze the Project.)	22.1	18.8 (85% of Baseline)	
2018 countywide average VMT per office/**hotel**/industrial employee. (Source: Derived by this analysis using the same tools that were employed to analyze the Project.)	26.3	22.3 (85% of Baseline)	
2040 countywide average **retail** VMT per service population. (With non-retail Project-Development area and Program-Study area land use). (Source: Derived by this analysis using the same tools that were employed to analyze the Project.)	19.5	19.5 (100% of Baseline)	
2040 countywide average **retail** VMT per service population. (With non-retail super-cumulative land use). (Source: Derived by this analysis using the same tools that were employed to analyze the Project.)	19.8	19.8 (100% of Baseline)	
2018 Project-Development Area			
Project-Development area household VMT per resident. (56 employee cottages).		18.8 (85% of Baseline)	17.1 (Note 1)
Project-Development area VMT per **hotel** employee. (Hotel(s), 56 hotel cottages, ancillary uses).		22.3 (85% of Baseline)	21.8 (Note 2)
2040 Project-Development Area and Program-Study Area			
Project-Development area household VMT per resident. (56 employee cottages).		18.8 (85% of Baseline)	15.2 (Note 1)
Project-Development area VMT per **hotel** employee. (Hotel(s), 56 hotel cottages, ancillary uses).		22.3 (85% of Baseline)	19.5 (Note 2)
Program-Study area household VMT per resident. (702 dwelling units).		18.8 (85% of Baseline)	22.9 (Note 3)
Program-Study area retail VMT per service population. (90,000 sqft retail).		19.5 (100% of Baseline)	19.5
Super-Cumulative Project-Development Area and Program-Study Area (Super-Cumulative includes the proposed Marble Valley, Lime Rock, and EDH 52 projects)			
Project-Development area household VMT per resident. (56 employee cottages).		18.8 (85% of Baseline)	13.9 (Note 1)
Project-Development area VMT per **hotel** employee. (Hotel(s), 56 hotel cottages, ancillary uses).		22.3 (85% of Baseline)	18.1 (Note 2)
Program-Study area household VMT per resident. (702 dwelling units).		18.8 (85% of Baseline)	21.4 (Note 3)
Program-Study area retail VMT per service population. (90,000 sqft retail).		19.8 (100% of Baseline)	19.8

Note 1: Project-Development area residential VMT/resident for the 56 employee housing units was adjusted by removing the VMT associated with the HBW (commute) trips that the TDM anticipated these homes would produce.

Note 2: Project-Development area hotel VMT/resident was adjusted to reflect employee housing by removing 112/145^{ths} of the home-based work (commute) trips that the TDM anticipated the hotel would attract.

Note 3: Without the VMT reduction benefit of employee housing, VMT per resident for these Program-Study area homes exceeds the significance threshold for residential projects.

VMT Discussion

Note that retail VMT per service population is little effected by the Project-Development and Program-Study area retail uses. This is because retail development is analyzed by looking at countywide retail per service population, which allows for existing retail trips to be attracted to the new, more convenient, shopping areas. VMT from new trips can be partially or fully offset by reduced VMT from existing trips that are attracted to the new retail development at the expense of retail uses located further away.

Also note that the event center and museum are considered as ancillary uses to the hotel and are included in the hotel analysis. It is also noteworthy that uses such as event centers typically have little impact on average daily VMT as they are relatively infrequent. For example, a single event attracting 365 trips might have a noticeable effect on VMT during the day on which the event occurs, but is equivalent to attracting a single trip on an annualized basis.

VMT CEQA Findings

Based on a comparison of the significance threshold and anticipated Project-Development area and Program-Study area VMT:

- The Project-Development area hotel has a **less-than-significant** CEQA impact on VMT. This includes the 300 hotel rooms, 112 cottages (56 units publicly available through the hotel, and 56 units received as employee housing), the event center, restaurants, and ancillary retail within the hotel(s).
- The residential portion of the Program-Study area has a **significant-unavoidable** CEQA impact on VMT. This differs from the employee housing because there is not VMT reduction for the elimination of commute trips.
- The retail portion of the Program-Study area has a **less-than-significant** CEQA impact on VMT.

Mitigation for the Program-Study area residential units can be based on measures identified by CAPCOA[15] and are already designed into the Project, specifically the substantial densification relative to surrounding land uses, the mixed-use nature of the Project, and bicycle connectivity. Additional VMT mitigation, such as implementing transit service, is not feasible, nor would it reduce the impact to a less-than-significant level.

[15] CAPCOA (2021) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, California Air Pollution control Officers Association.

4.0 TRANSIT, BICYCLE, AND PEDESTRIAN ANALYSIS

4.1 Existing Transit Services

El Dorado Transit is the primary public transit service provider in El Dorado County. Their services are described on their website and include local transit services within and between community areas of the county, connections into Folsom, and limited commuter service to Sacramento. A transit system map is provided as **Figure 7**. Within the study area, El Dorado Transit provides:

- Limited commuter service during morning and afternoon commute periods connecting a park-and-ride lot, located adjacent to the Cambridge Rd interchange, with Placerville and downtown Sacramento.
- Hourly service from approximately 6AM to 6PM from the Cambridge Rd park-and-ride lot to several locations in Folsom including the Iron Point Light Rail Station, Ingersoll Way & Parker Drive, Intel, Kaiser Permanente, and Folsom Lake College. This service also connects with Red Hawk Casino and several locations within the City of Placerville (Raley's, Big Lots, Health and Human Services, and Placerville Library).
- Dial-a-ride services are also provided within many portions of El Dorado County, including El Dorado Hills, Bass Lake Hills, and Cameron Park.

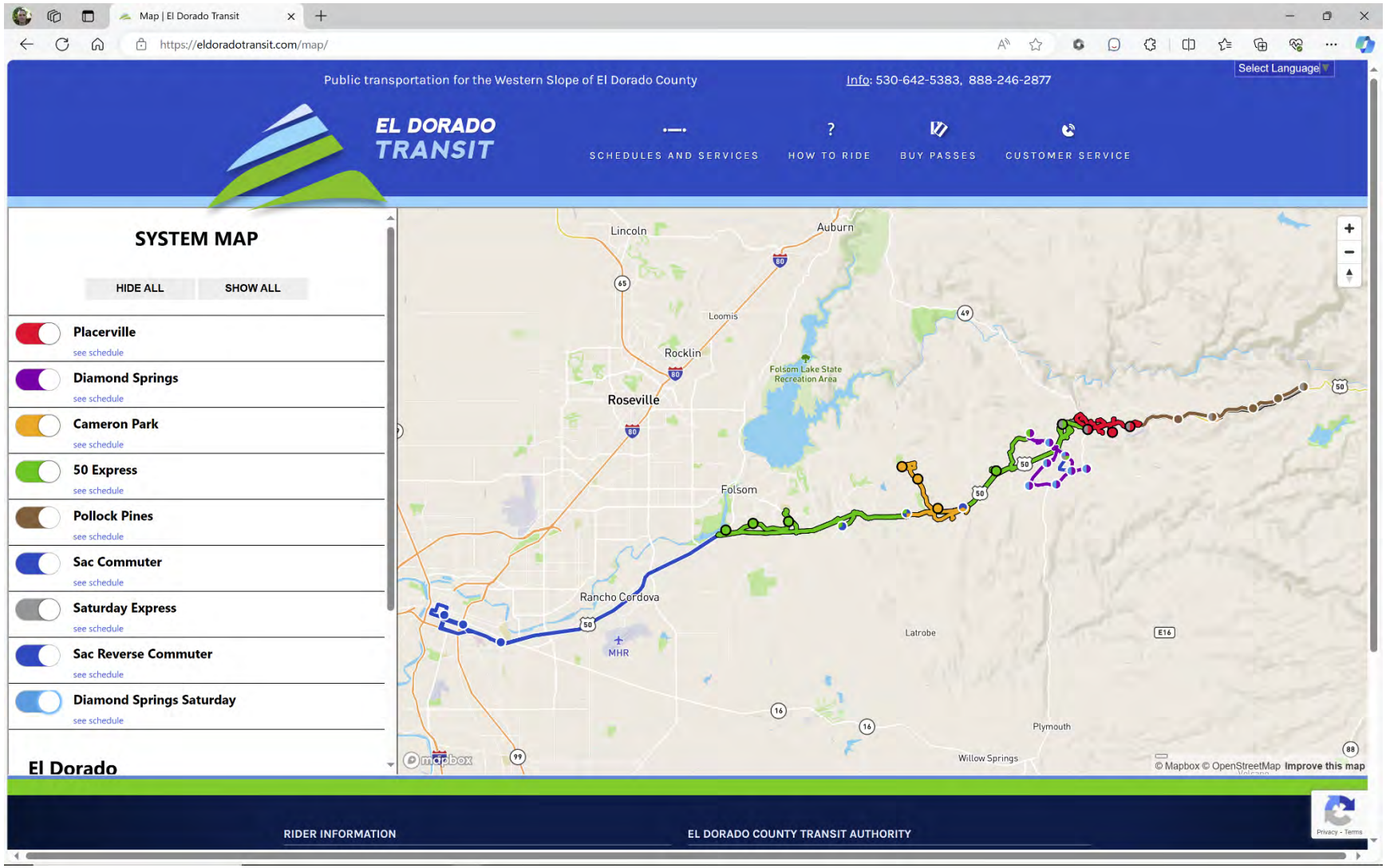


Figure 7. Transit system overview map

Through connections at the Missouri Flat Transit Center, the Folsom Lake College El Dorado Center, and the Placerville Station Transfer Center, there are connections to local routes serving Diamond Springs, Placerville, and Pollock Pines on an hourly basis between roughly 6AM and 6PM. Though the utility of those connections is limited due to the hourly headway.

(Note that there is a new park-and-ride facility just west of the Bass Lake Rd/Country Club Drive intersection which may also serve as a future bus stop. The 2023 Capital Improvement Program includes funds for park-and-ride facilities and other transit capital expenditures in Project 36109004.)

4.2 Existing and Proposed Bicycle and Pedestrian Facilities

There are limited pedestrian facilities but a fairly, well-developed set of bicycle facilities is proximate to the Project-Development and Program-Study areas. Existing and proposed bicycle facilities based on the County's active transportation plan[16] are shown in **Figure 8**, which reflects 2020 conditions. **Figure 4** provides an updated snapshot of those facilities along the frontage for the Project-Development and Program-Study areas (as well as through the Project-Development and Program-Study areas). The class 1 bike trail along the Old Country Club Dr alignment, and class 2 bike lanes along Country Club Dr have been constructed. There are also existing class 2 bike lanes along Bass Lake Road, however counter to what is shown as the existing condition in the Active Transportation Plan, those class 2 bike lanes do not pass under US 50 (see **Figure 9**).

Apart from class 1 trails which are utilized as multi-purpose trails in El Dorado County, the area around the Project-Development and Program-Study areas lacks sidewalks and other pedestrian amenities. However, the Bass Lake Rd/Country Club Dr intersection does include crosswalks with protected pedestrian phases.

The Project-Development area will be required to construct the approved class 1 bike trail along the development's Bass Lake Rd frontage, as well as the proposed class 1 trail through the Project-Development area. The Program-Study area would be required to build the proposed grade separated class 1 trail over Bass Lake Rd if it were not constructed as part of the Project-development area.

4.3 Transit, Bicycle, and Pedestrian Significance Thresholds

A project is considered to have a significant impact if it interferes with existing or proposed transit service, bicycle facilities, or pedestrian facilities.

4.4 Transit, Bicycle, and Pedestrian CEQA Findings

The Project-Development and Program-Study areas do not interfere with existing or proposed transit service, bicycle facilities, or pedestrian facilities. The Project-Development and Program-Study areas have a **less-than-significant** Impact on transit, bicycle, and pedestrian facilities.

[16] Apt ref

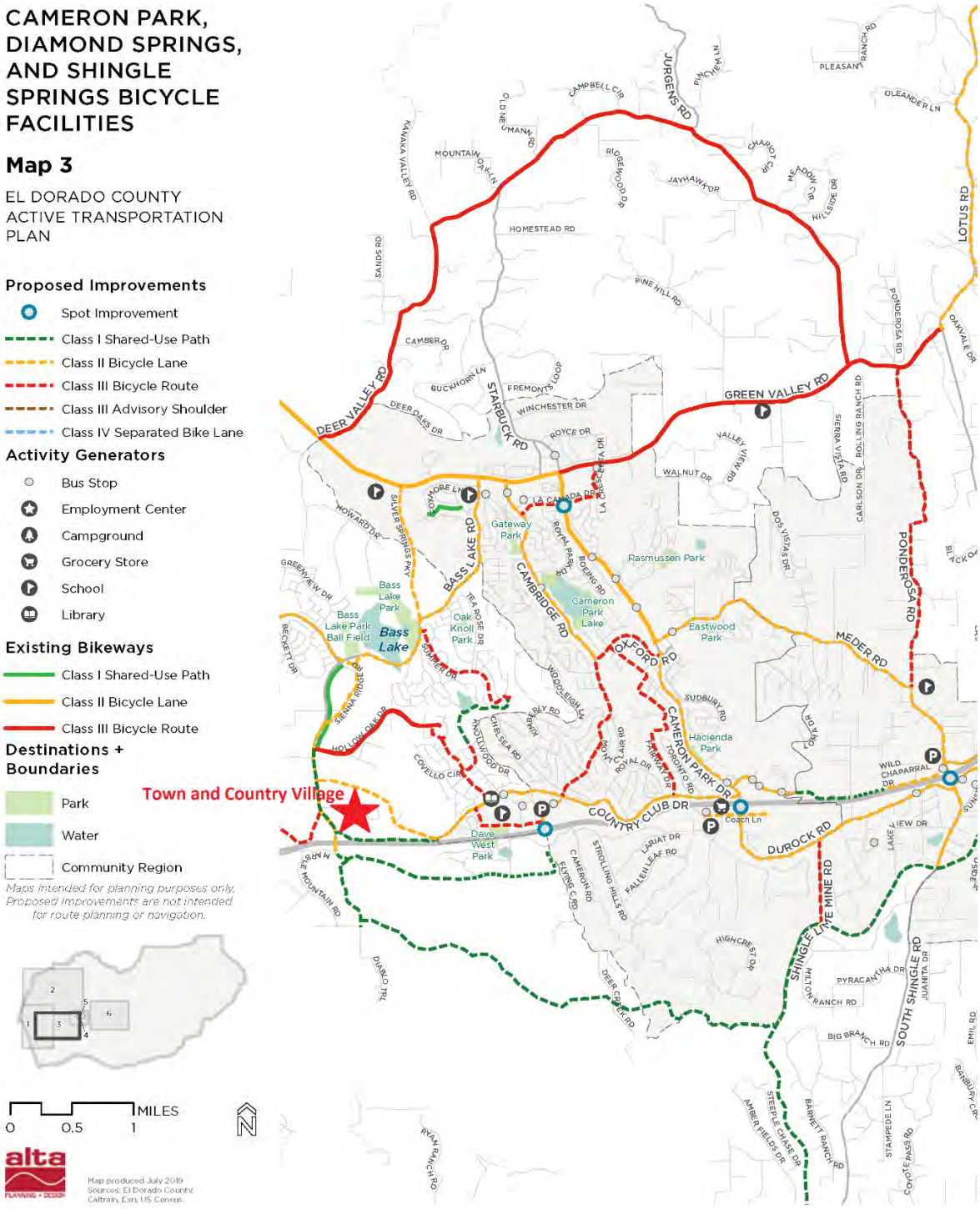


Figure 8. Bicycle facilities near Town and Country Village (adapted from 2020 ATP)[17]

[17] ECTTC (2020) El Dorado County Active Transportation Plan, El Dorado County Transportation Commission, Placerville, CA.



Figure 9. Looking South on Bass Lake Rd at end of the class 2 bike lane near US 50

5.0 COLLISION HISTORY/SAFETY ANALYSIS

5.1 Collision Data

The California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) data base as implemented through the UC Berkely Transportation Injury Mapping System (TIMS)[18] was used to identify collisions in the vicinity of the Project-Development and Program-Study areas. A review of 5 years (2018-2022) of collision data in the Project vicinity identified eight collisions on Bass Lake Rd in the vicinity of the Project-Development and Program-Study areas.

Two Collisions at the Bass Lake Rd Country Club Drive intersection:

- A northbound rear-end collision involving three vehicles on 5/9/2020 at 12:30 PM due to unsafe speed (possible injury).
- A head-on collision involving two vehicles on 5/22/2019 at 4:20 PM due to wrong side of road driving (injury).

Five Collisions at the Bass Lake interchange:

- A westbound single vehicle collision struck a fixed object on 1/13/2018 at 4:50 AM due to driving under the influence (possible injury).
- An eastbound vehicle broadsided a southbound vehicle on 3/18/2018 at 5:20 PM due to failure to yield right of way (possible injury).
- A northbound rear-end collision involving two vehicles on 6/6/19 at 10:35 AM due to unsafe speed (possible injury).
- A head-on collision involving two vehicles just north of the interchange on 10/30/2020 at 2:55 PM due to wrong side of road driving (injury).
- A westbound rear-end collision involving two vehicles on 1/27/2020 at 5:20 PM due to unsafe starting or backing (possible injury). Note that there are duplicate records for this collision.

An additional collision shows up in mapping software at the Bass Lake Rd/westbound ramp intersection, however that collision occurred 2640 feet to the east which would put it near the top of the offramp. This was a single vehicle overturn due to unsafe speed with 4 possible injuries and is not considered relevant to the Project-Development and Program-Study areas.

[18] TIMS (2024) Transportation Injury Mapping System, https://tims.berkeley.edu/, accessed March 2024

5.2 Collision History Significance Thresholds

There are two significance thresholds commonly applied to collision history:

- Collision rates per million vehicle miles can be compared to statewide averages published by Caltrans for road segments. For two lane undivided roadways, the latest available data available show an average rate of 1.05 collisions per million vehicle miles in 2021 and 1.03 as a three-year average for 2019-2021.[19] **For this analysis the significance threshold of 1.03 collisions per million vehicle miles was used.**

- For unsignalized intersections, the crash experience signal warrant from the manual of uniform traffic control devices (MUTCD) is also applicable. That warrant requires at least five collisions in one year before it is applicable, and the intersections near the Project-Development and Program-Study areas would not trigger its application.

In both cases when a key transportation facility for a project is found to be unsafe, the project is considered to have a potentially significant impact and mitigation should be considered. This can be problematic because the project in question is often not the cause of the unsafe condition, however in practice most applicants want to address safety issues fronting their projects.

5.3 Collision Rates Along Project Frontage

There were no reported collisions along the Project's Country Club Dr frontage over the 2018-2022 period analyzed. (The closest collision on Country Club Dr occurred east of Tierra De Dios Dr.)

For Bass Lake Rd there were seven collisions on the 0.36 mile stretch between the US 50 eastbound ramps and Country Club Drive. This stretch of Bass Lake Rd had an average volume of 13,900 vehicles per day in 2023. A 1.25% growth rate was assumed to back-cast that volume and arrived at an average 2018-2022 volume of 13,400 vehicle trips per day. These data reflect a collision rate of 0.80 collisions per million vehicle miles of travel.

5.4 Collision History CEQA Findings

The most collision-prone facility accessing the Project-Development and Program-Study areas is Bass Lake Rd between the US 50 eastbound offramp and Country Club Dr. Individual intersections along this segment do not meet the crash experience signal warrant, and the overall collision rate of 0.80 collisions per million vehicle miles of travel is well below the statewide average of 1.03 collisions per million vehicle miles of travel. Based on these results the Project-Development and Program-Study areas have a **less- than-significant** impact on collision history.

[19] Caltrans (2024) 2021 Crash Data on California State Highways (road miles, travel, crashes, crash rates), https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/annual-collision-data/2021crashdataoncshwybook1a11y.pdf, accessed March 2024.

Appendix A: VMT Calculations

```
;-------------------------------------------------------------------------------
;
; Step 1: Skim the loaded networks for each period to get TAZ-to-TAZ
;         distances. Use half of the shortestes destance to closest neighboring
;         TAZ for the intrazonal distance. Adjust gateway trip lengths.
;
;         Inputs: Loaded networks for each period
;         Outputs: Total TAZ-to-TAZ distance for each period
;
;-------------------------------------------------------------------------------
; Input networks
;-------------------------------------------------------------------------------
AMNET='.\Loaded_Networks\2040A3VS.NET'
MIDDAYNET='.\Loaded_Networks\2040MDVS.NET'
PMNET='.\Loaded_Networks\2040P3V.NET'
EVVNET='.\Loaded_Networks\2040EVV.NET'
;-------------------------------------------------------------------------------
; Input OD
;-------------------------------------------------------------------------------
AMOD= '.\OD_Tables\2040A3VS.MAT'
MDOD= '.\OD_Tables\2040MDV.MAT'
PMOD= '.\OD_Tables\2040P3V.MAT'
EVVOD='.\OD_Tables\2040EVV.MAT'
;-------------------------------------------------------------------------------
; Temp output distance skims
;-------------------------------------------------------------------------------
AMDIST= '.\Temp_Files\AM_Distance.MAT'
MDDIST= '.\Temp_Files\MD_Distance.MAT'
PMDIST= '.\Temp_Files\PM_Distance.MAT'
EVVDIST='.\Temp_Files\EV_Distance.MAT'
;-------------------------------------------------------------------------------
; Temp output for skim matrici scratch files
;-------------------------------------------------------------------------------
TEMP= '.\Temp_Files\TEMP.MAT'
TEMP2='.\Temp_Files\TEMP2.MAT'
;
;
;
;-------------------------------------------------------------------------------
; Run a distance skim for each time period
;-------------------------------------------------------------------------------
; AM peak period enterzonal distance skim
RUN PGM=HWYLOAD
FILEI NETI = "@AMNET@"
FILEO MATO[1] = "@TEMP@",
 MO=1 FORMAT=tpp                                    ; output skim matrix
 PHASE=LINKREAD                                     ; define link groups
  IF (LI.HOVLINK=0) ADDTOGROUP=1                    ; no restriction
  IF (LI.HOVLINK=1) ADDTOGROUP=2                    ; walk
  IF (LI.HOVLINK=2) ADDTOGROUP=3                    ; HOV lanes
  IF (LI.HOVLINK=3) ADDTOGROUP=4                    ; HOV bypassses
  IF (LI.CAPCLASS=99) ADDTOGROUP=5                  ; switched off links
 endphase
 PHASE=ILOOP                                        ; skim path building
    PATHLOAD PATH=li.TIME_1,EXCLUDEGRP=2,5,         ; pathload without HOV links
       MW[1]=PATHTRACE(LI.DISTANCE),SELECTGROUP=1   ; select links used by all
veh
 endphase
ENDRUN
; intrazonals - fill the diagonal element with half of the rowmin value
RUN PGM=MATRIX
```

```
61   FILEI MATI[1] = "@TEMP@"
62   FILEO MATO[1] = "@TEMP2@",
63    MO=1
64    MW[1]=MI.1.1
65    iz1 = lowest(1,1,0.5,32700)*0.5     ;(MW,# to sum, low value, hight
     vakue)...so this takes half the shortest distance to a neighboring zone beteen
     0.5' and 32700'
66    jloop j=i
67       mw[1] = iz1
68    endjloop
69   ENDRUN
70   ;
71   ; Adjust gateway distnaces
72   ;(Note: these values come from the 1/5/2021 Central El Dorado Hills Specific
     Plan VMT Analysis memorandom)
73   RUN PGM=MATRIX
74   FILEI MATI[1] = "@TEMP2@"
75   FILEO MATO[1] = "@AMDIST@",
76    MO=1
77    MW[1]=MI.1.1
78   ;
79   ;Adjust external to internal (XI) gateway distance
80    IF (I=650) mw[1]=mw[1]+13.08
81    IF (I=651) mw[1]=mw[1]+3.96
82    IF (I=652) mw[1]=mw[1]+0
83    IF (I=653) mw[1]=mw[1]+20.39
84    IF (I=654) mw[1]=mw[1]+10.38
85    IF (I=655) mw[1]=mw[1]+8.80
86    IF (I=656) mw[1]=mw[1]+0
87    IF (I=657) mw[1]=mw[1]+6.4
88    IF (I=658) mw[1]=mw[1]+0
89    IF (I=659) mw[1]=mw[1]+0
90    IF (I=660) mw[1]=mw[1]+7.19
91    IF (I=661) mw[1]=mw[1]+8.54
92    IF (I=662) mw[1]=mw[1]+6.14
93    IF (I=663) mw[1]=mw[1]+5.41
94    IF (I=664) mw[1]=mw[1]+12.66
95    IF (I=665) mw[1]=mw[1]+5.17
96    IF (I=666) mw[1]=mw[1]+7.44
97    IF (I=667) mw[1]=mw[1]+0
98    IF (I=668) mw[1]=mw[1]+14.21
99    IF (I=669) mw[1]=mw[1]+0
100   IF (I=670) mw[1]=mw[1]+0
101   IF (I=671) mw[1]=mw[1]+16.28
102   IF (I=672) mw[1]=mw[1]+0
103   IF (I=673) mw[1]=mw[1]+3.82
104   IF (I=674) mw[1]=mw[1]+18.38
105  ;
106  ;Adjust internal to external (IX) gateway distance
107   jloop j=650
108      mw[1] = mw[1]+12.41
109   endjloop
110  ;
111   jloop j=651
112      mw[1] = mw[1]+4.11
113   endjloop
114  ;
115   jloop j=652
116      mw[1] = mw[1]+0
117   endjloop
118  ;
```

```
 jloop j=653
    mw[1] = mw[1]+31.33
 endjloop
;
 jloop j=654
    mw[1] = mw[1]+11.07
 endjloop
;
 jloop j=655
    mw[1] = mw[1]+11.32
 endjloop
;
 jloop j=656
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=657
    mw[1] = mw[1]+6.91
 endjloop
;
 jloop j=658
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=659
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=660
    mw[1] = mw[1]+7.73
 endjloop
;
 jloop j=661
    mw[1] = mw[1]+8.88
 endjloop
;
 jloop j=662
    mw[1] = mw[1]+5.47
 endjloop
;
 jloop j=663
    mw[1] = mw[1]+8.16
 endjloop
;
 jloop j=664
    mw[1] = mw[1]+10.17
 endjloop
;
 jloop j=665
    mw[1] = mw[1]+5.43
 endjloop
;
 jloop j=666
    mw[1] = mw[1]+6.97
 endjloop
;
 jloop j=667
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=668
```

```
180       mw[1] = mw[1]+15.96
181     endjloop
182    ;
183     jloop j=669
184       mw[1] = mw[1]+0
185     endjloop
186    ;
187     jloop j=670
188       mw[1] = mw[1]+0
189     endjloop
190    ;
191     jloop j=671
192       mw[1] = mw[1]+18.61
193     endjloop
194    ;
195     jloop j=672
196       mw[1] = mw[1]+0
197     endjloop
198    ;
199     jloop j=673
200       mw[1] = mw[1]+3.73
201     endjloop
202    ;
203     jloop j=674
204       mw[1] = mw[1]+19.21
205     endjloop
206    ;
207    ENDRUN
208    ;
209    ;
210    ; mid day enterzonal distance skim
211    RUN PGM=HWYLOAD
212    FILEI NETI = "@MIDDAYNET@"
213    FILEO MATO[1] = "@TEMP@",
214     MO=1 FORMAT=tpp                                    ; output skim matrix
215     PHASE=LINKREAD                                     ; define link groups
216      IF (LI.HOVLINK=0) ADDTOGROUP=1                    ; no restriction
217      IF (LI.HOVLINK=1) ADDTOGROUP=2                    ; walk
218      IF (LI.HOVLINK=2) ADDTOGROUP=3                    ; HOV lanes
219      IF (LI.HOVLINK=3) ADDTOGROUP=4                    ; HOV bypassses
220      IF (LI.CAPCLASS=99) ADDTOGROUP=5                  ; switched off links
221     endphase
222     PHASE=ILOOP                                        ; skim path building
223        PATHLOAD PATH=li.TIME_1,EXCLUDEGRP=2,5,         ; pathload without HOV links
224           MW[1]=PATHTRACE(LI.DISTANCE),SELECTGROUP=1   ; select links used by all
    veh
225     endphase
226    ENDRUN
227    ; intrazonals - fill the diagonal element with half of the rowmin value
228    RUN PGM=MATRIX
229    FILEI MATI[1] = "@TEMP@"
230    FILEO MATO[1] = "@TEMP2@",
231     MO=1
232     MW[1]=MI.1.1
233     iz1 = lowest(1,1,0.5,32700)*0.5
234     jloop j=i
235       mw[1] = iz1
236     endjloop
237    ENDRUN
238    ;
239    ; Adjust gateway distnaces
```

```
;(Note: these values come from the 1/5/2021 Central El Dorado Hills Specific
Plan VMT Analysis memorandom)
RUN PGM=MATRIX
FILEI MATI[1] = "@TEMP2@"
FILEO MATO[1] = "@MDDIST@",
 MO=1
 MW[1]=MI.1.1
;
;Adjust external to internal (XI) gateway distance
 IF (I=650) mw[1]=mw[1]+13.08
 IF (I=651) mw[1]=mw[1]+3.96
 IF (I=652) mw[1]=mw[1]+0
 IF (I=653) mw[1]=mw[1]+20.39
 IF (I=654) mw[1]=mw[1]+10.38
 IF (I=655) mw[1]=mw[1]+8.80
 IF (I=656) mw[1]=mw[1]+0
 IF (I=657) mw[1]=mw[1]+6.4
 IF (I=658) mw[1]=mw[1]+0
 IF (I=659) mw[1]=mw[1]+0
 IF (I=660) mw[1]=mw[1]+7.19
 IF (I=661) mw[1]=mw[1]+8.54
 IF (I=662) mw[1]=mw[1]+6.14
 IF (I=663) mw[1]=mw[1]+5.41
 IF (I=664) mw[1]=mw[1]+12.66
 IF (I=665) mw[1]=mw[1]+5.17
 IF (I=666) mw[1]=mw[1]+7.44
 IF (I=667) mw[1]=mw[1]+0
 IF (I=668) mw[1]=mw[1]+14.21
 IF (I=669) mw[1]=mw[1]+0
 IF (I=670) mw[1]=mw[1]+0
 IF (I=671) mw[1]=mw[1]+16.28
 IF (I=672) mw[1]=mw[1]+0
 IF (I=673) mw[1]=mw[1]+3.82
 IF (I=674) mw[1]=mw[1]+18.38
;
;Adjust internal to external (IX) gateway distance
 jloop j=650
    mw[1] = mw[1]+12.41
 endjloop
;
 jloop j=651
    mw[1] = mw[1]+4.11
 endjloop
;
 jloop j=652
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=653
    mw[1] = mw[1]+31.33
 endjloop
;
 jloop j=654
    mw[1] = mw[1]+11.07
 endjloop
;
 jloop j=655
    mw[1] = mw[1]+11.32
 endjloop
;
 jloop j=656
```

```
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=657
      mw[1] = mw[1]+6.91
   endjloop
  ;
   jloop j=658
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=659
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=660
      mw[1] = mw[1]+7.73
   endjloop
  ;
   jloop j=661
      mw[1] = mw[1]+8.88
   endjloop
  ;
   jloop j=662
      mw[1] = mw[1]+5.47
   endjloop
  ;
   jloop j=663
      mw[1] = mw[1]+8.16
   endjloop
  ;
   jloop j=664
      mw[1] = mw[1]+10.17
   endjloop
  ;
   jloop j=665
      mw[1] = mw[1]+5.43
   endjloop
  ;
   jloop j=666
      mw[1] = mw[1]+6.97
   endjloop
  ;
   jloop j=667
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=668
      mw[1] = mw[1]+15.96
   endjloop
  ;
   jloop j=669
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=670
      mw[1] = mw[1]+0
   endjloop
  ;
   jloop j=671
      mw[1] = mw[1]+18.61
```

```
 endjloop
;
 jloop j=672
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=673
    mw[1] = mw[1]+3.73
 endjloop
;
 jloop j=674
    mw[1] = mw[1]+19.21
 endjloop
;
ENDRUN
;
;
; PM peak period enterzonal distance skim
RUN PGM=HWYLOAD
FILEI NETI = "@PMNET@"
FILEO MATO[1] = "@TEMP@",
 MO=1 FORMAT=tpp                                    ; output skim matrix
 PHASE=LINKREAD                                     ; define link groups
  IF (LI.HOVLINK=0) ADDTOGROUP=1                    ; no restriction
  IF (LI.HOVLINK=1) ADDTOGROUP=2                    ; walk
  IF (LI.HOVLINK=2) ADDTOGROUP=3                    ; HOV lanes
  IF (LI.HOVLINK=3) ADDTOGROUP=4                    ; HOV bypassses
  IF (LI.CAPCLASS=99) ADDTOGROUP=5                  ; switched off links
 endphase
 PHASE=ILOOP                                        ; skim path building
    PATHLOAD PATH=li.TIME_1,EXCLUDEGRP=2,5,         ; pathload without HOV links
       MW[1]=PATHTRACE(LI.DISTANCE),SELECTGROUP=1   ; select links used by all
veh
 endphase
ENDRUN
; intrazonals - fill the diagonal element with half of the rowmin value
RUN PGM=MATRIX
FILEI MATI[1] = "@TEMP@"
FILEO MATO[1] = "@TEMP2@",
 MO=1
 MW[1]=MI.1.1
 iz1 = lowest(1,1,0.5,32700)*0.5
 jloop j=i
    mw[1] = iz1
 endjloop
ENDRUN
;
; Adjust gateway distnaces
;(Note: these values come from the 1/5/2021 Central El Dorado Hills Specific
Plan VMT Analysis memorandom)
RUN PGM=MATRIX
FILEI MATI[1] = "@TEMP2@"
FILEO MATO[1] = "@PMDIST@",
 MO=1
 MW[1]=MI.1.1
;
;Adjust external to internal (XI) gateway distance
 IF (I=650) mw[1]=mw[1]+13.08
 IF (I=651) mw[1]=mw[1]+3.96
 IF (I=652) mw[1]=mw[1]+0
 IF (I=653) mw[1]=mw[1]+20.39
```

```
  IF (I=654) mw[1]=mw[1]+10.38
  IF (I=655) mw[1]=mw[1]+8.80
  IF (I=656) mw[1]=mw[1]+0
  IF (I=657) mw[1]=mw[1]+6.4
  IF (I=658) mw[1]=mw[1]+0
  IF (I=659) mw[1]=mw[1]+0
  IF (I=660) mw[1]=mw[1]+7.19
  IF (I=661) mw[1]=mw[1]+8.54
  IF (I=662) mw[1]=mw[1]+6.14
  IF (I=663) mw[1]=mw[1]+5.41
  IF (I=664) mw[1]=mw[1]+12.66
  IF (I=665) mw[1]=mw[1]+5.17
  IF (I=666) mw[1]=mw[1]+7.44
  IF (I=667) mw[1]=mw[1]+0
  IF (I=668) mw[1]=mw[1]+14.21
  IF (I=669) mw[1]=mw[1]+0
  IF (I=670) mw[1]=mw[1]+0
  IF (I=671) mw[1]=mw[1]+16.28
  IF (I=672) mw[1]=mw[1]+0
  IF (I=673) mw[1]=mw[1]+3.82
  IF (I=674) mw[1]=mw[1]+18.38
 ;
 ;Adjust internal to external (IX) gateway distance
  jloop j=650
     mw[1] = mw[1]+12.41
  endjloop
 ;
  jloop j=651
     mw[1] = mw[1]+4.11
  endjloop
 ;
  jloop j=652
     mw[1] = mw[1]+0
  endjloop
 ;
  jloop j=653
     mw[1] = mw[1]+31.33
  endjloop
 ;
  jloop j=654
     mw[1] = mw[1]+11.07
  endjloop
 ;
  jloop j=655
     mw[1] = mw[1]+11.32
  endjloop
 ;
  jloop j=656
     mw[1] = mw[1]+0
  endjloop
 ;
  jloop j=657
     mw[1] = mw[1]+6.91
  endjloop
 ;
  jloop j=658
     mw[1] = mw[1]+0
  endjloop
 ;
  jloop j=659
     mw[1] = mw[1]+0
```

```
 endjloop
;
 jloop j=660
    mw[1] = mw[1]+7.73
 endjloop
;
 jloop j=661
    mw[1] = mw[1]+8.88
 endjloop
;
 jloop j=662
    mw[1] = mw[1]+5.47
 endjloop
;
 jloop j=663
    mw[1] = mw[1]+8.16
 endjloop
;
 jloop j=664
    mw[1] = mw[1]+10.17
 endjloop
;
 jloop j=665
    mw[1] = mw[1]+5.43
 endjloop
;
 jloop j=666
    mw[1] = mw[1]+6.97
 endjloop
;
 jloop j=667
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=668
    mw[1] = mw[1]+15.96
 endjloop
;
 jloop j=669
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=670
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=671
    mw[1] = mw[1]+18.61
 endjloop
;
 jloop j=672
    mw[1] = mw[1]+0
 endjloop
;
 jloop j=673
    mw[1] = mw[1]+3.73
 endjloop
;
 jloop j=674
    mw[1] = mw[1]+19.21
 endjloop
```

```
;
ENDRUN
;
;
; Evening enterzonal distance skim
RUN PGM=HWYLOAD
FILEI NETI = "@EVVNET@"
FILEO MATO[1] = "@TEMP@",
 MO=1 FORMAT=tpp                                    ; output skim matrix
 PHASE=LINKREAD                                     ; define link groups
  IF (LI.HOVLINK=0) ADDTOGROUP=1                    ; no restriction
  IF (LI.HOVLINK=1) ADDTOGROUP=2                    ; walk
  IF (LI.HOVLINK=2) ADDTOGROUP=3                    ; HOV lanes
  IF (LI.HOVLINK=3) ADDTOGROUP=4                    ; HOV bypassses
  IF (LI.CAPCLASS=99) ADDTOGROUP=5                  ; switched off links
 endphase
 PHASE=ILOOP                                        ; skim path building
    PATHLOAD PATH=li.TIME_1,EXCLUDEGRP=2,5,         ; pathload without HOV links
       MW[1]=PATHTRACE(LI.DISTANCE),SELECTGROUP=1   ; select links used by all
veh
 endphase
ENDRUN
; intrazonals - fill the diagonal element with half of the rowmin value
RUN PGM=MATRIX
FILEI MATI[1] = "@TEMP@"
FILEO MATO[1] = "@TEMP2@",
 MO=1
 MW[1]=MI.1.1
 iz1 = lowest(1,1,0.5,32700)*0.5
 jloop j=i
    mw[1] = iz1
 endjloop
ENDRUN
;
; Adjust gateway distnaces
;(Note: these values come from the 1/5/2021 Central El Dorado Hills Specific
Plan VMT Analysis memorandom)
RUN PGM=MATRIX
FILEI MATI[1] = "@TEMP2@"
FILEO MATO[1] = "@EVVDIST@",
 MO=1
 MW[1]=MI.1.1
;
;Adjust external to internal (XI) gateway distance
 IF (I=650) mw[1]=mw[1]+13.08
 IF (I=651) mw[1]=mw[1]+3.96
 IF (I=652) mw[1]=mw[1]+0
 IF (I=653) mw[1]=mw[1]+20.39
 IF (I=654) mw[1]=mw[1]+10.38
 IF (I=655) mw[1]=mw[1]+8.80
 IF (I=656) mw[1]=mw[1]+0
 IF (I=657) mw[1]=mw[1]+6.4
 IF (I=658) mw[1]=mw[1]+0
 IF (I=659) mw[1]=mw[1]+0
 IF (I=660) mw[1]=mw[1]+7.19
 IF (I=661) mw[1]=mw[1]+8.54
 IF (I=662) mw[1]=mw[1]+6.14
 IF (I=663) mw[1]=mw[1]+5.41
 IF (I=664) mw[1]=mw[1]+12.66
 IF (I=665) mw[1]=mw[1]+5.17
 IF (I=666) mw[1]=mw[1]+7.44
```

```
 601    IF (I=667) mw[1]=mw[1]+0
 602    IF (I=668) mw[1]=mw[1]+14.21
 603    IF (I=669) mw[1]=mw[1]+0
 604    IF (I=670) mw[1]=mw[1]+0
 605    IF (I=671) mw[1]=mw[1]+16.28
 606    IF (I=672) mw[1]=mw[1]+0
 607    IF (I=673) mw[1]=mw[1]+3.82
 608    IF (I=674) mw[1]=mw[1]+18.38
 609   ;
 610   ;Adjust internal to external (IX) gateway distance
 611    jloop j=650
 612       mw[1] = mw[1]+12.41
 613    endjloop
 614   ;
 615    jloop j=651
 616       mw[1] = mw[1]+4.11
 617    endjloop
 618   ;
 619    jloop j=652
 620       mw[1] = mw[1]+0
 621    endjloop
 622   ;
 623    jloop j=653
 624       mw[1] = mw[1]+31.33
 625    endjloop
 626   ;
 627    jloop j=654
 628       mw[1] = mw[1]+11.07
 629    endjloop
 630   ;
 631    jloop j=655
 632       mw[1] = mw[1]+11.32
 633    endjloop
 634   ;
 635    jloop j=656
 636       mw[1] = mw[1]+0
 637    endjloop
 638   ;
 639    jloop j=657
 640       mw[1] = mw[1]+6.91
 641    endjloop
 642   ;
 643    jloop j=658
 644       mw[1] = mw[1]+0
 645    endjloop
 646   ;
 647    jloop j=659
 648       mw[1] = mw[1]+0
 649    endjloop
 650   ;
 651    jloop j=660
 652       mw[1] = mw[1]+7.73
 653    endjloop
 654   ;
 655    jloop j=661
 656       mw[1] = mw[1]+8.88
 657    endjloop
 658   ;
 659    jloop j=662
 660       mw[1] = mw[1]+5.47
 661    endjloop
```

```
662   ;
663    jloop j=663
664       mw[1] = mw[1]+8.16
665    endjloop
666   ;
667    jloop j=664
668       mw[1] = mw[1]+10.17
669    endjloop
670   ;
671    jloop j=665
672       mw[1] = mw[1]+5.43
673    endjloop
674   ;
675    jloop j=666
676       mw[1] = mw[1]+6.97
677    endjloop
678   ;
679    jloop j=667
680       mw[1] = mw[1]+0
681    endjloop
682   ;
683    jloop j=668
684       mw[1] = mw[1]+15.96
685    endjloop
686   ;
687    jloop j=669
688       mw[1] = mw[1]+0
689    endjloop
690   ;
691    jloop j=670
692       mw[1] = mw[1]+0
693    endjloop
694   ;
695    jloop j=671
696       mw[1] = mw[1]+18.61
697    endjloop
698   ;
699    jloop j=672
700       mw[1] = mw[1]+0
701    endjloop
702   ;
703    jloop j=673
704       mw[1] = mw[1]+3.73
705    endjloop
706   ;
707    jloop j=674
708       mw[1] = mw[1]+19.21
709    endjloop
710   ;
711   ENDRUN
712   ;
713
```

```
;-------------------------------------------------------------------------
;
; Step 2: Determin trips by purpose for each time period
;
;         Inputs: PA tables for HBW, HBS, HBSc, HBO, WO, OO, Comercial,
;                 transit access, Thru and airport trips by class
;
;         Output for each period: Production to Attraction (PA) and
;                 Attraction to Production (AP) trip tables for
;                    (File 1) drive alone (HBW, HBS, HBSc, HBO, WO,and OO)
;                    (File 2) shared ride (HBW, HBS, HBSc, HBO, WO,and OO)
;                    (File 3) C2
;                    (File 4) C3
;        These are then  further processed to multiclass (HBW, HBS, HBSc HBO,
;        WO, OO, THRU, and COM) PA/AP tables by period (AM, MD, PM, EV).
;
;       The PA table and the distance table from step 1 are multiplied to
;       generate a P-A VMT table.
;
;       RESIDENTIAL PROJECTS:
;               The PA table is multiplied by the distance table. Row totals
;               are VMT assigned to production/origen (i.e. HBW home to work
;               trip VMT is associated with the TAZ with the home).
;
;               The AP table is multiplied by the transpose of the distance
;               table. Row totals are VMT assigned to the attraction/
;               destination(i.e., HBW work to home trip VMT is associated with
;               the TAZ with the home).
;
;       COMMERCIAL PROJECTS:
;                Same as residential but read column totals rather row
;                totals.  This associates the the HBW trip VMT from the home
;                to the office with the TAZ that has the offie. the return
;                HBW trip VMT from the office to home is also associated with
;                the office.
;
;-------------------------------------------------------------------------
; Note The PA and AP factoring is addopted from the script that parse the daily
; PA's to OD pairs by time-of-day (i.e., For El dorado County this is
; "EDC_CAT_082118C\APPLICATIONS1\03_ASSIGN\3AMAT00C.S") and from 3AMAT00D.S
; wich is under the first highway assignment step in he assenment portion of
; the El Dorado County Catalog. This code allocates Other-Other trips
; to home bassed or work based trips based on the ratio of home based
; to work based VMT/trips.
;-------------------------------------------------------------------------
; Input daily PA tables (sub tables in perenthises)
;-------------------------------------------------------------------------
HBW='.\PA_Tables\2040HBWM.MAT'    ;home based work
;                         (1)DA, (2)SR2, (3)SR3, (4)transit access walk,
;                         (5)transit access drive, (6)walk, (7)bike
HBS='.\PA_Tables\2040HBSM.MAT'    ;home based shop
;                         (1)DA, (2)SR2, (3)SR3, (4)transit access walk,
;                         (5)transit access drive, (6)walk, (7)bike
HBSC='.\PA_Tables\2040HSCM.MAT'   ;home based school
;                          (1)m1, (2)m2 ???
HBO='.\PA_Tables\2040HBOM.MAT'     ;home based other
;                         (1)DA, (2)SR2, (3)SR3, (4)transit access walk,
;                         (5)transit access drive, (6)walk, (7)bike
WO='.\PA_Tables\2040WOM.MAT'       ;work-other
;                         (1)DA, (2)SR2, (3)SR3, (4)transit access walk,
;                         (5)transit access drive, (6)walk, (7)bike
```

```
OO='.\PA_Tables\2040OOM.MAT'       ;other-other
;                          (1)DA, (2)SR2, (3)SR3, (4)transit access walk,
;                          (5)transit access drive, (6)walk, (7)bike
NWTD='.\PA_Tables\2040NWTD.MAT'   ;used for commercial vehicle trips (???)
;                          (1)HBS, (2)HBSC, (3)HBO, (4)WO, (5)OO,
;                          (6)C2, (7)C3
TDVT='.\PA_Tables\TDVT.MAT'       ;transit access
;                          (1)HBW DA, (2)HBW SR, (3)HBS DA, (4)HBS SR,
;                          (5)HBO DA, (6)HBO SR, (7)WO DA, (8)WO SR,
;                          (9)OO DA, (10)OO SR)
THRU='.\PA_Tables\2040THRU.MAT'   ;through trips
;                          (1)auto, (2)C3
;-------------------------------------------------------------------------------
; Input distance skims
;-------------------------------------------------------------------------------
AMDIST='.\Temp_Files\AM_Distance.MAT'
MDDIST='.\Temp_Files\MD_Distance.MAT'
PMDIST='.\Temp_Files\PM_Distance.MAT'
EVDIST='.\Temp_Files\EV_Distance.MAT'
;
;-------------------------------------------------------------------------------
; Temp output trips by purpose
;-------------------------------------------------------------------------------
; AM Peak Period
DA_AM='.\Temp_Files\DA_AM_Trips_by_Purpose.mat'
SR_AM='.\Temp_Files\SR_AM_Trips_by_Purpose.mat'
C2_AM='.\Temp_Files\C2_AM_Trips_by_Purpose.mat'
C3_AM='.\Temp_Files\C3_AM_Trips_by_Purpose.mat'
;
; mid day Period
DA_MD='.\Temp_Files\DA_MD_Trips_by_Purpose.mat'
SR_MD='.\Temp_Files\SR_MD_Trips_by_Purpose.mat'
C2_MD='.\Temp_Files\C2_MD_Trips_by_Purpose.mat'
C3_MD='.\Temp_Files\C3_MD_Trips_by_Purpose.mat'
;
; PM Peak Period
DA_PM='.\Temp_Files\DA_PM_Trips_by_Purpose.mat'
SR_PM='.\Temp_Files\SR_PM_Trips_by_Purpose.mat'
C2_PM='.\Temp_Files\C2_PM_Trips_by_Purpose.mat'
C3_PM='.\Temp_Files\C3_PM_Trips_by_Purpose.mat'
;
; Evening Peak Period
DA_EV='.\Temp_Files\DA_EV_Trips_by_Purpose.mat'
SR_EV='.\Temp_Files\SR_EV_Trips_by_Purpose.mat'
C2_EV='.\Temp_Files\C2_EV_Trips_by_Purpose.mat'
C3_EV='.\Temp_Files\C3_EV_Trips_by_Purpose.mat'
;
;-------------------------------------------------------------------------------
; Temp output multi-class PA/AP tables
;-------------------------------------------------------------------------------
AM_Trips='.\temp_files\AM_PA_AP_Data.mat'
MD_Trips='.\temp_files\MD_PA_AP_Data.mat'
PM_Trips='.\temp_files\PM_PA_AP_Data.mat'
EV_Trips='.\temp_files\EV_PA_AP_Data.mat'
;                     HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
;                     HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
;                     THRU_PA, THRU_AP, COM_PA, COM_AP, TOT_PA, TOT_AP
;
;-------------------------------------------------------------------------------
; Temp output VMT matrices
;-------------------------------------------------------------------------------
```

```
AMVMTSIMP='.\temp_files\AM_vmt_by_purpose.mat'
MDVMTSIMP='.\temp_files\MD_vmt_by_purpose.mat'
PMVMTSIMP='.\temp_files\PM_vmt_by_purpose.mat'
EVVMTSIMP='.\temp_files\EV_vmt_by_purpose.mat'
;
;-------------------------------------------------------------------------------
; Estimate trip purposes for AM3
;-------------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
FILEI MATI[1] = "@HBW@"
FILEI MATI[2] = "@HBS@"
FILEI MATI[3] = "@HBSC@"
FILEI MATI[4] = "@HBO@"
FILEI MATI[5] = "@WO@"
FILEI MATI[6] = "@OO@"
FILEI MATI[7] = "@nwtd@"
FILEI MATI[8] = "@TDVT@"
FILEI MATI[9] = "@THRU@"
;
; Outputs
FILEO MATO[1] = "@DA_AM@", MO=21-34,
                NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                      HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                      THRU_PA, THRU_AP
FILEO MATO[2] = "@SR_AM@", MO=41-54,
                NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                      HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                      THRU_PA, THRU_AP
FILEO MATO[3] = "@C2_AM@", MO=55-56, NAME= C2_PA, C2_AP
FILEO MATO[4] = "@C3_AM@", MO=57-58, NAME= C3_PA, C3_AP
;
; Input DA trips
  MW[1] = mi.1.1 *0.01                          ; HBW (scaled by 100)
  MW[2] = mi.2.1                                ; HBS (unscaled)
  MW[3] = (mi.3.1*0.06 + mi.3.1.t*0.22)         ; HBSc (unscaled)
  MW[4] = mi.4.1                                ; HBO (unscaled)
  MW[5] = mi.5.1                                ; WO (unscaled)
  MW[6] = mi.6.1                                ; OO (unscaled)
;
; Input and convert SR to Vehicle Trips
  MW[11] = (mi.1.2*0.50 + mi.1.3*0.302)*0.01 ; HBW SR (scaled by 100)
  MW[12] = (mi.2.2*0.50 + mi.2.3*0.272)         ; HBS (unscaled)
  MW[13] = (mi.3.1*0.34)                        ; HBSc (unscaled)
  MW[14] = (mi.4.2*0.50 + mi.4.3*0.287)         ; HBO (unscaled)
  MW[15] = (mi.5.2*0.50 + mi.5.3*0.279)         ; WO (unscaled)
  MW[16] = (mi.6.2*0.50 + mi.6.3*0.272)         ; OO (unscaled)
;
; Drive Alone P-A to O-D factoring
; P-A
  MW[21] = 0.330 *MW[1] + 0.406 *mi.8.1      ;HBW + HBW TD access  (all these
TD access terms go to zero)
  MW[23] = 0.052 *MW[2] + 0.185 *mi.8.3      ;HBS + HBS TD access
  MW[25] = 0.523 *MW[3]                      ;HBSc
  MW[27] = 0.147 *MW[4] + 0.108 *mi.8.5      ;HBO + HBO TD access
  MW[29] = 0.146 *MW[5] + 0.075 *mi.8.7      ;WO + WO TD access
  MW[31] = 0.063 *MW[6] + 0.1675*mi.8.9      ;OO + OO TD access
  MW[33] = 0.090 *mi.9.1*0.8                 ;Thru
;
; A-P
  MW[22] = 0.014 *MW[1] + 0.0   *mi.8.1      ;HBW + HBW TD access
```

```
    MW[24] = 0.026 *MW[2] + 0.004 *mi.8.3      ;HBS + HBS TD access
    MW[26] = 0.006 *MW[3]                      ;HBSc
    MW[28] = 0.045 *MW[4] + 0.004 *mi.8.5      ;HBO + HBO TD access
    MW[30] = 0.040 *MW[5] + 0.093 *mi.8.7      ;WO + WO TD access
    MW[32] = 0.063 *MW[6] + 0.1675*mi.8.9      ;OO + OO TD access
    MW[34] = 0.090 *mi.9.1*0.8                 ;Thru
  ;
  ; Shared Ride  P-A to O-D factoring
  ; P-A
    MW[41] = 0.365 *MW[11] + 0.406 *mi.8.2      ;HBW + HBW TD access
    MW[43] = 0.052 *MW[12] + 0.185 *mi.8.4      ;HBS + HBS TD access
    MW[45] = 0.523 *MW[13]                      ;HBSc
    MW[47] = 0.147 *MW[14] + 0.108 *mi.8.6      ;HBO + HBO TD access
    MW[49] = 0.146 *MW[15] + 0.075 *mi.8.8      ;WO + WO TD access
    MW[51] = 0.063 *MW[16] + 0.1675*mi.8.10     ;OO + OO TD access
    MW[53] = 0.090 *mi.9.1*0.2                  ;Thru
  ;
  ; A-P
    MW[42] = 0.009 *MW[11] + 0.0   *mi.8.2      ;HBW + HBW TD access
    MW[43] = 0.026 *MW[12] + 0.004 *mi.8.4      ;HBS + HBS TD access
    MW[46] = 0.006 *MW[13]                      ;HBSc
    MW[48] = 0.045 *MW[14] + 0.004 *mi.8.6      ;HBO + HBO TD access
    MW[50] = 0.040 *MW[15] + 0.093 *mi.8.8      ;WO + WO TD access
    MW[52] = 0.063 *MW[16] + 0.1675*mi.8.10     ;OO + OO TD access
    MW[54] = 0.090 *MI.9.1*0.2                  ;Thru
  ;
  ; C2  P-A to O-D factoring
    MW[55] = 0.091*mi.7.6                       ; P-A
    MW[56] = MW[55]                             ; A-P
  ;
  ; C3  P-A to O-D factoring
    MW[57] = 0.091*mi.7.7 + 0.91*mi.9.2         ; P-A (with XX commercial)
    MW[58] = MW[57]                             ; A-P
  ENDRUN
  ;
  ;
  ;
  ;-------------------------------------------------------------------------------
  ; Estimate trip purposes for mid day
  ;-------------------------------------------------------------------------------
  RUN PGM=MATRIX
  ; Inputs
  FILEI MATI[1] = "@HBW@"
  FILEI MATI[2] = "@HBS@"
  FILEI MATI[3] = "@HBSC@"
  FILEI MATI[4] = "@HBO@"
  FILEI MATI[5] = "@WO@"
  FILEI MATI[6] = "@OO@"
  FILEI MATI[7] = "@nwtd@"
  FILEI MATI[8] = "@TDVT@"
  FILEI MATI[9] = "@THRU@"
  ;
  ; Outputs
  FILEO MATO[1] = "@DA_MD@", MO=21-34,
                  NAME= HBW_PA, HBW_AP,     HBS_PA, HBS_AP,     HBSc_PA, HBSC_AP,
                        HBO_PA, HBO_AP,     WO_PA, WO_AP,       OO_PA, OO_AP,
                        THRU_PA, THRU_AP
  FILEO MATO[2] = "@SR_MD@", MO=41-54,
                  NAME= HBW_PA, HBW_AP,     HBS_PA, HBS_AP,     HBSc_PA, HBSC_AP,
                        HBO_PA, HBO_AP,     WO_PA, WO_AP,       OO_PA, OO_AP,
                        THRU_PA, THRU_AP
```

```
244   FILEO MATO[3] = "@C2_MD@", MO=55-56, NAME= C2_PA, C2_AP
245   FILEO MATO[4] = "@C3_MD@", MO=57-78, NAME= C3_PA, C3_AP
246   ;
247   ; Input DA trips
248     MW[1] = mi.1.1 *0.01                        ; HBW (scaled by 100)
249     MW[2] = mi.2.1                              ; HBS (unscaled)
250     MW[3] = (mi.3.1*0.06 + mi.3.1.t*0.22)       ; HBSc (unscaled)
251     MW[4] = mi.4.1                              ; HBO (unscaled)
252     MW[5] = mi.5.1                              ; WO (unscaled)
253     MW[6] = mi.6.1                              ; OO (unscaled)
254   ;
255   ; Input and convert SR to Vehicle Trips
256     MW[11] = (mi.1.2*0.50 + mi.1.3*0.302)*0.01 ; HBW SR (scaled by 100)
257     MW[12] = (mi.2.2*0.50 + mi.2.3*0.272)       ; HBS (unscaled)
258     MW[13] = (mi.3.1*0.34)                      ; HBSc (unscaled)
259     MW[14] = (mi.4.2*0.50 + mi.4.3*0.287)       ; HBO (unscaled)
260     MW[15] = (mi.5.2*0.50 + mi.5.3*0.279)       ; WO (unscaled)
261     MW[16] = (mi.6.2*0.50 + mi.6.3*0.272)       ; OO (unscaled)
262   ;
263   ; Drive Alone P-A to O-D factoring
264   ; P-A
265     MW[21] = 0.082 *MW[1] + 0.044 *mi.8.1       ;HBW + HBW TD access
266     MW[23] = 0.145 *MW[2] + 0.015 *mi.8.3       ;HBS + HBS TD access
267     MW[25] = 0.028 *MW[3]                       ;HBSc
268     MW[27] = 0.135 *MW[4] + 0.131 *mi.8.5       ;HBO + HBO TD access
269     MW[29] = 0.219 *MW[5] + 0.394 *mi.8.7       ;WO + WO TD access
270     MW[31] = 0.194 *MW[6] + 0.1295*mi.8.9       ;OO + OO TD access
271     MW[33] = 0.180 *mi.9.1*0.8                  ;Thru
272   ;
273   ; A-P
274     MW[22] = 0.076 *MW[1] + 0.0   *mi.8.1       ;HBW + HBW TD access
275     MW[24] = 0.189 *MW[2] + 0.311 *mi.8.3       ;HBS + HBS TD access
276     MW[26] = 0.119 *MW[3]                       ;HBSc
277     MW[28] = 0.109 *MW[4] + 0.138 *mi.8.5       ;HBO + HBO TD access
278     MW[30] = 0.203 *MW[5] + 0.309 *mi.8.7       ;WO + WO TD access
279     MW[32] = 0.194 *MW[6] + 0.1295*mi.8.9       ;OO + OO TD access
280     MW[34] = 0.180 *mi.9.1*0.8                  ;Thru
281   ;
282   ; Shared Ride  P-A to O-D factoring
283   ; P-A
284     MW[41] = 0.083 *MW[11] + 0.044 *mi.8.2       ;HBW + HBW TD access
285     MW[43] = 0.145 *MW[12] + 0.015 *mi.8.4       ;HBS + HBS TD access
286     MW[45] = 0.028 *MW[13]                       ;HBSc
287     MW[47] = 0.135 *MW[14] + 0.131 *mi.8.6       ;HBO + HBO TD access
288     MW[49] = 0.219 *MW[15] + 0.394 *mi.8.8       ;WO + WO TD access
289     MW[51] = 0.194 *MW[16] + 0.129*mi.8.10       ;OO + OO TD access
290     MW[53] = 0.180 *mi.9.1*0.2                   ;Thru
291   ;
292   ; A-P
293     MW[42] = 0.064 *MW[11] + 0.0   *mi.8.2       ;HBW + HBW TD access
294     MW[42] = 0.189 *MW[12] + 0.311 *mi.8.4       ;HBS + HBS TD access
295     MW[46] = 0.119 *MW[13]                       ;HBSc
296     MW[48] = 0.109 *MW[14] + 0.138 *mi.8.6       ;HBO + HBO TD access
297     MW[50] = 0.203 *MW[15] + 0.309 *mi.8.8       ;WO + WO TD access
298     MW[52] = 0.194 *MW[16] + 0.129 *mi.8.10      ;OO + OO TD access
299     MW[54] = 0.180 *MI.9.1*0.2                   ;Thru
300   ;
301   ; C2  P-A to O-D factoring
302     MW[55] = 0.144*mi.7.6                        ; P-A
303     MW[56] = MW[55]                              ; A-P
304   ;
```

```
; C3  P-A to O-D factoring
  MW[57] = 0.1625*mi.7.7 + 0.1625*mi.9.2      ; P-A (with XX commercial)
  MW[58] = MW[57]                             ; A-P
ENDRUN
;
;
;
;-------------------------------------------------------------------------
; Estimate trip purposes for PM3
;-------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
FILEI MATI[1] = "@HBW@"
FILEI MATI[2] = "@HBS@"
FILEI MATI[3] = "@HBSC@"
FILEI MATI[4] = "@HBO@"
FILEI MATI[5] = "@WO@"
FILEI MATI[6] = "@OO@"
FILEI MATI[7] = "@nwtd@"
FILEI MATI[8] = "@TDVT@"
FILEI MATI[9] = "@THRU@"
;
; Outputs
FILEO MATO[1] = "@DA_PM@", MO=21-34,
                NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                      HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                      THRU_PA, THRU_AP
FILEO MATO[2] = "@SR_PM@", MO=41-54,
                NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                      HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                      THRU_PA, THRU_AP
FILEO MATO[3] = "@C2_PM@", MO=55-56, NAME= C2_PA, C2_AP
FILEO MATO[4] = "@C3_PM@", MO=57-78, NAME= C3_PA, C3_AP
;
; Input DA trips
  MW[1] = mi.1.1 *0.01                      ; HBW (scaled by 100)
  MW[2] = mi.2.1                            ; HBS (unscaled)
  MW[3] = (mi.3.1*0.06 + mi.3.1.t*0.22)     ; HBSc (unscaled)
  MW[4] = mi.4.1                            ; HBO (unscaled)
  MW[5] = mi.5.1                            ; WO (unscaled)
  MW[6] = mi.6.1                            ; OO (unscaled)
;
; Input and convert SR to Vehicle Trips
  MW[11] = (mi.1.2*0.50 + mi.1.3*0.302)*0.01 ; HBW SR (scaled by 100)
  MW[12] = (mi.2.2*0.50 + mi.2.3*0.272)      ; HBS (unscaled)
  MW[13] = (mi.3.1*0.34)                     ; HBSc (unscaled)
  MW[14] = (mi.4.2*0.50 + mi.4.3*0.287)      ; HBO (unscaled)
  MW[15] = (mi.5.2*0.50 + mi.5.3*0.279)      ; WO (unscaled)
  MW[16] = (mi.6.2*0.50 + mi.6.3*0.272)      ; OO (unscaled)
;
; Drive Alone P-A to O-D factoring
; P-A
  MW[21] = 0.026 *MW[1] + 0.0 *mi.8.1        ;HBW + HBW TD access
  MW[23] = 0.093 *MW[2] + 0.069 *mi.8.3      ;HBS + HBS TD access
  MW[25] = 0.023 *MW[3]                      ;HBSc
  MW[27] = 0.088 *MW[4] + 0.154 *mi.8.5      ;HBO + HBO TD access
  MW[29] = 0.075 *MW[5] + 0.039 *mi.8.7      ;WO + WO TD access
  MW[31] = 0.142 *MW[6] + 0.146*mi.8.9       ;OO + OO TD access
  MW[33] = 0.090 *mi.9.1*0.8                 ;Thru
;
; A-P
```

```
    MW[22] = 0.226 *MW[1] + 0.465 *mi.8.1      ;HBW + HBW TD access
    MW[24] = 0.213 *MW[2] + 0.171 *mi.8.3      ;HBS + HBS TD access
    MW[26] = 0.246 *MW[3]                      ;HBSc
    MW[28] = 0.133 *MW[4] + 0.176 *mi.8.5      ;HBO + HBO TD access
    MW[30] = 0.207 *MW[5] + 0.064 *mi.8.7      ;WO + WO TD access
    MW[32] = 0.142 *MW[6] + 0.146 *mi.8.9      ;OO + OO TD access
    MW[34] = 0.090 *mi.9.1*0.8                 ;Thru
  ;
  ; Shared Ride  P-A to O-D factoring
  ; P-A
    MW[41] = 0.037 *MW[11] + 0.0 *mi.8.2       ;HBW + HBW TD access
    MW[43] = 0.093 *MW[12] + 0.069 *mi.8.4     ;HBS + HBS TD access
    MW[45] = 0.023 *MW[13]                     ;HBSc
    MW[47] = 0.088 *MW[14] + 0.154 *mi.8.6     ;HBO + HBO TD access
    MW[49] = 0.075 *MW[15] + 0.039 *mi.8.8     ;WO + WO TD access
    MW[51] = 0.142 *MW[16] + 0.146 *mi.8.10    ;OO + OO TD access
    MW[53] = 0.090 *mi.9.1*0.2                 ;Thru
  ;
  ; A-P
    MW[42] = 0.211 *MW[11] + 0.465 *mi.8.2     ;HBW + HBW TD access
    MW[44] = 0.213 *MW[12] + 0.171 *mi.8.4     ;HBS + HBS TD access
    MW[46] = 0.246 *MW[13]                     ;HBSc
    MW[48] = 0.133 *MW[14] + 0.176 *mi.8.6     ;HBO + HBO TD access
    MW[50] = 0.207 *MW[15] + 0.064 *mi.8.8     ;WO + WO TD access
    MW[52] = 0.142 *MW[16] + 0.146 *mi.8.10    ;OO + OO TD access
    MW[54] = 0.090 *MI.9.1*0.2                 ;Thru
  ;
  ; C2  P-A to O-D factoring
    MW[55] = 0.1175*mi.7.6                      ; P-A
    MW[56] = MW[55]                            ; A-P
  ;
  ; C3  P-A to O-D factoring
    MW[57] = 0.072*mi.7.7 + 0.072*mi.9.2       ; P-A (with XX commercial)
    MW[58] = MW[57]                            ; A-P
  ENDRUN
  ;
  ;
  ;
  ;-------------------------------------------------------------------------------
  ; Estimate trip purposes for evening
  ;-------------------------------------------------------------------------------
  RUN PGM=MATRIX
  ; Inputs
  FILEI MATI[1] = "@HBW@"
  FILEI MATI[2] = "@HBS@"
  FILEI MATI[3] = "@HBSC@"
  FILEI MATI[4] = "@HBO@"
  FILEI MATI[5] = "@WO@"
  FILEI MATI[6] = "@OO@"
  FILEI MATI[7] = "@nwtd@"
  FILEI MATI[8] = "@TDVT@"
  FILEI MATI[9] = "@THRU@"
  ;
  ; Outputs
  FILEO MATO[1] = "@DA_EV@", MO=21-34,
                  NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                        HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                        THRU_PA, THRU_AP
  FILEO MATO[2] = "@SR_EV@", MO=41-54,
                  NAME= HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                        HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
```

```
                          THRU_PA, THRU_AP
  FILEO MATO[3] = "@C2_EV@", MO=55-56, NAME= C2_PA, C2_AP
  FILEO MATO[4] = "@C3_EV@", MO=57-78, NAME= C3_PA, C3_AP
  ;
  ; Input DA trips
    MW[1] = mi.1.1 *0.01                          ; HBW (scaled by 100)
    MW[2] = mi.2.1                                ; HBS (unscaled)
    MW[3] = (mi.3.1*0.06 + mi.3.1.t*0.22)         ; HBSc (unscaled)
    MW[4] = mi.4.1                                ; HBO (unscaled)
    MW[5] = mi.5.1                                ; WO (unscaled)
    MW[6] = mi.6.1                                ; OO (unscaled)
  ;
  ; Input and convert SR to Vehicle Trips
    MW[11] = (mi.1.2*0.50 + mi.1.3*0.302)*0.01 ; HBW SR (scaled by 100)
    MW[12] = (mi.2.2*0.50 + mi.2.3*0.272)         ; HBS (unscaled)
    MW[13] = (mi.3.1*0.34)                        ; HBSc (unscaled)
    MW[14] = (mi.4.2*0.50 + mi.4.3*0.287)         ; HBO (unscaled)
    MW[15] = (mi.5.2*0.50 + mi.5.3*0.279)         ; WO (unscaled)
    MW[16] = (mi.6.2*0.50 + mi.6.3*0.272)         ; OO (unscaled)
  ;
  ; Drive Alone P-A to O-D factoring
  ; P-A
    MW[21] = 0.098 *MW[1] + 0.048 *mi.8.1         ;HBW + HBW TD access
    MW[23] = 0.089 *MW[2] + 0.136 *mi.8.3         ;HBS + HBS TD access
    MW[25] = 0.018 *MW[3]                         ;HBSc
    MW[27] = 0.140 *MW[4] + 0.128 *mi.8.5         ;HBO + HBO TD access
    MW[29] = 0.036 *MW[5] + 0.0 *mi.8.7           ;WO + WO TD access
    MW[31] = 0.101 *MW[6] + 0.057*mi.8.9          ;OO + OO TD access
    MW[33] = 0.140 *mi.9.1*0.8                    ;Thru
  ;
  ; A-P
    MW[22] = 0.149 *MW[1] + 0.037 *mi.8.1         ;HBW + HBW TD access
    MW[24] = 0.194 *MW[2] + 0.109 *mi.8.3         ;HBS + HBS TD access
    MW[26] = 0.036 *MW[3]                         ;HBSc
    MW[28] = 0.204 *MW[4] + 0.161 *mi.8.5         ;HBO + HBO TD access
    MW[30] = 0.072 *MW[5] + 0.026 *mi.8.7         ;WO + WO TD access
    MW[32] = 0.101 *MW[6] + 0.057 *mi.8.9         ;OO + OO TD access
    MW[34] = 0.140 *mi.9.1*0.8                    ;Thru
  ;
  ; Shared Ride  P-A to O-D factoring
  ; P-A
    MW[41] = 0.082 *MW[11] + 0.048 *mi.8.2         ;HBW + HBW TD access
    MW[43] = 0.089 *MW[12] + 0.136 *mi.8.4         ;HBS + HBS TD access
    MW[45] = 0.018 *MW[13]                         ;HBSc
    MW[47] = 0.140 *MW[14] + 0.128 *mi.8.6         ;HBO + HBO TD access
    MW[49] = 0.036 *MW[15] + 0.0 *mi.8.8           ;WO + WO TD access
    MW[51] = 0.101 *MW[16] + 0.057 *mi.8.10        ;OO + OO TD access
    MW[53] = 0.140 *mi.9.1*0.2                     ;Thru
  ;
  ; A-P
    MW[42] = 0.148 *MW[11] + 0.037 *mi.8.2         ;HBW + HBW TD access
    MW[44] = 0.194 *MW[12] + 0.109 *mi.8.4         ;HBS + HBS TD access
    MW[46] = 0.036 *MW[13]                         ;HBSc
    MW[48] = 0.204 *MW[14] + 0.161 *mi.8.6         ;HBO + HBO TD access
    MW[50] = 0.072 *MW[15] + 0.026 *mi.8.8         ;WO + WO TD access
    MW[52] = 0.101 *MW[16] + 0.057 *mi.8.10        ;OO + OO TD access
    MW[54] = 0.140 *MI.9.1*0.2                     ;Thru
  ;
  ; C2  P-A to O-D factoring
    MW[55] = 0.1475*mi.7.6                        ; P-A
    MW[56] = MW[55]                               ; A-P
```

```
;
; C3  P-A to O-D factoring
  MW[57] = 0.1745*mi.7.7 + 0.1745*mi.9.2      ; P-A (with XX commercial)
  MW[58] = MW[57]                             ; A-P
ENDRUN
;*********************************************************************
;
;
;
;---------------------------------------------------------------------
; Combine AM DA, SR, C2 and C3 PA/AP tables for AM3
;---------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
  FILEI MATI[1] = "@DA_AM@"
  FILEI MATI[2] = "@SR_AM@"
  FILEI MATI[3] = "@C2_AM@"
  FILEI MATI[4] = "@C3_AM@"
;
; DA and SR input files each have 14 matrici: HBW_PA, HBW_AP,   HBS_PA, HBS_AP,
;     HBSc_PA, HBSC_AP,   HBO_PA, HBO_AP,   WO_PA, WO_AP,   OO_PA, OO_AP,
;     THRU_PA, THRU_AP
;
; C2 and C3 input files have two atricies each: C2_PA, C2_AP  or C3_PA, C3_AP
;
; Outputs
FILEO MATO[1] = "@AM_Trips@", MO=1-18,
                NAME = HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                       HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                       THRU_PA, THRU_AP,  COM_PA, COM_AP,    TOT_PA, TOT_AP
;
  MW[1] =MI.1.1+ MI.2.1                                       ;HBW PA
  MW[2] =MI.1.2+ MI.2.2                                       ;HBW AP
  MW[3] =MI.1.3+ MI.2.3                                       ;HBS PA
  MW[4] =MI.1.4+ MI.2.4                                       ;HBS AP
  MW[5] =MI.1.5+ MI.2.5                                       ;HBSC PA
  MW[6] =MI.1.6+ MI.2.6                                       ;HBSC AP
  MW[7] =MI.1.7+ MI.2.7                                       ;HBO PA
  MW[8] =MI.1.8+ MI.2.8                                       ;HBO AP
  MW[9] =MI.1.9+ MI.2.9                                       ;WO PA
  MW[10]=MI.1.10+MI.2.10                                      ;WO AP
  MW[11]=MI.1.11+MI.2.11                                      ;OO PA
  MW[12]=MI.1.12+MI.2.12                                      ;OO AP
  MW[13]=MI.1.13+MI.2.13                                      ;THRU PA
  MW[14]=MI.1.14+MI.2.14                                      ;THRU AP
  MW[15]=MI.3.1+MI.4.1                                        ;COM PA
  MW[16]=MI.3.2+MI.4.2                                        ;COM AP
  MW[17]=MW[1]+MW[3]+MW[5]+MW[7]+MW[9]+MW[11]+MW[13]+MW[15]   ;TOT
PA
  MW[18]=MW[2]+MW[4]+MW[6]+MW[8]+MW[10]+MW[12]+MW[14]+MW[16]  ;TOT
AP
;
ENDRUN
;
;
;
;---------------------------------------------------------------------
; Combine AM DA, SR, C2 and C3 PA/AP tables for MD
;---------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
```

```
  FILEI MATI[1] = "@DA_MD@"
  FILEI MATI[2] = "@SR_MD@"
  FILEI MATI[3] = "@C2_MD@"
  FILEI MATI[4] = "@C3_MD@"
;
; DA and SR input files each have 14 matrici: HBW_PA, HBW_AP,   HBS_PA, HBS_AP,
;     HBSc_PA, HBSC_AP,   HBO_PA, HBO_AP,   WO_PA, WO_AP,   OO_PA, OO_AP,
;     THRU_PA, THRU_AP
;
; C2 and C3 input files have two atricies each: C2_PA, C2_AP  or C3_PA, C3_AP
;
; Outputs
FILEO MATO[1] = "@MD_Trips@", MO=1-18,
                NAME = HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
                       HBO_PA, HBO_AP,    WO_PA, WO_AP,      OO_PA, OO_AP,
                       THRU_PA, THRU_AP,  COM_PA, COM_AP,    TOT_PA, TOT_AP
;
  MW[1] =MI.1.1+ MI.2.1                                      ;HBW PA
  MW[2] =MI.1.2+ MI.2.2                                      ;HBW AP
  MW[3] =MI.1.3+ MI.2.3                                      ;HBS PA
  MW[4] =MI.1.4+ MI.2.4                                      ;HBS AP
  MW[5] =MI.1.5+ MI.2.5                                      ;HBSC PA
  MW[6] =MI.1.6+ MI.2.6                                      ;HBSC AP
  MW[7] =MI.1.7+ MI.2.7                                      ;HBO PA
  MW[8] =MI.1.8+ MI.2.8                                      ;HBO AP
  MW[9] =MI.1.9+ MI.2.9                                      ;WO PA
  MW[10]=MI.1.10+MI.2.10                                     ;WO AP
  MW[11]=MI.1.11+MI.2.11                                     ;OO PA
  MW[12]=MI.1.12+MI.2.12                                     ;OO AP
  MW[13]=MI.1.13+MI.2.13                                     ;THRU PA
  MW[14]=MI.1.14+MI.2.14                                     ;THRU AP
  MW[15]=MI.3.1+MI.4.1                                       ;COM PA
  MW[16]=MI.3.2+MI.4.2                                       ;COM AP
  MW[17]=MW[1]+MW[3]+MW[5]+MW[7]+MW[9]+MW[11]+MW[13]+MW[15]  ;TOT
PA
  MW[18]=MW[2]+MW[4]+MW[6]+MW[8]+MW[10]+MW[12]+MW[14]+MW[16] ;TOT
AP
;
ENDRUN
;
;
;
;-------------------------------------------------------------------------
; Combine AM DA, SR, C2 and C3 PA/AP tables for PM3
;-------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
  FILEI MATI[1] = "@DA_PM@"
  FILEI MATI[2] = "@SR_PM@"
  FILEI MATI[3] = "@C2_PM@"
  FILEI MATI[4] = "@C3_PM@"
;
; DA and SR input files each have 14 matrici: HBW_PA, HBW_AP,   HBS_PA, HBS_AP,
;     HBSc_PA, HBSC_AP,   HBO_PA, HBO_AP,   WO_PA, WO_AP,   OO_PA, OO_AP,
;     THRU_PA, THRU_AP
;
; C2 and C3 input files have two atricies each: C2_PA, C2_AP  or C3_PA, C3_AP
;
; Outputs
FILEO MATO[1] = "@PM_Trips@", MO=1-18,
                NAME = HBW_PA, HBW_AP,    HBS_PA, HBS_AP,    HBSc_PA, HBSC_AP,
```

```
                        HBO_PA, HBO_AP,     WO_PA, WO_AP,       OO_PA, OO_AP,
                        THRU_PA, THRU_AP,   COM_PA, COM_AP,     TOT_PA, TOT_AP
;
  MW[1] =MI.1.1+ MI.2.1                                          ;HBW PA
  MW[2] =MI.1.2+ MI.2.2                                          ;HBW AP
  MW[3] =MI.1.3+ MI.2.3                                          ;HBS PA
  MW[4] =MI.1.4+ MI.2.4                                          ;HBS AP
  MW[5] =MI.1.5+ MI.2.5                                          ;HBSC PA
  MW[6] =MI.1.6+ MI.2.6                                          ;HBSC AP
  MW[7] =MI.1.7+ MI.2.7                                          ;HBO PA
  MW[8] =MI.1.8+ MI.2.8                                          ;HBO AP
  MW[9] =MI.1.9+ MI.2.9                                          ;WO PA
  MW[10]=MI.1.10+MI.2.10                                         ;WO AP
  MW[11]=MI.1.11+MI.2.11                                         ;OO PA
  MW[12]=MI.1.12+MI.2.12                                         ;OO AP
  MW[13]=MI.1.13+MI.2.13                                         ;THRU PA
  MW[14]=MI.1.14+MI.2.14                                         ;THRU AP
  MW[15]=MI.3.1+MI.4.1                                           ;COM PA
  MW[16]=MI.3.2+MI.4.2                                           ;COM AP
  MW[17]=MW[1]+MW[3]+MW[5]+MW[7]+MW[9]+MW[11]+MW[13]+MW[15]      ;TOT
PA
  MW[18]=MW[2]+MW[4]+MW[6]+MW[8]+MW[10]+MW[12]+MW[14]+MW[16]     ;TOT
AP
;
ENDRUN
;
;
;
;---------------------------------------------------------------------------
; Combine AM DA, SR, C2 and C3 PA/AP tables for EV
;---------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
  FILEI MATI[1] = "@DA_EV@"
  FILEI MATI[2] = "@SR_EV@"
  FILEI MATI[3] = "@C2_EV@"
  FILEI MATI[4] = "@C3_EV@"
;
; DA and SR input files each have 14 matrici: HBW_PA, HBW_AP,   HBS_PA, HBS_AP,
;     HBSc_PA, HBSC_AP,   HBO_PA, HBO_AP,   WO_PA, WO_AP,   OO_PA, OO_AP,
;     THRU_PA, THRU_AP
;
; C2 and C3 input files have two atricies each: C2_PA, C2_AP  or C3_PA, C3_AP
;
; Outputs
FILEO MATO[1] = "@EV_Trips@", MO=1-18,
                NAME = HBW_PA, HBW_AP,     HBS_PA, HBS_AP,     HBSc_PA, HBSC_AP,
                       HBO_PA, HBO_AP,     WO_PA, WO_AP,       OO_PA, OO_AP,
                       THRU_PA, THRU_AP,   COM_PA, COM_AP,     TOT_PA, TOT_AP
;
  MW[1] =MI.1.1+ MI.2.1                                          ;HBW PA
  MW[2] =MI.1.2+ MI.2.2                                          ;HBW AP
  MW[3] =MI.1.3+ MI.2.3                                          ;HBS PA
  MW[4] =MI.1.4+ MI.2.4                                          ;HBS AP
  MW[5] =MI.1.5+ MI.2.5                                          ;HBSC PA
  MW[6] =MI.1.6+ MI.2.6                                          ;HBSC AP
  MW[7] =MI.1.7+ MI.2.7                                          ;HBO PA
  MW[8] =MI.1.8+ MI.2.8                                          ;HBO AP
  MW[9] =MI.1.9+ MI.2.9                                          ;WO PA
  MW[10]=MI.1.10+MI.2.10                                         ;WO AP
  MW[11]=MI.1.11+MI.2.11                                         ;OO PA
```

```
  MW[12]=MI.1.12+MI.2.12                                                ;OO AP
  MW[13]=MI.1.13+MI.2.13                                                ;THRU PA
  MW[14]=MI.1.14+MI.2.14                                                ;THRU AP
  MW[15]=MI.3.1+MI.4.1                                                  ;COM PA
  MW[16]=MI.3.2+MI.4.2                                                  ;COM AP
  MW[17]=MW[1]+MW[3]+MW[5]+MW[7]+MW[9]+MW[11]+MW[13]+MW[15]             ;TOT
PA
  MW[18]=MW[2]+MW[4]+MW[6]+MW[8]+MW[10]+MW[12]+MW[14]+MW[16]            ;TOT
AP
;
ENDRUN
;
;
;
;-------------------------------------------------------------------------
; Combine distance skimes and PA/AP Data to get VMT.
; ;-------------------------------------------------------------------------
; AM peak period VMT
RUN PGM=MATRIX
  FILEI MATI[1]="@AM_Trips@"  ; AP and PA trip tables, 18 matricies:
;                                HBW_PA,   HBW_AP,
;                                HBS_PA,   HBS_AP,
;                                HBSc_PA,  HBSC_AP,
;                                HBO_PA,   HBO_AP,
;                                WO_PA,    WO_AP,
;                                OO_PA,    OO_AP,
;                                THRU_PA,  THRU_AP,
;                                COM_PA,   COM_AP,
;                                TOT_PA,   TOT_AP
  FILEI MATI[2] = "@AMDIST@"  ; Distance Skim
  FILEO MATO[1] = "@AMVMTSIMP@", MO=1-18, NAME =
                                          HBW_PA,   HBW_AP,
                                          HBS_PA,   HBS_AP,
                                          HBSc_PA,  HBSC_AP,
                                          HBO_PA,   HBO_AP,
                                          WO_PA,    WO_AP,
                                          OO_PA,    OO_AP,
                                          THRU_PA,  THRU_AP,
                                          COM_PA,   COM_AP,
                                          TOT_PA,   TOT_AP
;
  MW[21]=MI.1.1                                                         ;HBW PA
  MW[22]=MI.1.2                                                         ;HBW AP
  MW[23]=MI.1.3                                                         ;HBS PA
  MW[24]=MI.1.4                                                         ;HBS AP
  MW[25]=MI.1.5                                                         ;HBSc PA
  MW[26]=MI.1.6                                                         ;HBSc AP
  MW[27]=MI.1.7                                                         ;HBO PA
  MW[28]=MI.1.8                                                         ;HBO AP
  MW[29]=MI.1.9                                                         ;WO PA
  MW[30]=MI.1.10                                                        ;WO AP
  MW[31]=MI.1.11                                                        ;OO PA
  MW[32]=MI.1.12                                                        ;OO AP
  MW[33]=MI.1.13                                                        ;THRU PA
  MW[34]=MI.1.14                                                        ;THRU AP
  MW[35]=MI.1.15                                                        ;COM PA
  MW[36]=MI.1.16                                                        ;COM AP
  MW[37]=MI.1.17                                                        ;TOTAL PA
  MW[38]=MI.1.18                                                        ;TATAL AP
  MW[39]=MI.2.1                                                         ;Distance skim
for PA
```

```
  MW[40]=MI.2.1.t                                                    ;Distance skim
for AP
; NOTE AP TRIPS NEED TO BE USED WITH TRANSPOSE OF DISTANCE MATRIX SO THAT ROW
TOTALS
; LINE UP WITH PRODUCTION LAND USE.
;
; FIRST GET PA VMT
  JLOOP
    MW[1]= MW[21]*MW[39]                                             ;HBW
    MW[3]= MW[23]*MW[39]                                             ;HBS
    MW[5]= MW[25]*MW[39]                                             ;HBSc
    MW[7]= MW[27]*MW[39]                                             ;HBO
    MW[9]= MW[29]*MW[39]                                             ;WO
    MW[11]=MW[31]*MW[39]                                             ;OO
    MW[13]=MW[33]*MW[39]                                             ;THRU
    MW[15]=MW[35]*MW[39]                                             ;COM
    MW[17]=MW[37]*MW[39]                                             ;TOTAL
  ENDJLOOP
; SECOND GET AP VMT (THESE MAY NEED TO BE TRANSPOSED??)
  JLOOP
    MW[2]= MW[22]*MW[40]                                             ;HBW
    MW[4]= MW[24]*MW[40]                                             ;HBS
    MW[6]= MW[26]*MW[40]                                             ;HBSc
    MW[8]= MW[28]*MW[40]                                             ;HBO
    MW[10]=MW[30]*MW[40]                                             ;WO
    MW[12]=MW[32]*MW[40]                                             ;OO
    MW[14]=MW[34]*MW[40]                                             ;THRU
    MW[16]=MW[36]*MW[40]                                             ;COM
    MW[18]=MW[38]*MW[40]                                             ;TOTAL
  ENDJLOOP
ENDRUN
;
;
;
; md peak period VMT
RUN PGM=MATRIX
  FILEI MATI[1]="@MD_Trips@"  ; AP and PA trip tables, 18 matricies:
;                                    HBW_PA,  HBW_AP,
;                                    HBS_PA,  HBS_AP,
;                                    HBSc_PA, HBSC_AP,
;                                    HBO_PA,  HBO_AP,
;                                    WO_PA,   WO_AP,
;                                    OO_PA,   OO_AP,
;                                    THRU_PA, THRU_AP,
;                                    COM_PA,  COM_AP,
;                                    TOT_PA,  TOT_AP
  FILEI MATI[2] = "@MDDIST@"  ; Distance Skim
  FILEO MATO[1] = "@MDVMTSIMP@", MO=1-18, NAME =
                                    HBW_PA,  HBW_AP,
                                    HBS_PA,  HBS_AP,
                                    HBSc_PA, HBSC_AP,
                                    HBO_PA,  HBO_AP,
                                    WO_PA,   WO_AP,
                                    OO_PA,   OO_AP,
                                    THRU_PA, THRU_AP,
                                    COM_PA,  COM_AP,
                                    TOT_PA,  TOT_AP
;
  MW[21]=MI.1.1                                                      ;HBW PA
  MW[22]=MI.1.2                                                      ;HBW AP
  MW[23]=MI.1.3                                                      ;HBS PA
```

```
  MW[24]=MI.1.4                                                    ;HBS AP
  MW[25]=MI.1.5                                                    ;HBSc PA
  MW[26]=MI.1.6                                                    ;HBSc AP
  MW[27]=MI.1.7                                                    ;HBO PA
  MW[28]=MI.1.8                                                    ;HBO AP
  MW[29]=MI.1.9                                                    ;WO PA
  MW[30]=MI.1.10                                                   ;WO AP
  MW[31]=MI.1.11                                                   ;OO PA
  MW[32]=MI.1.12                                                   ;OO AP
  MW[33]=MI.1.13                                                   ;THRU PA
  MW[34]=MI.1.14                                                   ;THRU AP
  MW[35]=MI.1.15                                                   ;COM PA
  MW[36]=MI.1.16                                                   ;COM AP
  MW[37]=MI.1.17                                                   ;TOTAL PA
  MW[38]=MI.1.18                                                   ;TATAL AP
  MW[39]=MI.2.1                                                    ;Distance skim
for PA
  MW[40]=MI.2.1.t                                                  ;Distance skim
for AP
; NOTE AP TRIPS NEED TO BE USED WITH TRANSPOSE OF DISTANCE MATRIX SO THAT ROW
TOTALS
; LINE UP WITH PRODUCTION LAND USE.
;
; FIRST GET PA VMT
  JLOOP
    MW[1]= MW[21]*MW[39]                                           ;HBW
    MW[3]= MW[23]*MW[39]                                           ;HBS
    MW[5]= MW[25]*MW[39]                                           ;HBSc
    MW[7]= MW[27]*MW[39]                                           ;HBO
    MW[9]= MW[29]*MW[39]                                           ;WO
    MW[11]=MW[31]*MW[39]                                           ;OO
    MW[13]=MW[33]*MW[39]                                           ;THRU
    MW[15]=MW[35]*MW[39]                                           ;COM
    MW[17]=MW[37]*MW[39]                                           ;TOTAL
  ENDJLOOP
; SECOND GET AP VMT (THESE MAY NEED TO BE TRANSPOSED??)
  JLOOP
    MW[2]= MW[22]*MW[40]                                           ;HBW
    MW[4]= MW[24]*MW[40]                                           ;HBS
    MW[6]= MW[26]*MW[40]                                           ;HBSc
    MW[8]= MW[28]*MW[40]                                           ;HBO
    MW[10]=MW[30]*MW[40]                                           ;WO
    MW[12]=MW[32]*MW[40]                                           ;OO
    MW[14]=MW[34]*MW[40]                                           ;THRU
    MW[16]=MW[36]*MW[40]                                           ;COM
    MW[18]=MW[38]*MW[40]                                           ;TOTAL
  ENDJLOOP
ENDRUN
;
;
;
; PM peak period VMT
RUN PGM=MATRIX
  FILEI MATI[1]="@PM_Trips@"  ; AP and PA trip tables, 18 matricies:
;                                    HBW_PA,   HBW_AP,
;                                    HBS_PA,   HBS_AP,
;                                    HBSc_PA,  HBSC_AP,
;                                    HBO_PA,   HBO_AP,
;                                    WO_PA,    WO_AP,
;                                    OO_PA,    OO_AP,
;                                    THRU_PA,  THRU_AP,
```

```
;                                   COM_PA,   COM_AP,
;                                   TOT_PA,   TOT_AP
  FILEI MATI[2] = "@PMDIST@"  ; Distance Skim
  FILEO MATO[1] = "@PMVMTSIMP@", MO=1-18, NAME =
                                            HBW_PA,   HBW_AP,
                                            HBS_PA,   HBS_AP,
                                            HBSc_PA,  HBSC_AP,
                                            HBO_PA,   HBO_AP,
                                            WO_PA,    WO_AP,
                                            OO_PA,    OO_AP,
                                            THRU_PA,  THRU_AP,
                                            COM_PA,   COM_AP,
                                            TOT_PA,   TOT_AP
;
  MW[21]=MI.1.1                                                 ;HBW PA
  MW[22]=MI.1.2                                                 ;HBW AP
  MW[23]=MI.1.3                                                 ;HBS PA
  MW[24]=MI.1.4                                                 ;HBS AP
  MW[25]=MI.1.5                                                 ;HBSc PA
  MW[26]=MI.1.6                                                 ;HBSc AP
  MW[27]=MI.1.7                                                 ;HBO PA
  MW[28]=MI.1.8                                                 ;HBO AP
  MW[29]=MI.1.9                                                 ;WO PA
  MW[30]=MI.1.10                                                ;WO AP
  MW[31]=MI.1.11                                                ;OO PA
  MW[32]=MI.1.12                                                ;OO AP
  MW[33]=MI.1.13                                                ;THRU PA
  MW[34]=MI.1.14                                                ;THRU AP
  MW[35]=MI.1.15                                                ;COM PA
  MW[36]=MI.1.16                                                ;COM AP
  MW[37]=MI.1.17                                                ;TOTAL PA
  MW[38]=MI.1.18                                                ;TATAL AP
  MW[39]=MI.2.1                                                 ;Distance skim
for PA
  MW[40]=MI.2.1.t                                               ;Distance skim
for AP
; NOTE AP TRIPS NEED TO BE USED WITH TRANSPOSE OF DISTANCE MATRIX SO THAT ROW
TOTALS
; LINE UP WITH PRODUCTION LAND USE.
;
; FIRST GET PA VMT
  JLOOP
    MW[1]= MW[21]*MW[39]                                         ;HBW
    MW[3]= MW[23]*MW[39]                                         ;HBS
    MW[5]= MW[25]*MW[39]                                         ;HBSc
    MW[7]= MW[27]*MW[39]                                         ;HBO
    MW[9]= MW[29]*MW[39]                                         ;WO
    MW[11]=MW[31]*MW[39]                                         ;OO
    MW[13]=MW[33]*MW[39]                                         ;THRU
    MW[15]=MW[35]*MW[39]                                         ;COM
    MW[17]=MW[37]*MW[39]                                         ;TOTAL
  ENDJLOOP
; SECOND GET AP VMT (THESE MAY NEED TO BE TRANSPOSED??)
  JLOOP
    MW[2]= MW[22]*MW[40]                                         ;HBW
    MW[4]= MW[24]*MW[40]                                         ;HBS
    MW[6]= MW[26]*MW[40]                                         ;HBSc
    MW[8]= MW[28]*MW[40]                                         ;HBO
    MW[10]=MW[30]*MW[40]                                         ;WO
    MW[12]=MW[32]*MW[40]                                         ;OO
    MW[14]=MW[34]*MW[40]                                         ;THRU
```

```
898       MW[16]=MW[36]*MW[40]                                          ;COM
899       MW[18]=MW[38]*MW[40]                                          ;TOTAL
900     ENDJLOOP
901   ENDRUN
902   ;
903   ;
904   ;
905   ; EV peak period VMT
906   RUN PGM=MATRIX
907     FILEI MATI[1]="@EV_Trips@"  ; AP and PA trip tables, 18 matricies:
908   ;                                HBW_PA,   HBW_AP,
909   ;                                HBS_PA,   HBS_AP,
910   ;                                HBSc_PA,  HBSC_AP,
911   ;                                HBO_PA,   HBO_AP,
912   ;                                WO_PA,    WO_AP,
913   ;                                OO_PA,    OO_AP,
914   ;                                THRU_PA,  THRU_AP,
915   ;                                COM_PA,   COM_AP,
916   ;                                TOT_PA,   TOT_AP
917     FILEI MATI[2] = "@EVDIST@"  ; Distance Skim
918     FILEO MATO[1] = "@EVVMTSIMP@", MO=1-18, NAME =
919                                             HBW_PA,   HBW_AP,
920                                             HBS_PA,   HBS_AP,
921                                             HBSc_PA,  HBSC_AP,
922                                             HBO_PA,   HBO_AP,
923                                             WO_PA,    WO_AP,
924                                             OO_PA,    OO_AP,
925                                             THRU_PA,  THRU_AP,
926                                             COM_PA,   COM_AP,
927                                             TOT_PA,   TOT_AP
928   ;
929     MW[21]=MI.1.1                                                   ;HBW PA
930     MW[22]=MI.1.2                                                   ;HBW AP
931     MW[23]=MI.1.3                                                   ;HBS PA
932     MW[24]=MI.1.4                                                   ;HBS AP
933     MW[25]=MI.1.5                                                   ;HBSc PA
934     MW[26]=MI.1.6                                                   ;HBSc AP
935     MW[27]=MI.1.7                                                   ;HBO PA
936     MW[28]=MI.1.8                                                   ;HBO AP
937     MW[29]=MI.1.9                                                   ;WO PA
938     MW[30]=MI.1.10                                                  ;WO AP
939     MW[31]=MI.1.11                                                  ;OO PA
940     MW[32]=MI.1.12                                                  ;OO AP
941     MW[33]=MI.1.13                                                  ;THRU PA
942     MW[34]=MI.1.14                                                  ;THRU AP
943     MW[35]=MI.1.15                                                  ;COM PA
944     MW[36]=MI.1.16                                                  ;COM AP
945     MW[37]=MI.1.17                                                  ;TOTAL PA
946     MW[38]=MI.1.18                                                  ;TATAL AP
947     MW[39]=MI.2.1                                                   ;Distance skim
    for PA
948     MW[40]=MI.2.1.t                                                 ;Distance skim
    for AP
949   ; NOTE AP TRIPS NEED TO BE USED WITH TRANSPOSE OF DISTANCE MATRIX SO THAT ROW
    TOTALS
950   ; LINE UP WITH PRODUCTION LAND USE.
951   ;
952   ; FIRST GET PA VMT
953     JLOOP
954       MW[1]= MW[21]*MW[39]                                          ;HBW
955       MW[3]= MW[23]*MW[39]                                          ;HBS
```

```
      MW[5]= MW[25]*MW[39]                                    ;HBSc
      MW[7]= MW[27]*MW[39]                                    ;HBO
      MW[9]= MW[29]*MW[39]                                    ;WO
      MW[11]=MW[31]*MW[39]                                    ;OO
      MW[13]=MW[33]*MW[39]                                    ;THRU
      MW[15]=MW[35]*MW[39]                                    ;COM
      MW[17]=MW[37]*MW[39]                                    ;TOTAL
    ENDJLOOP
; SECOND GET AP VMT (THESE MAY NEED TO BE TRANSPOSED??)
    JLOOP
      MW[2]= MW[22]*MW[40]                                    ;HBW
      MW[4]= MW[24]*MW[40]                                    ;HBS
      MW[6]= MW[26]*MW[40]                                    ;HBSc
      MW[8]= MW[28]*MW[40]                                    ;HBO
      MW[10]=MW[30]*MW[40]                                    ;WO
      MW[12]=MW[32]*MW[40]                                    ;OO
      MW[14]=MW[34]*MW[40]                                    ;THRU
      MW[16]=MW[36]*MW[40]                                    ;COM
      MW[18]=MW[38]*MW[40]                                    ;TOTAL
    ENDJLOOP
ENDRUN
;
;
;
```

```
;-------------------------------------------------------------------------------
;
; Step 3: Aggrigate the VMT and trip matrici by trip purpase and taz
;         from Step 2.
;
;         These data can then be post-processed with pop and employment data
;         to derive VMT per capita/service pop setting and for comparing to
;         thresholds.
;
;-------------------------------------------------------------------------------
; Input VMT matrices
;-------------------------------------------------------------------------------
AMVMTSIMP='.\temp_files\AM_vmt_by_purpose.mat'
MDVMTSIMP='.\temp_files\MD_vmt_by_purpose.mat'
PMVMTSIMP='.\temp_files\PM_vmt_by_purpose.mat'
EVVMTSIMP='.\temp_files\EV_vmt_by_purpose.mat'
; Note: VMT is provided for x purposes: HBW, HBS, HBSc, HBO, WO, OO,
;       Thru, Commercial (and total). each purose has a a PA and an AP table.
;-------------------------------------------------------------------------------
; Input multi-class PA and AP tables
;-------------------------------------------------------------------------------
AM_Trips='.\temp_files\AM_PA_AP_Data.mat'
MD_Trips='.\temp_files\MD_PA_AP_Data.mat'
PM_Trips='.\temp_files\PM_PA_AP_Data.mat'
EV_Trips='.\temp_files\EV_PA_AP_Data.mat'
;
;-------------------------------------------------------------------------------
; Output VMT and trips by purpose and each TAZ
;-------------------------------------------------------------------------------
VMT_BY_PURPOSE=  '.\temp_files\DAILY_VMT_BY_PURPOSE.MAT'
TRIPS_BY_PURPOSE='.\temp_files\DAILY_TRIPS_BY_PURPOSE.MAT'
; Daily HBW, HBS, HBSc, HBO, WO, OO, THRU, COMMERCIAL, TOTAL, ALL BY PA AND AP.
;
;-------------------------------------------------------------------------------
; DAILY TOTALS (VMT)
;-------------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
FILEI MATI[1] = "@AMVMTSIMP@"                          ;AM
FILEI MATI[2] = "@MDVMTSIMP@"                          ;Md
FILEI MATI[3] = "@PMVMTSIMP@"                          ;PM
FILEI MATI[4] = "@EVVMTSIMP@"                          ;EV
; Outputs
FILEO MATO[1] = "@VMT_BY_PURPOSE@", mo=1-10,           ;daily
                 name= HBW, HBS, SHSC, HBO,
                 WO, OO_HOME, OO_WORK, THRU,
                 COMERCIAL, TOT
;
  MW[1]= mi.1.1+ mi.2.1+ mi.3.1+ mi.4.1+               ;HBW
         mi.1.2+ mi.2.2+ mi.3.2+ mi.4.2
  MW[2]= mi.1.3+ mi.2.3+ mi.3.3+ mi.4.3+               ;HBS
         mi.1.4+ mi.2.4+ mi.3.4+ mi.4.4
  MW[3]= mi.1.5+ mi.2.5+ mi.3.5+ mi.4.5+               ;HBSc
         mi.1.6+ mi.2.6+ mi.3.6+ mi.4.6
  MW[4]= mi.1.7+ mi.2.7+ mi.3.7+ mi.4.7+               ;HBO
         mi.1.8+ mi.2.8+ mi.3.8+ mi.4.8
  MW[5]= mi.1.9+ mi.2.9+ mi.3.9+ mi.4.9+               ;WO
         mi.1.10+mi.2.10+mi.3.10+mi.4.10
  MW[20]=mi.1.11+mi.2.11+mi.3.11+mi.4.11+              ;OO
         mi.1.12+mi.2.12+mi.3.12+mi.4.12
  MW[8]= mi.1.13+mi.2.13+mi.3.13+mi.4.13+              ;THRU
```

```
           mi.1.14+mi.2.14+mi.3.14+mi.4.14
  MW[9]= mi.1.15+mi.2.15+mi.3.15+mi.4.15+          ;COM
         mi.1.16+mi.2.16+mi.3.16+mi.4.16
  MW[10]=mi.1.17+mi.2.17+mi.3.17+mi.4.17+          ;TOTAL
         mi.1.18+mi.2.18+mi.3.18+mi.4.18
;
; Allocate OO to home-based or work-based
  MW[30]=MW[1]+MW[2]+MW[3]+MW[4]+MW[5]
  JLOOP
    IF (MW[30]>0)
        MW[6]=(MW[1]+MW[2]+MW[3]+MW[4])/MW[30]*MW[20] ; OO allocated to Home
based
        MW[7]= MW[5]/MW[30]*MW[20]                    ; OO allocated to work
based
    ELSE
        MW[6]=0
        MW[7]=0
    ENDIF
  ENDJLOOP
;
ENDRUN
;
;
;-------------------------------------------------------------------------
; DAILY TOTALS (trips)
;-------------------------------------------------------------------------
RUN PGM=MATRIX
; Inputs
FILEI MATI[1] = "@AM_Trips@"                     ;AM
FILEI MATI[2] = "@MD_Trips@"                     ;Md
FILEI MATI[3] = "@PM_Trips@"                     ;PM
FILEI MATI[4] = "@EV_Trips@"                     ;EV
; Outputs
FILEO MATO[1] = "@TRIPS_BY_PURPOSE@", mo=1-10,   ;daily
                 name= HBW, HBS, SHSC, HBO,
                 WO, OO_HOME, OO_WORK, THRU,
                 COMERCIAL, TOT
;
  MW[1]= mi.1.1+ mi.2.1+ mi.3.1+ mi.4.1+         ;HBW
         mi.1.2+ mi.2.2+ mi.3.2+ mi.4.2
  MW[2]= mi.1.3+ mi.2.3+ mi.3.3+ mi.4.3+         ;HBS
         mi.1.4+ mi.2.4+ mi.3.4+ mi.4.4
  MW[3]= mi.1.5+ mi.2.5+ mi.3.5+ mi.4.5+         ;HBSc
         mi.1.6+ mi.2.6+ mi.3.6+ mi.4.6
  MW[4]= mi.1.7+ mi.2.7+ mi.3.7+ mi.4.7+         ;HBO
         mi.1.8+ mi.2.8+ mi.3.8+ mi.4.8
  MW[5]= mi.1.9+ mi.2.9+ mi.3.9+ mi.4.9+         ;WO
         mi.1.10+mi.2.10+mi.3.10+mi.4.10
  MW[20]=mi.1.11+mi.2.11+mi.3.11+mi.4.11+        ;OO
         mi.1.12+mi.2.12+mi.3.12+mi.4.12
  MW[8]= mi.1.13+mi.2.13+mi.3.13+mi.4.13+        ;THRU
         mi.1.14+mi.2.14+mi.3.14+mi.4.14
  MW[9]= mi.1.15+mi.2.15+mi.3.15+mi.4.15+        ;COM
         mi.1.16+mi.2.16+mi.3.16+mi.4.16
  MW[10]=mi.1.17+mi.2.17+mi.3.17+mi.4.17+        ;TOTAL
         mi.1.18+mi.2.18+mi.3.18+mi.4.18
;
; Allocate OO to home-based or work-based
  MW[30]=MW[1]+MW[2]+MW[3]+MW[4]+MW[5]
  JLOOP
    IF (MW[30]>0)
```

```
121           MW[6]=(MW[1]+MW[2]+MW[3]+MW[4])/MW[30]*MW[20] ; OO allocated to Home
      based
122           MW[7]= MW[5]/MW[30]*MW[20]                    ; OO allocated to work
      based
123         ELSE
124           MW[6]=0
125           MW[7]=0
126         ENDIF
127       ENDJLOOP
128     ;
129     ENDRUN
130     ;
131     ;
132     ;---------------------------------------------------------------------------
133     ; consoldate outputs
134     ;---------------------------------------------------------------------------
135     ;
136     RUN PGM=MATRIX
137     ;---------------------------------------------------------------------------
138     ; Print VMT - Rows & Columns
139     ;---------------------------------------------------------------------------
140       MATI[1]="@VMT_BY_PURPOSE@"
141       MATI[2]="@TRIPS_BY_PURPOSE@"
142       ZONES=674
143       mw[1]= mi.1.1                                   ;HBW
144       mw[2]= mi.1.2                                   ;HBS
145       mw[3]= mi.1.3                                   ;HBSC
146       mw[4]= mi.1.4                                   ;HBO
147       mw[5]= mi.1.5                                   ;WO
148       mw[6]= mi.1.6                                   ;00_HOME
149       mw[7]= mi.1.7                                   ;OO_WORK
150       mw[8]= mi.1.8                                   ;THRU
151       mw[9]= mi.1.9                                   ;COMMERCIAL
152       mw[10]=mi.1.10                                  ;Total
153     ;
154       mw[11]=mi.2.1                                   ;HBW
155       mw[12]=mi.2.2                                   ;HBS
156       mw[13]=mi.2.3                                   ;HBSC
157       mw[14]=mi.2.4                                   ;HBO
158       mw[15]=mi.2.5                                   ;WO
159       mw[16]=mi.2.6                                   ;00_HOME
160       mw[17]=mi.2.7                                   ;OO_WORK
161       mw[18]=mi.2.8                                   ;THRU
162       mw[19]=mi.2.9                                   ;COMMERCIAL
163       mw[20]=mi.2.10                                  ;Total
164     ;
165     ;    Request margins summaries for office land use
166     ;   (HBW (attractions), WO and OO(work portion) productions)
167       REPORT  MARGINS=1,5,7
168       MARGINREC=Y FORM=8.0,LIST=J(5.0),
169       C1,                                           ;HBW Attractions
170       R5,                                           ;WO Productions
171       R7,                                           ;Work share of OO Productions
172       C1_R5_R7,                                     ;OFFICE TOTAL
173       FILE=OFFICE_HBW(A)+WO(P)+OO_work(P)+OffTOT.Txt,PRINT=N
174     ;
175     ;
176     ;    Request margins summaries for residential land use
177     ;   (HBW, HBS, HBSc, HBO, OO(home portion) productions)
178       REPORT  MARGINS=1,2,3,4,6
179       MARGINREC=Y FORM=8.0,LIST=
```

```
    J(5.0),                                          ;zone
    R1,                                              ;HBW Productions
    R2,                                              ;HBS Productions
    R3,                                              ;HBSc Productions
    R4,                                              ;HBO Productions
    R6,                                              ;Home share of OO Productions
    R1_R2_R3_R4_R6,                                  ;RESIDENTIAL TOTAL
    FILE=RESIDENTIAL_HBW(P)+HBS(P)+HBSC(P)+HBO(P)+OO_home(P)+ResTOT.Txt,PRINT=N
;
;
;    Request margins summaries for Retail land use
;   (HBW, HBS, HBSc, HBO, OO(home portion) productions)
    REPORT  MARGINS=1-7
    MARGINREC=Y FORM=8.0,LIST=
    J(5.0),                                          ;zone
    R1,                                              ;HBW Productions
    R2,                                              ;HBS Productions
    R3,                                              ;HBSc Productions
    R4,                                              ;HBO Productions
    R6,                                              ;Home share of OO Productions
    R5,                                              ;WO Productions
    R7,                                              ;Work share of OO Productions
    R1_R2_R3_R4_R6_R5_R7,                            ;RETAIL TOTAL
    FILE
=RETAIL_HBW(P)+HBS(P)+HBSC(P)+HBO(P)+OO_home(P)+WO(P)+OO_work(P)+RetTOT.Txt,
PRINT=N
;
;
;   And one file for all 3 for mixed projects
    REPORT MARGINS=1-7
    MARGINREC=Y FORM=8.0, LIST=
    J(5.0),                                          ;zone
    C1,                                              ;HBW Attractions
    R5,                                              ;WO Productions
    R7,                                              ;Work share of OO Productions
    C1_R5_R7,                                        ;OFFICE TOTAL
;
    R1,                                              ;HBW Productions
    R2,                                              ;HBS Productions
    R3,                                              ;HBSc Productions
    R4,                                              ;HBO Productions
    R6,                                              ;Home share of OO Productions
    R1_R2_R3_R4_R6,                                  ;RESIDENTIAL TOTAL
;
    R1,                                              ;HBW Productions
    R2,                                              ;HBS Productions
    R3,                                              ;HBSc Productions
    R4,                                              ;HBO Productions
    R6,                                              ;Home share of OO Productions
    R5,                                              ;WO Productions
    R7,                                              ;Work share of OO Productions
    R1_R2_R3_R4_R6_R5_R7,                            ;RETAIL TOTAL
    FILE
=COMBINED_HBW(A)+WO(P)+OO_work(P)+OffTOT+HBW(P)+HBS(P)+HBSC(P)+HBO(P)+OO_home(P)+
ResTOT+HBW(P)+HBS(P)+HBSC(P)+HBO(P)+OO_home(P)+WO(P)+OO_work(P)+RetTOT.Txt,PRINT
=N
*/;
ENDRUN
;
```

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	74.6	16.0	0.0	46.0	324	898	309	1531	1671	174	141	388	352	2726	1671	174	141	388	352	898	309	3933
2	EDC	1185.1	34.0	0.0	525.0	405	149	9	563	17443	4165	2303	6882	1104	31897	17443	4165	2303	6882	1104	149	9	32055
3	EDC	87.7	0.0	0.0	34.0	24	0	0	24	984	464	380	1482	314	3624	984	464	380	1482	314	0	0	3624
4	EDC	33.8	2.0	0.0	16.0	51	148	30	229	531	234	263	320	124	1473	531	234	263	320	124	148	30	1650
5	EDC	72.6	0.0	0.0	33.0	20	0	0	20	1173	1084	476	946	245	3924	1173	1084	476	946	245	0	0	3924
6	EDC	645.6	9.0	0.0	270.0	300	96	15	412	6970	1970	634	5615	982	16171	6970	1970	634	5615	982	96	15	16282
7	EDC	1118.6	71.0	0.0	516.0	919	523	52	1495	13248	8413	1368	9034	1738	33800	13248	8413	1368	9034	1738	523	52	34376
8	EDC	36.0	60.0	0.0	14.0	724	608	103	1435	338	59	17	202	132	749	338	59	17	202	132	608	103	1459
9	EDC	1240.2	117.0	283.0	482.0	1629	1916	153	3699	16061	4665	754	10351	2053	33885	16061	4665	754	10351	2053	1916	153	35953
10	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	outside EDC	1740.5	96.0	1626.0	663.0	1415	3852	545	5811	9494	841	3684	9963	3793	27774	9494	841	3684	9963	3793	3852	545	32172
13	outside EDC	1994.6	0.0	0.0	775.0	480	0	0	480	13986	1560	1001	12273	3338	32158	13986	1560	1001	12273	3338	0	0	32158
14	outside EDC	4068.3	32.0	438.0	1502.0	1123	1184	121	2428	27377	3871	3056	23181	6556	64041	27377	3871	3056	23181	6556	1184	121	65346
15	outside EDC	22.5	0.0	0.0	10.0	2	0	0	2	122	27	15	214	49	427	122	27	15	214	49	0	0	427
16	outside EDC	378.1	434.0	0.0	149.0	6674	8358	4339	19370	2378	192	180	2371	3604	8725	2378	192	180	2371	3604	8358	4339	21422
17	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	outside EDC	116.2	0.0	0.0	41.0	67	0	0	67	58	8	0	200	46	311	58	8	0	200	46	0	0	312
19	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	outside EDC	1.0	5.0	0.0	1.0	64	23	6	94	7	0	0	0	2	9	7	0	0	0	2	23	6	38
21	outside EDC	2.0	112.0	0.0	1.0	1500	560	350	2411	5	4	0	6	12	27	5	4	0	6	12	560	350	937
22	outside EDC	6.0	23.0	0.0	2.0	347	233	184	764	24	17	8	79	120	248	24	17	8	79	120	233	184	665
23	outside EDC	272.6	244.0	1355.0	101.0	3802	4257	1451	9510	1204	637	7542	3140	4650	17173	1204	637	7542	3140	4650	4257	1451	22881
24	outside EDC	1.0	0.0	0.0	1.0	0	0	0	0	0	4	0	6	5	15	0	4	0	6	5	0	0	15
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	outside EDC	6.0	22.0	0.0	2.0	316	152	54	523	37	12	10	80	57	196	37	12	10	80	57	152	54	402
28	outside EDC	332.1	6.0	0.0	123.0	228	32	4	265	2615	1212	598	4758	1234	10417	2615	1212	598	4758	1234	32	4	10453
29	outside EDC	192.0	5.0	0.0	72.0	147	27	4	178	1699	769	475	3209	821	6972	1699	769	475	3209	821	27	4	7004
30	outside EDC	0.0	133.0	0.0	0.0	2062	900	329	3291	0	0	0	0	0	0	0	0	0	0	0	900	329	1229
31	outside EDC	94.1	45.0	0.0	44.0	776	349	66	1191	995	463	202	1705	653	4018	995	463	202	1705	653	349	66	4433
32	outside EDC	1526.3	0.0	0.0	676.0	594	0	0	594	613	117	0	2165	755	3650	613	117	0	2165	755	0	0	3650
33	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	outside EDC	190.8	16.0	0.0	75.0	439	141	20	600	2328	1081	617	4007	1105	9138	2328	1081	617	4007	1105	141	20	9299
35	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2314	861	465	3640	0	0	0	0	0	0	0	0	0	0	0	861	465	1326
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1568.8	227.0	0.0	666.0	2588	783	72	3443	6520	999	622	8139	1661	17940	6520	999	622	8139	1661	783	72	18796
40	outside EDC	2079.2	1839.0	63.0	916.0	16478	17059	6448	39986	9014	812	551	8334	8904	27615	9014	812	551	8334	8904	17059	6448	51122
41	outside EDC	1270.5	203.0	0.0	544.0	3083	914	152	4149	6355	1744	1132	11471	3620	24322	6355	1744	1132	11471	3620	914	152	25388
42	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	outside EDC	2045.3	0.0	0.0	828.0	948	0	0	948	16812	6148	2183	25382	7746	58271	16812	6148	2183	25382	7746	0	0	58271
44	outside EDC	2614.3	95.0	1218.0	1069.0	2597	3898	698	7192	18660	6571	5380	28452	10841	69904	18660	6571	5380	28452	10841	3898	698	74500
45	outside EDC	2056.5	1357.0	96.0	906.0	14336	15713	6134	36183	8999	799	729	9118	9428	29073	8999	799	729	9118	9428	15713	6134	50920
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	2398.0	0.0	0.0	32795	12324	12391	57509	0	0	0	0	0	0	0	0	0	0	0	12324	12391	24715
48	outside EDC	3067.8	121.0	470.0	1203.0	2196	1552	257	4005	9836	4331	4475	26616	7894	53153	9836	4331	4475	26616	7894	1552	257	54961
49	outside EDC	0.0	4642.0	0.0	0.0	57284	16104	13509	86898	0	0	0	0	0	0	0	0	0	0	0	16104	13509	29613
50	outside EDC	2429.5	826.0	753.0	1025.0	9936	3747	750	14433	7708	3918	4684	21028	7934	45271	7708	3918	4684	21028	7934	3747	750	49769
51	outside EDC	4252.6	1237.0	384.0	1768.0	15909	11755	4083	31747	13577	3983	3588	32788	20221	74157	13577	3983	3588	32788	20221	11755	4083	89995
52	outside EDC	667.1	240.0	2617.0	297.0	2835	5943	1506	10283	2511	910	8260	5472	4550	21702	2511	910	8260	5472	4550	5943	1506	29152
53	outside EDC	3451.7	377.0	356.0	1335.0	5419	4505	1096	11020	11619	4194	4058	28458	12581	60910	11619	4194	4058	28458	12581	4505	1096	66511
54	outside EDC	1153.4	1827.0	173.0	476.0	24481	6488	1531	32500	4284	2554	2100	12180	5499	26617	4284	2554	2100	12180	5499	6488	1531	34636
55	outside EDC	1582.7	800.0	1483.0	675.0	11672	7959	2597	22228	6160	3396	8549	16565	12412	47082	6160	3396	8549	16565	12412	7959	2597	57638
56	outside EDC	1932.6	4.0	0.0	820.0	783	9	1	793	6084	4413	2507	20814	5514	39332	6084	4413	2507	20814	5514	9	1	39342
57	outside EDC	0.0	7375.0	0.0	0.0	96848	21683	13970	132500	0	0	0	0	0	0	0	0	0	0	0	21683	13970	35653
58	outside EDC	1160.1	388.0	0.0	465.0	6115	3400	1263	10778	3916	2360	1679	12276	8189	28421	3916	2360	1679	12276	8189	3400	1263	33083
59	outside EDC	4.0	9.0	0.0	2.0	87	28	7	122	25	0	0	20	13	57	25	0	0	20	13	28	7	93
60	outside EDC	477.5	4236.0	0.0	238.0	54065	15060	8246	77371	1606	1009	370	4733	4839	12557	1606	1009	370	4733	4839	15060	8246	35863
61	outside EDC	5227.4	797.0	365.0	2205.0	12490	8629	2314	23433	21094	9604	7681	50368	25686	114434	21094	9604	7681	50368	25686	8629	2314	125376
62	outside EDC	8.0	1150.0	0.0	4.0	13447	4334	2786	20568	36	11	0	63	87	198	36	11	0	63	87	4334	2786	7317
63	outside EDC	755.9	3083.0	0.0	340.0	35181	12404	5931	53515	2680	1416	836	7340	6698	18970	2680	1416	836	7340	6698	12404	5931	37305
64	outside EDC	2155.8	560.0	0.0	865.0	7152	2912	611	10674	9345	3529	2227	19272	7717	42090	9345	3529	2227	19272	7717	2912	611	45613
65	outside EDC	338.2	0.0	0.0	136.0	114	0	0	114	2289	722	399	3468	1081	7959	2289	722	399	3468	1081	0	0	7959
66	outside EDC	1950.4	172.0	346.0	826.0	2686	2204	494	5383	6386	2929	2607	16542	6787	35251	6386	2929	2607	16542	6787	2204	494	37949
67	outside EDC	0.0	178.0	0.0	0.0	2397	1526	2473	6396	0	0	0	0	0	0	0	0	0	0	0	1526	2473	3999
68	outside EDC	1313.9	679.0	0.0	616.0	7415	2818	660	10893	4340	2217	1083	11105	4697	23441	4340	2217	1083	11105	4697	2818	660	26920
69	outside EDC	4121.9	2320.0	346.0	1588.0	30198	8218	1728	40143	15263	5604	6107	35096	13764	75834	15263	5604	6107	35096	13764	8218	1728	85780
70	outside EDC	0.0	6956.0	1786.0	0.0	89650	20561	13701	123913	0	0	505	0	525	1030	0	0	505	0	525	20561	13701	35292
71	outside EDC	3087.5	121.0	480.0	1231.0	3482	2438	409	6330	20997	10145	4657	39188	12924	87911	20997	10145	4657	39188	12924	2438	409	90758
72	outside EDC	0.0	5133.0	48.0	0.0	72577	17330	13493	103401	0	0	161	0	206	367	0	0	161	0	206	17330	13493	31190

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
73	outside EDC	0.0	5627.0	0.0	0.0	66786	14612	8534	89932	0	0	0	0	0	0	0	0	0	0	0	14612	8534	23146
74	outside EDC	1021.8	4728.0	0.0	435.0	61240	15998	9688	86926	2950	1069	1166	8344	9329	22860	2950	1069	1166	8344	9329	15998	9688	48544
75	outside EDC	4401.4	1866.0	0.0	1936.0	22494	5166	764	28424	14226	5936	4898	35028	9294	69382	14226	5936	4898	35028	9294	5166	764	75312
76	outside EDC	1351.6	297.0	0.0	508.0	4445	3289	1193	8928	3986	1233	1374	10974	6867	24434	3986	1233	1374	10974	6867	3289	1193	28916
77	outside EDC	2809.5	1659.0	923.0	1155.0	21345	8966	2506	32817	9397	4303	4965	25156	13220	57041	9397	4303	4965	25156	13220	8966	2506	68513
78	outside EDC	0.0	1567.0	73.0	0.0	21146	12970	20030	54147	0	0	0	0	0	0	0	0	0	0	0	12970	20030	33000
79	outside EDC	0.0	20.0	0.0	0.0	1	21	29	51	0	0	0	0	0	0	0	0	0	0	0	21	29	50
80	outside EDC	0.0	1410.0	0.0	0.0	17195	5129	5216	27539	0	0	0	0	0	0	0	0	0	0	0	5129	5216	10345
81	outside EDC	0.0	4951.0	0.0	0.0	63072	17404	16403	96879	0	0	0	0	0	0	0	0	0	0	0	17404	16403	33807
82	outside EDC	0.0	1787.0	0.0	0.0	23109	6965	5108	35182	0	0	0	0	0	0	0	0	0	0	0	6965	5108	12073
83	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	outside EDC	2817.0	405.0	0.0	1226.0	5798	3619	897	10314	12403	2868	1977	20238	9879	47364	12403	2868	1977	20238	9879	3619	897	51881
85	outside EDC	3245.6	253.0	653.0	1295.0	3976	4093	851	8921	15348	3929	3441	25325	10601	58644	15348	3929	3441	25325	10601	4093	851	63588
86	outside EDC	4487.3	754.0	1340.0	1968.0	10046	10023	2688	22757	16716	4314	5288	31399	16509	74226	16716	4314	5288	31399	16509	10023	2688	86937
87	outside EDC	4343.7	800.0	183.0	2114.0	11152	6459	1805	19417	13150	4178	3500	32392	15669	68889	13150	4178	3500	32392	15669	6459	1805	77153
88	outside EDC	2679.3	762.0	0.0	1099.0	10484	8032	2645	21161	11122	2872	2325	20800	13268	50387	11122	2872	2325	20800	13268	8032	2645	61064
89	outside EDC	0.0	293.0	0.0	0.0	3994	1711	1521	7227	0	0	0	0	0	0	0	0	0	0	0	1711	1521	3232
90	outside EDC	0.0	592.0	0.0	0.0	9608	6746	11270	27624	0	0	0	0	0	0	0	0	0	0	0	6746	11270	18016
91	outside EDC	961.1	4100.0	34.0	383.0	42914	17506	8613	69032	3632	935	889	7178	7302	19937	3632	935	889	7178	7302	17506	8613	46055
92	outside EDC	2708.6	141.0	836.0	1139.0	2550	2366	423	5340	12818	3619	4680	22709	8183	52009	12818	3619	4680	22709	8183	2366	423	54798
93	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	outside EDC	15.0	0.0	0.0	6.0	2	0	0	2	57	53	12	209	53	383	57	53	12	209	53	0	0	384
95	outside EDC	0.0	27.0	0.0	0.0	376	167	92	634	0	0	0	0	0	0	0	0	0	0	0	167	92	259
96	outside EDC	0.0	12.0	0.0	0.0	109	63	13	185	0	0	0	0	0	0	0	0	0	0	0	63	13	76
97	outside EDC	4.0	0.0	0.0	2.0	0	0	0	0	18	3	0	36	16	74	18	3	0	36	16	0	0	73
98	outside EDC	24.6	2289.0	0.0	10.0	24292	13096	9070	46458	110	13	10	114	325	572	110	13	10	114	325	13096	9070	22738
99	outside EDC	1944.1	958.0	501.0	791.0	10485	4477	796	15758	9273	1174	2021	11020	4659	28147	9273	1174	2021	11020	4659	4477	796	33420
100	outside EDC	203.1	0.0	0.0	84.0	81	0	0	81	1973	674	372	3174	918	7111	1973	674	372	3174	918	0	0	7111
101	outside EDC	0.0	320.0	0.0	0.0	5136	2324	1282	8742	0	0	0	0	0	0	0	0	0	0	0	2324	1282	3606
102	outside EDC	153.0	53.0	0.0	51.0	779	349	46	1174	1254	387	471	2532	635	5279	1254	387	471	2532	635	349	46	5674
103	outside EDC	2199.9	0.0	0.0	910.0	1054	0	0	1054	19037	6825	2570	27078	8266	63776	19037	6825	2570	27078	8266	0	0	63776
104	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	outside EDC	0.0	70.0	0.0	0.0	952	456	147	1555	0	0	0	0	0	0	0	0	0	0	0	456	147	603
107	outside EDC	0.0	3135.0	0.0	0.0	38931	13552	6836	59319	0	0	0	0	0	0	0	0	0	0	0	13552	6836	20388
108	outside EDC	0.0	15.0	0.0	0.0	142	65	29	236	0	0	0	0	0	0	0	0	0	0	0	65	29	94
109	outside EDC	0.0	238.0	0.0	0.0	3967	3057	3822	10846	0	0	0	0	0	0	0	0	0	0	0	3057	3822	6879
110	outside EDC	425.7	1610.0	0.0	205.0	23147	9071	3869	36087	1781	546	304	3995	3397	10023	1781	546	304	3995	3397	9071	3869	22963
111	outside EDC	727.7	1151.0	0.0	350.0	21453	18890	15200	55543	2483	469	577	5537	9291	18357	2483	469	577	5537	9291	18890	15200	52447
112	outside EDC	1945.8	2117.0	194.0	747.0	30893	23138	11755	65786	9507	1064	1972	13061	15674	41278	9507	1064	1972	13061	15674	23138	11755	76171
113	outside EDC	0.0	4022.0	0.0	0.0	41650	15999	7773	65422	0	0	0	0	0	0	0	0	0	0	0	15999	7773	23772
114	outside EDC	1949.9	660.0	0.0	770.0	6125	2648	315	9087	10686	1254	833	9857	3048	25677	10686	1254	833	9857	3048	2648	315	28641
115	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1031.1	1492.0	2300.0	401.0	16040	10141	2068	28249	4878	749	5330	6361	3951	21269	4878	749	5330	6361	3951	10141	2068	33478
118	outside EDC	5897.7	187.0	790.0	2313.0	3346	3343	507	7195	25155	3755	3428	31288	10546	74172	25155	3755	3428	31288	10546	3343	507	78022
119	outside EDC	522.0	6545.0	0.0	214.0	59190	24059	9679	92929	2331	331	160	2785	3309	8915	2331	331	160	2785	3309	24059	9679	42654
120	outside EDC	0.0	4131.0	0.0	0.0	46939	35789	24599	107326	0	0	0	0	0	0	0	0	0	0	0	35789	24599	60388
121	outside EDC	4261.4	1724.0	581.0	1642.0	19807	24265	7042	51115	19424	1720	2429	20080	15734	59387	19424	1720	2429	20080	15734	24265	7042	90694
122	outside EDC	1530.1	1071.0	3230.0	619.0	9816	10100	1727	21642	6342	754	611	7253	3241	18201	6342	754	611	7253	3241	10100	1727	30028
123	outside EDC	528.8	855.0	0.0	200.0	9029	9349	4076	22454	2637	221	224	2586	3404	9072	2637	221	224	2586	3404	9349	4076	22497
124	outside EDC	2627.6	328.0	401.0	1240.0	4613	6776	1400	12790	14771	3016	2631	18261	9402	48081	14771	3016	2631	18261	9402	6776	1400	56257
125	outside EDC	800.8	781.0	0.0	389.0	8078	8565	4000	20643	3219	353	241	3700	4440	11952	3219	353	241	3700	4440	8565	4000	24518
126	outside EDC	279.5	129.0	0.0	136.0	1579	1971	811	4360	1432	154	95	1380	1510	4570	1432	154	95	1380	1510	1971	811	7353
127	outside EDC	1693.1	117.0	0.0	800.0	1667	1314	208	3189	11227	1463	792	9851	4105	27438	11227	1463	792	9851	4105	1314	208	28960
128	outside EDC	2061.9	767.0	0.0	999.0	9825	10061	2624	22510	13309	1796	1353	13489	9214	39162	13309	1796	1353	13489	9214	10061	2624	51846
129	outside EDC	2246.3	0.0	0.0	994.0	618	0	0	618	14496	2636	1953	15356	4707	39146	14496	2636	1953	15356	4707	0	0	39148
130	outside EDC	740.3	416.0	578.0	369.0	3577	4567	1362	9506	3144	271	1088	2824	2661	9988	3144	271	1088	2824	2661	4567	1362	15917
131	outside EDC	1234.3	1278.0	1486.0	607.0	11138	10932	3215	25285	4943	567	3243	5521	5241	19515	4943	567	3243	5521	5241	10932	3215	33662
132	outside EDC	893.9	260.0	0.0	407.0	3045	2879	628	6551	5031	966	585	6334	3285	16201	5031	966	585	6334	3285	2879	628	19708
133	outside EDC	5211.1	1475.0	1829.0	2087.0	13373	16556	3611	33540	22876	1868	3725	20716	12711	61896	22876	1868	3725	20716	12711	16556	3611	82063
134	outside EDC	2460.4	1492.0	0.0	1075.0	15279	7321	1162	23763	9585	1564	868	12646	4623	29286	9585	1564	868	12646	4623	7321	1162	37769
135	outside EDC	0.0	2114.0	0.0	0.0	19667	8030	1989	29686	0	0	0	0	0	0	0	0	0	0	0	8030	1989	10019
136	outside EDC	1668.8	82.0	0.0	669.0	1379	1350	198	2927	11031	1311	895	9394	3725	26357	11031	1311	895	9394	3725	1350	198	27904
137	outside EDC	6734.6	673.0	610.0	2349.0	8344	12673	2134	23151	37344	4506	4746	35450	15987	98033	37344	4506	4746	35450	15987	12673	2134	112840
138	EDC	366.7	25.0	0.0	161.0	383	160	10	552	2218	375	144	2144	405	5285	2218	375	144	2144	405	160	10	5456
139	EDC	135.3	55.0	0.0	62.0	646	634	89	1368	706	162	16	645	356	1886	706	162	16	645	356	634	89	2608
140	EDC	27.4	383.0	0.0	10.0	5400	6216	2946	14562	89	11	7	65	284	457	89	11	7	65	284	6216	2946	9618
141	EDC	48.8	2.0	0.0	21.0	54	60	6	120	651	173	123	763	238	1948	651	173	123	763	238	60	6	2014
142	EDC	353.1	0.0	0.0	157.0	131	0	0	131	3205	909	230	3102	720	8166	3205	909	230	3102	720	0	0	8166
143	EDC	209.2	4.0	0.0	93.0	94	6	1	101	1569	361	60	1420	314	3724	1569	361	60	1420	314	6	1	3731
144	EDC	186.5	19.0	0.0	74.0	248	83	9	340	1988	316	76	1288	292	3960	1988	316	76	1288	292	83	9	4052

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
145	EDC	68.5	0.0	0.0	30.0	6	0	0	6	415	46	15	229	41	747	415	46	15	229	41	0	0	746
146	EDC	144.6	51.0	0.0	64.0	602	496	68	1165	725	135	21	652	334	1867	725	135	21	652	334	496	68	2431
147	EDC	359.2	0.0	0.0	159.0	94	0	0	94	1973	331	108	1757	341	4510	1973	331	108	1757	341	0	0	4510
148	outside EDC	5292.5	137.0	0.0	2250.0	5162	1429	125	6717	68186	29738	18119	78631	17707	212380	68186	29738	18119	78631	17707	1429	125	213935
149	EDC	98.1	112.0	0.0	37.0	1432	1663	388	3483	741	82	17	580	593	2012	741	82	17	580	593	1663	388	4064
150	EDC	259.8	3.0	0.0	109.0	148	31	3	182	2709	675	569	3459	817	8229	2709	675	569	3459	817	31	3	8263
151	EDC	67.2	0.0	0.0	23.0	4	0	0	4	770	197	156	640	77	1841	770	197	156	640	77	0	0	1840
152	EDC	314.9	99.0	0.0	122.0	1408	1439	184	3030	2598	317	90	2393	1021	6418	2598	317	90	2393	1021	1439	184	8042
153	EDC	388.3	5.0	0.0	178.0	169	10	1	179	2630	607	126	2711	655	6729	2630	607	126	2711	655	10	1	6740
154	EDC	196.1	16.0	0.0	84.0	184	62	4	251	1236	129	104	1322	248	3038	1236	129	104	1322	248	62	4	3105
155	EDC	161.4	0.0	0.0	62.0	25	0	0	25	1295	196	50	1225	220	2987	1295	196	50	1225	220	0	0	2986
156	EDC	67.3	0.0	0.0	27.0	22	0	0	22	871	263	227	1071	200	2633	871	263	227	1071	200	0	0	2632
157	EDC	807.5	0.0	0.0	274.0	122	0	0	122	4742	735	264	5779	1025	12544	4742	735	264	5779	1025	0	0	12545
158	EDC	1373.4	72.0	0.0	598.0	955	377	26	1358	10449	1355	841	9062	2013	23721	10449	1355	841	9062	2013	377	26	24123
159	EDC	877.6	1.0	0.0	340.0	182	0	0	182	7112	877	686	5923	1034	15632	7112	877	686	5923	1034	0	0	15632
160	EDC	500.7	0.0	0.0	194.0	113	0	0	113	4172	544	119	3588	702	9125	4172	544	119	3588	702	0	0	9125
161	EDC	282.7	0.0	0.0	105.0	48	0	0	48	2748	547	326	2991	587	7199	2748	547	326	2991	587	0	0	7199
162	EDC	4414.2	0.0	0.0	1503.0	838	0	0	838	36497	7790	2974	36532	6151	89945	36497	7790	2974	36532	6151	0	0	89944
163	EDC	20.6	4.0	0.0	7.0	21	12	1	34	138	29	19	171	18	375	138	29	19	171	18	12	1	388
164	EDC	0.0	1232.0	0.0	0.0	13323	4877	1908	20109	0	0	0	0	0	0	0	0	0	0	0	4877	1908	6785
165	EDC	997.3	0.0	0.0	373.0	261	0	0	261	6874	848	862	7800	1634	18018	6874	848	862	7800	1634	0	0	18018
166	EDC	1891.8	49.0	672.0	749.0	1084	2073	262	3419	12991	1800	2123	13406	4344	34665	12991	1800	2123	13406	4344	2073	262	36999
167	EDC	2904.2	55.0	0.0	1297.0	1651	225	23	1899	16016	3407	2486	22215	5396	49520	16016	3407	2486	22215	5396	225	23	49768
168	EDC	2519.0	9.0	0.0	1125.0	807	21	2	830	11022	1490	1273	15812	2720	32319	11022	1490	1273	15812	2720	21	2	32340
169	EDC	0.0	1688.0	102.0	0.0	20709	23942	17175	61826	0	0	126	0	1395	1521	0	0	126	0	1395	23942	17175	42638
170	EDC	0.0	1357.0	0.0	0.0	13821	5286	1141	20248	0	0	0	0	0	0	0	0	0	0	0	5286	1141	6427
171	EDC	789.6	20.0	0.0	441.0	569	113	19	701	2677	1062	266	6972	2004	12981	2677	1062	266	6972	2004	113	19	13113
172	EDC	0.0	168.0	0.0	0.0	1898	1965	1377	5240	0	0	0	0	0	0	0	0	0	0	0	1965	1377	3342
173	EDC	0.0	547.0	0.0	0.0	6121	7470	5326	18917	0	0	0	0	0	0	0	0	0	0	0	7470	5326	12796
174	EDC	37.4	11.0	52.0	15.0	194	307	36	537	481	134	165	545	194	1518	481	134	165	545	194	307	36	1862
175	EDC	26.2	5.0	0.0	11.0	63	22	2	87	284	65	38	327	61	775	284	65	38	327	61	22	2	799
176	EDC	69.1	0.0	0.0	29.0	17	0	0	17	704	183	127	979	195	2189	704	183	127	979	195	0	0	2188
177	EDC	24.9	7.0	0.0	10.0	76	30	2	108	215	44	35	261	48	603	215	44	35	261	48	30	2	635
178	EDC	77.3	0.0	0.0	30.0	17	0	0	17	700	165	169	1047	185	2267	700	165	169	1047	185	0	0	2266
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	5
180	EDC	149.4	0.0	0.0	58.0	23	0	0	23	1291	262	150	1536	311	3550	1291	262	150	1536	311	0	0	3550
181	EDC	2.7	58.0	0.0	1.0	527	338	35	900	0	0	0	0	1	1	0	0	0	0	1	338	35	374
182	EDC	3202.4	0.0	0.0	1186.0	680	0	0	680	26885	5024	2215	24199	4612	62934	26885	5024	2215	24199	4612	0	0	62935
183	EDC	354.9	0.0	0.0	152.0	74	0	0	74	2610	616	188	3157	682	7253	2610	616	188	3157	682	0	0	7253
184	EDC	963.9	300.0	961.0	357.0	3139	5809	625	9573	7715	1339	1381	7502	2719	20655	7715	1339	1381	7502	2719	5809	625	27090
185	EDC	342.2	0.0	0.0	149.0	49	0	0	49	2637	502	155	2425	508	6228	2637	502	155	2425	508	0	0	6227
186	EDC	6.9	28.0	0.0	3.0	189	135	7	331	33	4	1	14	7	58	33	4	1	14	7	135	7	201
187	EDC	548.9	85.0	0.0	239.0	934	460	35	1429	3952	543	283	3781	871	9430	3952	543	283	3781	871	460	35	9925
188	EDC	431.8	69.0	0.0	188.0	733	390	22	1146	2938	337	210	2685	478	6648	2938	337	210	2685	478	390	22	7060
189	EDC	103.5	0.0	0.0	37.0	22	0	0	22	1129	323	246	1459	271	3427	1129	323	246	1459	271	0	0	3428
190	EDC	663.1	0.0	0.0	237.0	118	0	0	118	5577	939	576	5491	973	13555	5577	939	576	5491	973	0	0	13556
191	EDC	53.2	0.0	0.0	19.0	3	0	0	3	394	63	34	378	54	922	394	63	34	378	54	0	0	923
192	EDC	69.6	0.0	0.0	25.0	5	0	0	5	566	92	38	445	82	1224	566	92	38	445	82	0	0	1223
193	EDC	2284.2	93.0	0.0	852.0	1334	588	47	1968	18253	3405	983	16868	3664	43173	18253	3405	983	16868	3664	588	47	43808
194	EDC	1284.6	0.0	0.0	439.0	212	0	0	212	8707	1737	238	9313	1686	21681	8707	1737	238	9313	1686	0	0	21681
195	EDC	25.5	14.0	0.0	10.0	125	297	101	523	167	31	14	157	175	544	167	31	14	157	175	297	101	942
196	outside EDC	2502.9	82.0	540.0	923.0	1285	2117	214	3616	20104	3826	1937	18336	5050	49253	20104	3826	1937	18336	5050	2117	214	51584
197	EDC	219.4	0.0	0.0	86.0	31	0	0	31	1774	325	131	1544	345	4118	1774	325	131	1544	345	0	0	4119
198	EDC	2481.8	453.0	440.0	887.0	4283	8825	1114	14222	18063	2580	1825	16982	6264	45714	18063	2580	1825	16982	6264	8825	1114	55653
199	EDC	173.5	120.0	0.0	62.0	1292	2206	687	4186	1233	217	127	1202	1208	3987	1233	217	127	1202	1208	2206	687	6880
200	EDC	17.9	67.0	0.0	7.0	576	754	316	1645	102	20	7	86	154	369	102	20	7	86	154	754	316	1439
201	EDC	438.9	301.0	0.0	150.0	2525	1799	174	4498	2988	568	253	3177	876	7862	2988	568	253	3177	876	1799	174	9835
202	EDC	2062.1	199.0	0.0	737.0	2162	3503	358	6022	15873	2362	1565	15219	4344	39363	15873	2362	1565	15219	4344	3503	358	43224
203	EDC	3060.8	139.0	0.0	1043.0	1669	847	54	2570	24680	5291	2134	25505	4484	62093	24680	5291	2134	25505	4484	847	54	62995
204	EDC	1066.8	41.0	562.0	362.0	521	1670	153	2343	6841	1212	933	7599	1852	18437	6841	1212	933	7599	1852	1670	153	20260
205	EDC	0.0	80.0	0.0	0.0	703	379	51	1134	0	0	0	0	0	0	0	0	0	0	0	379	51	430
206	EDC	153.2	0.0	0.0	52.0	13	0	0	13	956	171	31	1065	171	2394	956	171	31	1065	171	0	0	2394
207	EDC	868.6	0.0	0.0	296.0	165	0	0	165	7072	1510	737	7576	1410	18306	7072	1510	737	7576	1410	0	0	18305
208	EDC	26.4	0.0	0.0	9.0	0	0	0	0	181	38	21	200	24	463	181	38	21	200	24	0	0	464
209	EDC	161.4	14.0	0.0	55.0	120	64	5	190	1264	236	122	1292	232	3146	1264	236	122	1292	232	64	5	3215
210	EDC	365.8	0.0	0.0	125.0	49	0	0	49	2831	572	221	2867	508	6999	2831	572	221	2867	508	0	0	6999
211	EDC	11.1	0.0	0.0	4.0	0	0	0	0	83	9	5	66	3	167	83	9	5	66	3	0	0	166
212	EDC	102.7	0.0	0.0	35.0	9	0	0	9	878	203	87	960	152	2281	878	203	87	960	152	0	0	2280
213	EDC	322.8	0.0	0.0	116.0	59	0	0	59	3410	718	329	3219	627	8303	3410	718	329	3219	627	0	0	8303
214	EDC	19.3	0.0	0.0	8.0	5	0	0	5	258	182	106	189	55	790	258	182	106	189	55	0	0	790
215	EDC	316.2	0.0	0.0	113.0	55	0	0	55	2871	555	301	3078	543	7348	2871	555	301	3078	543	0	0	7348
216	EDC	12.1	0.0	0.0	5.0	3	0	0	3	120	86	60	122	36	424	120	86	60	122	36	0	0	424

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
217	EDC	30.8	0.0	0.0	11.0	2	0	0	2	292	64	50	365	54	825	292	64	50	365	54	0	0	825
218	EDC	78.3	0.0	0.0	28.0	10	0	0	10	714	173	102	866	146	2002	714	173	102	866	146	0	0	2001
219	EDC	77.9	77.0	0.0	28.0	913	584	71	1568	824	166	106	874	289	2259	824	166	106	874	289	584	71	2914
220	EDC	25.0	0.0	0.0	9.0	2	0	0	2	244	55	40	272	38	648	244	55	40	272	38	0	0	649
221	EDC	2358.8	0.0	0.0	876.0	497	0	0	497	23783	5527	2306	20895	3885	56396	23783	5527	2306	20895	3885	0	0	56396
222	EDC	70.6	26.0	0.0	26.0	219	653	118	990	593	119	38	487	353	1591	593	119	38	487	353	653	118	2361
223	EDC	279.5	0.0	0.0	103.0	23	0	0	23	2417	471	198	1941	315	5342	2417	471	198	1941	315	0	0	5342
224	EDC	257.8	29.0	0.0	95.0	293	164	10	468	2511	593	232	2338	433	6106	2511	593	232	2338	433	164	10	6281
225	EDC	270.0	79.0	620.0	92.0	893	2587	313	3792	2435	621	1192	2600	1130	7977	2435	621	1192	2600	1130	2587	313	10878
226	EDC	384.4	76.0	436.0	131.0	694	1891	156	2742	3351	761	643	3191	928	8875	3351	761	643	3191	928	1891	156	10921
227	EDC	12.1	2.0	0.0	5.0	3	2	0	6	58	8	3	51	5	126	58	8	3	51	5	2	0	127
228	EDC	1702.9	20.0	0.0	705.0	433	248	12	693	13398	2782	1243	11640	1770	30832	13398	2782	1243	11640	1770	248	12	31093
229	EDC	24.2	0.0	0.0	9.0	0	0	0	0	189	46	18	164	18	435	189	46	18	164	18	0	0	435
230	EDC	35.2	0.0	0.0	12.0	1	0	0	1	284	48	32	277	30	672	284	48	32	277	30	0	0	671
231	EDC	14.7	28.0	0.0	5.0	180	190	17	386	87	24	10	100	36	256	87	24	10	100	36	190	17	464
232	EDC	91.8	0.0	0.0	33.0	10	0	0	10	1081	246	117	1006	170	2619	1081	246	117	1006	170	0	0	2620
233	EDC	211.3	101.0	0.0	92.0	711	1410	191	2313	1681	336	114	1352	714	4198	1681	336	114	1352	714	1410	191	5798
234	EDC	2305.8	587.0	0.0	1004.0	4326	5203	405	9934	18287	3436	1475	14974	4073	42245	18287	3436	1475	14974	4073	5203	405	47853
235	EDC	2214.3	0.0	0.0	861.0	397	0	0	397	18978	3839	1921	15949	2923	43611	18978	3839	1921	15949	2923	0	0	43610
236	EDC	1203.6	9.0	0.0	468.0	231	34	2	267	10094	2222	806	8833	1473	23428	10094	2222	806	8833	1473	34	2	23464
237	EDC	172.2	0.0	0.0	75.0	18	0	0	18	1410	286	92	1248	250	3285	1410	286	92	1248	250	0	0	3286
238	EDC	676.3	199.0	0.0	280.0	1917	1237	79	3232	5576	1079	534	5336	1092	13617	5576	1079	534	5336	1092	1237	79	14933
239	EDC	86.8	16.0	0.0	32.0	97	359	32	489	692	128	64	529	191	1604	692	128	64	529	191	359	32	1995
240	EDC	344.6	0.0	0.0	127.0	66	0	0	66	3726	939	614	3682	627	9590	3726	939	614	3682	627	0	0	9588
241	EDC	445.0	2.0	0.0	164.0	64	15	1	81	4007	766	380	3215	561	8928	4007	766	380	3215	561	15	1	8945
242	EDC	59.7	0.0	0.0	22.0	1	0	0	1	485	80	44	351	42	1002	485	80	44	351	42	0	0	1002
243	EDC	141.1	13.0	0.0	52.0	79	53	3	134	1271	244	114	1002	151	2782	1271	244	114	1002	151	53	3	2838
244	EDC	56.6	0.0	0.0	22.0	6	0	0	6	680	211	96	602	86	1675	680	211	96	602	86	0	0	1675
245	EDC	29.0	0.0	0.0	10.0	4	0	0	4	347	72	74	379	62	935	347	72	74	379	62	0	0	934
246	EDC	182.5	0.0	0.0	63.0	27	0	0	27	2203	575	520	2127	327	5752	2203	575	520	2127	327	0	0	5752
247	EDC	645.8	0.0	0.0	296.0	289	0	0	289	6356	2430	1021	5923	1356	17086	6356	2430	1021	5923	1356	0	0	17086
248	EDC	440.9	0.0	0.0	185.0	167	0	0	167	5592	1363	878	4581	978	13392	5592	1363	878	4581	978	0	0	13392
249	EDC	58.9	0.0	0.0	27.0	17	0	0	17	582	253	171	852	176	2035	582	253	171	852	176	0	0	2034
250	EDC	123.2	0.0	0.0	53.0	31	0	0	31	1635	370	220	1389	266	3881	1635	370	220	1389	266	0	0	3880
251	EDC	223.7	0.0	0.0	88.0	49	0	0	49	1980	374	122	2129	407	5011	1980	374	122	2129	407	0	0	5012
252	EDC	1130.1	0.0	0.0	434.0	359	0	0	359	10353	1884	727	9716	1965	24644	10353	1884	727	9716	1965	0	0	24645
253	EDC	402.7	0.0	0.0	147.0	110	0	0	110	4047	943	535	4284	747	10556	4047	943	535	4284	747	0	0	10556
254	EDC	294.8	0.0	0.0	116.0	79	0	0	79	2794	590	217	2994	585	7180	2794	590	217	2994	585	0	0	7180
255	EDC	0.0	426.0	0.0	0.0	4943	4948	2119	12011	0	0	0	0	0	0	0	0	0	0	0	4948	2119	7067
256	EDC	121.3	1042.0	0.0	47.0	13474	12725	4773	30973	756	61	81	688	1628	3213	756	61	81	688	1628	12725	4773	20712
257	EDC	388.9	960.0	0.0	153.0	10723	5786	751	17260	2565	365	155	2893	1324	7302	2565	365	155	2893	1324	5786	751	13839
258	EDC	57.5	2.0	0.0	21.0	21	3	0	23	577	155	135	642	80	1590	577	155	135	642	80	3	0	1592
259	EDC	78.1	0.0	0.0	30.0	8	0	0	8	822	200	131	832	113	2098	822	200	131	832	113	0	0	2098
260	EDC	4.4	146.0	0.0	2.0	1774	1576	577	3928	3	3	1	12	40	59	3	3	1	12	40	1576	577	2212
261	EDC	252.0	282.0	0.0	92.0	3556	3433	694	7683	1679	206	69	1686	1278	4918	1679	206	69	1686	1278	3433	694	9045
262	EDC	307.6	238.0	0.0	121.0	2932	2355	374	5661	1996	264	71	1947	1103	5381	1996	264	71	1947	1103	2355	374	8110
263	EDC	295.9	35.0	0.0	108.0	488	571	56	1114	2074	270	77	1974	629	5025	2074	270	77	1974	629	571	56	5651
264	EDC	137.0	45.0	0.0	50.0	601	874	144	1619	912	118	37	883	514	2464	912	118	37	883	514	874	144	3482
265	EDC	117.2	0.0	0.0	45.0	15	0	0	15	1110	235	99	1177	182	2804	1110	235	99	1177	182	0	0	2803
266	EDC	91.6	4.0	0.0	42.0	76	50	5	131	764	262	71	825	207	2129	764	262	71	825	207	50	5	2184
267	EDC	335.9	0.0	0.0	129.0	83	0	0	83	2856	530	187	2715	418	6707	2856	530	187	2715	418	0	0	6706
268	EDC	179.7	6.0	0.0	69.0	91	16	1	108	1522	300	116	1438	258	3634	1522	300	116	1438	258	16	1	3651
269	EDC	515.8	1.0	0.0	204.0	174	0	0	174	5012	808	284	4005	931	11040	5012	808	284	4005	931	0	0	11040
270	EDC	113.2	0.0	0.0	44.0	18	0	0	18	1419	312	129	1101	182	3144	1419	312	129	1101	182	0	0	3143
271	EDC	379.3	5.0	0.0	150.0	147	15	1	163	4191	957	463	3788	758	10156	4191	957	463	3788	758	15	1	10173
272	EDC	347.2	23.0	0.0	131.0	307	179	11	497	3443	558	100	2836	585	7522	3443	558	100	2836	585	179	11	7712
273	EDC	391.4	12.0	0.0	134.0	205	61	4	270	4591	872	411	3635	655	10165	4591	872	411	3635	655	61	4	10229
274	EDC	617.5	99.0	424.0	233.0	1256	2029	161	3446	5963	1077	850	4851	1382	14124	5963	1077	850	4851	1382	2029	161	16313
275	EDC	827.9	13.0	0.0	321.0	396	143	10	549	8331	1137	459	6682	1535	18145	8331	1137	459	6682	1535	143	10	18297
276	EDC	541.1	12.0	0.0	224.0	209	50	3	262	4528	802	279	4114	834	10557	4528	802	279	4114	834	50	3	10610
277	EDC	415.6	0.0	0.0	161.0	63	0	0	63	3555	525	152	2857	542	7630	3555	525	152	2857	542	0	0	7631
278	EDC	246.9	0.0	0.0	91.0	46	0	0	46	2629	689	294	2673	483	6769	2629	689	294	2673	483	0	0	6768
279	EDC	122.1	0.0	0.0	45.0	15	0	0	15	1382	362	216	1284	197	3440	1382	362	216	1284	197	0	0	3441
280	EDC	98.1	0.0	0.0	37.0	9	0	0	9	928	134	21	820	125	2029	928	134	21	820	125	0	0	2028
281	EDC	156.4	36.0	0.0	59.0	489	211	13	714	1487	210	76	1321	261	3355	1487	210	76	1321	261	211	13	3579
282	EDC	103.4	0.0	0.0	39.0	8	0	0	8	950	125	15	759	117	1967	950	125	15	759	117	0	0	1966
283	EDC	0.0	161.0	1778.0	0.0	1957	6215	1354	9526	0	0	3658	0	659	4317	0	0	3658	0	659	6215	1354	11886
284	EDC	64.5	25.0	0.0	25.0	261	170	12	443	447	59	9	375	98	988	447	59	9	375	98	170	12	1170
285	EDC	26.4	66.0	400.0	12.0	825	1590	267	2682	148	32	990	143	250	1563	148	32	990	143	250	1590	267	3420
286	EDC	95.4	0.0	0.0	36.0	8	0	0	8	973	215	71	839	133	2230	973	215	71	839	133	0	0	2231
287	EDC	87.7	0.0	0.0	34.0	8	0	0	8	931	168	56	769	128	2052	931	168	56	769	128	0	0	2052
288	EDC	135.2	0.0	0.0	51.0	18	0	0	18	1397	251	108	1222	217	3196	1397	251	108	1222	217	0	0	3195

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
289	EDC	23.4	0.0	0.0	8.0	0	0	0	0	217	34	24	138	6	419	217	34	24	138	6	0	0	419
290	EDC	128.5	0.0	0.0	44.0	12	0	0	12	1483	231	133	1081	172	3100	1483	231	133	1081	172	0	0	3100
291	EDC	463.5	0.0	0.0	188.0	131	0	0	131	5748	1488	355	4600	916	13107	5748	1488	355	4600	916	0	0	13107
292	EDC	210.3	0.0	0.0	72.0	31	0	0	31	2599	634	518	2057	292	6100	2599	634	518	2057	292	0	0	6100
293	EDC	77.4	0.0	0.0	34.0	9	0	0	9	478	87	35	493	97	1190	478	87	35	493	97	0	0	1190
294	EDC	247.0	0.0	0.0	97.0	55	0	0	55	2191	290	90	1637	351	4559	2191	290	90	1637	351	0	0	4559
295	EDC	283.7	1491.0	0.0	110.0	29281	40391	16310	85982	2584	149	201	1536	5387	9857	2584	149	201	1536	5387	40391	16310	66558
296	EDC	304.7	56.0	438.0	117.0	792	1669	164	2624	2402	341	1150	2121	837	6851	2402	341	1150	2121	837	1669	164	8684
297	EDC	182.3	0.0	0.0	70.0	25	0	0	25	1348	221	69	1167	131	2935	1348	221	69	1167	131	0	0	2936
298	EDC	205.7	0.0	0.0	79.0	38	0	0	38	1666	237	102	1405	266	3676	1666	237	102	1405	266	0	0	3676
299	EDC	268.0	0.0	0.0	106.0	64	0	0	64	2667	420	189	2274	479	6029	2667	420	189	2274	479	0	0	6029
300	EDC	70.8	0.0	0.0	28.0	6	0	0	6	619	89	32	448	81	1270	619	89	32	448	81	0	0	1269
301	EDC	2.3	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
302	EDC	129.8	33.0	152.0	57.0	457	551	50	1058	814	156	455	778	292	2494	814	156	455	778	292	551	50	3096
303	EDC	231.3	0.0	0.0	106.0	52	0	0	52	1457	325	61	1461	332	3637	1457	325	61	1461	332	0	0	3636
304	EDC	27.3	224.0	0.0	12.0	2329	1465	282	4076	121	28	8	113	149	420	121	28	8	113	149	1465	282	2166
305	EDC	2.3	283.0	0.0	1.0	3087	1841	461	5389	0	0	0	0	0	0	0	0	0	0	0	1841	461	2302
306	EDC	21.8	55.0	0.0	10.0	600	258	19	876	130	29	4	109	45	318	130	29	4	109	45	258	19	594
307	EDC	36.1	2.0	0.0	16.0	17	9	1	27	172	38	9	172	44	434	172	38	9	172	44	9	1	445
308	EDC	24.8	1.0	0.0	11.0	3	0	0	3	96	21	6	82	11	216	96	21	6	82	11	0	0	216
309	EDC	31.9	4.0	0.0	14.0	28	14	1	43	169	32	10	129	28	367	169	32	10	129	28	14	1	383
310	EDC	58.7	122.0	0.0	26.0	1259	751	115	2125	290	67	13	262	201	832	290	67	13	262	201	751	115	1699
311	EDC	86.6	158.0	0.0	38.0	2141	1957	551	4649	474	81	26	417	566	1564	474	81	26	417	566	1957	551	4072
312	EDC	70.0	3.0	0.0	31.0	24	2	0	26	343	78	12	318	48	800	343	78	12	318	48	2	0	801
313	EDC	98.8	506.0	1583.0	38.0	6729	4795	690	12214	669	88	2786	356	685	4584	669	88	2786	356	685	4795	690	10069
314	EDC	206.3	8.0	0.0	81.0	116	17	1	134	1535	162	73	1046	212	3029	1535	162	73	1046	212	17	1	3046
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	29.6	0.0	0.0	13.0	1	0	0	1	129	24	9	109	17	288	129	24	9	109	17	0	0	288
317	EDC	18.2	0.0	0.0	8.0	0	0	0	0	73	12	6	59	8	158	73	12	6	59	8	0	0	158
318	EDC	326.0	2.0	0.0	128.0	97	1	0	98	2347	254	88	1601	334	4625	2347	254	88	1601	334	1	0	4625
319	EDC	98.8	6.0	0.0	38.0	60	8	1	68	607	64	16	356	60	1103	607	64	16	356	60	8	1	1112
320	EDC	44.4	39.0	351.0	18.0	497	1485	225	2208	455	109	1129	270	321	2284	455	109	1129	270	321	1485	225	3994
321	EDC	256.4	0.0	0.0	104.0	62	0	0	62	3095	744	107	2340	469	6756	3095	744	107	2340	469	0	0	6755
322	EDC	386.9	33.0	0.0	153.0	508	166	18	692	3695	743	216	2937	641	8233	3695	743	216	2937	641	166	18	8416
323	EDC	129.0	4.0	0.0	51.0	48	11	2	61	1435	372	108	1269	225	3409	1435	372	108	1269	225	11	2	3422
324	EDC	164.7	0.0	0.0	64.0	32	0	0	32	2171	458	194	1630	278	4730	2171	458	194	1630	278	0	0	4731
325	EDC	39.4	0.0	0.0	16.0	3	0	0	3	417	84	12	231	46	791	417	84	12	231	46	0	0	790
326	EDC	120.8	1.0	0.0	49.0	27	1	1	29	1330	256	54	861	150	2651	1330	256	54	861	150	1	1	2653
327	Placerville (not	100.8	0.0	0.0	40.0	15	0	0	15	972	145	55	599	118	1890	972	145	55	599	118	0	0	1889
328	EDC	47.9	0.0	0.0	19.0	4	0	0	4	453	81	25	295	57	911	453	81	25	295	57	0	0	911
329	Placerville (not	317.5	0.0	0.0	139.0	83	0	0	83	2705	412	116	1811	438	5482	2705	412	116	1811	438	0	0	5482
330	EDC	184.0	0.0	0.0	73.0	34	0	0	34	1599	206	75	953	200	3033	1599	206	75	953	200	0	0	3033
331	EDC	274.0	0.0	0.0	110.0	76	0	0	76	3436	677	197	2399	529	7239	3436	677	197	2399	529	0	0	7238
332	EDC	104.3	0.0	0.0	47.0	17	0	0	17	726	192	72	621	108	1718	726	192	72	621	108	0	0	1719
333	EDC	225.5	0.0	0.0	91.0	58	0	0	58	2190	730	280	2122	360	5682	2190	730	280	2122	360	0	0	5682
334	EDC	57.7	110.0	0.0	26.0	1280	515	41	1836	396	121	56	390	118	1081	396	121	56	390	118	515	41	1637
335	EDC	164.9	5.0	0.0	77.0	90	5	1	96	1392	248	348	994	185	3166	1392	248	348	994	185	5	1	3173
336	EDC	70.4	0.0	0.0	30.0	8	0	0	8	595	145	72	479	75	1366	595	145	72	479	75	0	0	1366
337	EDC	301.7	62.0	320.0	121.0	811	1275	89	2174	2840	1020	966	2361	677	7864	2840	1020	966	2361	677	1275	89	9228
338	EDC	830.6	14.0	0.0	322.0	322	165	8	496	8448	1880	922	5747	1029	18026	8448	1880	922	5747	1029	165	8	18199
339	EDC	410.4	0.0	0.0	188.0	101	0	0	101	5112	3209	351	3029	604	12305	5112	3209	351	3029	604	0	0	12305
340	EDC	205.0	14.0	0.0	93.0	206	226	35	467	3209	2150	806	1814	564	8543	3209	2150	806	1814	564	226	35	8804
341	EDC	70.8	8.0	0.0	31.0	73	14	2	89	760	534	10	379	69	1753	760	534	10	379	69	14	2	1768
342	EDC	123.8	0.0	0.0	48.0	23	0	0	23	1314	305	263	1102	169	3152	1314	305	263	1102	169	0	0	3153
343	EDC	115.7	0.0	0.0	53.0	35	0	0	35	1497	569	466	1219	246	3996	1497	569	466	1219	246	0	0	3997
344	EDC	120.1	0.0	0.0	55.0	38	0	0	38	1666	649	517	1280	265	4377	1666	649	517	1280	265	0	0	4377
345	EDC	63.3	0.0	0.0	29.0	14	0	0	14	731	233	120	625	122	1832	731	233	120	625	122	0	0	1831
346	EDC	49.5	0.0	0.0	22.0	9	0	0	9	497	180	66	469	77	1288	497	180	66	469	77	0	0	1289
347	EDC	108.3	0.0	0.0	42.0	21	0	0	21	1333	387	540	1090	164	3514	1333	387	540	1090	164	0	0	3514
348	EDC	110.2	0.0	0.0	49.0	30	0	0	30	1014	337	208	1138	218	2916	1014	337	208	1138	218	0	0	2915
349	EDC	191.4	18.0	0.0	83.0	232	148	21	402	2523	2273	739	1899	470	7904	2523	2273	739	1899	470	148	21	8073
350	EDC	48.0	0.0	0.0	22.0	10	0	0	10	585	488	32	363	73	1541	585	488	32	363	73	0	0	1541
351	EDC	50.2	0.0	0.0	23.0	8	0	0	8	589	439	268	337	51	1684	589	439	268	337	51	0	0	1684
352	EDC	63.3	0.0	0.0	29.0	14	0	0	14	892	617	336	479	81	2405	892	617	336	479	81	0	0	2405
353	EDC	364.6	1.0	0.0	167.0	82	0	0	82	4795	3419	1928	2305	392	12838	4795	3419	1928	2305	392	0	0	12839
354	EDC	115.7	77.0	275.0	53.0	703	811	73	1587	1117	729	759	565	326	3495	1117	729	759	565	326	811	73	4380
355	Placerville (in C	550.4	244.0	0.0	241.0	2955	1806	262	5022	3271	344	145	2267	1190	7217	3271	344	145	2267	1190	1806	262	9285
356	Placerville (in C	194.9	0.0	0.0	91.0	44	0	0	44	1194	226	71	915	203	2608	1194	226	71	915	203	0	0	2609
357	EDC	208.8	21.0	0.0	89.0	342	434	57	834	1660	358	157	1337	540	4050	1660	358	157	1337	540	434	57	4543
358	Placerville (not	190.1	98.0	0.0	81.0	1165	739	97	2001	1336	237	83	999	449	3104	1336	237	83	999	449	739	97	3940
359	EDC	254.0	0.0	0.0	105.0	58	0	0	58	2235	443	215	1825	357	5074	2235	443	215	1825	357	0	0	5075
360	EDC	237.1	10.0	0.0	98.0	200	128	9	337	2339	551	359	2134	469	5852	2339	551	359	2134	469	128	9	5989

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
361	Placerville (in C	938.3	392.0	0.0	458.0	4055	1567	151	5773	4592	916	128	4014	1201	10851	4592	916	128	4014	1201	1567	151	12569
362	Placerville (in C	591.2	876.0	0.0	252.0	11405	9222	2813	23440	3065	293	159	1957	2915	8389	3065	293	159	1957	2915	9222	2813	20424
363	EDC	30.9	0.0	0.0	13.0	1	0	0	1	159	27	12	95	19	312	159	27	12	95	19	0	0	312
364	Placerville (not	328.5	30.0	0.0	138.0	371	62	5	438	1740	185	116	1186	278	3505	1740	185	116	1186	278	62	5	3572
365	EDC	722.1	71.0	0.0	322.0	1029	713	73	1815	3849	759	253	3544	1118	9523	3849	759	253	3544	1118	713	73	10309
366	EDC	31.3	4.0	0.0	15.0	22	9	1	32	80	26	6	91	20	223	80	26	6	91	20	9	1	233
367	EDC	0.0	197.0	0.0	0.0	1930	771	107	2808	0	0	0	0	0	0	0	0	0	0	0	771	107	878
368	EDC	149.0	0.0	0.0	68.0	23	0	0	23	716	160	13	635	102	1625	716	160	13	635	102	0	0	1626
369	EDC	506.6	13.0	0.0	228.0	239	43	3	285	2499	448	138	2237	462	5784	2499	448	138	2237	462	43	3	5830
370	EDC	0.0	303.0	0.0	0.0	2966	1156	224	4346	0	0	0	0	0	0	0	0	0	0	0	1156	224	1380
371	EDC	46.7	0.0	0.0	21.0	3	0	0	3	304	69	13	275	45	706	304	69	13	275	45	0	0	706
372	EDC	433.3	211.0	1138.0	195.0	2341	3411	441	6193	2320	481	2346	2111	1331	8588	2320	481	2346	2111	1331	3411	441	12441
373	EDC	58.7	0.0	0.0	26.0	4	0	0	4	251	41	14	216	37	558	251	41	14	216	37	0	0	559
374	EDC	28.5	2.0	0.0	13.0	11	8	1	20	130	25	4	94	25	278	130	25	4	94	25	8	1	287
375	EDC	31.6	0.0	0.0	14.0	1	0	0	1	141	26	9	114	19	308	141	26	9	114	19	0	0	309
376	EDC	76.8	3.0	0.0	34.0	29	2	0	31	393	66	21	310	60	850	393	66	21	310	60	2	0	852
377	EDC	29.4	14.0	0.0	13.0	131	29	1	161	128	21	5	91	15	260	128	21	5	91	15	29	1	290
378	EDC	59.1	0.0	0.0	27.0	4	0	0	4	251	61	6	218	46	582	251	61	6	218	46	0	0	582
379	EDC	105.2	0.0	0.0	48.0	12	0	0	12	457	99	12	389	78	1035	457	99	12	389	78	0	0	1035
380	EDC	26.3	0.0	0.0	12.0	1	0	0	1	91	16	4	70	12	194	91	16	4	70	12	0	0	193
381	EDC	15.3	0.0	0.0	7.0	0	0	0	0	41	13	2	40	8	103	41	13	2	40	8	0	0	104
382	EDC	24.1	0.0	0.0	11.0	1	0	0	1	91	17	4	65	13	190	91	17	4	65	13	0	0	190
383	EDC	102.2	0.0	0.0	46.0	17	0	0	17	716	166	48	595	114	1639	716	166	48	595	114	0	0	1639
384	EDC	266.6	0.0	0.0	120.0	59	0	0	59	1730	379	97	1421	314	3940	1730	379	97	1421	314	0	0	3941
385	EDC	1002.1	0.0	0.0	451.0	287	0	0	287	6107	1261	302	5104	945	13719	6107	1261	302	5104	945	0	0	13719
386	EDC	200.0	0.0	0.0	90.0	35	0	0	35	1267	279	71	1032	211	2860	1267	279	71	1032	211	0	0	2860
387	EDC	80.0	8.0	0.0	36.0	79	47	4	129	373	79	17	316	86	871	373	79	17	316	86	47	4	922
388	EDC	0.0	303.0	0.0	0.0	3001	1146	215	4362	0	0	0	0	0	0	0	0	0	0	0	1146	215	1361
389	EDC	4.4	264.0	0.0	2.0	2563	1138	296	3998	0	0	0	3	7	11	0	0	0	3	7	1138	296	1444
390	EDC	379.3	23.0	0.0	182.0	316	110	7	433	1486	346	77	1669	320	3898	1486	346	77	1669	320	110	7	4015
391	EDC	22.9	54.0	0.0	11.0	527	443	132	1102	48	15	4	54	98	220	48	15	4	54	98	443	132	794
392	EDC	58.4	0.0	0.0	28.0	5	0	0	5	205	40	10	225	38	520	205	40	10	225	38	0	0	518
393	EDC	605.4	68.0	0.0	268.0	987	659	63	1709	2838	353	160	2525	789	6666	2838	353	160	2525	789	659	63	7387
394	EDC	21.9	0.0	0.0	8.0	0	0	0	0	79	9	5	53	6	152	79	9	5	53	6	0	0	152
395	Placerville (in C	165.5	2253.0	18.0	74.0	26223	11863	4058	42143	630	73	75	556	1363	2696	630	73	75	556	1363	11863	4058	18618
396	EDC	0.0	439.0	0.0	0.0	6278	7260	3612	17150	0	0	0	0	0	0	0	0	0	0	0	7260	3612	10872
397	EDC	113.9	3.0	0.0	50.0	39	1	0	41	527	81	35	451	87	1181	527	81	35	451	87	1	0	1182
398	EDC	31.6	3.0	0.0	14.0	18	9	1	29	120	21	9	95	22	267	120	21	9	95	22	9	1	277
399	EDC	97.1	0.0	0.0	43.0	12	0	0	12	483	73	30	381	74	1043	483	73	30	381	74	0	0	1041
400	EDC	33.3	0.0	0.0	16.0	1	0	0	1	79	19	7	89	17	212	79	19	7	89	17	0	0	211
401	Placerville (not	62.6	213.0	0.0	28.0	2673	1782	627	5082	268	30	14	184	341	838	268	30	14	184	341	1782	627	3246
402	EDC	132.6	106.0	0.0	51.0	1041	425	28	1493	714	57	32	436	131	1369	714	57	32	436	131	425	28	1823
403	EDC	258.4	654.0	462.0	124.0	7774	4952	1006	13733	969	165	1108	1092	1270	4604	969	165	1108	1092	1270	4952	1006	10562
404	EDC	41.6	49.0	0.0	19.0	434	159	8	601	147	28	6	130	33	344	147	28	6	130	33	159	8	511
405	EDC	19.7	0.0	0.0	9.0	0	0	0	0	43	11	2	47	9	112	43	11	2	47	9	0	0	112
406	EDC	52.6	286.0	0.0	24.0	4047	4737	2157	10942	214	28	10	163	537	953	214	28	10	163	537	4737	2157	7846
407	EDC	2.1	309.0	9.0	1.0	3396	2099	869	6364	0	0	8	0	93	101	0	0	8	0	93	2099	869	3069
408	EDC	2.1	182.0	0.0	1.0	1701	812	174	2688	1	1	0	3	7	13	1	1	0	3	7	812	174	998
409	Placerville (not	247.5	445.0	0.0	104.0	5718	3463	857	10037	1466	150	79	1013	1138	3847	1466	150	79	1013	1138	3463	857	8166
410	EDC	1030.6	277.0	0.0	426.0	3640	3007	386	7033	7000	926	508	5270	2395	16098	7000	926	508	5270	2395	3007	386	19492
411	Placerville (in C	712.2	1271.0	0.0	298.0	13723	9592	2850	26165	2923	365	199	2238	3181	8906	2923	365	199	2238	3181	9592	2850	21348
412	EDC	205.5	0.0	0.0	86.0	48	0	0	48	1506	220	109	1098	239	3171	1506	220	109	1098	239	0	0	3172
413	Placerville (not	301.1	0.0	0.0	126.0	67	0	0	67	1838	267	122	1307	302	3836	1838	267	122	1307	302	0	0	3836
414	EDC	14.6	120.0	0.0	7.0	1170	499	69	1738	24	15	2	37	37	114	24	15	2	37	37	499	69	683
415	EDC	40.4	0.0	0.0	18.0	2	0	0	2	178	45	12	152	29	416	178	45	12	152	29	0	0	416
416	EDC	18.8	0.0	0.0	9.0	0	0	0	0	38	15	2	51	9	116	38	15	2	51	9	0	0	115
417	Placerville (in C	113.9	278.0	0.0	45.0	2891	1922	549	5362	491	65	32	323	479	1390	491	65	32	323	479	1922	549	3861
418	Placerville (in C	0.0	64.0	0.0	0.0	686	705	371	1762	0	0	0	0	0	0	0	0	0	0	0	705	371	1076
419	Placerville (in C	0.0	85.0	0.0	0.0	853	712	346	1910	0	0	0	0	0	0	0	0	0	0	0	712	346	1058
420	Placerville (in C	100.4	52.0	0.0	42.0	463	124	6	593	432	58	28	279	61	857	432	58	28	279	61	124	6	988
421	Placerville (in C	162.5	5.0	0.0	68.0	66	2	0	68	718	109	44	499	102	1473	718	109	44	499	102	2	0	1474
422	Placerville (in C	652.2	1907.0	475.0	278.0	24331	6947	1053	32332	2603	383	963	1908	1590	7447	2603	383	963	1908	1590	6947	1053	15447
423	EDC	47.8	0.0	0.0	20.0	1	0	0	1	204	37	14	131	24	411	204	37	14	131	24	0	0	410
424	Placerville (not	390.5	228.0	0.0	171.0	2483	1376	150	4010	2431	309	62	1628	657	5086	2431	309	62	1628	657	1376	150	6613
425	Placerville (not	2616.8	563.0	1598.0	1167.0	6034	7711	913	14659	15293	1972	3905	9276	4583	35029	15293	1972	3905	9276	4583	7711	913	43653
426	Placerville (not	82.2	0.0	0.0	33.0	5	0	0	5	534	62	8	243	42	889	534	62	8	243	42	0	0	889
427	EDC	231.6	0.0	0.0	93.0	56	0	0	56	2370	333	69	1428	335	4535	2370	333	69	1428	335	0	0	4535
428	EDC	54.8	0.0	0.0	22.0	3	0	0	3	396	50	6	171	33	656	396	50	6	171	33	0	0	656
429	EDC	82.5	0.0	0.0	35.0	12	0	0	12	722	128	44	572	54	1520	722	128	44	572	54	0	0	1520
430	EDC	136.7	10.0	0.0	58.0	136	26	2	164	1130	178	84	817	184	2393	1130	178	84	817	184	26	2	2421
431	Placerville (in C	45.1	60.0	0.0	22.0	632	252	23	907	166	41	12	136	66	421	166	41	12	136	66	252	23	696
432	EDC	728.5	229.0	0.0	309.0	2631	1094	106	3831	5098	869	352	3561	1153	11034	5098	869	352	3561	1153	1094	106	12233

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
433	Placerville (in C	1041.0	36.0	0.0	481.0	653	96	8	757	4275	792	270	3730	883	9950	4275	792	270	3730	883	96	8	10054
434	Placerville (in C	70.7	0.0	0.0	33.0	6	0	0	6	243	44	14	170	43	514	243	44	14	170	43	0	0	514
435	Placerville (in C	77.1	27.0	0.0	36.0	210	47	3	261	260	47	15	187	47	556	260	47	15	187	47	47	3	606
436	EDC	62.3	0.0	0.0	25.0	6	0	0	6	461	117	41	365	59	1043	461	117	41	365	59	0	0	1043
437	EDC	287.0	12.0	0.0	117.0	210	133	11	355	2848	428	222	1777	478	5752	2848	428	222	1777	478	133	11	5897
438	EDC	278.1	11.0	89.0	124.0	194	514	43	751	2125	613	237	1913	578	5467	2125	613	237	1913	578	514	43	6023
439	EDC	349.8	3.0	0.0	156.0	133	2	0	135	2587	629	222	2449	450	6337	2587	629	222	2449	450	2	0	6339
440	EDC	62.8	15.0	0.0	28.0	148	72	5	224	386	114	37	387	86	1009	386	114	37	387	86	72	5	1087
441	Placerville (in C	28.7	0.0	0.0	12.0	1	0	0	1	161	27	12	96	20	315	161	27	12	96	20	0	0	316
442	Placerville (in C	767.7	69.0	143.0	313.0	1016	1041	108	2165	5594	652	517	3233	1235	11231	5594	652	517	3233	1235	1041	108	12380
443	EDC	85.2	0.0	0.0	38.0	15	0	0	15	594	160	60	553	111	1477	594	160	60	553	111	0	0	1478
444	EDC	19.1	0.0	0.0	8.0	0	0	0	0	81	16	6	56	8	166	81	16	6	56	8	0	0	167
445	Placerville (not	56.4	11.0	0.0	23.0	120	25	1	147	444	59	25	228	49	804	444	59	25	228	49	25	1	831
446	Placerville (in C	58.6	19.0	0.0	25.0	224	250	39	514	403	63	22	212	143	842	403	63	22	212	143	250	39	1132
447	EDC	189.5	0.0	0.0	76.0	41	0	0	41	1639	444	131	1452	254	3920	1639	444	131	1452	254	0	0	3920
448	Placerville (not	130.0	4.0	0.0	53.0	47	14	1	61	1071	147	68	591	96	1974	1071	147	68	591	96	14	1	1988
449	EDC	30.0	0.0	0.0	14.0	3	0	0	3	202	64	26	157	31	480	202	64	26	157	31	0	0	480
450	EDC	179.9	31.0	0.0	84.0	347	104	9	460	1198	239	74	899	235	2645	1198	239	74	899	235	104	9	2758
451	EDC	57.8	0.0	0.0	27.0	9	0	0	9	407	95	37	337	70	946	407	95	37	337	70	0	0	946
452	Placerville (not	259.1	33.0	428.0	121.0	449	988	95	1532	1422	230	1018	1036	474	4179	1422	230	1018	1036	474	988	95	5263
453	Placerville (in C	310.5	1.0	0.0	145.0	83	0	0	83	1392	242	61	1118	176	2990	1392	242	61	1118	176	0	0	2989
454	EDC	53.5	0.0	0.0	25.0	4	0	0	4	223	46	14	160	35	478	223	46	14	160	35	0	0	478
455	EDC	172.1	0.0	0.0	73.0	38	0	0	38	1439	266	116	957	215	2992	1439	266	116	957	215	0	0	2993
456	EDC	109.2	0.0	0.0	51.0	22	0	0	22	830	213	93	689	142	1968	830	213	93	689	142	0	0	1967
457	EDC	137.0	5.0	0.0	62.0	90	9	1	100	1344	326	178	913	193	2953	1344	326	178	913	193	9	1	2964
458	Placerville (not	157.2	26.0	0.0	67.0	305	166	11	481	1173	213	88	878	177	2528	1173	213	88	878	177	166	11	2706
459	Placerville (not	25.8	0.0	0.0	11.0	0	0	0	0	131	29	14	97	15	286	131	29	14	97	15	0	0	286
460	EDC	47.1	20.0	0.0	22.0	225	73	6	304	364	88	36	298	77	863	364	88	36	298	77	73	6	942
461	EDC	14.1	59.0	0.0	6.0	584	246	19	849	59	24	4	53	22	162	59	24	4	53	22	246	19	427
462	EDC	66.4	125.0	0.0	31.0	1723	746	132	2600	484	65	117	372	238	1275	484	65	117	372	238	746	132	2154
463	EDC	194.1	0.0	0.0	85.0	32	0	0	32	2404	2307	778	1240	163	6892	2404	2307	778	1240	163	0	0	6892
464	EDC	103.6	0.0	0.0	47.0	30	0	0	30	1177	585	370	891	171	3195	1177	585	370	891	171	0	0	3194
465	EDC	133.6	16.0	0.0	58.0	103	28	4	135	1862	1817	694	850	145	5367	1862	1817	694	850	145	28	4	5400
466	EDC	139.3	22.0	0.0	61.0	181	88	11	280	1599	1229	232	970	201	4230	1599	1229	232	970	201	88	11	4330
467	EDC	89.1	0.0	0.0	39.0	19	0	0	19	1174	1223	506	618	103	3623	1174	1223	506	618	103	0	0	3624
468	EDC	276.7	6.0	0.0	120.0	109	15	2	126	3357	2841	616	2347	443	9604	3357	2841	616	2347	443	15	2	9621
469	EDC	130.8	15.0	0.0	59.0	122	35	5	163	1710	1918	625	969	187	5409	1710	1918	625	969	187	35	5	5449
470	EDC	73.1	1.0	0.0	32.0	21	1	0	21	998	981	291	519	92	2882	998	981	291	519	92	1	0	2882
471	EDC	52.5	6.0	0.0	23.0	47	9	2	58	620	604	241	335	54	1854	620	604	241	335	54	9	2	1865
472	EDC	59.4	20.0	0.0	26.0	132	33	5	170	656	728	229	393	68	2074	656	728	229	393	68	33	5	2112
473	EDC	23.0	2.0	0.0	10.0	24	29	5	57	215	78	21	129	51	493	215	78	21	129	51	29	5	528
474	EDC	80.8	0.0	0.0	37.0	21	0	0	21	908	319	144	580	114	2065	908	319	144	580	114	0	0	2065
475	EDC	83.0	0.0	0.0	38.0	19	0	0	19	895	389	222	637	113	2256	895	389	222	637	113	0	0	2256
476	EDC	41.3	0.0	0.0	16.0	5	0	0	5	396	123	105	317	43	983	396	123	105	317	43	0	0	984
477	EDC	69.1	15.0	0.0	30.0	110	26	4	140	896	689	183	489	84	2342	896	689	183	489	84	26	4	2371
478	EDC	66.0	0.0	0.0	30.0	16	0	0	16	749	267	153	529	91	1788	749	267	153	529	91	0	0	1789
479	EDC	117.5	37.0	0.0	51.0	414	423	55	892	1352	349	305	824	344	3175	1352	349	305	824	344	423	55	3652
480	EDC	45.7	0.0	0.0	20.0	10	0	0	10	592	603	237	352	66	1849	592	603	237	352	66	0	0	1850
481	EDC	44.0	0.0	0.0	20.0	12	0	0	12	608	659	194	359	79	1899	608	659	194	359	79	0	0	1899
482	EDC	162.7	3.0	0.0	74.0	76	6	1	83	2445	2089	1021	1816	369	7740	2445	2089	1021	1816	369	6	1	7747
483	EDC	248.6	9.0	0.0	115.0	133	47	5	184	1936	845	181	1957	347	5266	1936	845	181	1957	347	47	5	5318
484	EDC	226.9	114.0	0.0	91.0	895	454	30	1379	2434	770	396	1654	334	5588	2434	770	396	1654	334	454	30	6072
485	EDC	37.4	0.0	0.0	15.0	6	0	0	6	490	278	235	296	37	1336	490	278	235	296	37	0	0	1336
486	EDC	155.8	0.0	0.0	69.0	32	0	0	32	2400	1154	713	1203	208	5678	2400	1154	713	1203	208	0	0	5678
487	EDC	518.6	36.0	0.0	221.0	699	564	62	1325	4989	1113	565	4090	1161	11919	4989	1113	565	4090	1161	564	62	12544
488	EDC	241.5	0.0	0.0	107.0	64	0	0	64	3626	1139	576	1757	319	7417	3626	1139	576	1757	319	0	0	7417
489	EDC	300.2	58.0	0.0	133.0	610	284	23	917	3592	807	163	2085	462	7109	3592	807	163	2085	462	284	23	7416
490	EDC	59.8	0.0	0.0	24.0	8	0	0	8	606	185	84	474	67	1416	606	185	84	474	67	0	0	1416
491	EDC	398.9	3.0	0.0	160.0	140	37	3	179	3909	998	573	3127	582	9189	3909	998	573	3127	582	37	3	9229
492	EDC	176.0	31.0	0.0	71.0	380	458	48	886	1777	557	321	1473	453	4581	1777	557	321	1473	453	458	48	5087
493	EDC	178.4	26.0	159.0	72.0	326	608	39	973	1693	607	485	1443	372	4600	1693	607	485	1443	372	608	39	5247
494	EDC	169.5	10.0	0.0	68.0	110	28	2	139	1617	571	67	1406	221	3882	1617	571	67	1406	221	28	2	3912
495	EDC	39.9	0.0	0.0	16.0	2	0	0	2	335	87	46	241	29	737	335	87	46	241	29	0	0	738
496	EDC	200.7	67.0	0.0	81.0	810	1252	171	2233	1993	417	376	1414	715	4916	1993	417	376	1414	715	1252	171	6338
497	EDC	224.3	3.0	0.0	88.0	79	11	1	91	2445	698	490	1744	260	5637	2445	698	490	1744	260	11	1	5649
498	EDC	158.0	6.0	0.0	70.0	80	11	1	92	2183	582	205	1171	206	4346	2183	582	205	1171	206	11	1	4359
499	EDC	74.8	0.0	0.0	30.0	11	0	0	11	733	255	83	517	75	1663	733	255	83	517	75	0	0	1663
500	EDC	25.8	51.0	416.0	11.0	561	1248	191	2000	184	58	806	131	230	1409	184	58	806	131	230	1248	191	2848
501	EDC	48.8	83.0	0.0	22.0	731	320	21	1072	375	130	17	292	68	883	375	130	17	292	68	320	21	1223
502	EDC	272.1	18.0	0.0	117.0	306	279	27	612	2770	1000	1059	2386	517	7731	2770	1000	1059	2386	517	279	27	8038
503	EDC	2.2	76.0	0.0	1.0	1008	1152	623	2783	0	0	0	0	0	0	0	0	0	0	0	1152	623	1775
504	EDC	312.8	19.0	0.0	141.0	296	121	12	428	2680	757	261	2405	542	6646	2680	757	261	2405	542	121	12	6778

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	20	7	4	12	1	44	20	7	4	12	1	0	0	44
506	EDC	62.1	0.0	0.0	28.0	8	0	0	8	488	143	46	400	68	1145	488	143	46	400	68	0	0	1145
507	EDC	116.3	37.0	0.0	50.0	347	119	8	475	904	319	70	829	135	2257	904	319	70	829	135	119	8	2384
508	EDC	183.7	186.0	0.0	85.0	1780	687	49	2517	1252	546	88	1282	274	3441	1252	546	88	1282	274	687	49	4178
509	EDC	26.6	2.0	0.0	12.0	10	1	0	11	150	60	10	117	18	355	150	60	10	117	18	1	0	356
510	EDC	198.8	10.0	0.0	92.0	124	62	6	192	1337	525	56	1304	255	3476	1337	525	56	1304	255	62	6	3545
511	EDC	104.7	33.0	0.0	45.0	326	304	38	668	757	239	38	615	231	1880	757	239	38	615	231	304	38	2222
512	EDC	86.1	27.0	0.0	37.0	332	273	34	639	718	213	108	685	228	1952	718	213	108	685	228	273	34	2259
513	EDC	354.0	0.0	0.0	142.0	67	0	0	67	4470	1828	1225	2704	390	10619	4470	1828	1225	2704	390	0	0	10617
514	EDC	1550.6	0.0	0.0	622.0	277	0	0	277	19426	8570	6737	10339	1554	46625	19426	8570	6737	10339	1554	0	0	46626
515	EDC	175.9	8.0	0.0	69.0	85	14	1	101	1915	719	468	1365	191	4657	1915	719	468	1365	191	14	1	4673
516	EDC	362.0	0.0	0.0	142.0	69	0	0	69	4459	2172	1721	2883	401	11636	4459	2172	1721	2883	401	0	0	11636
517	EDC	857.5	101.0	0.0	388.0	1052	1153	81	2287	9082	2919	2520	5843	1206	21569	9082	2919	2520	5843	1206	1153	81	22804
518	EDC	670.7	17.0	0.0	289.0	260	71	5	336	7019	2326	1009	4696	765	15816	7019	2326	1009	4696	765	71	5	15891
519	EDC	329.5	12.0	0.0	142.0	153	99	6	259	3453	1129	540	2281	314	7715	3453	1129	540	2281	314	99	6	7822
520	EDC	617.3	12.0	0.0	266.0	222	88	6	316	7046	2329	1525	4542	689	16131	7046	2329	1525	4542	689	88	6	16225
521	EDC	640.9	60.0	0.0	290.0	529	505	28	1062	6104	1839	825	3768	564	13101	6104	1839	825	3768	564	505	28	13633
522	EDC	221.0	0.0	0.0	85.0	41	0	0	41	3110	956	943	1782	235	7025	3110	956	943	1782	235	0	0	7026
523	EDC	588.5	206.0	6.0	240.0	1873	2861	452	5186	5523	641	842	2863	1185	11054	5523	641	842	2863	1185	2861	452	14367
524	EDC	490.2	103.0	519.0	205.0	1059	2303	188	3550	5073	2057	1927	3086	904	13047	5073	2057	1927	3086	904	2303	188	15538
525	EDC	199.4	0.0	0.0	85.0	35	0	0	35	2454	1745	746	1645	436	7026	2454	1745	746	1645	436	0	0	7026
526	EDC	12.2	0.0	0.0	5.0	1	0	0	1	115	22	18	83	23	260	115	22	18	83	23	0	0	261
527	EDC	380.0	38.0	0.0	162.0	309	248	47	603	4233	1786	340	2698	568	9624	4233	1786	340	2698	568	248	47	9920
528	EDC	2428.5	72.0	0.0	1001.0	710	718	152	1579	32938	17377	7014	22695	6518	86541	32938	17377	7014	22695	6518	718	152	87412
529	EDC	36.3	0.0	0.0	15.0	7	0	0	7	353	152	59	419	143	1126	353	152	59	419	143	0	0	1126
530	EDC	461.8	0.0	0.0	191.0	142	0	0	142	5815	2706	1790	5554	1371	17236	5815	2706	1790	5554	1371	0	0	17236
531	EDC	82.2	0.0	0.0	34.0	22	0	0	22	1118	587	357	984	266	3312	1118	587	357	984	266	0	0	3312
532	EDC	147.5	0.0	0.0	61.0	38	0	0	38	1774	709	410	1807	506	5206	1774	709	410	1807	506	0	0	5206
533	EDC	270.8	34.0	0.0	105.0	596	989	349	1934	2964	819	845	3284	1030	8940	2964	819	845	3284	1030	989	349	10280
534	EDC	128.1	0.0	0.0	53.0	33	0	0	33	1628	757	469	1654	449	4957	1628	757	469	1654	449	0	0	4957
535	EDC	221.5	0.0	0.0	91.0	54	0	0	54	3037	1136	390	2659	842	8063	3037	1136	390	2659	842	0	0	8064
536	EDC	199.6	0.0	0.0	82.0	47	0	0	47	2619	931	287	2257	766	6860	2619	931	287	2257	766	0	0	6860
537	EDC	401.6	0.0	0.0	165.0	83	0	0	83	5760	2374	810	4302	1452	14697	5760	2374	810	4302	1452	0	0	14698
538	EDC	106.8	22.0	0.0	44.0	269	464	198	931	1160	295	84	1206	619	3365	1160	295	84	1206	619	464	198	4026
539	EDC	14.5	166.0	338.0	6.0	2023	4757	2668	9448	87	14	986	105	557	1749	87	14	986	105	557	4757	2668	9174
540	EDC	0.0	53.0	0.0	0.0	530	1013	709	2252	0	0	0	0	0	0	0	0	0	0	0	1013	709	1722
541	EDC	42.2	6.0	0.0	18.0	51	54	13	118	416	100	120	327	96	1058	416	100	120	327	96	54	13	1126
542	EDC	123.0	37.0	0.0	52.0	366	436	62	864	1261	511	52	965	240	3028	1261	511	52	965	240	436	62	3527
543	EDC	114.5	107.0	0.0	49.0	1804	3054	914	5772	1013	118	119	895	811	2957	1013	118	119	895	811	3054	914	6924
544	EDC	21.0	8.0	0.0	9.0	74	46	13	133	161	34	31	147	31	404	161	34	31	147	31	46	13	463
545	EDC	53.7	0.0	0.0	23.0	11	0	0	11	625	387	131	672	225	2040	625	387	131	672	225	0	0	2040
546	EDC	142.5	0.0	0.0	61.0	43	0	0	43	1829	1430	618	2060	655	6592	1829	1430	618	2060	655	0	0	6592
547	EDC	23.4	46.0	0.0	10.0	459	1798	748	3005	158	28	74	134	206	600	158	28	74	134	206	1798	748	3146
548	EDC	910.1	22.0	0.0	386.0	404	211	25	640	10732	4344	321	7099	1269	23766	10732	4344	321	7099	1269	211	25	24001
549	EDC	99.0	0.0	0.0	42.0	17	0	0	17	1034	350	101	995	176	2656	1034	350	101	995	176	0	0	2656
550	EDC	18.0	0.0	0.0	7.0	1	0	0	1	151	20	12	79	12	273	151	20	12	79	12	0	0	274
551	EDC	105.5	54.0	0.0	41.0	769	1266	275	2311	1220	166	78	789	488	2741	1220	166	78	789	488	1266	275	4282
552	EDC	18.7	32.0	0.0	8.0	472	675	211	1358	139	24	10	113	131	417	139	24	10	113	131	675	211	1303
553	EDC	74.8	0.0	0.0	32.0	13	0	0	13	813	294	50	691	116	1964	813	294	50	691	116	0	0	1964
554	EDC	193.9	4.0	0.0	83.0	73	59	11	143	2174	947	179	1610	272	5182	2174	947	179	1610	272	59	11	5252
555	EDC	80.5	0.0	0.0	34.0	17	0	0	17	804	456	98	669	158	2184	804	456	98	669	158	0	0	2185
556	EDC	191.6	0.0	0.0	82.0	47	0	0	47	2388	1537	607	2064	478	7075	2388	1537	607	2064	478	0	0	7074
557	EDC	81.8	1.0	0.0	35.0	24	9	2	35	784	221	244	612	184	2044	784	221	244	612	184	9	2	2056
558	EDC	84.4	19.0	12.0	36.0	143	229	50	422	973	689	242	744	208	2855	973	689	242	744	208	229	50	3135
559	EDC	58.6	0.0	0.0	25.0	11	0	0	11	657	309	164	510	145	1785	657	309	164	510	145	0	0	1785
560	EDC	63.1	10.0	0.0	27.0	83	110	28	222	595	315	89	489	142	1628	595	315	89	489	142	110	28	1768
561	EDC	52.1	0.0	0.0	22.0	11	0	0	11	564	298	63	456	100	1481	564	298	63	456	100	0	0	1481
562	EDC	145.4	0.0	0.0	62.0	30	0	0	30	1907	1533	661	1342	331	5774	1907	1533	661	1342	331	0	0	5774
563	EDC	70.7	0.0	0.0	32.0	12	0	0	12	1135	943	347	646	108	3179	1135	943	347	646	108	0	0	3179
564	EDC	33.5	0.0	0.0	14.0	2	0	0	2	336	122	7	218	32	716	336	122	7	218	32	0	0	715
565	EDC	129.3	0.0	0.0	56.0	28	0	0	28	1493	806	125	941	192	3556	1493	806	125	941	192	0	0	3557
566	EDC	220.1	1.0	0.0	93.0	51	23	5	79	2236	1092	128	1595	318	5370	2236	1092	128	1595	318	23	5	5397
567	EDC	41.5	2.0	0.0	18.0	18	8	2	28	342	121	11	201	47	723	342	121	11	201	47	8	2	732
568	EDC	61.5	0.0	0.0	26.0	9	0	0	9	559	179	15	339	64	1155	559	179	15	339	64	0	0	1156
569	EDC	144.3	31.0	0.0	61.0	261	659	134	1054	1337	370	39	809	318	2872	1337	370	39	809	318	659	134	3666
570	EDC	92.3	92.0	232.0	40.0	723	1260	180	2163	807	213	371	465	251	2107	807	213	371	465	251	1260	180	3547
571	EDC	76.2	0.0	0.0	33.0	15	0	0	15	811	300	37	489	100	1737	811	300	37	489	100	0	0	1737
572	EDC	61.3	34.0	0.0	25.0	225	187	26	438	597	192	20	354	80	1242	597	192	20	354	80	187	26	1456
573	EDC	196.6	2.0	0.0	89.0	80	22	2	103	2641	1544	982	2149	556	7872	2641	1544	982	2149	556	22	2	7896
574	EDC	174.1	0.0	0.0	71.0	23	0	0	23	2746	2322	987	1463	195	7713	2746	2322	987	1463	195	0	0	7713
575	EDC	71.1	0.0	0.0	29.0	12	0	0	12	1197	1099	566	935	171	3967	1197	1099	566	935	171	0	0	3968
576	EDC	42.0	1.0	0.0	19.0	12	22	3	38	564	380	138	265	54	1402	564	380	138	265	54	22	3	1426

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
577	EDC	28.7	0.0	0.0	13.0	3	0	0	3	354	287	119	187	33	980	354	287	119	187	33	0	0	980
578	EDC	817.4	0.0	0.0	370.0	90	0	0	90	12762	11507	4678	6256	1073	36277	12762	11507	4678	6256	1073	0	0	36276
579	EDC	96.4	12.0	0.0	38.0	90	38	5	132	1400	1452	835	1213	187	5086	1400	1452	835	1213	187	38	5	5130
580	EDC	88.8	5.0	19.0	35.0	52	75	8	135	1297	1340	276	901	155	3969	1297	1340	276	901	155	75	8	4052
581	EDC	94.5	32.0	0.0	43.0	271	71	16	358	1428	1504	667	1053	249	4900	1428	1504	667	1053	249	71	16	4988
582	EDC	33.8	0.0	0.0	13.0	8	0	0	8	519	310	215	419	66	1529	519	310	215	419	66	0	0	1529
583	EDC	773.9	10.0	28.0	352.0	194	146	18	358	14364	13746	4830	8351	1633	42924	14364	13746	4830	8351	1633	146	18	43088
584	EDC	39.7	3.0	19.0	18.0	49	111	22	182	665	573	169	460	175	2042	665	573	169	460	175	111	22	2175
585	EDC	272.6	0.0	0.0	124.0	63	0	0	63	4544	4109	1866	2971	585	14075	4544	4109	1866	2971	585	0	0	14075
586	EDC	90.7	92.0	0.0	51.0	1498	705	128	2331	805	390	72	904	391	2561	805	390	72	904	391	705	128	3395
587	EDC	99.4	0.0	0.0	39.0	10	0	0	10	1311	612	609	584	66	3183	1311	612	609	584	66	0	0	3182
588	EDC	805.2	0.0	0.0	323.0	101	0	0	101	12313	6048	5082	5404	649	29496	12313	6048	5082	5404	649	0	0	29496
589	EDC	12.0	0.0	0.0	3.0	0	0	0	0	237	72	114	61	5	489	237	72	114	61	5	0	0	489
590	EDC	45.6	0.0	0.0	18.0	6	0	0	6	469	133	104	274	35	1015	469	133	104	274	35	0	0	1015
591	EDC	7.6	0.0	0.0	3.0	0	0	0	0	26	12	12	21	2	73	26	12	12	21	2	0	0	73
592	EDC	749.2	91.0	384.0	339.0	688	1244	75	2007	6503	1645	851	3688	729	13416	6503	1645	851	3688	729	1244	75	14735
593	EDC	382.4	28.0	0.0	151.0	225	84	5	314	4285	1195	766	2311	309	8866	4285	1195	766	2311	309	84	5	8955
594	EDC	790.2	5.0	0.0	312.0	146	8	1	155	10415	4043	3659	5691	702	24511	10415	4043	3659	5691	702	8	1	24519
595	EDC	56.4	31.0	0.0	25.0	233	104	6	342	806	253	190	313	57	1620	806	253	190	313	57	104	6	1729
596	EDC	84.8	25.0	0.0	34.0	196	258	23	477	1125	391	424	527	169	2635	1125	391	424	527	169	258	23	2917
597	EDC	234.3	278.0	0.0	106.0	1879	2494	398	4772	1920	466	218	1034	720	4358	1920	466	218	1034	720	2494	398	7250
598	EDC	30.9	35.0	0.0	14.0	234	413	81	727	212	50	24	102	109	497	212	50	24	102	109	413	81	991
599	EDC	37.6	0.0	0.0	17.0	6	0	0	6	378	140	66	230	34	848	378	140	66	230	34	0	0	848
600	EDC	453.0	130.0	0.0	205.0	1204	758	51	2013	4755	1554	1055	3120	568	11052	4755	1554	1055	3120	568	758	51	11861
601	EDC	22.0	0.0	0.0	10.0	4	0	0	4	131	402	184	931	201	1849	131	402	184	931	201	0	0	1849
602	EDC	5.3	2.0	0.0	3.0	43	47	20	110	18	12	0	24	33	86	18	12	0	24	33	47	20	154
603	EDC	19.6	2.0	0.0	11.0	73	67	20	160	243	163	0	144	65	615	243	163	0	144	65	67	20	702
604	EDC	33.1	3.0	0.0	17.0	99	11	1	111	648	631	16	244	75	1614	648	631	16	244	75	11	1	1626
605	EDC	38.0	2.0	16.0	18.0	74	71	8	152	589	462	202	276	80	1610	589	462	202	276	80	71	8	1688
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	49.4	0.0	0.0	19.0	11	0	0	11	1538	1014	484	1402	362	4800	1538	1014	484	1402	362	0	0	4800
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
609	EDC	71.7	4.0	0.0	34.0	111	164	48	323	1413	420	537	550	321	3242	1413	420	537	550	321	164	48	3453
610	EDC	0.0	1745.0	121.0	0.0	19052	7096	2388	28536	0	0	158	0	271	428	0	0	158	0	271	7096	2388	9913
611	EDC	0.0	1.0	0.0	153.0	2	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	4	4
612	EDC	0.0	3121.0	0.0	0.0	35997	12262	4781	53040	0	0	0	0	0	0	0	0	0	0	0	12262	4781	17043
613	EDC	5.2	0.0	0.0	2.0	0	0	0	0	17	1	2	16	2	38	17	1	2	16	2	0	0	38
614	EDC	2033.2	59.0	525.0	797.0	927	1728	163	2818	16722	3190	1606	14169	3789	39476	16722	3190	1606	14169	3789	1728	163	41367
615	EDC	1831.1	0.0	0.0	683.0	422	0	0	422	13173	1947	866	12986	2529	31501	13173	1947	866	12986	2529	0	0	31501
616	EDC	1990.9	321.0	517.0	787.0	3554	2873	319	6746	10695	1711	1571	14334	3769	32081	10695	1711	1571	14334	3769	2873	319	35272
617	EDC	547.2	118.0	1763.0	187.0	1120	5424	800	7344	3712	690	2449	3902	1973	12727	3712	690	2449	3902	1973	5424	800	18950
618	EDC	0.0	146.0	0.0	0.0	1113	758	104	1975	0	0	0	0	0	0	0	0	0	0	0	758	104	862
619	EDC	0.0	151.0	0.0	0.0	1186	921	214	2321	0	0	0	0	0	0	0	0	0	0	0	921	214	1135
620	EDC	0.0	188.0	2400.0	0.0	1675	7492	2052	11219	0	0	3422	0	781	4203	0	0	3422	0	781	7492	2052	13747
621	EDC	956.9	0.0	0.0	327.0	163	0	0	163	7402	1520	444	7591	1394	18351	7402	1520	444	7591	1394	0	0	18351
622	EDC	1082.7	147.0	430.0	370.0	1522	2038	187	3746	7601	1562	1001	8583	2103	20850	7601	1562	1001	8583	2103	2038	187	23075
623	EDC	0.0	16.0	0.0	0.0	125	76	6	207	0	0	0	0	0	0	0	0	0	0	0	76	6	82
624	EDC	904.6	96.0	0.0	308.0	1058	483	37	1577	6137	990	341	6707	1300	15475	6137	990	341	6707	1300	483	37	15995
625	EDC	0.0	40.0	0.0	0.0	347	138	32	517	0	0	0	0	0	0	0	0	0	0	0	138	32	170
626	EDC	382.9	98.0	0.0	164.0	1011	578	48	1636	2659	579	169	3015	712	7133	2659	579	169	3015	712	578	48	7760
627	EDC	0.0	897.0	0.0	0.0	11370	16943	8631	36944	0	0	0	0	0	0	0	0	0	0	0	16943	8631	25574
628	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
629	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
631	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
632	Project Resider	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
633	Proj Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
634	Proj Hotel	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
635	Program Resid	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
636	Program Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2018 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	406574	250171	57511	714256	346940	190792	96416	475676	326062	1435886	346940	190792	96416	475676	326062	250171	57511	1743568
651	gateway	0.0	0.0	0.0	0.0	3669	2680	490	6838	3820	2420	1407	4682	3231	15560	3820	2420	1407	4682	3231	2680	490	18730
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	46968	33484	6796	87247	45551	25211	12031	59312	41737	183843	45551	25211	12031	59312	41737	33484	6796	224122
654	gateway	0.0	0.0	0.0	0.0	2300	1589	328	4217	2225	1303	583	2937	2006	9054	2225	1303	583	2937	2006	1589	328	10971
655	gateway	0.0	0.0	0.0	0.0	28133	17994	4097	50223	24406	14521	7414	34730	23501	104573	24406	14521	7414	34730	23501	17994	4097	126663
656	gateway	0.0	0.0	0.0	0.0	6105	2116	484	8705	2924	2061	1432	4671	3035	14123	2924	2061	1432	4671	3035	2116	484	16723
657	gateway	0.0	0.0	0.0	0.0	2914	1235	277	4425	1713	1041	708	2436	1635	7533	1713	1041	708	2436	1635	1235	277	9045
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	902	399	79	1380	562	376	179	747	499	2363	562	376	179	747	499	399	79	2841
660	gateway	0.0	0.0	0.0	0.0	27966	15314	3563	46843	20534	12327	6475	30437	20303	90075	20534	12327	6475	30437	20303	15314	3563	108953
661	gateway	0.0	0.0	0.0	0.0	20258	11717	2747	34722	15821	9455	4743	23106	15481	68606	15821	9455	4743	23106	15481	11717	2747	83070
662	gateway	0.0	0.0	0.0	0.0	104136	62837	13898	180871	84105	41643	25610	116064	78935	346357	84105	41643	25610	116064	78935	62837	13898	423092
663	gateway	0.0	0.0	0.0	0.0	67562	43274	9526	120362	57594	26123	17328	77395	53715	232155	57594	26123	17328	77395	53715	43274	9526	284955
664	gateway	0.0	0.0	0.0	0.0	48718	40412	7643	96773	56059	22352	13375	64648	45075	201510	56059	22352	13375	64648	45075	40412	7643	249564
665	gateway	0.0	0.0	0.0	0.0	28034	17046	3215	48295	23090	8034	5864	25571	17652	80210	23090	8034	5864	25571	17652	17046	3215	100472
666	gateway	0.0	0.0	0.0	0.0	13366	9869	1837	25072	13556	5000	3173	14906	10353	46988	13556	5000	3173	14906	10353	9869	1837	58694
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	72127	13618	85744	105746	51542	15487	117483	85713	375971	105746	51542	15487	117483	85713	72127	13618	461716
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	23767	19747	4531	48045	33374	17350	7301	33560	18284	109869	33374	17350	7301	33560	18284	19747	4531	134147
672	gateway	0.0	0.0	0.0	0.0	0	9311	1576	10888	9592	5900	1652	12410	8420	37973	9592	5900	1652	12410	8420	9311	1576	48861
673	gateway	0.0	0.0	0.0	0.0	0	3558	615	4173	4200	2813	765	5061	3606	16445	4200	2813	765	5061	3606	3558	615	20618
674	gateway	0.0	0.0	0.0	0.0	0	8489	1451	9940	9366	5694	1637	10156	7883	34736	9366	5694	1637	10156	7883	8489	1451	44676
EDC Total		137,989.7	33,175.0	21,477.0	55,804.0	402,078.0	359,818.0	110,183.0	872,079.0	1,221,253.0	359,311.0	195,366.0	1,020,455.0	251,868.0	3,048,247.0	1,221,253.0	359,311.0	195,366.0	1,020,455.0	251,868.0	359,818.0	110,183.0	3,518,254.0

2018 No Project El Dorado County VMT/Employee **26.3**
85% Threshold **22.3**

2018 No Project El Dorado County VMT/Resident **22.1**
85% Threshold **18.8**

2018 El Dorado County VMT/Service Population **20.6**

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	74.6	16.0	0.0	46.0	324	897	308	1528	1670	173	141	387	351	2723	1670	173	141	387	351	897	308	3927
2	EDC	1185.1	34.0	0.0	525.0	403	149	9	561	17396	4167	2301	6889	1104	31857	17396	4167	2301	6889	1104	149	9	32015
3	EDC	87.7	0.0	0.0	34.0	24	0	0	24	978	464	380	1480	314	3616	978	464	380	1480	314	0	0	3616
4	EDC	33.8	2.0	0.0	16.0	51	148	30	228	528	232	264	320	124	1467	528	232	264	320	124	148	30	1646
5	EDC	72.6	0.0	0.0	33.0	20	0	0	20	1166	1086	477	946	244	3918	1166	1086	477	946	244	0	0	3919
6	EDC	645.6	9.0	0.0	270.0	300	96	15	412	6973	1970	634	5622	982	16181	6973	1970	634	5622	982	96	15	16292
7	EDC	1118.6	71.0	0.0	516.0	916	523	52	1491	13210	8413	1366	9040	1737	33766	13210	8413	1366	9040	1737	523	52	34341
8	EDC	36.0	60.0	0.0	14.0	723	606	103	1432	337	59	17	202	132	747	337	59	17	202	132	606	103	1456
9	EDC	1240.2	117.0	283.0	482.0	1628	1917	153	3697	16049	4664	755	10360	2055	33882	16049	4664	755	10360	2055	1917	153	35953
10	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	outside EDC	1740.5	96.0	1626.0	663.0	1411	3850	545	5806	9495	845	3702	9972	3799	27813	9495	845	3702	9972	3799	3850	545	32208
13	outside EDC	1994.6	0.0	0.0	775.0	479	0	0	479	14207	1564	1001	12280	3338	32390	14207	1564	1001	12280	3338	0	0	32390
14	outside EDC	4068.3	32.0	438.0	1502.0	1120	1177	120	2417	27533	3859	3050	23127	6540	64109	27533	3859	3050	23127	6540	1177	120	65406
15	outside EDC	22.5	0.0	0.0	10.0	1	0	0	1	123	27	16	214	49	428	123	27	16	214	49	0	0	429
16	outside EDC	378.1	434.0	0.0	149.0	6682	8354	4339	19375	2378	193	179	2373	3608	8731	2378	193	179	2373	3608	8354	4339	21424
17	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	outside EDC	116.2	0.0	0.0	41.0	67	0	0	67	58	8	0	200	46	311	58	8	0	200	46	0	0	312
19	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	outside EDC	1.0	5.0	0.0	1.0	63	23	7	92	7	0	0	0	2	9	7	0	0	0	2	23	7	39
21	outside EDC	2.0	112.0	0.0	1.0	1496	560	350	2407	5	4	0	6	12	27	5	4	0	6	12	560	350	937
22	outside EDC	6.0	23.0	0.0	2.0	345	232	184	762	24	17	8	79	120	247	24	17	8	79	120	232	184	664
23	outside EDC	272.6	244.0	1355.0	101.0	3794	4256	1448	9499	1213	637	7545	3138	4647	17180	1213	637	7545	3138	4647	4256	1448	22884
24	outside EDC	1.0	0.0	0.0	1.0	0	0	0	0	0	4	0	6	5	15	0	4	0	6	5	0	0	15
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	outside EDC	6.0	22.0	0.0	2.0	317	152	54	523	38	12	10	80	57	197	38	12	10	80	57	152	54	403
28	outside EDC	332.1	6.0	0.0	123.0	230	32	4	266	2623	1212	598	4757	1233	10423	2623	1212	598	4757	1233	32	4	10459
29	outside EDC	192.0	5.0	0.0	72.0	148	27	4	179	1703	769	475	3209	821	6978	1703	769	475	3209	821	27	4	7008
30	outside EDC	0.0	133.0	0.0	0.0	2085	899	329	3314	0	0	0	0	0	0	0	0	0	0	0	899	329	1228
31	outside EDC	94.1	45.0	0.0	44.0	780	349	66	1196	998	463	202	1704	652	4018	998	463	202	1704	652	349	66	4434
32	outside EDC	1526.3	0.0	0.0	676.0	594	0	0	594	613	117	0	2165	755	3650	613	117	0	2165	755	0	0	3650
33	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	outside EDC	190.8	16.0	0.0	75.0	441	141	20	602	2331	1081	617	4006	1104	9140	2331	1081	617	4006	1104	141	20	9300
35	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2304	860	465	3629	0	0	0	0	0	0	0	0	0	0	0	860	465	1325
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1568.8	227.0	0.0	666.0	2597	783	73	3453	6519	995	611	8099	1659	17883	6519	995	611	8099	1659	783	73	18739
40	outside EDC	2079.2	1839.0	63.0	916.0	16598	17087	6420	40105	9254	808	556	8344	8939	27901	9254	808	556	8344	8939	17087	6420	51408
41	outside EDC	1270.5	203.0	0.0	544.0	3063	914	151	4128	6434	1747	1132	11473	3619	24404	6434	1747	1132	11473	3619	914	151	25470
42	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	outside EDC	2045.3	0.0	0.0	828.0	955	0	0	955	16770	6148	2180	25378	7743	58219	16770	6148	2180	25378	7743	0	0	58219
44	outside EDC	2614.3	95.0	1218.0	1069.0	2619	3897	699	7216	18599	6571	5373	28451	10843	69836	18599	6571	5373	28451	10843	3897	699	74433
45	outside EDC	2056.5	1357.0	96.0	906.0	14379	15543	6063	35985	9064	795	729	9078	9409	29074	9064	795	729	9078	9409	15543	6063	50681
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	2398.0	0.0	0.0	32543	12318	12378	57239	0	0	0	0	0	0	0	0	0	0	0	12318	12378	24696
48	outside EDC	3067.8	121.0	470.0	1203.0	2183	1552	258	3993	9520	4328	4499	26629	7890	52866	9520	4328	4499	26629	7890	1552	258	54676
49	outside EDC	0.0	4642.0	0.0	0.0	57142	16105	13495	86742	0	0	0	0	0	0	0	0	0	0	0	16105	13495	29600
50	outside EDC	2429.5	826.0	753.0	1025.0	9903	3745	749	14397	7765	3920	4681	21016	7931	45313	7765	3920	4681	21016	7931	3745	749	49807
51	outside EDC	4252.6	1237.0	384.0	1768.0	15780	11752	4079	31612	13607	3989	3585	32764	20208	74153	13607	3989	3585	32764	20208	11752	4079	89984
52	outside EDC	667.1	240.0	2617.0	297.0	2806	5942	1507	10254	2485	911	8282	5469	4547	21694	2485	911	8282	5469	4547	5942	1507	29143
53	outside EDC	3451.7	377.0	356.0	1335.0	5369	4509	1100	10977	11499	4201	4053	28450	12576	60779	11499	4201	4053	28450	12576	4509	1100	66388
54	outside EDC	1153.4	1827.0	173.0	476.0	24446	6486	1528	32460	4325	2553	2099	12173	5497	26647	4325	2553	2099	12173	5497	6486	1528	34661
55	outside EDC	1582.7	800.0	1483.0	675.0	11628	7955	2593	22176	6211	3396	8552	16558	12408	47126	6211	3396	8552	16558	12408	7955	2593	57673
56	outside EDC	1932.6	4.0	0.0	820.0	779	9	1	789	6125	4412	2484	20759	5505	39285	6125	4412	2484	20759	5505	9	1	39295
57	outside EDC	0.0	7375.0	0.0	0.0	96546	21644	13949	132139	0	0	0	0	0	0	0	0	0	0	0	21644	13949	35593
58	outside EDC	1160.1	388.0	0.0	465.0	6090	3394	1260	10744	3938	2359	1662	12241	8178	28379	3938	2359	1662	12241	8178	3394	1260	33032
59	outside EDC	4.0	9.0	0.0	2.0	88	28	7	123	25	0	0	20	13	58	25	0	0	20	13	28	7	93
60	outside EDC	477.5	4236.0	0.0	238.0	53880	15027	8227	77134	1616	1006	370	4726	4838	12556	1616	1006	370	4726	4838	15027	8227	35810
61	outside EDC	5227.4	797.0	365.0	2205.0	12484	8626	2309	23419	21286	9604	7679	50337	25675	114580	21286	9604	7679	50337	25675	8626	2309	125516
62	outside EDC	8.0	1150.0	0.0	4.0	13391	4333	2783	20507	37	11	0	63	88	199	37	11	0	63	88	4333	2783	7315
63	outside EDC	755.9	3083.0	0.0	340.0	35046	12380	5918	53344	2692	1416	827	7321	6692	18948	2692	1416	827	7321	6692	12380	5918	37246
64	outside EDC	2155.8	560.0	0.0	865.0	7116	2907	609	10632	9385	3526	2204	19221	7707	42044	9385	3526	2204	19221	7707	2907	609	45559
65	outside EDC	338.2	0.0	0.0	136.0	113	0	0	113	2296	722	395	3459	1079	7952	2296	722	395	3459	1079	0	0	7951
66	outside EDC	1950.4	172.0	346.0	826.0	2672	2199	499	5371	6415	2928	2585	16120	6772	34820	6415	2928	2585	16120	6772	2199	499	37518
67	outside EDC	0.0	178.0	0.0	0.0	2386	1523	2470	6378	0	0	0	0	0	0	0	0	0	0	0	1523	2470	3993
68	outside EDC	1313.9	679.0	0.0	616.0	7380	2817	662	10859	4246	2217	1079	11092	4686	23320	4246	2217	1079	11092	4686	2817	662	26799
69	outside EDC	4121.9	2320.0	346.0	1588.0	30225	8275	1744	40244	15001	5620	6298	35383	13830	76132	15001	5620	6298	35383	13830	8275	1744	86151
70	outside EDC	0.0	6956.0	1786.0	0.0	89216	20544	13685	123445	0	0	504	0	525	1029	0	0	504	0	525	20544	13685	35258
71	outside EDC	3087.5	121.0	480.0	1231.0	3506	2444	412	6362	20777	10153	4690	39303	12934	87857	20777	10153	4690	39303	12934	2444	412	90713
72	outside EDC	0.0	5133.0	48.0	0.0	72332	17300	13474	103106	0	0	160	0	205	364	0	0	160	0	205	17300	13474	31139

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
73	outside EDC	0.0	5627.0	0.0	0.0	66397	14602	8522	89522	0	0	0	0	0	0	0	0	0	0	0	14602	8522	23124
74	outside EDC	1021.8	4728.0	0.0	435.0	61104	15992	9681	86777	2942	1069	1165	8337	9314	22826	2942	1069	1165	8337	9314	15992	9681	48500
75	outside EDC	4401.4	1866.0	0.0	1936.0	22346	5161	766	28273	14053	5928	4886	34983	9281	69132	14053	5928	4886	34983	9281	5161	766	75058
76	outside EDC	1351.6	297.0	0.0	508.0	4407	3287	1191	8885	4006	1231	1372	10963	6859	24432	4006	1231	1372	10963	6859	3287	1191	28909
77	outside EDC	2809.5	1659.0	923.0	1155.0	21213	9036	2530	32779	9034	4304	5203	25399	13252	57192	9034	4304	5203	25399	13252	9036	2530	68758
78	outside EDC	0.0	1567.0	73.0	0.0	20881	12960	20008	53849	0	0	0	0	0	0	0	0	0	0	0	12960	20008	32968
79	outside EDC	0.0	20.0	0.0	0.0	1	21	29	51	0	0	0	0	0	0	0	0	0	0	0	21	29	50
80	outside EDC	0.0	1410.0	0.0	0.0	17144	5127	5210	27481	0	0	0	0	0	0	0	0	0	0	0	5127	5210	10337
81	outside EDC	0.0	4951.0	0.0	0.0	62968	17402	16382	96751	0	0	0	0	0	0	0	0	0	0	0	17402	16382	33784
82	outside EDC	0.0	1787.0	0.0	0.0	23064	6963	5102	35129	0	0	0	0	0	0	0	0	0	0	0	6963	5102	12065
83	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	outside EDC	2817.0	405.0	0.0	1226.0	5795	3619	893	10307	12547	2865	1976	20230	9873	47490	12547	2865	1976	20230	9873	3619	893	52003
85	outside EDC	3245.6	253.0	653.0	1295.0	3952	4092	855	8899	15174	3929	3437	25303	10591	58434	15174	3929	3437	25303	10591	4092	855	63381
86	outside EDC	4487.3	754.0	1340.0	1968.0	9991	10017	2687	22695	16683	4309	5303	31387	16496	74179	16683	4309	5303	31387	16496	10017	2687	86882
87	outside EDC	4343.7	800.0	183.0	2114.0	11052	6458	1805	19315	13134	4176	3498	32370	15655	68834	13134	4176	3498	32370	15655	6458	1805	77096
88	outside EDC	2679.3	762.0	0.0	1099.0	10367	8030	2638	21035	11202	2871	2324	20791	13268	50455	11202	2871	2324	20791	13268	8030	2638	61124
89	outside EDC	0.0	293.0	0.0	0.0	4023	1712	1522	7257	0	0	0	0	0	0	0	0	0	0	0	1712	1522	3234
90	outside EDC	0.0	592.0	0.0	0.0	9537	6745	11257	27539	0	0	0	0	0	0	0	0	0	0	0	6745	11257	18002
91	outside EDC	961.1	4100.0	34.0	383.0	42876	17496	8594	68966	3671	935	889	7174	7310	19978	3671	935	889	7174	7310	17496	8594	46069
92	outside EDC	2708.6	141.0	836.0	1139.0	2531	2368	422	5322	12944	3634	4681	22727	8196	52183	12944	3634	4681	22727	8196	2368	422	54972
93	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	outside EDC	15.0	0.0	0.0	6.0	2	0	0	2	57	53	12	209	53	383	57	53	12	209	53	0	0	384
95	outside EDC	0.0	27.0	0.0	0.0	375	167	93	635	0	0	0	0	0	0	0	0	0	0	0	167	93	260
96	outside EDC	0.0	12.0	0.0	0.0	109	63	13	185	0	0	0	0	0	0	0	0	0	0	0	63	13	76
97	outside EDC	4.0	0.0	0.0	2.0	0	0	0	0	18	3	0	36	16	74	18	3	0	36	16	0	0	73
98	outside EDC	24.6	2289.0	0.0	10.0	24238	13021	9038	46297	109	13	10	114	326	573	109	13	10	114	326	13021	9038	22631
99	outside EDC	1944.1	958.0	501.0	791.0	10492	4473	794	15759	9294	1170	2019	11004	4649	28136	9294	1170	2019	11004	4649	4473	794	33403
100	outside EDC	203.1	0.0	0.0	84.0	80	0	0	80	1973	675	372	3175	918	7113	1973	675	372	3175	918	0	0	7113
101	outside EDC	0.0	320.0	0.0	0.0	5168	2326	1282	8776	0	0	0	0	0	0	0	0	0	0	0	2326	1282	3608
102	outside EDC	153.0	53.0	0.0	51.0	783	349	46	1178	1250	387	470	2531	635	5272	1250	387	470	2531	635	349	46	5668
103	outside EDC	2199.9	0.0	0.0	910.0	1067	0	0	1067	19005	6830	2570	27089	8269	63763	19005	6830	2570	27089	8269	0	0	63763
104	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	outside EDC	0.0	70.0	0.0	0.0	957	457	147	1561	0	0	0	0	0	0	0	0	0	0	0	457	147	604
107	outside EDC	0.0	3135.0	0.0	0.0	39023	13557	6838	59418	0	0	0	0	0	0	0	0	0	0	0	13557	6838	20395
108	outside EDC	0.0	15.0	0.0	0.0	143	66	29	237	0	0	0	0	0	0	0	0	0	0	0	66	29	95
109	outside EDC	0.0	238.0	0.0	0.0	3972	3055	3818	10844	0	0	0	0	0	0	0	0	0	0	0	3055	3818	6873
110	outside EDC	425.7	1610.0	0.0	205.0	23041	9074	3867	35982	1789	547	303	3995	3397	10032	1789	547	303	3995	3397	9074	3867	22972
111	outside EDC	727.7	1151.0	0.0	350.0	21452	18849	15197	55499	2464	468	576	5534	9283	18325	2464	468	576	5534	9283	18849	15197	52371
112	outside EDC	1945.8	2117.0	194.0	747.0	30733	23145	11739	65617	9555	1058	1968	13047	15652	41280	9555	1058	1968	13047	15652	23145	11739	76164
113	outside EDC	0.0	4022.0	0.0	0.0	41645	15606	7697	64948	0	0	0	0	0	0	0	0	0	0	0	15606	7697	23303
114	outside EDC	1949.9	660.0	0.0	770.0	6150	2619	313	9082	10564	1252	820	9783	3033	25453	10564	1252	820	9783	3033	2619	313	28384
115	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1031.1	1492.0	2300.0	401.0	16049	10186	2062	28298	5014	757	5360	6391	3975	21498	5014	757	5360	6391	3975	10186	2062	33745
118	outside EDC	5897.7	187.0	790.0	2313.0	3355	3357	503	7215	26011	3769	3454	31406	10571	75210	26011	3769	3454	31406	10571	3357	503	79071
119	outside EDC	522.0	6545.0	0.0	214.0	59038	24230	9705	92973	2381	331	163	2798	3327	8999	2381	331	163	2798	3327	24230	9705	42935
120	outside EDC	0.0	4131.0	0.0	0.0	46962	35770	24605	107337	0	0	0	0	0	0	0	0	0	0	0	35770	24605	60375
121	outside EDC	4261.4	1724.0	581.0	1642.0	19864	24260	7015	51139	19804	1725	2436	20099	15781	59844	19804	1725	2436	20099	15781	24260	7015	91120
122	outside EDC	1530.1	1071.0	3230.0	619.0	9851	10097	1721	21669	6470	756	612	7258	3251	18347	6470	756	612	7258	3251	10097	1721	30165
123	outside EDC	528.8	855.0	0.0	200.0	9043	9346	4070	22460	2671	222	224	2588	3415	9121	2671	222	224	2588	3415	9346	4070	22536
124	outside EDC	2627.6	328.0	401.0	1240.0	4609	6706	1403	12718	14212	3017	2627	18222	9378	47456	14212	3017	2627	18222	9378	6706	1403	55565
125	outside EDC	800.8	781.0	0.0	389.0	8055	8538	3997	20590	3140	354	244	3707	4425	11870	3140	354	244	3707	4425	8538	3997	24405
126	outside EDC	279.5	129.0	0.0	136.0	1584	1944	812	4340	1366	154	94	1374	1502	4490	1366	154	94	1374	1502	1944	812	7246
127	outside EDC	1693.1	117.0	0.0	800.0	1668	1297	209	3174	10723	1462	792	9823	4091	26891	10723	1462	792	9823	4091	1297	209	28397
128	outside EDC	2061.9	767.0	0.0	999.0	9803	9947	2628	22378	12778	1795	1350	13444	9177	38544	12778	1795	1350	13444	9177	9947	2628	51119
129	outside EDC	2246.3	0.0	0.0	994.0	617	0	0	617	13991	2635	1949	15307	4693	38575	13991	2635	1949	15307	4693	0	0	38575
130	outside EDC	740.3	416.0	578.0	369.0	3599	4557	1358	9515	3133	272	1092	2830	2661	9988	3133	272	1092	2830	2661	4557	1358	15903
131	outside EDC	1234.3	1278.0	1486.0	607.0	11158	10898	3214	25270	4817	568	3249	5532	5227	19392	4817	568	3249	5532	5227	10898	3214	33505
132	outside EDC	893.9	260.0	0.0	407.0	3040	2850	628	6518	4853	971	585	6314	3275	15999	4853	971	585	6314	3275	2850	628	19476
133	outside EDC	5211.1	1475.0	1829.0	2087.0	13459	16578	3622	33660	22955	1866	3684	20646	12724	61876	22955	1866	3684	20646	12724	16578	3622	82075
134	outside EDC	2460.4	1492.0	0.0	1075.0	15400	7331	1165	23897	9603	1559	855	12594	4624	29235	9603	1559	855	12594	4624	7331	1165	37731
135	outside EDC	0.0	2114.0	0.0	0.0	19838	7998	1986	29822	0	0	0	0	0	0	0	0	0	0	0	7998	1986	9984
136	outside EDC	1668.8	82.0	0.0	669.0	1382	1347	196	2925	11234	1312	895	9391	3720	26552	11234	1312	895	9391	3720	1347	196	28095
137	outside EDC	6734.6	673.0	610.0	2349.0	8393	12600	2119	23111	37676	4492	4734	35356	15952	98208	37676	4492	4734	35356	15952	12600	2119	112929
138	EDC	366.7	25.0	0.0	161.0	380	160	10	550	2207	375	144	2145	405	5277	2207	375	144	2145	405	160	10	5446
139	EDC	135.3	55.0	0.0	62.0	640	634	88	1363	702	162	16	645	356	1880	702	162	16	645	356	634	88	2603
140	EDC	27.4	383.0	0.0	10.0	5379	6216	2947	14542	88	11	7	66	284	456	88	11	7	66	284	6216	2947	9619
141	EDC	48.8	2.0	0.0	21.0	54	60	6	120	652	173	122	762	238	1946	652	173	122	762	238	60	6	2013
142	EDC	353.1	0.0	0.0	157.0	130	0	0	130	3190	909	230	3104	720	8152	3190	909	230	3104	720	0	0	8153
143	EDC	209.2	4.0	0.0	93.0	93	6	0	100	1564	361	60	1420	314	3720	1564	361	60	1420	314	6	0	3725
144	EDC	186.5	19.0	0.0	74.0	247	83	9	338	1986	316	76	1289	292	3958	1986	316	76	1289	292	83	9	4051

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
145	EDC	68.5	0.0	0.0	30.0	6	0	0	6	410	46	15	229	41	742	410	46	15	229	41	0	0	741
146	EDC	144.6	51.0	0.0	64.0	599	495	68	1162	723	135	21	652	334	1866	723	135	21	652	334	495	68	2428
147	EDC	359.2	0.0	0.0	159.0	93	0	0	93	1961	332	108	1758	341	4500	1961	332	108	1758	341	0	0	4500
148	outside EDC	5292.5	137.0	0.0	2250.0	5186	1427	126	6739	68172	29782	18074	78616	17699	212343	68172	29782	18074	78616	17699	1427	126	213896
149	EDC	98.1	112.0	0.0	37.0	1428	1660	388	3476	736	81	17	580	593	2006	736	81	17	580	593	1660	388	4055
150	EDC	259.8	3.0	0.0	109.0	148	31	3	182	2784	675	570	3459	816	8306	2784	675	570	3459	816	31	3	8338
151	EDC	67.2	0.0	0.0	23.0	4	0	0	4	771	197	156	640	77	1841	771	197	156	640	77	0	0	1841
152	EDC	314.9	99.0	0.0	122.0	1404	1438	184	3025	2583	317	90	2393	1022	6404	2583	317	90	2393	1022	1438	184	8027
153	EDC	388.3	5.0	0.0	178.0	168	10	1	179	2616	607	126	2713	655	6717	2616	607	126	2713	655	10	1	6728
154	EDC	196.1	16.0	0.0	84.0	184	62	4	250	1228	129	104	1322	248	3031	1228	129	104	1322	248	62	4	3097
155	EDC	161.4	0.0	0.0	62.0	25	0	0	25	1289	196	50	1225	220	2981	1289	196	50	1225	220	0	0	2980
156	EDC	67.3	0.0	0.0	27.0	22	0	0	22	871	263	228	1070	200	2632	871	263	228	1070	200	0	0	2632
157	EDC	807.5	0.0	0.0	274.0	122	0	0	122	4782	735	265	5782	1026	12590	4782	735	265	5782	1026	0	0	12590
158	EDC	1373.4	72.0	0.0	598.0	953	376	26	1355	10399	1353	842	9063	2015	23672	10399	1353	842	9063	2015	376	26	24074
159	EDC	877.6	1.0	0.0	340.0	182	0	0	182	7089	877	688	5929	1036	15619	7089	877	688	5929	1036	0	0	15619
160	EDC	500.7	0.0	0.0	194.0	112	0	0	112	4130	543	119	3589	703	9083	4130	543	119	3589	703	0	0	9084
161	EDC	282.7	0.0	0.0	105.0	49	0	0	49	2731	541	326	2981	583	7161	2731	541	326	2981	583	0	0	7162
162	EDC	4414.2	0.0	0.0	1503.0	833	0	0	833	36529	7763	2977	36493	6148	89910	36529	7763	2977	36493	6148	0	0	89910
163	EDC	20.6	4.0	0.0	7.0	22	12	1	34	139	29	19	169	18	374	139	29	19	169	18	12	1	387
164	EDC	0.0	1232.0	0.0	0.0	13443	4878	1909	20230	0	0	0	0	0	0	0	0	0	0	0	4878	1909	6787
165	EDC	997.3	0.0	0.0	373.0	267	0	0	267	7396	848	864	7803	1635	18546	7396	848	864	7803	1635	0	0	18546
166	EDC	1891.8	49.0	672.0	749.0	1087	2071	262	3420	12998	1804	2129	13417	4348	34696	12998	1804	2129	13417	4348	2071	262	37029
167	EDC	2904.2	55.0	0.0	1297.0	1672	225	23	1919	16832	3400	2489	22197	5388	50306	16832	3400	2489	22197	5388	225	23	50554
168	EDC	2519.0	9.0	0.0	1125.0	811	21	2	834	11363	1490	1276	15816	2721	32666	11363	1490	1276	15816	2721	21	2	32689
169	EDC	0.0	1688.0	102.0	0.0	20805	23921	17175	61901	0	0	126	0	1397	1523	0	0	126	0	1397	23921	17175	42619
170	EDC	0.0	1357.0	0.0	0.0	13918	5284	1141	20343	0	0	0	0	0	0	0	0	0	0	0	5284	1141	6425
171	EDC	789.6	20.0	0.0	441.0	578	113	18	709	2890	1062	266	6969	2005	13192	2890	1062	266	6969	2005	113	18	13323
172	EDC	0.0	168.0	0.0	0.0	1909	1965	1377	5252	0	0	0	0	0	0	0	0	0	0	0	1965	1377	3342
173	EDC	0.0	547.0	0.0	0.0	6145	7465	5327	18937	0	0	0	0	0	0	0	0	0	0	0	7465	5327	12792
174	EDC	37.4	11.0	52.0	15.0	194	308	36	537	479	133	165	544	193	1514	479	133	165	544	193	308	36	1858
175	EDC	26.2	5.0	0.0	11.0	63	22	2	87	290	65	38	326	61	779	290	65	38	326	61	22	2	804
176	EDC	69.1	0.0	0.0	29.0	17	0	0	17	724	183	127	977	194	2204	724	183	127	977	194	0	0	2205
177	EDC	24.9	7.0	0.0	10.0	76	30	2	108	221	44	35	261	48	608	221	44	35	261	48	30	2	641
178	EDC	77.3	0.0	0.0	30.0	17	0	0	17	718	165	170	1046	185	2284	718	165	170	1046	185	0	0	2284
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	EDC	149.4	0.0	0.0	58.0	23	0	0	23	1276	255	147	1506	309	3493	1276	255	147	1506	309	0	0	3493
181	EDC	2.7	58.0	0.0	1.0	523	336	35	893	0	0	0	0	1	1	0	0	0	0	1	336	35	372
182	EDC	3202.4	0.0	0.0	1186.0	676	0	0	676	26986	5045	2247	24265	4623	63165	26986	5045	2247	24265	4623	0	0	63166
183	EDC	354.9	0.0	0.0	152.0	74	0	0	74	2602	615	189	3154	681	7242	2602	615	189	3154	681	0	0	7241
184	EDC	963.9	300.0	961.0	357.0	3124	5781	622	9527	7662	1329	1380	7493	2711	20575	7662	1329	1380	7493	2711	5781	622	26978
185	EDC	342.2	0.0	0.0	149.0	49	0	0	49	2623	501	156	2420	509	6209	2623	501	156	2420	509	0	0	6209
186	EDC	6.9	28.0	0.0	3.0	189	135	7	330	32	4	1	14	7	58	32	4	1	14	7	135	7	200
187	EDC	548.9	85.0	0.0	239.0	929	459	35	1423	3926	543	283	3779	871	9402	3926	543	283	3779	871	459	35	9896
188	EDC	431.8	69.0	0.0	188.0	729	389	22	1140	2914	337	210	2684	478	6623	2914	337	210	2684	478	389	22	7034
189	EDC	103.5	0.0	0.0	37.0	22	0	0	22	1128	323	245	1460	270	3426	1128	323	245	1460	270	0	0	3426
190	EDC	663.1	0.0	0.0	237.0	119	0	0	119	5541	939	578	5488	974	13521	5541	939	578	5488	974	0	0	13520
191	EDC	53.2	0.0	0.0	19.0	2	0	0	2	396	63	34	377	54	923	396	63	34	377	54	0	0	924
192	EDC	69.6	0.0	0.0	25.0	4	0	0	4	563	92	38	445	82	1221	563	92	38	445	82	0	0	1220
193	EDC	2284.2	93.0	0.0	852.0	1336	587	47	1969	18154	3407	986	16868	3664	43078	18154	3407	986	16868	3664	587	47	43713
194	EDC	1284.6	0.0	0.0	439.0	211	0	0	211	8743	1738	239	9313	1687	21720	8743	1738	239	9313	1687	0	0	21720
195	EDC	25.5	14.0	0.0	10.0	124	296	101	521	165	31	13	157	174	540	165	31	13	157	174	296	101	937
196	outside EDC	2502.9	82.0	540.0	923.0	1278	2115	214	3606	20140	3824	1939	18338	5051	49291	20140	3824	1939	18338	5051	2115	214	51621
197	EDC	219.4	0.0	0.0	86.0	31	0	0	31	1740	323	125	1524	342	4054	1740	323	125	1524	342	0	0	4054
198	EDC	2481.8	453.0	440.0	887.0	4305	8821	1116	14241	17949	2581	1831	16987	6267	45614	17949	2581	1831	16987	6267	8821	1116	55552
199	EDC	173.5	120.0	0.0	62.0	1290	2204	689	4183	1211	217	126	1200	1208	3963	1211	217	126	1200	1208	2204	689	6855
200	EDC	17.9	67.0	0.0	7.0	575	753	315	1643	101	20	7	86	154	367	101	20	7	86	154	753	315	1436
201	EDC	438.9	301.0	0.0	150.0	2532	1798	174	4504	2974	569	253	3178	876	7850	2974	569	253	3178	876	1798	174	9822
202	EDC	2062.1	199.0	0.0	737.0	2169	3499	358	6027	15768	2364	1570	15220	4348	39270	15768	2364	1570	15220	4348	3499	358	43127
203	EDC	3060.8	139.0	0.0	1043.0	1661	844	54	2559	24690	5279	2134	25483	4484	62070	24690	5279	2134	25483	4484	844	54	62968
204	EDC	1066.8	41.0	562.0	362.0	521	1667	152	2341	6870	1212	933	7597	1853	18465	6870	1212	933	7597	1853	1667	152	20284
205	EDC	0.0	80.0	0.0	0.0	706	379	51	1136	0	0	0	0	0	0	0	0	0	0	0	379	51	430
206	EDC	153.2	0.0	0.0	52.0	13	0	0	13	959	171	31	1065	170	2396	959	171	31	1065	170	0	0	2396
207	EDC	868.6	0.0	0.0	296.0	166	0	0	166	7056	1512	738	7577	1412	18295	7056	1512	738	7577	1412	0	0	18295
208	EDC	26.4	0.0	0.0	9.0	0	0	0	0	180	38	21	200	24	463	180	38	21	200	24	0	0	463
209	EDC	161.4	14.0	0.0	55.0	121	64	5	190	1262	235	122	1292	231	3142	1262	235	122	1292	231	64	5	3211
210	EDC	365.8	0.0	0.0	125.0	50	0	0	50	2817	573	221	2869	508	6988	2817	573	221	2869	508	0	0	6988
211	EDC	11.1	0.0	0.0	4.0	0	0	0	0	83	9	5	66	3	166	83	9	5	66	3	0	0	166
212	EDC	102.7	0.0	0.0	35.0	9	0	0	9	873	203	88	960	152	2276	873	203	88	960	152	0	0	2276
213	EDC	322.8	0.0	0.0	116.0	59	0	0	59	3397	718	329	3219	626	8290	3397	718	329	3219	626	0	0	8289
214	EDC	19.3	0.0	0.0	8.0	5	0	0	5	258	182	106	189	55	790	258	182	106	189	55	0	0	790
215	EDC	316.2	0.0	0.0	113.0	54	0	0	54	2864	555	301	3078	543	7341	2864	555	301	3078	543	0	0	7341
216	EDC	12.1	0.0	0.0	5.0	3	0	0	3	120	86	60	121	36	423	120	86	60	121	36	0	0	423

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
217	EDC	30.8	0.0	0.0	11.0	2	0	0	2	292	65	50	364	54	824	292	65	50	364	54	0	0	825
218	EDC	78.3	0.0	0.0	28.0	10	0	0	10	713	174	102	864	146	1999	713	174	102	864	146	0	0	1999
219	EDC	77.9	77.0	0.0	28.0	915	582	71	1568	820	166	106	872	288	2253	820	166	106	872	288	582	71	2905
220	EDC	25.0	0.0	0.0	9.0	2	0	0	2	243	55	40	272	37	647	243	55	40	272	37	0	0	647
221	EDC	2358.8	0.0	0.0	876.0	493	0	0	493	23694	5471	2308	20847	3877	56196	23694	5471	2308	20847	3877	0	0	56197
222	EDC	70.6	26.0	0.0	26.0	221	650	118	989	595	118	38	486	354	1591	595	118	38	486	354	650	118	2359
223	EDC	279.5	0.0	0.0	103.0	23	0	0	23	2405	470	198	1940	315	5328	2405	470	198	1940	315	0	0	5328
224	EDC	257.8	29.0	0.0	95.0	293	163	10	466	2508	592	232	2336	433	6101	2508	592	232	2336	433	163	10	6274
225	EDC	270.0	79.0	620.0	92.0	896	2580	312	3789	2428	620	1193	2598	1130	7969	2428	620	1193	2598	1130	2580	312	10861
226	EDC	384.4	76.0	436.0	131.0	692	1882	156	2730	3337	757	645	3187	928	8854	3337	757	645	3187	928	1882	156	10892
227	EDC	12.1	2.0	0.0	5.0	3	2	0	5	58	8	3	51	5	126	58	8	3	51	5	2	0	127
228	EDC	1702.9	20.0	0.0	705.0	433	246	12	691	13372	2778	1244	11626	1770	30790	13372	2778	1244	11626	1770	246	12	31048
229	EDC	24.2	0.0	0.0	9.0	0	0	0	0	188	46	18	163	18	433	188	46	18	163	18	0	0	433
230	EDC	35.2	0.0	0.0	12.0	1	0	0	1	283	47	32	276	30	669	283	47	32	276	30	0	0	668
231	EDC	14.7	28.0	0.0	5.0	178	189	16	383	86	24	10	99	36	254	86	24	10	99	36	189	16	460
232	EDC	91.8	0.0	0.0	33.0	10	0	0	10	1079	246	117	1005	170	2617	1079	246	117	1005	170	0	0	2617
233	EDC	211.3	101.0	0.0	92.0	706	1408	191	2305	1675	336	115	1351	716	4193	1675	336	115	1351	716	1408	191	5792
234	EDC	2305.8	587.0	0.0	1004.0	4322	5190	405	9917	18130	3431	1477	14967	4076	42081	18130	3431	1477	14967	4076	5190	405	47676
235	EDC	2214.3	0.0	0.0	861.0	395	0	0	395	18843	3830	1926	15941	2924	43464	18843	3830	1926	15941	2924	0	0	43464
236	EDC	1203.6	9.0	0.0	468.0	230	34	2	266	10054	2215	808	8824	1473	23373	10054	2215	808	8824	1473	34	2	23410
237	EDC	172.2	0.0	0.0	75.0	18	0	0	18	1406	285	92	1246	250	3278	1406	285	92	1246	250	0	0	3279
238	EDC	676.3	199.0	0.0	280.0	1913	1233	78	3224	5559	1077	535	5336	1094	13602	5559	1077	535	5336	1094	1233	78	14912
239	EDC	86.8	16.0	0.0	32.0	97	358	32	487	690	127	64	528	192	1601	690	127	64	528	192	358	32	1991
240	EDC	344.6	0.0	0.0	127.0	65	0	0	65	3715	937	615	3678	627	9571	3715	937	615	3678	627	0	0	9572
241	EDC	445.0	2.0	0.0	164.0	64	15	1	81	3998	765	380	3212	561	8916	3998	765	380	3212	561	15	1	8932
242	EDC	59.7	0.0	0.0	22.0	1	0	0	1	479	80	44	351	42	997	479	80	44	351	42	0	0	996
243	EDC	141.1	13.0	0.0	52.0	78	53	3	134	1269	243	114	1002	151	2779	1269	243	114	1002	151	53	3	2835
244	EDC	56.6	0.0	0.0	22.0	6	0	0	6	682	211	96	601	86	1676	682	211	96	601	86	0	0	1676
245	EDC	29.0	0.0	0.0	10.0	4	0	0	4	346	72	74	379	62	934	346	72	74	379	62	0	0	933
246	EDC	182.5	0.0	0.0	63.0	27	0	0	27	2199	575	520	2127	327	5747	2199	575	520	2127	327	0	0	5748
247	EDC	645.8	0.0	0.0	296.0	287	0	0	287	6337	2431	1021	5928	1356	17072	6337	2431	1021	5928	1356	0	0	17073
248	EDC	440.9	0.0	0.0	185.0	167	0	0	167	5641	1360	878	4566	974	13421	5641	1360	878	4566	974	0	0	13419
249	EDC	58.9	0.0	0.0	27.0	16	0	0	16	584	253	171	851	175	2034	584	253	171	851	175	0	0	2034
250	EDC	123.2	0.0	0.0	53.0	30	0	0	30	1659	370	221	1389	265	3903	1659	370	221	1389	265	0	0	3904
251	EDC	223.7	0.0	0.0	88.0	49	0	0	49	1967	374	122	2129	406	4999	1967	374	122	2129	406	0	0	4998
252	EDC	1130.1	0.0	0.0	434.0	354	0	0	354	10294	1884	727	9720	1967	24593	10294	1884	727	9720	1967	0	0	24592
253	EDC	402.7	0.0	0.0	147.0	112	0	0	112	4027	943	536	4285	748	10538	4027	943	536	4285	748	0	0	10539
254	EDC	294.8	0.0	0.0	116.0	79	0	0	79	2782	590	217	2996	585	7170	2782	590	217	2996	585	0	0	7170
255	EDC	0.0	426.0	0.0	0.0	4925	4937	2120	11981	0	0	0	0	0	0	0	0	0	0	0	4937	2120	7057
256	EDC	121.3	1042.0	0.0	47.0	13419	12704	4781	30904	751	61	81	687	1628	3208	751	61	81	687	1628	12704	4781	20693
257	EDC	388.9	960.0	0.0	153.0	10689	5774	751	17213	2551	365	155	2893	1325	7288	2551	365	155	2893	1325	5774	751	13814
258	EDC	57.5	2.0	0.0	21.0	20	3	0	23	576	155	135	642	78	1586	576	155	135	642	78	3	0	1589
259	EDC	78.1	0.0	0.0	30.0	8	0	0	8	818	200	131	831	113	2093	818	200	131	831	113	0	0	2093
260	EDC	4.4	146.0	0.0	2.0	1768	1573	578	3918	3	3	1	11	40	59	3	3	1	11	40	1573	578	2209
261	EDC	252.0	282.0	0.0	92.0	3544	3426	696	7665	1666	206	69	1687	1279	4907	1666	206	69	1687	1279	3426	696	9029
262	EDC	307.6	238.0	0.0	121.0	2921	2348	374	5644	1978	264	71	1949	1104	5365	1978	264	71	1949	1104	2348	374	8088
263	EDC	295.9	35.0	0.0	108.0	484	571	56	1111	2063	270	77	1975	629	5014	2063	270	77	1975	629	571	56	5641
264	EDC	137.0	45.0	0.0	50.0	598	874	144	1615	908	118	37	883	514	2461	908	118	37	883	514	874	144	3478
265	EDC	117.2	0.0	0.0	45.0	15	0	0	15	1106	235	99	1178	182	2799	1106	235	99	1178	182	0	0	2800
266	EDC	91.6	4.0	0.0	42.0	75	50	5	130	759	263	71	825	206	2123	759	263	71	825	206	50	5	2179
267	EDC	335.9	0.0	0.0	129.0	82	0	0	82	2837	530	188	2717	419	6691	2837	530	188	2717	419	0	0	6691
268	EDC	179.7	6.0	0.0	69.0	91	16	1	108	1515	300	116	1438	259	3627	1515	300	116	1438	259	16	1	3645
269	EDC	515.8	1.0	0.0	204.0	174	0	0	174	4996	809	284	4009	930	11028	4996	809	284	4009	930	0	0	11028
270	EDC	113.2	0.0	0.0	44.0	17	0	0	17	1419	311	129	1103	182	3144	1419	311	129	1103	182	0	0	3144
271	EDC	379.3	5.0	0.0	150.0	146	15	1	162	4186	957	463	3789	759	10155	4186	957	463	3789	759	15	1	10170
272	EDC	347.2	23.0	0.0	131.0	305	178	11	494	3434	558	100	2836	585	7513	3434	558	100	2836	585	178	11	7702
273	EDC	391.4	12.0	0.0	134.0	205	61	4	270	4583	873	412	3638	655	10162	4583	873	412	3638	655	61	4	10226
274	EDC	617.5	99.0	424.0	233.0	1253	2027	161	3440	5952	1076	851	4863	1385	14128	5952	1076	851	4863	1385	2027	161	16315
275	EDC	827.9	13.0	0.0	321.0	395	142	10	547	8294	1138	460	6685	1536	18112	8294	1138	460	6685	1536	142	10	18265
276	EDC	541.1	12.0	0.0	224.0	208	50	3	261	4513	801	280	4115	834	10542	4513	801	280	4115	834	50	3	10596
277	EDC	415.6	0.0	0.0	161.0	62	0	0	62	3536	523	152	2857	542	7610	3536	523	152	2857	542	0	0	7610
278	EDC	246.9	0.0	0.0	91.0	46	0	0	46	2617	689	294	2670	483	6754	2617	689	294	2670	483	0	0	6753
279	EDC	122.1	0.0	0.0	45.0	14	0	0	14	1376	361	216	1284	197	3434	1376	361	216	1284	197	0	0	3434
280	EDC	98.1	0.0	0.0	37.0	9	0	0	9	921	134	21	820	125	2021	921	134	21	820	125	0	0	2021
281	EDC	156.4	36.0	0.0	59.0	490	210	13	713	1476	209	76	1321	260	3342	1476	209	76	1321	260	210	13	3565
282	EDC	103.4	0.0	0.0	39.0	8	0	0	8	948	125	15	760	117	1965	948	125	15	760	117	0	0	1965
283	EDC	0.0	161.0	1778.0	0.0	1952	6207	1356	9515	0	0	3659	0	657	4317	0	0	3659	0	657	6207	1356	11879
284	EDC	64.5	25.0	0.0	25.0	260	169	12	442	443	59	9	375	97	983	443	59	9	375	97	169	12	1164
285	EDC	26.4	66.0	400.0	12.0	821	1587	268	2675	147	32	989	143	249	1560	147	32	989	143	249	1587	268	3415
286	EDC	95.4	0.0	0.0	36.0	9	0	0	9	974	215	71	839	133	2231	974	215	71	839	133	0	0	2232
287	EDC	87.7	0.0	0.0	34.0	8	0	0	8	928	168	56	769	128	2049	928	168	56	769	128	0	0	2049
288	EDC	135.2	0.0	0.0	51.0	18	0	0	18	1393	251	108	1223	217	3192	1393	251	108	1223	217	0	0	3192

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
289	EDC	23.4	0.0	0.0	8.0	0	0	0	0	215	34	24	138	6	418	215	34	24	138	6	0	0	417
290	EDC	128.5	0.0	0.0	44.0	12	0	0	12	1481	230	133	1081	172	3098	1481	230	133	1081	172	0	0	3097
291	EDC	463.5	0.0	0.0	188.0	132	0	0	132	5743	1487	355	4602	917	13104	5743	1487	355	4602	917	0	0	13104
292	EDC	210.3	0.0	0.0	72.0	32	0	0	32	2595	634	519	2057	292	6096	2595	634	519	2057	292	0	0	6097
293	EDC	77.4	0.0	0.0	34.0	10	0	0	10	474	87	35	493	97	1185	474	87	35	493	97	0	0	1186
294	EDC	247.0	0.0	0.0	97.0	54	0	0	54	2177	290	90	1639	350	4546	2177	290	90	1639	350	0	0	4546
295	EDC	283.7	1491.0	0.0	110.0	29185	40329	16318	85832	2571	149	201	1537	5396	9855	2571	149	201	1537	5396	40329	16318	66501
296	EDC	304.7	56.0	438.0	117.0	788	1666	164	2618	2390	341	1151	2123	838	6843	2390	341	1151	2123	838	1666	164	8673
297	EDC	182.3	0.0	0.0	70.0	26	0	0	26	1337	221	69	1168	130	2925	1337	221	69	1168	130	0	0	2925
298	EDC	205.7	0.0	0.0	79.0	38	0	0	38	1656	237	102	1406	266	3667	1656	237	102	1406	266	0	0	3667
299	EDC	268.0	0.0	0.0	106.0	64	0	0	64	2661	420	189	2276	479	6024	2661	420	189	2276	479	0	0	6025
300	EDC	70.8	0.0	0.0	28.0	7	0	0	7	616	89	32	449	81	1267	616	89	32	449	81	0	0	1267
301	EDC	2.3	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
302	EDC	129.8	33.0	152.0	57.0	453	550	50	1053	810	156	455	777	291	2489	810	156	455	777	291	550	50	3089
303	EDC	231.3	0.0	0.0	106.0	52	0	0	52	1449	325	61	1462	332	3629	1449	325	61	1462	332	0	0	3629
304	EDC	27.3	224.0	0.0	12.0	2321	1462	281	4064	121	28	8	113	149	419	121	28	8	113	149	1462	281	2162
305	EDC	2.3	283.0	0.0	1.0	3077	1839	461	5377	0	0	0	0	0	0	0	0	0	0	0	1839	461	2300
306	EDC	21.8	55.0	0.0	10.0	598	257	19	873	129	29	4	109	45	317	129	29	4	109	45	257	19	592
307	EDC	36.1	2.0	0.0	16.0	17	9	1	27	171	38	9	171	44	433	171	38	9	171	44	9	1	443
308	EDC	24.8	1.0	0.0	11.0	3	0	0	3	95	21	6	82	11	215	95	21	6	82	11	0	0	215
309	EDC	31.9	4.0	0.0	14.0	28	14	1	43	168	32	10	129	28	366	168	32	10	129	28	14	1	382
310	EDC	58.7	122.0	0.0	26.0	1250	750	115	2114	289	67	13	262	201	831	289	67	13	262	201	750	115	1697
311	EDC	86.6	158.0	0.0	38.0	2129	1955	552	4636	470	81	25	417	565	1559	470	81	25	417	565	1955	552	4065
312	EDC	70.0	3.0	0.0	31.0	24	2	0	26	341	79	12	318	48	798	341	79	12	318	48	2	0	800
313	EDC	98.8	506.0	1583.0	38.0	6707	4790	692	12188	665	88	2788	356	684	4582	665	88	2788	356	684	4790	692	10063
314	EDC	206.3	8.0	0.0	81.0	115	17	1	133	1522	162	73	1046	212	3015	1522	162	73	1046	212	17	1	3033
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	29.6	0.0	0.0	13.0	1	0	0	1	127	24	9	109	17	286	127	24	9	109	17	0	0	286
317	EDC	18.2	0.0	0.0	8.0	0	0	0	0	73	12	6	59	8	158	73	12	6	59	8	0	0	158
318	EDC	326.0	2.0	0.0	128.0	96	1	0	97	2336	254	88	1602	334	4613	2336	254	88	1602	334	1	0	4615
319	EDC	98.8	6.0	0.0	38.0	59	8	1	68	604	64	16	356	60	1100	604	64	16	356	60	8	1	1109
320	EDC	44.4	39.0	351.0	18.0	497	1486	225	2208	454	109	1130	270	321	2284	454	109	1130	270	321	1486	225	3995
321	EDC	256.4	0.0	0.0	104.0	62	0	0	62	3093	744	107	2341	467	6752	3093	744	107	2341	467	0	0	6752
322	EDC	386.9	33.0	0.0	153.0	508	166	18	692	3697	743	216	2939	641	8236	3697	743	216	2939	641	166	18	8420
323	EDC	129.0	4.0	0.0	51.0	48	11	2	61	1432	371	108	1269	225	3405	1432	371	108	1269	225	11	2	3418
324	EDC	164.7	0.0	0.0	64.0	32	0	0	32	2170	458	194	1631	279	4732	2170	458	194	1631	279	0	0	4732
325	EDC	39.4	0.0	0.0	16.0	3	0	0	3	417	84	12	231	46	790	417	84	12	231	46	0	0	790
326	EDC	120.8	1.0	0.0	49.0	27	1	1	29	1330	256	54	861	150	2650	1330	256	54	861	150	1	1	2653
327	Placerville (not	100.8	0.0	0.0	40.0	15	0	0	15	971	145	55	599	118	1889	971	145	55	599	118	0	0	1888
328	EDC	47.9	0.0	0.0	19.0	4	0	0	4	450	81	25	295	57	908	450	81	25	295	57	0	0	908
329	Placerville (not	317.5	0.0	0.0	139.0	83	0	0	83	2692	412	116	1811	437	5468	2692	412	116	1811	437	0	0	5468
330	EDC	184.0	0.0	0.0	73.0	34	0	0	34	1589	205	75	954	200	3023	1589	205	75	954	200	0	0	3023
331	EDC	274.0	0.0	0.0	110.0	76	0	0	76	3432	677	197	2400	529	7235	3432	677	197	2400	529	0	0	7235
332	EDC	104.3	0.0	0.0	47.0	18	0	0	18	723	192	72	621	107	1715	723	192	72	621	107	0	0	1715
333	EDC	225.5	0.0	0.0	91.0	58	0	0	58	2178	730	280	2124	360	5672	2178	730	280	2124	360	0	0	5672
334	EDC	57.7	110.0	0.0	26.0	1277	514	41	1831	392	121	56	390	118	1077	392	121	56	390	118	514	41	1632
335	EDC	164.9	5.0	0.0	77.0	90	5	1	96	1386	248	348	993	185	3159	1386	248	348	993	185	5	1	3166
336	EDC	70.4	0.0	0.0	30.0	9	0	0	9	590	145	72	479	75	1361	590	145	72	479	75	0	0	1361
337	EDC	301.7	62.0	320.0	121.0	807	1276	89	2171	2822	1020	966	2362	677	7847	2822	1020	966	2362	677	1276	89	9212
338	EDC	830.6	14.0	0.0	322.0	319	165	8	493	8390	1880	922	5752	1028	17972	8390	1880	922	5752	1028	165	8	18145
339	EDC	410.4	0.0	0.0	188.0	100	0	0	100	5090	3210	351	3029	603	12282	5090	3210	351	3029	603	0	0	12283
340	EDC	205.0	14.0	0.0	93.0	206	225	35	466	3199	2151	806	1813	563	8532	3199	2151	806	1813	563	225	35	8792
341	EDC	70.8	8.0	0.0	31.0	73	14	2	89	758	533	10	379	69	1750	758	533	10	379	69	14	2	1765
342	EDC	123.8	0.0	0.0	48.0	23	0	0	23	1311	305	262	1101	169	3148	1311	305	262	1101	169	0	0	3148
343	EDC	115.7	0.0	0.0	53.0	35	0	0	35	1492	569	465	1219	243	3988	1492	569	465	1219	243	0	0	3988
344	EDC	120.1	0.0	0.0	55.0	37	0	0	37	1658	648	517	1280	265	4367	1658	648	517	1280	265	0	0	4368
345	EDC	63.3	0.0	0.0	29.0	14	0	0	14	729	233	120	624	122	1828	729	233	120	624	122	0	0	1828
346	EDC	49.5	0.0	0.0	22.0	9	0	0	9	494	180	66	469	77	1285	494	180	66	469	77	0	0	1286
347	EDC	108.3	0.0	0.0	42.0	21	0	0	21	1325	386	540	1088	164	3503	1325	386	540	1088	164	0	0	3503
348	EDC	110.2	0.0	0.0	49.0	30	0	0	30	1008	338	208	1138	218	2910	1008	338	208	1138	218	0	0	2910
349	EDC	191.4	18.0	0.0	83.0	232	148	21	401	2511	2272	739	1899	469	7891	2511	2272	739	1899	469	148	21	8059
350	EDC	48.0	0.0	0.0	22.0	10	0	0	10	581	487	31	363	73	1535	581	487	31	363	73	0	0	1535
351	EDC	50.2	0.0	0.0	23.0	8	0	0	8	585	438	268	337	51	1679	585	438	268	337	51	0	0	1679
352	EDC	63.3	0.0	0.0	29.0	14	0	0	14	888	616	335	480	81	2400	888	616	335	480	81	0	0	2400
353	EDC	364.6	1.0	0.0	167.0	82	0	0	82	4769	3418	1926	2306	392	12812	4769	3418	1926	2306	392	0	0	12811
354	EDC	115.7	77.0	275.0	53.0	701	810	73	1584	1107	728	759	565	326	3486	1107	728	759	565	326	810	73	4368
355	Placerville (in C	550.4	244.0	0.0	241.0	2944	1806	262	5012	3251	344	145	2268	1190	7197	3251	344	145	2268	1190	1806	262	9266
356	Placerville (in C	194.9	0.0	0.0	91.0	44	0	0	44	1193	226	71	915	203	2608	1193	226	71	915	203	0	0	2608
357	EDC	208.8	21.0	0.0	89.0	342	433	57	832	1654	357	157	1336	540	4044	1654	357	157	1336	540	433	57	4534
358	Placerville (not	190.1	98.0	0.0	81.0	1163	740	97	1999	1326	237	83	998	449	3093	1326	237	83	998	449	740	97	3930
359	EDC	254.0	0.0	0.0	105.0	58	0	0	58	2225	443	215	1825	357	5064	2225	443	215	1825	357	0	0	5065
360	EDC	237.1	10.0	0.0	98.0	199	128	9	336	2326	551	357	2135	469	5838	2326	551	357	2135	469	128	9	5975

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
361	Placerville (in C	938.3	392.0	0.0	458.0	4040	1566	151	5756	4576	916	128	4018	1201	10839	4576	916	128	4018	1201	1566	151	12556
362	Placerville (in C	591.2	876.0	0.0	252.0	11373	9232	2816	23421	3059	293	160	1959	2919	8390	3059	293	160	1959	2919	9232	2816	20438
363	EDC	30.9	0.0	0.0	13.0	1	0	0	1	158	27	12	95	19	311	158	27	12	95	19	0	0	311
364	Placerville (not	328.5	30.0	0.0	138.0	370	62	5	436	1732	185	116	1187	278	3497	1732	185	116	1187	278	62	5	3565
365	EDC	722.1	71.0	0.0	322.0	1023	710	73	1807	3834	757	253	3545	1117	9506	3834	757	253	3545	1117	710	73	10289
366	EDC	31.3	4.0	0.0	15.0	22	9	1	32	79	26	6	91	20	223	79	26	6	91	20	9	1	232
367	EDC	0.0	197.0	0.0	0.0	1924	771	107	2802	0	0	0	0	0	0	0	0	0	0	0	771	107	878
368	EDC	149.0	0.0	0.0	68.0	22	0	0	22	711	160	13	635	102	1621	711	160	13	635	102	0	0	1621
369	EDC	506.6	13.0	0.0	228.0	237	42	3	282	2487	448	138	2238	461	5773	2487	448	138	2238	461	42	3	5817
370	EDC	0.0	303.0	0.0	0.0	2953	1156	224	4333	0	0	0	0	0	0	0	0	0	0	0	1156	224	1380
371	EDC	46.7	0.0	0.0	21.0	3	0	0	3	303	69	13	274	45	704	303	69	13	274	45	0	0	704
372	EDC	433.3	211.0	1138.0	195.0	2326	3411	441	6178	2309	482	2348	2112	1331	8582	2309	482	2348	2112	1331	3411	441	12434
373	EDC	58.7	0.0	0.0	26.0	4	0	0	4	249	41	14	215	37	556	249	41	14	215	37	0	0	556
374	EDC	28.5	2.0	0.0	13.0	11	8	1	20	128	26	4	94	25	276	128	26	4	94	25	8	1	286
375	EDC	31.6	0.0	0.0	14.0	1	0	0	1	138	26	9	114	19	306	138	26	9	114	19	0	0	306
376	EDC	76.8	3.0	0.0	34.0	29	2	0	31	391	66	21	310	60	847	391	66	21	310	60	2	0	850
377	EDC	29.4	14.0	0.0	13.0	130	29	1	161	126	21	5	91	15	258	126	21	5	91	15	29	1	288
378	EDC	59.1	0.0	0.0	27.0	4	0	0	4	249	61	6	218	46	579	249	61	6	218	46	0	0	580
379	EDC	105.2	0.0	0.0	48.0	11	0	0	11	454	99	12	389	78	1031	454	99	12	389	78	0	0	1032
380	EDC	26.3	0.0	0.0	12.0	1	0	0	1	90	16	4	70	12	193	90	16	4	70	12	0	0	192
381	EDC	15.3	0.0	0.0	7.0	0	0	0	0	41	13	2	40	8	103	41	13	2	40	8	0	0	104
382	EDC	24.1	0.0	0.0	11.0	1	0	0	1	90	17	4	65	13	189	90	17	4	65	13	0	0	189
383	EDC	102.2	0.0	0.0	46.0	16	0	0	16	711	166	49	595	114	1634	711	166	49	595	114	0	0	1635
384	EDC	266.6	0.0	0.0	120.0	59	0	0	59	1726	379	97	1421	314	3937	1726	379	97	1421	314	0	0	3937
385	EDC	1002.1	0.0	0.0	451.0	285	0	0	285	6081	1263	302	5110	945	13701	6081	1263	302	5110	945	0	0	13701
386	EDC	200.0	0.0	0.0	90.0	35	0	0	35	1261	279	71	1032	211	2855	1261	279	71	1032	211	0	0	2854
387	EDC	80.0	8.0	0.0	36.0	79	46	4	129	370	79	17	316	86	868	370	79	17	316	86	46	4	918
388	EDC	0.0	303.0	0.0	0.0	2983	1147	215	4345	0	0	0	0	0	0	0	0	0	0	0	1147	215	1362
389	EDC	4.4	264.0	0.0	2.0	2552	1138	296	3986	0	0	0	3	7	11	0	0	0	3	7	1138	296	1444
390	EDC	379.3	23.0	0.0	182.0	314	109	7	430	1484	346	77	1669	320	3896	1484	346	77	1669	320	109	7	4012
391	EDC	22.9	54.0	0.0	11.0	524	442	132	1098	48	15	4	54	98	220	48	15	4	54	98	442	132	793
392	EDC	58.4	0.0	0.0	28.0	6	0	0	6	204	40	10	225	38	519	204	40	10	225	38	0	0	517
393	EDC	605.4	68.0	0.0	268.0	984	658	63	1706	2823	353	160	2528	791	6655	2823	353	160	2528	791	658	63	7376
394	EDC	21.9	0.0	0.0	8.0	0	0	0	0	78	9	5	53	6	152	78	9	5	53	6	0	0	151
395	Placerville (in C	165.5	2253.0	18.0	74.0	26149	11856	4062	42067	626	73	75	556	1362	2692	626	73	75	556	1362	11856	4062	18610
396	EDC	0.0	439.0	0.0	0.0	6253	7255	3615	17124	0	0	0	0	0	0	0	0	0	0	0	7255	3615	10870
397	EDC	113.9	3.0	0.0	50.0	39	1	0	41	523	81	34	452	87	1177	523	81	34	452	87	1	0	1178
398	EDC	31.6	3.0	0.0	14.0	18	9	1	28	119	21	9	95	22	265	119	21	9	95	22	9	1	276
399	EDC	97.1	0.0	0.0	43.0	12	0	0	12	480	73	30	381	74	1040	480	73	30	381	74	0	0	1038
400	EDC	33.3	0.0	0.0	16.0	1	0	0	1	79	19	7	89	17	211	79	19	7	89	17	0	0	211
401	Placerville (not	62.6	213.0	0.0	28.0	2665	1781	628	5073	266	30	14	184	341	836	266	30	14	184	341	1781	628	3244
402	EDC	132.6	106.0	0.0	51.0	1036	424	27	1487	708	57	32	436	131	1363	708	57	32	436	131	424	27	1815
403	EDC	258.4	654.0	462.0	124.0	7744	4949	1008	13701	964	165	1109	1092	1270	4601	964	165	1109	1092	1270	4949	1008	10557
404	EDC	41.6	49.0	0.0	19.0	433	158	8	599	145	28	6	130	33	342	145	28	6	130	33	158	8	508
405	EDC	19.7	0.0	0.0	9.0	0	0	0	0	43	11	2	47	9	112	43	11	2	47	9	0	0	112
406	EDC	52.6	286.0	0.0	24.0	4030	4734	2159	10923	212	28	10	163	537	951	212	28	10	163	537	4734	2159	7843
407	EDC	2.1	309.0	9.0	1.0	3397	2098	869	6365	0	0	8	0	93	101	0	0	8	0	93	2098	869	3068
408	EDC	2.1	182.0	0.0	1.0	1693	812	174	2679	1	1	0	3	7	13	1	1	0	3	7	812	174	998
409	Placerville (not	247.5	445.0	0.0	104.0	5697	3460	857	10014	1457	150	79	1013	1137	3836	1457	150	79	1013	1137	3460	857	8153
410	EDC	1030.6	277.0	0.0	426.0	3619	3007	385	7010	6968	926	508	5276	2396	16073	6968	926	508	5276	2396	3007	385	19466
411	Placerville (in C	712.2	1271.0	0.0	298.0	13680	9591	2852	26123	2901	365	199	2239	3184	8889	2901	365	199	2239	3184	9591	2852	21331
412	EDC	205.5	0.0	0.0	86.0	48	0	0	48	1499	220	109	1098	239	3164	1499	220	109	1098	239	0	0	3165
413	Placerville (not	301.1	0.0	0.0	126.0	66	0	0	66	1832	267	122	1308	302	3830	1832	267	122	1308	302	0	0	3831
414	EDC	14.6	120.0	0.0	7.0	1163	498	69	1730	23	15	2	37	37	114	23	15	2	37	37	498	69	681
415	EDC	40.4	0.0	0.0	18.0	2	0	0	2	175	45	12	152	29	413	175	45	12	152	29	0	0	413
416	EDC	18.8	0.0	0.0	9.0	0	0	0	0	37	15	2	51	9	115	37	15	2	51	9	0	0	114
417	Placerville (in C	113.9	278.0	0.0	45.0	2881	1922	550	5353	486	65	32	323	479	1385	486	65	32	323	479	1922	550	3857
418	Placerville (in C	0.0	64.0	0.0	0.0	683	704	371	1758	0	0	0	0	0	0	0	0	0	0	0	704	371	1075
419	Placerville (in C	0.0	85.0	0.0	0.0	850	712	345	1907	0	0	0	0	0	0	0	0	0	0	0	712	345	1057
420	Placerville (in C	100.4	52.0	0.0	42.0	463	123	6	593	429	58	28	279	61	854	429	58	28	279	61	123	6	984
421	Placerville (in C	162.5	5.0	0.0	68.0	66	2	0	68	715	109	45	499	102	1470	715	109	45	499	102	2	0	1472
422	Placerville (in C	652.2	1907.0	475.0	278.0	24256	6946	1054	32255	2591	383	964	1909	1590	7437	2591	383	964	1909	1590	6946	1054	15437
423	EDC	47.8	0.0	0.0	20.0	1	0	0	1	203	37	14	131	24	410	203	37	14	131	24	0	0	409
424	Placerville (not	390.5	228.0	0.0	171.0	2477	1377	150	4005	2418	309	62	1628	657	5074	2418	309	62	1628	657	1377	150	6601
425	Placerville (not	2616.8	563.0	1598.0	1167.0	6014	7709	913	14636	15227	1973	3911	9286	4588	34985	15227	1973	3911	9286	4588	7709	913	43607
426	Placerville (not	82.2	0.0	0.0	33.0	5	0	0	5	529	62	8	243	42	885	529	62	8	243	42	0	0	884
427	EDC	231.6	0.0	0.0	93.0	56	0	0	56	2360	333	69	1429	334	4525	2360	333	69	1429	334	0	0	4525
428	EDC	54.8	0.0	0.0	22.0	3	0	0	3	393	50	6	171	33	653	393	50	6	171	33	0	0	653
429	EDC	82.5	0.0	0.0	35.0	13	0	0	13	715	128	44	572	54	1514	715	128	44	572	54	0	0	1513
430	EDC	136.7	10.0	0.0	58.0	135	26	2	163	1129	178	84	816	184	2392	1129	178	84	816	184	26	2	2419
431	Placerville (in C	45.1	60.0	0.0	22.0	630	252	24	906	164	41	12	136	66	419	164	41	12	136	66	252	24	695
432	EDC	728.5	229.0	0.0	309.0	2623	1093	106	3823	5080	870	352	3565	1152	11018	5080	870	352	3565	1152	1093	106	12218

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
433	Placerville (in C	1041.0	36.0	0.0	481.0	650	96	8	754	4256	792	270	3733	883	9934	4256	792	270	3733	883	96	8	10038
434	Placerville (in C	70.7	0.0	0.0	33.0	6	0	0	6	241	44	14	170	43	513	241	44	14	170	43	0	0	512
435	Placerville (in C	77.1	27.0	0.0	36.0	208	47	3	259	258	47	15	187	47	555	258	47	15	187	47	47	3	604
436	EDC	62.3	0.0	0.0	25.0	6	0	0	6	459	117	41	365	59	1041	459	117	41	365	59	0	0	1041
437	EDC	287.0	12.0	0.0	117.0	211	133	11	355	2835	428	222	1776	478	5739	2835	428	222	1776	478	133	11	5883
438	EDC	278.1	11.0	89.0	124.0	193	513	42	749	2110	613	238	1912	578	5451	2110	613	238	1912	578	513	42	6006
439	EDC	349.8	3.0	0.0	156.0	132	2	0	135	2574	629	222	2449	450	6324	2574	629	222	2449	450	2	0	6326
440	EDC	62.8	15.0	0.0	28.0	147	72	5	223	382	114	37	387	86	1006	382	114	37	387	86	72	5	1083
441	Placerville (in C	28.7	0.0	0.0	12.0	1	0	0	1	158	27	12	96	20	312	158	27	12	96	20	0	0	313
442	Placerville (in C	767.7	69.0	143.0	313.0	1016	1043	108	2167	5576	653	518	3238	1236	11221	5576	653	518	3238	1236	1043	108	12372
443	EDC	85.2	0.0	0.0	38.0	15	0	0	15	592	160	60	553	111	1475	592	160	60	553	111	0	0	1476
444	EDC	19.1	0.0	0.0	8.0	0	0	0	0	81	16	6	55	8	166	81	16	6	55	8	0	0	166
445	Placerville (not	56.4	11.0	0.0	23.0	119	25	1	146	438	59	25	228	49	798	438	59	25	228	49	25	1	825
446	Placerville (in C	58.6	19.0	0.0	25.0	223	249	39	511	401	63	22	212	143	840	401	63	22	212	143	249	39	1129
447	EDC	189.5	0.0	0.0	76.0	41	0	0	41	1631	445	131	1451	254	3913	1631	445	131	1451	254	0	0	3912
448	Placerville (not	130.0	4.0	0.0	53.0	47	13	1	61	1067	147	68	591	96	1969	1067	147	68	591	96	13	1	1983
449	EDC	30.0	0.0	0.0	14.0	3	0	0	3	199	64	26	157	31	477	199	64	26	157	31	0	0	477
450	EDC	179.9	31.0	0.0	84.0	347	103	9	458	1196	240	74	898	235	2643	1196	240	74	898	235	103	9	2755
451	EDC	57.8	0.0	0.0	27.0	8	0	0	8	405	95	37	337	70	944	405	95	37	337	70	0	0	944
452	Placerville (not	259.1	33.0	428.0	121.0	447	986	95	1528	1418	230	1019	1037	474	4177	1418	230	1019	1037	474	986	95	5259
453	Placerville (in C	310.5	1.0	0.0	145.0	83	0	0	84	1384	242	62	1119	176	2984	1384	242	62	1119	176	0	0	2983
454	EDC	53.5	0.0	0.0	25.0	4	0	0	4	222	46	14	160	35	477	222	46	14	160	35	0	0	477
455	EDC	172.1	0.0	0.0	73.0	37	0	0	37	1434	266	116	957	215	2988	1434	266	116	957	215	0	0	2988
456	EDC	109.2	0.0	0.0	51.0	22	0	0	22	829	213	93	689	142	1967	829	213	93	689	142	0	0	1966
457	EDC	137.0	5.0	0.0	62.0	89	9	1	99	1341	326	178	913	193	2950	1341	326	178	913	193	9	1	2961
458	Placerville (not	157.2	26.0	0.0	67.0	305	166	11	482	1165	213	88	878	177	2520	1165	213	88	878	177	166	11	2698
459	Placerville (not	25.8	0.0	0.0	11.0	0	0	0	0	131	29	14	97	15	286	131	29	14	97	15	0	0	286
460	EDC	47.1	20.0	0.0	22.0	225	73	6	304	359	88	36	298	77	858	359	88	36	298	77	73	6	937
461	EDC	14.1	59.0	0.0	6.0	584	247	19	849	60	24	4	53	22	163	60	24	4	53	22	247	19	429
462	EDC	66.4	125.0	0.0	31.0	1720	745	132	2597	483	65	117	371	238	1274	483	65	117	371	238	745	132	2151
463	EDC	194.1	0.0	0.0	85.0	31	0	0	31	2391	2303	778	1240	163	6875	2391	2303	778	1240	163	0	0	6875
464	EDC	103.6	0.0	0.0	47.0	29	0	0	29	1171	586	370	891	171	3189	1171	586	370	891	171	0	0	3189
465	EDC	133.6	16.0	0.0	58.0	103	28	4	135	1851	1815	693	851	145	5356	1851	1815	693	851	145	28	4	5387
466	EDC	139.3	22.0	0.0	61.0	181	87	11	279	1593	1226	232	970	201	4222	1593	1226	232	970	201	87	11	4320
467	EDC	89.1	0.0	0.0	39.0	19	0	0	19	1168	1220	506	617	103	3615	1168	1220	506	617	103	0	0	3614
468	EDC	276.7	6.0	0.0	120.0	109	15	2	126	3340	2841	616	2347	443	9587	3340	2841	616	2347	443	15	2	9604
469	EDC	130.8	15.0	0.0	59.0	122	35	5	163	1703	1914	625	969	187	5398	1703	1914	625	969	187	35	5	5438
470	EDC	73.1	1.0	0.0	32.0	21	1	0	22	992	980	291	519	92	2874	992	980	291	519	92	1	0	2875
471	EDC	52.5	6.0	0.0	23.0	47	9	2	58	614	601	241	335	54	1844	614	601	241	335	54	9	2	1856
472	EDC	59.4	20.0	0.0	26.0	131	33	5	169	651	726	229	393	68	2067	651	726	229	393	68	33	5	2105
473	EDC	23.0	2.0	0.0	10.0	23	29	5	57	214	77	21	128	51	491	214	77	21	128	51	29	5	525
474	EDC	80.8	0.0	0.0	37.0	21	0	0	21	897	318	145	580	114	2054	897	318	145	580	114	0	0	2054
475	EDC	83.0	0.0	0.0	38.0	19	0	0	19	888	389	221	638	113	2249	888	389	221	638	113	0	0	2249
476	EDC	41.3	0.0	0.0	16.0	5	0	0	5	394	123	105	317	43	982	394	123	105	317	43	0	0	982
477	EDC	69.1	15.0	0.0	30.0	110	26	4	140	887	689	183	489	84	2332	887	689	183	489	84	26	4	2362
478	EDC	66.0	0.0	0.0	30.0	16	0	0	16	738	266	152	528	91	1775	738	266	152	528	91	0	0	1775
479	EDC	117.5	37.0	0.0	51.0	415	423	54	892	1342	349	305	824	343	3164	1342	349	305	824	343	423	54	3640
480	EDC	45.7	0.0	0.0	20.0	10	0	0	10	589	601	237	352	66	1845	589	601	237	352	66	0	0	1845
481	EDC	44.0	0.0	0.0	20.0	12	0	0	12	603	659	194	359	79	1893	603	659	194	359	79	0	0	1894
482	EDC	162.7	3.0	0.0	74.0	76	6	1	84	2434	2088	1023	1815	369	7728	2434	2088	1023	1815	369	6	1	7736
483	EDC	248.6	9.0	0.0	115.0	134	46	5	184	1932	845	181	1957	347	5262	1932	845	181	1957	347	46	5	5313
484	EDC	226.9	114.0	0.0	91.0	892	452	29	1373	2401	766	394	1652	334	5547	2401	766	394	1652	334	452	29	6028
485	EDC	37.4	0.0	0.0	15.0	6	0	0	6	487	278	236	296	37	1334	487	278	236	296	37	0	0	1334
486	EDC	155.8	0.0	0.0	69.0	32	0	0	32	2396	1153	711	1203	208	5672	2396	1153	711	1203	208	0	0	5671
487	EDC	518.6	36.0	0.0	221.0	698	564	62	1324	4976	1114	565	4094	1160	11909	4976	1114	565	4094	1160	564	62	12535
488	EDC	241.5	0.0	0.0	107.0	64	0	0	64	3618	1138	575	1756	319	7406	3618	1138	575	1756	319	0	0	7406
489	EDC	300.2	58.0	0.0	133.0	609	283	23	915	3577	807	163	2084	462	7094	3577	807	163	2084	462	283	23	7399
490	EDC	59.8	0.0	0.0	24.0	8	0	0	8	601	185	83	473	67	1410	601	185	83	473	67	0	0	1409
491	EDC	398.9	3.0	0.0	160.0	138	37	3	178	3897	998	573	3127	582	9177	3897	998	573	3127	582	37	3	9217
492	EDC	176.0	31.0	0.0	71.0	379	457	48	885	1757	554	320	1470	452	4553	1757	554	320	1470	452	457	48	5058
493	EDC	178.4	26.0	159.0	72.0	325	607	39	971	1685	607	484	1444	372	4593	1685	607	484	1444	372	607	39	5238
494	EDC	169.5	10.0	0.0	68.0	109	27	2	138	1607	572	67	1406	221	3873	1607	572	67	1406	221	27	2	3902
495	EDC	39.9	0.0	0.0	16.0	2	0	0	2	331	87	46	242	29	733	331	87	46	242	29	0	0	735
496	EDC	200.7	67.0	0.0	81.0	808	1246	171	2225	1972	416	375	1413	714	4889	1972	416	375	1413	714	1246	171	6307
497	EDC	224.3	3.0	0.0	88.0	80	11	1	92	2416	696	488	1742	260	5602	2416	696	488	1742	260	11	1	5614
498	EDC	158.0	6.0	0.0	70.0	80	11	1	92	2175	581	205	1170	206	4337	2175	581	205	1170	206	11	1	4349
499	EDC	74.8	0.0	0.0	30.0	11	0	0	11	727	255	83	517	75	1658	727	255	83	517	75	0	0	1657
500	EDC	25.8	51.0	416.0	11.0	559	1249	191	1999	183	57	807	131	230	1409	183	57	807	131	230	1249	191	2848
501	EDC	48.8	83.0	0.0	22.0	730	320	20	1070	376	130	17	293	68	884	376	130	17	293	68	320	20	1224
502	EDC	272.1	18.0	0.0	117.0	306	278	26	610	2762	1000	1058	2386	517	7722	2762	1000	1058	2386	517	278	26	8027
503	EDC	2.2	76.0	0.0	1.0	1007	1150	623	2780	0	0	0	0	0	0	0	0	0	0	0	1150	623	1773
504	EDC	312.8	19.0	0.0	141.0	295	120	12	427	2670	758	261	2406	541	6636	2670	758	261	2406	541	120	12	6768

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	20	7	4	12	1	44	20	7	4	12	1	0	0	44
506	EDC	62.1	0.0	0.0	28.0	8	0	0	8	485	143	46	400	68	1142	485	143	46	400	68	0	0	1142
507	EDC	116.3	37.0	0.0	50.0	346	119	9	473	900	318	70	829	135	2254	900	318	70	829	135	119	9	2380
508	EDC	183.7	186.0	0.0	85.0	1775	687	49	2511	1249	546	88	1281	274	3438	1249	546	88	1281	274	687	49	4174
509	EDC	26.6	2.0	0.0	12.0	10	1	0	11	149	60	10	117	18	354	149	60	10	117	18	1	0	355
510	EDC	198.8	10.0	0.0	92.0	124	62	6	192	1332	525	56	1304	255	3471	1332	525	56	1304	255	62	6	3540
511	EDC	104.7	33.0	0.0	45.0	326	304	39	668	752	239	38	610	231	1870	752	239	38	610	231	304	39	2213
512	EDC	86.1	27.0	0.0	37.0	331	273	34	638	714	213	108	684	228	1947	714	213	108	684	228	273	34	2254
513	EDC	354.0	0.0	0.0	142.0	68	0	0	68	4418	1820	1219	2702	390	10550	4418	1820	1219	2702	390	0	0	10549
514	EDC	1550.6	0.0	0.0	622.0	278	0	0	278	19388	8569	6732	10344	1554	46587	19388	8569	6732	10344	1554	0	0	46587
515	EDC	175.9	8.0	0.0	69.0	85	14	1	101	1895	714	465	1363	191	4628	1895	714	465	1363	191	14	1	4643
516	EDC	362.0	0.0	0.0	142.0	69	0	0	69	4411	2163	1711	2879	401	11566	4411	2163	1711	2879	401	0	0	11565
517	EDC	857.5	101.0	0.0	388.0	1052	1153	81	2286	9063	2921	2518	5844	1206	21552	9063	2921	2518	5844	1206	1153	81	22786
518	EDC	670.7	17.0	0.0	289.0	260	71	5	336	7000	2328	1008	4699	765	15800	7000	2328	1008	4699	765	71	5	15876
519	EDC	329.5	12.0	0.0	142.0	153	99	6	258	3447	1127	540	2281	314	7708	3447	1127	540	2281	314	99	6	7814
520	EDC	617.3	12.0	0.0	266.0	222	88	6	316	7029	2329	1523	4544	689	16114	7029	2329	1523	4544	689	88	6	16208
521	EDC	640.9	60.0	0.0	290.0	528	506	28	1062	6090	1839	825	3770	565	13089	6090	1839	825	3770	565	506	28	13623
522	EDC	221.0	0.0	0.0	85.0	41	0	0	41	3101	954	942	1780	235	7012	3101	954	942	1780	235	0	0	7012
523	EDC	588.5	206.0	6.0	240.0	1870	2860	451	5182	5508	641	841	2865	1186	11040	5508	641	841	2865	1186	2860	451	14352
524	EDC	490.2	103.0	519.0	205.0	1057	2304	188	3550	5064	2058	1930	3088	904	13043	5064	2058	1930	3088	904	2304	188	15536
525	EDC	199.4	0.0	0.0	85.0	34	0	0	34	2463	1744	745	1645	436	7033	2463	1744	745	1645	436	0	0	7033
526	EDC	12.2	0.0	0.0	5.0	1	0	0	1	115	22	18	83	23	260	115	22	18	83	23	0	0	261
527	EDC	380.0	38.0	0.0	162.0	308	248	46	602	4227	1787	339	2698	567	9618	4227	1787	339	2698	567	248	46	9912
528	EDC	2428.5	72.0	0.0	1001.0	713	718	152	1583	32978	17369	7012	22699	6515	86574	32978	17369	7012	22699	6515	718	152	87443
529	EDC	36.3	0.0	0.0	15.0	7	0	0	7	356	152	59	419	143	1128	356	152	59	419	143	0	0	1129
530	EDC	461.8	0.0	0.0	191.0	143	0	0	143	5808	2704	1790	5552	1371	17225	5808	2704	1790	5552	1371	0	0	17225
531	EDC	82.2	0.0	0.0	34.0	22	0	0	22	1122	586	357	983	265	3314	1122	586	357	983	265	0	0	3313
532	EDC	147.5	0.0	0.0	61.0	38	0	0	38	1777	710	410	1807	506	5210	1777	710	410	1807	506	0	0	5210
533	EDC	270.8	34.0	0.0	105.0	599	988	350	1936	2966	818	844	3284	1029	8942	2966	818	844	3284	1029	988	350	10279
534	EDC	128.1	0.0	0.0	53.0	32	0	0	32	1631	756	469	1654	449	4959	1631	756	469	1654	449	0	0	4959
535	EDC	221.5	0.0	0.0	91.0	54	0	0	54	3042	1136	390	2659	842	8069	3042	1136	390	2659	842	0	0	8069
536	EDC	199.6	0.0	0.0	82.0	47	0	0	47	2619	930	287	2258	766	6859	2619	930	287	2258	766	0	0	6860
537	EDC	401.6	0.0	0.0	165.0	84	0	0	84	5769	2372	809	4301	1452	14703	5769	2372	809	4301	1452	0	0	14703
538	EDC	106.8	22.0	0.0	44.0	269	464	199	932	1162	295	84	1206	619	3367	1162	295	84	1206	619	464	199	4029
539	EDC	14.5	166.0	338.0	6.0	2028	4756	2667	9452	87	14	987	105	557	1749	87	14	987	105	557	4756	2667	9173
540	EDC	0.0	53.0	0.0	0.0	531	1012	710	2253	0	0	0	0	0	0	0	0	0	0	0	1012	710	1722
541	EDC	42.2	6.0	0.0	18.0	51	54	13	117	416	100	120	326	96	1058	416	100	120	326	96	54	13	1125
542	EDC	123.0	37.0	0.0	52.0	366	436	61	863	1260	510	52	965	241	3027	1260	510	52	965	241	436	61	3525
543	EDC	114.5	107.0	0.0	49.0	1804	3055	913	5772	1012	118	119	895	811	2957	1012	118	119	895	811	3055	913	6923
544	EDC	21.0	8.0	0.0	9.0	74	46	13	133	161	34	31	147	31	404	161	34	31	147	31	46	13	463
545	EDC	53.7	0.0	0.0	23.0	11	0	0	11	627	385	131	672	225	2041	627	385	131	672	225	0	0	2040
546	EDC	142.5	0.0	0.0	61.0	43	0	0	43	1832	1429	617	2061	655	6594	1832	1429	617	2061	655	0	0	6594
547	EDC	23.4	46.0	0.0	10.0	459	1798	747	3004	159	28	74	134	206	601	159	28	74	134	206	1798	747	3146
548	EDC	910.1	22.0	0.0	386.0	402	210	25	637	10729	4345	321	7103	1269	23767	10729	4345	321	7103	1269	210	25	24002
549	EDC	99.0	0.0	0.0	42.0	17	0	0	17	1034	350	101	994	176	2655	1034	350	101	994	176	0	0	2655
550	EDC	18.0	0.0	0.0	7.0	1	0	0	1	151	20	12	79	12	274	151	20	12	79	12	0	0	274
551	EDC	105.5	54.0	0.0	41.0	767	1267	272	2306	1221	166	78	790	485	2739	1221	166	78	790	485	1267	272	4279
552	EDC	18.7	32.0	0.0	8.0	473	674	211	1357	138	24	10	113	131	416	138	24	10	113	131	674	211	1301
553	EDC	74.8	0.0	0.0	32.0	12	0	0	12	814	294	50	691	116	1965	814	294	50	691	116	0	0	1965
554	EDC	193.9	4.0	0.0	83.0	72	59	11	142	2169	945	179	1610	272	5175	2169	945	179	1610	272	59	11	5245
555	EDC	80.5	0.0	0.0	34.0	17	0	0	17	802	456	98	669	158	2183	802	456	98	669	158	0	0	2183
556	EDC	191.6	0.0	0.0	82.0	47	0	0	47	2384	1536	606	2064	478	7068	2384	1536	606	2064	478	0	0	7068
557	EDC	81.8	1.0	0.0	35.0	24	9	2	35	788	219	244	612	184	2047	788	219	244	612	184	9	2	2058
558	EDC	84.4	19.0	12.0	36.0	143	229	50	422	980	689	242	743	208	2863	980	689	242	743	208	229	50	3141
559	EDC	58.6	0.0	0.0	25.0	12	0	0	12	657	308	164	510	145	1784	657	308	164	510	145	0	0	1784
560	EDC	63.1	10.0	0.0	27.0	84	110	28	222	594	313	89	489	142	1627	594	313	89	489	142	110	28	1765
561	EDC	52.1	0.0	0.0	22.0	11	0	0	11	562	298	63	455	100	1478	562	298	63	455	100	0	0	1478
562	EDC	145.4	0.0	0.0	62.0	30	0	0	30	1911	1534	661	1342	330	5778	1911	1534	661	1342	330	0	0	5778
563	EDC	70.7	0.0	0.0	32.0	12	0	0	12	1133	943	346	646	108	3175	1133	943	346	646	108	0	0	3176
564	EDC	33.5	0.0	0.0	14.0	2	0	0	2	334	123	7	218	32	714	334	123	7	218	32	0	0	714
565	EDC	129.3	0.0	0.0	56.0	27	0	0	27	1496	804	125	941	192	3558	1496	804	125	941	192	0	0	3558
566	EDC	220.1	1.0	0.0	93.0	51	23	5	78	2237	1092	128	1595	318	5371	2237	1092	128	1595	318	23	5	5398
567	EDC	41.5	2.0	0.0	18.0	18	8	2	28	342	120	11	201	47	721	342	120	11	201	47	8	2	731
568	EDC	61.5	0.0	0.0	26.0	9	0	0	9	557	179	15	339	64	1153	557	179	15	339	64	0	0	1154
569	EDC	144.3	31.0	0.0	61.0	260	659	133	1052	1332	369	39	808	318	2866	1332	369	39	808	318	659	133	3658
570	EDC	92.3	92.0	232.0	40.0	720	1259	180	2159	798	213	371	465	251	2099	798	213	371	465	251	1259	180	3537
571	EDC	76.2	0.0	0.0	33.0	14	0	0	14	810	300	37	489	100	1736	810	300	37	489	100	0	0	1736
572	EDC	61.3	34.0	0.0	25.0	225	186	26	437	595	192	20	354	80	1240	595	192	20	354	80	186	26	1453
573	EDC	196.6	2.0	0.0	89.0	80	22	2	103	2636	1541	982	2149	556	7864	2636	1541	982	2149	556	22	2	7888
574	EDC	174.1	0.0	0.0	71.0	23	0	0	23	2743	2320	986	1463	195	7708	2743	2320	986	1463	195	0	0	7707
575	EDC	71.1	0.0	0.0	29.0	12	0	0	12	1194	1098	566	934	171	3964	1194	1098	566	934	171	0	0	3963
576	EDC	42.0	1.0	0.0	19.0	12	22	3	37	563	379	138	265	54	1400	563	379	138	265	54	22	3	1424

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
577	EDC	28.7	0.0	0.0	13.0	3	0	0	3	351	286	119	187	33	975	351	286	119	187	33	0	0	976
578	EDC	817.4	0.0	0.0	370.0	90	0	0	90	12734	11497	4679	6259	1073	36242	12734	11497	4679	6259	1073	0	0	36242
579	EDC	96.4	12.0	0.0	38.0	90	38	5	132	1399	1448	834	1213	187	5081	1399	1448	834	1213	187	38	5	5124
580	EDC	88.8	5.0	19.0	35.0	52	75	8	135	1293	1337	276	901	155	3962	1293	1337	276	901	155	75	8	4045
581	EDC	94.5	32.0	0.0	43.0	271	71	15	358	1423	1501	665	1053	249	4892	1423	1501	665	1053	249	71	15	4977
582	EDC	33.8	0.0	0.0	13.0	8	0	0	8	519	308	216	419	66	1528	519	308	216	419	66	0	0	1528
583	EDC	773.9	10.0	28.0	352.0	195	147	18	359	14347	13737	4832	8354	1631	42902	14347	13737	4832	8354	1631	147	18	43066
584	EDC	39.7	3.0	19.0	18.0	49	110	22	181	662	572	169	460	174	2037	662	572	169	460	174	110	22	2169
585	EDC	272.6	0.0	0.0	124.0	63	0	0	63	4524	4104	1867	2971	585	14051	4524	4104	1867	2971	585	0	0	14051
586	EDC	90.7	92.0	0.0	51.0	1497	704	128	2328	801	390	72	903	391	2556	801	390	72	903	391	704	128	3389
587	EDC	99.4	0.0	0.0	39.0	10	0	0	10	1309	611	608	584	66	3178	1309	611	608	584	66	0	0	3178
588	EDC	805.2	0.0	0.0	323.0	102	0	0	102	12293	6047	5083	5405	649	29476	12293	6047	5083	5405	649	0	0	29477
589	EDC	12.0	0.0	0.0	3.0	0	0	0	0	236	72	114	61	5	488	236	72	114	61	5	0	0	488
590	EDC	45.6	0.0	0.0	18.0	6	0	0	6	469	132	104	274	35	1014	469	132	104	274	35	0	0	1014
591	EDC	7.6	0.0	0.0	3.0	0	0	0	0	26	12	12	21	2	73	26	12	12	21	2	0	0	73
592	EDC	749.2	91.0	384.0	339.0	688	1243	75	2006	6488	1644	851	3688	729	13401	6488	1644	851	3688	729	1243	75	14718
593	EDC	382.4	28.0	0.0	151.0	226	83	5	314	4269	1195	765	2311	309	8849	4269	1195	765	2311	309	83	5	8937
594	EDC	790.2	5.0	0.0	312.0	146	8	1	155	10398	4044	3657	5692	702	24494	10398	4044	3657	5692	702	8	1	24502
595	EDC	56.4	31.0	0.0	25.0	233	104	6	342	803	253	191	313	57	1616	803	253	191	313	57	104	6	1727
596	EDC	84.8	25.0	0.0	34.0	196	258	23	477	1117	391	424	526	169	2627	1117	391	424	526	169	258	23	2908
597	EDC	234.3	278.0	0.0	106.0	1880	2494	398	4772	1915	466	218	1034	720	4353	1915	466	218	1034	720	2494	398	7245
598	EDC	30.9	35.0	0.0	14.0	232	413	81	726	212	50	24	102	109	497	212	50	24	102	109	413	81	991
599	EDC	37.6	0.0	0.0	17.0	6	0	0	6	377	140	66	230	34	848	377	140	66	230	34	0	0	847
600	EDC	453.0	130.0	0.0	205.0	1203	756	51	2010	4745	1554	1054	3121	568	11043	4745	1554	1054	3121	568	756	51	11849
601	EDC	22.0	0.0	0.0	10.0	4	0	0	4	132	402	184	931	201	1849	132	402	184	931	201	0	0	1850
602	EDC	5.3	2.0	0.0	3.0	43	47	20	110	19	12	0	24	33	86	19	12	0	24	33	47	20	155
603	EDC	19.6	2.0	0.0	11.0	73	67	17	158	242	162	0	144	67	616	242	162	0	144	67	67	17	699
604	EDC	33.1	3.0	0.0	17.0	99	11	1	111	646	630	16	244	75	1609	646	630	16	244	75	11	1	1623
605	EDC	38.0	2.0	16.0	18.0	74	71	8	152	587	462	202	276	80	1607	587	462	202	276	80	71	8	1686
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	49.4	0.0	0.0	19.0	11	0	0	11	1536	1013	484	1402	361	4796	1536	1013	484	1402	361	0	0	4796
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
609	EDC	71.7	4.0	0.0	34.0	111	163	49	323	1412	418	537	548	321	3237	1412	418	537	548	321	163	49	3448
610	EDC	0.0	1745.0	121.0	0.0	19199	7094	2389	28681	0	0	158	0	270	428	0	0	158	0	270	7094	2389	9911
611	EDC	0.0	1.0	0.0	153.0	2	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	4	4
612	EDC	0.0	3121.0	0.0	0.0	36384	12266	4782	53431	0	0	0	0	0	0	0	0	0	0	0	12266	4782	17048
613	EDC	5.2	0.0	0.0	2.0	0	0	0	0	18	1	2	16	2	39	18	1	2	16	2	0	0	39
614	EDC	2033.2	59.0	525.0	797.0	925	1717	164	2805	16415	3172	1564	14043	3779	38973	16415	3172	1564	14043	3779	1717	164	40854
615	EDC	1831.1	0.0	0.0	683.0	423	0	0	423	13184	1948	867	12988	2532	31519	13184	1948	867	12988	2532	0	0	31519
616	EDC	1990.9	321.0	517.0	787.0	3560	2871	319	6750	10804	1711	1572	14339	3774	32200	10804	1711	1572	14339	3774	2871	319	35390
617	EDC	547.2	118.0	1763.0	187.0	1119	5419	800	7338	3718	690	2451	3902	1976	12737	3718	690	2451	3902	1976	5419	800	18956
618	EDC	0.0	146.0	0.0	0.0	1113	759	104	1976	0	0	0	0	0	0	0	0	0	0	0	759	104	863
619	EDC	0.0	151.0	0.0	0.0	1189	920	214	2324	0	0	0	0	0	0	0	0	0	0	0	920	214	1134
620	EDC	0.0	188.0	2400.0	0.0	1675	7485	2052	11212	0	0	3426	0	781	4207	0	0	3426	0	781	7485	2052	13744
621	EDC	956.9	0.0	0.0	327.0	165	0	0	165	7390	1527	445	7596	1395	18353	7390	1527	445	7596	1395	0	0	18353
622	EDC	1082.7	147.0	430.0	370.0	1525	2037	187	3750	7612	1564	1002	8586	2106	20869	7612	1564	1002	8586	2106	2037	187	23094
623	EDC	0.0	16.0	0.0	0.0	125	76	6	207	0	0	0	0	0	0	0	0	0	0	0	76	6	82
624	EDC	904.6	96.0	0.0	308.0	1056	482	36	1575	6163	990	341	6706	1301	15501	6163	990	341	6706	1301	482	36	16019
625	EDC	0.0	40.0	0.0	0.0	349	138	32	519	0	0	0	0	0	0	0	0	0	0	0	138	32	170
626	EDC	382.9	98.0	0.0	164.0	1006	576	48	1631	2642	578	169	3012	712	7113	2642	578	169	3012	712	576	48	7737
627	EDC	0.0	897.0	0.0	0.0	11330	16905	8635	36870	0	0	0	0	0	0	0	0	0	0	0	16905	8635	25540
628	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
629	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
631	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
632	Project Resider	157.8	0.0	0.0	56.0	18	0	0	18	1344	276	291	1890	248	4050	1344	276	291	1890	248	0	0	4049
633	Proj Retail	0.0	34.0	0.0	0.0	557	1019	964	2540	0	0	0	0	0	0	0	0	0	0	0	1019	964	1983
634	Proj Hotel	0.0	111.0	0.0	0.0	1088	685	122	1895	0	0	0	0	0	0	0	0	0	0	0	685	122	807
635	Program Resid	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
636	Program Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2018 With Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2018 POP	2018 Emp	2018 Students	2018 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	406904	250233	57528	714665	347118	190790	96485	475893	326228	1436514	347118	190790	96485	475893	326228	250233	57528	1744275
651	gateway	0.0	0.0	0.0	0.0	3699	2679	490	6869	3822	2419	1407	4684	3230	15562	3822	2419	1407	4684	3230	2679	490	18731
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	47320	33480	6795	87595	45553	25211	12030	59326	41741	183861	45553	25211	12030	59326	41741	33480	6795	224136
654	gateway	0.0	0.0	0.0	0.0	2335	1587	328	4250	2226	1302	583	2935	2004	9051	2226	1302	583	2935	2004	1587	328	10965
655	gateway	0.0	0.0	0.0	0.0	28100	17996	4095	50191	24424	14524	7419	34740	23507	104615	24424	14524	7419	34740	23507	17996	4095	126705
656	gateway	0.0	0.0	0.0	0.0	6094	2115	483	8693	2930	2063	1433	4673	3033	14132	2930	2063	1433	4673	3033	2115	483	16730
657	gateway	0.0	0.0	0.0	0.0	2910	1235	277	4422	1711	1041	708	2433	1632	7525	1711	1041	708	2433	1632	1235	277	9037
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	926	399	79	1404	563	376	179	746	499	2363	563	376	179	746	499	399	79	2841
660	gateway	0.0	0.0	0.0	0.0	27914	15313	3561	46787	20559	12331	6482	30447	20310	90129	20559	12331	6482	30447	20310	15313	3561	109003
661	gateway	0.0	0.0	0.0	0.0	20249	11716	2745	34710	15829	9454	4746	23112	15479	68620	15829	9454	4746	23112	15479	11716	2745	83081
662	gateway	0.0	0.0	0.0	0.0	103857	62924	13903	180685	84284	41649	25650	116228	78946	346755	84284	41649	25650	116228	78946	62924	13903	423584
663	gateway	0.0	0.0	0.0	0.0	67196	43286	9531	120013	57631	26121	17333	77384	53689	232158	57631	26121	17333	77384	53689	43286	9531	284975
664	gateway	0.0	0.0	0.0	0.0	48702	40215	7624	96542	55321	22356	13382	64620	45075	200754	55321	22356	13382	64620	45075	40215	7624	248593
665	gateway	0.0	0.0	0.0	0.0	28029	16888	3207	48124	22565	8031	5852	25521	17625	79595	22565	8031	5852	25521	17625	16888	3207	99689
666	gateway	0.0	0.0	0.0	0.0	13358	9797	1831	24986	13312	4999	3174	14886	10346	46716	13312	4999	3174	14886	10346	9797	1831	58345
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	72120	13643	85764	105778	51510	15493	117518	85681	375980	105778	51510	15493	117518	85681	72120	13643	461743
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	23818	19749	4539	48106	33452	17328	7305	33570	18274	109929	33452	17328	7305	33570	18274	19749	4539	134217
672	gateway	0.0	0.0	0.0	0.0	0	9310	1572	10882	9595	5900	1651	12416	8427	37989	9595	5900	1651	12416	8427	9310	1572	48871
673	gateway	0.0	0.0	0.0	0.0	0	3557	614	4171	4196	2806	764	5070	3612	16448	4196	2806	764	5070	3612	3557	614	20619
674	gateway	0.0	0.0	0.0	0.0	0	8479	1454	9933	9356	5685	1637	10163	7901	34741	9356	5685	1637	10163	7901	8479	1454	44675
EDC Total		138,147.5	33,320.0	21,477.0	55,860.0	403,899.0	361,105.0	111,288.0	876,279.0	1,221,134.0	359,288.0	195,671.0	1,022,147.0	252,105.0	3,050,346.0	1,221,134.0	359,288.0	195,671.0	1,022,147.0	252,105.0	361,105.0	111,288.0	3,522,738.0

2018 No Project El Dorado County VMT/Employee **26.3**
85% Threshold **22.3**

Project VMT/Employee **30.6**
Adjusted Project VMT/Employee **21.8**
Adjusted by removing 112/145*HBW VMT for employee housing
(Assumes 2 hotel employees per cottage)

2018 No Project El Dorado County VMT/Resident **22.1**
85% Threshold **18.8**

Project VMT/Resident **25.7**
Adjusted Project VMT/Resident **17.1**
(Adjusted by removing HBW VMT for Employee housing)

2018 No Project El Dorado County VMT/Service Population **20.6**

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	97.1	16.0	0.0	46.1	413	927	278	1617	1196	518	615	1143	632	4104	1196	518	615	1143	632	927	278	5309
2	EDC	1204.8	34.0	214.0	533.0	487	678	35	1200	15035	2665	659	5931	1199	25490	15035	2665	659	5931	1199	678	35	26202
3	EDC	94.3	0.0	0.0	38.8	31	0	0	31	1008	534	314	1625	399	3879	1008	534	314	1625	399	0	0	3880
4	EDC	34.8	2.0	0.0	16.0	60	123	28	211	428	284	254	436	138	1539	428	284	254	436	138	123	28	1691
5	EDC	73.0	0.0	0.0	33.0	22	0	0	22	1104	1087	452	1178	261	4081	1104	1087	452	1178	261	0	0	4082
6	EDC	651.0	9.0	0.0	281.5	350	87	18	456	6572	1983	503	5610	1074	15742	6572	1983	503	5610	1074	87	18	15847
7	EDC	1130.1	71.0	0.0	521.9	1056	544	57	1656	13055	7417	1145	8909	1751	32277	13055	7417	1145	8909	1751	544	57	32878
8	EDC	35.4	60.1	0.0	14.1	820	646	123	1588	304	70	16	193	133	718	304	70	16	193	133	646	123	1485
9	EDC	1230.2	117.0	283.0	491.2	1878	1927	185	3990	14336	4583	687	10123	2138	31867	14336	4583	687	10123	2138	1927	185	33979
10	outside EDC	4030.5	55.6	476.0	1571.0	1744	1501	149	3394	26345	5163	2669	31329	7256	72762	26345	5163	2669	31329	7256	1501	149	74412
11	outside EDC	7196.5	607.8	1963.0	2805.0	8750	10454	1336	20540	40183	6238	5807	49643	14427	116298	40183	6238	5807	49643	14427	10454	1336	128088
12	outside EDC	4509.8	264.5	1790.0	1644.0	3733	5563	692	9989	25218	2461	3805	27476	8194	67155	25218	2461	3805	27476	8194	5563	692	73409
13	outside EDC	2683.6	0.0	0.0	989.0	636	0	0	636	18381	2338	1619	17499	4167	44004	18381	2338	1619	17499	4167	0	0	44004
14	outside EDC	4136.1	80.8	855.0	1517.0	1677	2397	263	4337	26980	4239	3608	26193	7350	68370	26980	4239	3608	26193	7350	2397	263	71030
15	outside EDC	28.6	0.0	0.0	10.0	2	0	0	2	217	33	24	253	34	560	217	33	24	253	34	0	0	561
16	outside EDC	1173.3	1089.3	0.0	479.0	13457	11902	4060	29419	5706	796	481	7632	6397	21013	5706	796	481	7632	6397	11902	4060	36974
17	outside EDC	1622.6	0.0	0.0	637.0	554	0	0	554	15797	5910	2693	17603	2760	44762	15797	5910	2693	17603	2760	0	0	44763
18	outside EDC	4528.9	27.9	238.0	1879.0	1739	962	114	2815	38439	14964	4962	41203	11487	111055	38439	14964	4962	41203	11487	962	114	112131
19	outside EDC	1111.2	86.1	739.0	491.0	1242	2513	419	4173	6661	2867	1398	9487	3421	23834	6661	2867	1398	9487	3421	2513	419	26766
20	outside EDC	3.5	5.0	0.0	1.0	63	20	2	85	6	5	9	31	5	56	6	5	9	31	5	20	2	78
21	outside EDC	2.0	111.9	0.0	1.0	1517	532	320	2369	10	4	0	11	18	43	10	4	0	11	18	532	320	895
22	outside EDC	2.0	22.7	0.0	2.0	345	219	230	794	22	4	0	12	45	83	22	4	0	12	45	219	230	532
23	outside EDC	277.4	375.3	2047.0	99.0	6275	6443	2626	15344	1208	531	9480	2666	6095	19980	1208	531	9480	2666	6095	6443	2626	29049
24	outside EDC	124.0	110.9	0.0	124.0	2070	1189	838	4097	1225	373	0	967	1844	4409	1225	373	0	967	1844	1189	838	6436
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	2004.7	86.0	0.0	885.0	1937	1354	224	3515	12875	6785	2468	21386	7171	50685	12875	6785	2468	21386	7171	1354	224	52263
27	outside EDC	5.0	21.9	0.0	2.0	285	133	53	471	24	10	0	39	33	106	24	10	0	39	33	133	53	292
28	outside EDC	322.4	6.0	0.0	124.0	209	26	4	238	2285	976	623	4204	1089	9176	2285	976	623	4204	1089	26	4	9207
29	outside EDC	205.7	5.0	0.0	72.0	131	23	3	157	1494	692	505	3022	716	6427	1494	692	505	3022	716	23	3	6455
30	outside EDC	0.0	133.0	0.0	0.0	1677	817	253	2747	0	0	0	0	0	0	0	0	0	0	0	817	253	1070
31	outside EDC	119.4	45.7	0.0	46.0	631	342	50	1024	1138	472	270	1747	534	4161	1138	472	270	1747	534	342	50	4553
32	outside EDC	2148.2	0.0	0.0	821.0	648	0	0	648	18489	6431	2314	20402	5457	53093	18489	6431	2314	20402	5457	0	0	53093
33	outside EDC	56.0	0.0	0.0	22.0	11	0	0	11	459	166	65	546	136	1373	459	166	65	546	136	0	0	1372
34	outside EDC	176.4	15.7	0.0	78.0	388	127	20	535	2041	1035	366	3247	982	7671	2041	1035	366	3247	982	127	20	7818
35	outside EDC	2429.2	183.2	0.0	943.0	3446	743	102	4291	11121	3628	2757	19466	5122	42093	11121	3628	2757	19466	5122	743	102	42939
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2198	864	456	3518	0	0	0	0	0	0	0	0	0	0	0	864	456	1320
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1560.6	259.2	0.0	680.0	3047	1043	110	4200	6387	1093	593	8578	1901	18553	6387	1093	593	8578	1901	1043	110	19705
40	outside EDC	2268.4	1871.7	0.0	979.0	17812	17125	6279	41215	10050	915	626	9998	9676	31266	10050	915	626	9998	9676	17125	6279	54669
41	outside EDC	1292.1	203.3	0.0	559.0	3104	904	148	4156	6703	1950	1087	11148	3589	24477	6703	1950	1087	11148	3589	904	148	25529
42	outside EDC	4511.7	691.3	447.0	1838.0	10878	10353	2468	23698	23551	7470	3510	36009	17067	87607	23551	7470	3510	36009	17067	10353	2468	100428
43	outside EDC	2109.0	58.2	497.0	825.0	1089	1554	216	2859	14583	4218	1556	15976	5021	41354	14583	4218	1556	15976	5021	1554	216	43124
44	outside EDC	6452.0	463.5	2387.0	2533.0	6203	10661	1879	18742	38993	11185	5547	45276	17866	118868	38993	11185	5547	45276	17866	10661	1879	131407
45	outside EDC	2600.1	1639.2	125.0	1136.0	18212	18358	6990	43560	11138	1022	1050	12444	11665	37319	11138	1022	1050	12444	11665	18358	6990	62667
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	3453.7	0.0	0.0	49671	16436	15614	81720	0	0	0	0	0	0	0	0	0	0	0	16436	15614	32050
48	outside EDC	3165.2	172.0	549.0	1248.0	3028	1816	327	5171	9385	4252	4249	23766	7783	49436	9385	4252	4249	23766	7783	1816	327	51578
49	outside EDC	357.5	4925.2	0.0	144.0	60760	17684	11937	90382	964	368	421	2777	3725	8254	964	368	421	2777	3725	17684	11937	37876
50	outside EDC	2608.3	1467.3	1537.0	1029.0	19739	6156	1406	27300	7040	3468	6398	18523	8511	43939	7040	3468	6398	18523	8511	6156	1406	51502
51	outside EDC	4421.3	1254.2	384.0	1837.0	16653	11553	4181	32386	13284	4133	3054	30018	19186	69674	13284	4133	3054	30018	19186	11553	4181	85409
52	outside EDC	674.0	279.6	3880.0	299.0	3449	8339	2310	14099	2490	917	10877	4866	5545	24695	2490	917	10877	4866	5545	8339	2310	35344
53	outside EDC	4029.1	1058.8	482.0	1563.0	14856	8863	2779	26498	12701	4659	4089	28621	16584	66653	12701	4659	4089	28621	16584	8863	2779	78296
54	outside EDC	1199.8	1874.4	0.0	486.0	25603	6161	1488	33251	4075	2371	1175	11028	4862	23511	4075	2371	1175	11028	4862	6161	1488	31160
55	outside EDC	1793.9	869.6	2114.0	779.0	13015	8876	2980	24872	6419	3574	9002	16391	12844	48230	6419	3574	9002	16391	12844	8876	2980	60086
56	outside EDC	3224.3	282.5	0.0	1203.0	5619	1918	373	7910	9461	5647	4737	29647	10065	59557	9461	5647	4737	29647	10065	1918	373	61848
57	outside EDC	595.3	8063.1	0.0	268.0	105936	24017	12599	142551	1268	1149	655	5508	5211	13793	1268	1149	655	5508	5211	24017	12599	50407
58	outside EDC	1574.4	424.7	0.0	608.0	6829	3412	1124	11365	4895	2746	2167	14114	8397	32319	4895	2746	2167	14114	8397	3412	1124	36855
59	outside EDC	5.0	9.4	0.0	2.0	96	31	8	134	14	3	10	40	20	86	14	3	10	40	20	31	8	126
60	outside EDC	508.0	4670.1	0.0	238.0	62770	15839	8896	87504	1608	927	359	4176	4461	11530	1608	927	359	4176	4461	15839	8896	36266
61	outside EDC	5414.5	1410.8	404.0	2304.0	21727	10185	2975	34887	19323	9348	6978	44080	24617	104345	19323	9348	6978	44080	24617	10185	2975	117506
62	outside EDC	13.3	1648.9	0.0	4.0	20552	5814	3790	30157	37	18	21	107	141	324	37	18	21	107	141	5814	3790	9928
63	outside EDC	877.8	3971.1	0.0	359.0	46774	15841	8527	71143	2889	1398	1017	7346	7632	20282	2889	1398	1017	7346	7632	15841	8527	44650
64	outside EDC	3935.6	648.5	0.0	1582.0	9005	3400	660	13065	15695	5881	3586	30056	11148	66366	15695	5881	3586	30056	11148	3400	660	70426
65	outside EDC	356.2	0.0	0.0	138.0	121	0	0	121	2173	688	406	3221	1012	7500	2173	688	406	3221	1012	0	0	7500
66	outside EDC	1998.1	192.2	346.0	837.0	3072	2222	543	5837	5896	2781	2314	14146	6411	31548	5896	2781	2314	14146	6411	2222	543	34313
67	outside EDC	2626.8	935.5	0.0	1210.0	16038	7691	2497	26227	8157	5408	2879	24556	14208	55207	8157	5408	2879	24556	14208	7691	2497	65396
68	outside EDC	1475.8	820.5	0.0	707.0	9868	3709	1120	14698	4145	2327	1045	10777	5801	24094	4145	2327	1045	10777	5801	3709	1120	28924
69	outside EDC	6315.2	7270.8	416.0	2381.0	104797	26128	9951	140875	17231	5912	7605	40146	28570	99465	17231	5912	7605	40146	28570	26128	9951	135543
70	outside EDC	0.0	7350.2	2505.0	0.0	93570	22451	14095	130117	0	0	2548	0	2026	4573	0	0	2548	0	2026	22451	14095	41120
71	outside EDC	7725.4	828.3	1399.0	2980.0	15633	12050	2281	29964	42670	16422	9032	75852	27617	171592	42670	16422	9032	75852	27617	12050	2281	185924
72	outside EDC	220.4	8975.0	0.0	85.0	130933	26926	21105	178964	497	272	219	1534	2366	4888	497	272	219	1534	2366	26926	21105	52919

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
73	outside EDC	0.0	5746.2	0.0	0.0	68099	13762	7777	89638	0	0	0	0	0	0	0	0	0	0	0	13762	7777	21539
74	outside EDC	1134.7	5779.3	0.0	464.0	75882	19372	13461	108716	2760	1041	1050	7731	9828	22410	2760	1041	1050	7731	9828	19372	13461	55243
75	outside EDC	4513.9	2939.3	0.0	1937.0	39963	7369	1254	48586	12016	5328	4456	30864	9213	61877	12016	5328	4456	30864	9213	7369	1254	70500
76	outside EDC	1388.8	297.3	0.0	518.0	4543	3203	1226	8972	3853	1266	1219	9528	6385	22252	3853	1266	1219	9528	6385	3203	1226	26680
77	outside EDC	2910.5	1701.1	993.0	1158.0	22814	8592	2503	33909	8321	4016	4978	22492	12228	52035	8321	4016	4978	22492	12228	8592	2503	63130
78	outside EDC	251.5	1804.6	73.0	107.0	24803	13924	16495	55222	810	220	217	1723	4112	7081	810	220	217	1723	4112	13924	16495	37501
79	outside EDC	0.0	20.4	0.0	0.0	223	136	156	516	0	0	0	0	0	0	0	0	0	0	0	136	156	292
80	outside EDC	0.0	1473.9	0.0	0.0	17243	5136	4887	27266	0	0	0	0	0	0	0	0	0	0	0	5136	4887	10023
81	outside EDC	0.0	6290.8	0.0	0.0	76766	20432	17478	114675	0	0	0	0	0	0	0	0	0	0	0	20432	17478	37910
82	outside EDC	0.0	1787.3	0.0	0.0	20308	6130	4153	30591	0	0	0	0	0	0	0	0	0	0	0	6130	4153	10283
83	outside EDC	1418.7	219.7	1881.0	545.0	3666	5179	1045	9890	8195	2638	5956	13104	6126	36018	8195	2638	5956	13104	6126	5179	1045	42243
84	outside EDC	2887.3	407.0	0.0	1236.0	5877	3557	882	10317	12597	2964	1962	19207	9511	46242	12597	2964	1962	19207	9511	3557	882	50680
85	outside EDC	3258.6	262.1	905.0	1303.0	4192	4476	982	9650	14650	3896	3543	23049	10258	55395	14650	3896	3543	23049	10258	4476	982	60854
86	outside EDC	4494.6	774.9	1521.0	1977.0	10670	10287	2908	23865	16192	4403	5056	29314	16177	71142	16192	4403	5056	29314	16177	10287	2908	84337
87	outside EDC	4961.4	901.4	313.0	2291.0	12958	7020	1924	21902	15010	4687	4002	33648	16205	73551	15010	4687	4002	33648	16205	7020	1924	82496
88	outside EDC	2813.1	761.9	0.0	1127.0	10610	7896	2506	21012	12727	3149	2302	20195	13018	51392	12727	3149	2302	20195	13018	7896	2506	61793
89	outside EDC	0.0	292.1	0.0	0.0	3901	1706	1445	7052	0	0	0	0	0	0	0	0	0	0	0	1706	1445	3151
90	outside EDC	210.2	1019.5	0.0	123.0	16367	8962	10352	35681	565	256	124	1549	3452	5947	565	256	124	1549	3452	8962	10352	25260
91	outside EDC	1739.8	4670.1	34.0	679.0	49826	19730	8446	78002	6869	1673	1583	12000	10613	32738	6869	1673	1583	12000	10613	19730	8446	60914
92	outside EDC	2784.2	141.5	836.0	1159.0	2626	2337	415	5378	13711	3976	4108	21737	8006	51537	13711	3976	4108	21737	8006	2337	415	54290
93	outside EDC	1029.6	249.9	0.0	409.0	4188	1939	342	6469	7022	1319	850	8531	3325	21048	7022	1319	850	8531	3325	1939	342	23328
94	outside EDC	12.0	0.0	0.0	6.0	0	0	0	0	159	25	0	68	29	281	159	25	0	68	29	0	0	281
95	outside EDC	0.0	27.2	0.0	0.0	337	157	76	570	0	0	0	0	0	0	0	0	0	0	0	157	76	233
96	outside EDC	2827.4	456.4	408.0	1151.0	8321	6880	1181	16382	20492	3207	1946	25060	9624	60330	20492	3207	1946	25060	9624	6880	1181	68390
97	outside EDC	3283.3	0.0	0.0	1289.0	1071	0	0	1071	28867	10375	4664	32660	7751	84318	28867	10375	4664	32660	7751	0	0	84317
98	outside EDC	913.1	2957.6	0.0	348.0	32395	15796	6442	54633	4038	540	672	5525	5587	16362	4038	540	672	5525	5587	15796	6442	38600
99	outside EDC	1939.1	1040.5	501.0	791.0	11527	5045	964	17535	9752	1224	1828	11285	5045	29135	9752	1224	1828	11285	5045	5045	964	35143
100	outside EDC	1218.2	157.4	0.0	486.0	2491	1452	216	4159	10449	3081	1552	13083	4208	32373	10449	3081	1552	13083	4208	1452	216	34041
101	outside EDC	3677.1	617.7	467.0	1418.0	7741	5607	903	14251	25260	7429	3157	30620	10847	77313	25260	7429	3157	30620	10847	5607	903	83823
102	outside EDC	195.6	53.0	0.0	76.0	614	276	40	930	1316	445	262	2076	586	4685	1316	445	262	2076	586	276	40	5001
103	outside EDC	5354.4	511.2	765.0	2275.0	6743	8522	1389	16653	35126	11276	2876	40284	14682	104243	35126	11276	2876	40284	14682	8522	1389	114155
104	outside EDC	267.0	0.0	0.0	109.0	89	0	0	89	1979	575	345	2769	693	6361	1979	575	345	2769	693	0	0	6361
105	outside EDC	3393.4	70.9	0.0	1365.0	1894	1254	165	3314	26476	8088	2677	29143	8570	74954	26476	8088	2677	29143	8570	1254	165	76373
106	outside EDC	0.0	70.3	0.0	0.0	743	417	104	1265	0	0	0	0	0	0	0	0	0	0	0	417	104	521
107	outside EDC	4863.6	3741.3	927.0	2202.0	46444	22524	5594	74562	19927	3911	4933	36180	17636	82587	19927	3911	4933	36180	17636	22524	5594	110705
108	outside EDC	1796.3	842.0	0.0	673.0	10543	3412	451	14407	10527	1076	2058	12862	3752	30275	10527	1076	2058	12862	3752	3412	451	34138
109	outside EDC	1569.7	701.7	0.0	639.0	10843	6809	2111	19763	8405	1655	1674	13174	8409	33319	8405	1655	1674	13174	8409	6809	2111	42237
110	outside EDC	620.8	1922.3	0.0	262.0	26185	10228	3702	40115	2748	768	687	5654	4161	14017	2748	768	687	5654	4161	10228	3702	27948
111	outside EDC	1186.8	1667.5	0.0	517.0	26194	22437	14911	63542	5042	717	1002	8725	12296	27782	5042	717	1002	8725	12296	22437	14911	65130
112	outside EDC	2018.4	2144.3	194.0	749.0	30470	22618	10982	64070	10377	1121	2238	13869	15558	43163	10377	1121	2238	13869	15558	22618	10982	76763
113	outside EDC	0.0	4221.5	0.0	0.0	44225	16102	7914	68240	0	0	0	0	0	0	0	0	0	0	0	16102	7914	24016
114	outside EDC	2119.4	711.2	0.0	801.0	7111	3102	387	10600	11186	1486	1168	12275	3607	29722	11186	1486	1168	12275	3607	3102	387	33211
115	outside EDC	5916.2	1339.3	1547.0	2306.0	20969	20452	4560	45981	34567	6110	6144	44850	22455	114126	34567	6110	6144	44850	22455	20452	4560	139138
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1646.6	1491.8	2300.0	585.0	15903	10382	1839	28123	8398	1362	4378	10959	5038	30136	8398	1362	4378	10959	5038	10382	1839	42356
118	outside EDC	6343.0	186.4	551.0	2399.0	3401	2913	394	6708	28172	4236	3699	37001	10564	83673	28172	4236	3699	37001	10564	2913	394	86979
119	outside EDC	1272.5	6545.1	0.0	509.0	58497	24334	7866	90696	6130	855	558	7343	6162	21046	6130	855	558	7343	6162	24334	7866	53248
120	outside EDC	289.9	5099.5	0.0	113.0	51774	37801	22432	112007	1215	136	104	1640	3806	6900	1215	136	104	1640	3806	37801	22432	67134
121	outside EDC	4220.4	1760.6	651.0	1645.0	20229	24507	7486	52222	18781	2061	2635	23119	17137	63732	18781	2061	2635	23119	17137	24507	7486	95726
122	outside EDC	1805.8	1224.4	3643.0	771.0	11764	11772	2179	25715	7366	1086	735	9820	4292	23300	7366	1086	735	9820	4292	11772	2179	37250
123	outside EDC	569.2	855.2	0.0	208.0	8842	9033	3867	21742	2754	272	301	3137	3720	10184	2754	272	301	3137	3720	9033	3867	23084
124	outside EDC	2653.4	461.3	401.0	1243.0	6778	8337	1897	17012	15668	2789	2544	18695	10311	50007	15668	2789	2544	18695	10311	8337	1897	60241
125	outside EDC	834.5	1004.3	0.0	423.0	11219	10361	5134	26714	3423	383	245	4048	4991	13090	3423	383	245	4048	4991	10361	5134	28585
126	outside EDC	406.0	279.1	0.0	185.0	3503	3117	1222	7842	2170	211	186	2126	2158	6851	2170	211	186	2126	2158	3117	1222	11190
127	outside EDC	1765.6	117.0	0.0	828.0	1814	1281	201	3297	11735	1543	1001	10818	4263	29361	11735	1543	1001	10818	4263	1281	201	30842
128	outside EDC	2039.9	767.4	0.0	990.0	10373	9905	2668	22946	13223	1831	1305	13841	9323	39522	13223	1831	1305	13841	9323	9905	2668	52096
129	outside EDC	2269.4	0.0	0.0	1030.0	707	0	0	707	13744	2834	2016	16181	4925	39701	13744	2834	2016	16181	4925	0	0	39700
130	outside EDC	924.4	478.2	578.0	402.0	4450	4901	1382	10733	3698	327	939	3976	3018	11958	3698	327	939	3976	3018	4901	1382	18241
131	outside EDC	1290.2	1327.4	1635.0	629.0	12344	11276	3311	26931	5459	597	2912	6154	5484	20606	5459	597	2912	6154	5484	11276	3311	35193
132	outside EDC	925.3	300.9	0.0	409.0	3858	3292	761	7911	5436	970	642	6676	3581	17304	5436	970	642	6676	3581	3292	761	21358
133	outside EDC	5279.7	1484.3	1837.0	2116.0	14562	16467	3662	34690	23444	2006	3232	23049	13319	65049	23444	2006	3232	23049	13319	16467	3662	85179
134	outside EDC	2660.9	1568.3	0.0	1151.0	17022	7812	1289	26123	10295	1778	947	14653	5259	32931	10295	1778	947	14653	5259	7812	1289	42033
135	outside EDC	0.0	2114.0	0.0	0.0	21150	8067	2020	31236	0	0	0	0	0	0	0	0	0	0	0	8067	2020	10087
136	outside EDC	1710.8	110.3	0.0	670.0	1835	1676	257	3768	11457	1445	1090	10861	4177	29031	11457	1445	1090	10861	4177	1676	257	30963
137	outside EDC	6779.1	673.0	610.0	2354.0	9134	12856	2243	24233	37388	4851	5220	40417	17278	105154	37388	4851	5220	40417	17278	12856	2243	120253
138	EDC	378.1	25.0	0.0	173.0	454	155	11	620	2196	377	129	2145	455	5302	2196	377	129	2145	455	155	11	5468
139	EDC	133.2	106.9	0.0	62.0	1433	1250	277	2959	620	142	14	574	543	1893	620	142	14	574	543	1250	277	3420
140	EDC	22.0	442.5	0.0	10.0	7015	6764	3407	17185	47	9	1	47	212	316	47	9	1	47	212	6764	3407	10487
141	EDC	49.2	2.0	0.0	21.0	58	50	5	114	662	183	123	758	219	1946	662	183	123	758	219	50	5	2000
142	EDC	348.9	0.0	0.0	156.9	141	0	0	141	3139	809	185	2916	730	7778	3139	809	185	2916	730	0	0	7779
143	EDC	210.8	4.0	0.0	94.8	104	6	0	110	1510	333	53	1307	313	3515	1510	333	53	1307	313	6	0	3522
144	EDC	186.9	19.0	0.0	74.7	277	84	11	372	1875	304	70	1225	294	3768	1875	304	70	1225	294	84	11	3863

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
145	EDC	69.3	0.0	0.0	30.0	8	0	0	8	368	47	16	218	46	696	368	47	16	218	46	0	0	695
146	EDC	146.8	58.7	25.0	64.0	793	644	98	1534	692	128	72	610	377	1880	692	128	72	610	377	644	98	2621
147	EDC	364.7	0.0	0.0	159.0	104	0	0	104	1878	324	86	1711	344	4344	1878	324	86	1711	344	0	0	4343
148	outside EDC	5292.4	137.7	0.0	2260.0	5641	1411	158	7210	61998	30728	16471	80289	21328	210814	61998	30728	16471	80289	21328	1411	158	212383
149	EDC	125.8	214.2	0.0	44.9	3150	3236	958	7344	904	93	23	693	958	2671	904	93	23	693	958	3236	958	6865
150	EDC	257.8	3.0	0.0	108.8	147	33	3	183	2966	691	282	3251	803	7992	2966	691	282	3251	803	33	3	8029
151	EDC	66.8	0.0	0.0	23.0	5	0	0	5	736	175	124	624	77	1735	736	175	124	624	77	0	0	1736
152	EDC	391.5	99.0	0.0	161.4	1524	1381	178	3083	2980	389	98	2805	1134	7406	2980	389	98	2805	1134	1381	178	8965
153	EDC	411.6	32.5	0.0	191.5	635	448	51	1134	2597	580	127	2747	938	6988	2597	580	127	2747	938	448	51	7488
154	EDC	245.5	16.0	0.0	104.4	203	58	5	266	1409	157	125	1591	311	3592	1409	157	125	1591	311	58	5	3656
155	EDC	285.3	0.0	0.0	108.2	63	0	0	63	2206	357	97	2140	373	5174	2206	357	97	2140	373	0	0	5173
156	EDC	68.0	0.0	0.0	27.0	22	0	0	22	835	288	216	1131	211	2681	835	288	216	1131	211	0	0	2681
157	EDC	790.4	0.0	0.0	273.1	127	0	0	127	4723	866	171	5530	971	12262	4723	866	171	5530	971	0	0	12261
158	EDC	1409.8	72.0	0.0	614.8	1047	348	27	1421	9871	1305	764	8849	2017	22806	9871	1305	764	8849	2017	348	27	23181
159	EDC	993.8	1.0	0.0	409.6	236	0	0	236	7323	960	595	6270	1208	16355	7323	960	595	6270	1208	0	0	16356
160	EDC	847.9	0.0	0.0	349.5	245	0	0	245	6590	925	172	5714	1147	14547	6590	925	172	5714	1147	0	0	14548
161	EDC	283.3	0.0	0.0	109.0	53	0	0	53	2507	538	204	2646	538	6432	2507	538	204	2646	538	0	0	6433
162	EDC	4465.2	0.0	0.0	1503.0	906	0	0	906	35772	8316	2281	35864	6241	88473	35772	8316	2281	35864	6241	0	0	88474
163	EDC	430.2	230.0	0.0	144.8	2796	3710	959	7465	2848	429	179	3225	2340	9021	2848	429	179	3225	2340	3710	959	13690
164	EDC	0.0	2237.6	0.0	0.0	21936	8341	3468	33746	0	0	0	0	0	0	0	0	0	0	0	8341	3468	11809
165	EDC	1313.9	0.0	0.0	528.8	345	0	0	345	8422	1388	636	10118	2163	22728	8422	1388	636	10118	2163	0	0	22727
166	EDC	1954.3	58.8	756.0	762.0	1077	2060	244	3381	11762	1997	1993	13392	3868	33012	11762	1997	1993	13392	3868	2060	244	35316
167	EDC	3477.7	55.2	256.0	1497.3	1622	740	73	2435	23111	4534	1349	24254	6042	59290	23111	4534	1349	24254	6042	740	73	60103
168	EDC	2628.9	9.0	0.0	1131.8	740	24	2	766	13910	1898	780	16128	2669	35385	13910	1898	780	16128	2669	24	2	35411
169	EDC	531.7	1939.0	0.0	214.0	20654	23724	12823	57201	2508	322	190	3224	6227	12471	2508	322	190	3224	6227	23724	12823	49018
170	EDC	1217.5	1590.4	0.0	490.0	14739	6285	854	21878	6001	856	467	7782	2592	17698	6001	856	467	7782	2592	6285	854	24837
171	EDC	1080.7	93.7	0.0	441.0	1230	415	41	1686	7152	1184	473	8058	1884	18752	7152	1184	473	8058	1884	415	41	19207
172	EDC	0.0	178.2	0.0	0.0	1784	2008	1448	5240	0	0	0	0	0	0	0	0	0	0	0	2008	1448	3456
173	EDC	0.0	547.0	0.0	0.0	5554	7068	5007	17630	0	0	0	0	0	0	0	0	0	0	0	7068	5007	12075
174	EDC	37.8	11.0	52.0	15.0	199	289	37	526	422	144	189	561	199	1515	422	144	189	561	199	289	37	1841
175	EDC	25.8	5.0	0.0	10.9	63	22	1	87	315	58	31	277	46	727	315	58	31	277	46	22	1	750
176	EDC	76.8	0.0	0.0	32.4	21	0	0	21	845	177	75	960	207	2265	845	177	75	960	207	0	0	2264
177	EDC	66.6	7.0	0.0	26.4	92	32	3	126	588	154	59	790	162	1753	588	154	59	790	162	32	3	1788
178	EDC	94.6	0.0	0.0	36.9	22	0	0	22	1040	210	98	1174	223	2745	1040	210	98	1174	223	0	0	2745
179	EDC	47.1	0.0	0.0	18.1	2	0	0	2	359	55	20	322	53	808	359	55	20	322	53	0	0	809
180	EDC	1173.1	0.0	0.0	457.0	346	0	0	346	11332	2125	811	10688	2448	27404	11332	2125	811	10688	2448	0	0	27404
181	EDC	274.3	81.0	453.0	104.6	875	2024	282	3181	2116	365	629	2037	967	6115	2116	365	629	2037	967	2024	282	8420
182	EDC	3251.4	0.0	0.0	1240.0	781	0	0	781	26145	4355	1507	22733	4627	59366	26145	4355	1507	22733	4627	0	0	59367
183	EDC	667.9	0.0	0.0	284.1	184	0	0	184	4590	1084	313	5737	1182	12906	4590	1084	313	5737	1182	0	0	12906
184	EDC	1039.1	461.2	1110.0	396.3	5293	8455	1244	14992	7821	1228	1516	7449	3711	21726	7821	1228	1516	7449	3711	8455	1244	31424
185	EDC	346.2	0.0	0.0	150.9	56	0	0	56	2486	431	129	2320	502	5868	2486	431	129	2320	502	0	0	5868
186	EDC	258.1	185.1	0.0	112.5	2156	2729	595	5480	1752	280	90	1681	1258	5060	1752	280	90	1681	1258	2729	595	8385
187	EDC	559.9	85.0	0.0	244.2	981	441	36	1458	3836	515	250	3726	874	9200	3836	515	250	3726	874	441	36	9678
188	EDC	468.1	69.0	0.0	204.1	760	364	23	1147	2900	343	203	2778	513	6737	2900	343	203	2778	513	364	23	7124
189	EDC	103.0	0.0	0.0	36.9	25	0	0	25	1098	331	176	1486	285	3377	1098	331	176	1486	285	0	0	3376
190	EDC	704.5	0.0	0.0	252.4	148	0	0	148	5897	1035	444	6139	1124	14639	5897	1035	444	6139	1124	0	0	14639
191	EDC	75.4	0.0	0.0	27.0	5	0	0	5	570	90	36	574	88	1357	570	90	36	574	88	0	0	1358
192	EDC	69.2	0.0	0.0	25.0	5	0	0	5	506	87	29	457	83	1161	506	87	29	457	83	0	0	1162
193	EDC	2977.0	93.0	0.0	1135.3	1489	559	49	2097	22428	4838	871	21701	4785	54623	22428	4838	871	21701	4785	559	49	55231
194	EDC	1297.4	0.0	0.0	439.0	233	0	0	233	8880	1935	173	9147	1644	21778	8880	1935	173	9147	1644	0	0	21779
195	EDC	26.5	46.6	0.0	10.0	536	809	404	1749	169	29	16	170	290	674	169	29	16	170	290	809	404	1887
196	outside EDC	3646.7	88.2	593.0	1309.0	1678	2202	210	4091	28170	5875	2683	28014	6881	71625	28170	5875	2683	28014	6881	2202	210	74035
197	EDC	225.1	0.0	0.0	85.1	34	0	0	34	1710	314	112	1660	354	4151	1710	314	112	1660	354	0	0	4150
198	EDC	2475.8	470.9	740.0	887.0	5002	10123	1467	16592	17915	2595	1772	17712	7088	47082	17915	2595	1772	17712	7088	10123	1467	58672
199	EDC	173.1	120.0	0.0	62.0	1384	2246	766	4396	1201	219	104	1283	1289	4096	1201	219	104	1283	1289	2246	766	7108
200	EDC	18.5	113.0	0.0	7.0	1208	1382	702	3292	109	21	6	117	239	492	109	21	6	117	239	1382	702	2576
201	EDC	443.3	301.0	0.0	150.0	2679	1791	188	4658	2953	601	190	3270	905	7919	2953	601	190	3270	905	1791	188	9898
202	EDC	2116.9	199.0	0.0	758.4	2466	3544	404	6414	16204	2475	1148	16523	4838	41188	16204	2475	1148	16523	4838	3544	404	45136
203	EDC	3669.5	139.0	0.0	1268.1	1898	819	56	2773	29705	6791	1808	29231	5443	72978	29705	6791	1808	29231	5443	819	56	73853
204	EDC	1048.1	40.9	815.0	362.0	548	2249	225	3021	6632	1361	1328	7200	1969	18489	6632	1361	1328	7200	1969	2249	225	20964
205	EDC	327.1	80.0	0.0	113.0	737	360	29	1126	1944	351	105	2391	438	5229	1944	351	105	2391	438	360	29	5618
206	EDC	147.7	0.0	0.0	51.1	14	0	0	14	910	185	21	1014	157	2287	910	185	21	1014	157	0	0	2287
207	EDC	876.4	0.0	0.0	302.8	185	0	0	185	7147	1554	536	7570	1505	18311	7147	1554	536	7570	1505	0	0	18312
208	EDC	26.0	0.0	0.0	9.0	0	0	0	0	169	40	14	181	22	425	169	40	14	181	22	0	0	426
209	EDC	242.6	14.0	0.0	83.8	153	62	5	221	1912	386	130	1978	376	4781	1912	386	130	1978	376	62	5	4849
210	EDC	465.6	0.0	0.0	157.5	77	0	0	77	3397	748	216	3674	678	8713	3397	748	216	3674	678	0	0	8713
211	EDC	11.3	0.0	0.0	4.0	0	0	0	0	73	8	6	67	3	158	73	8	6	67	3	0	0	157
212	EDC	107.5	0.0	0.0	37.1	12	0	0	12	948	218	75	989	171	2402	948	218	75	989	171	0	0	2401
213	EDC	346.5	0.0	0.0	125.2	72	0	0	72	3288	818	299	3574	693	8672	3288	818	299	3574	693	0	0	8672
214	EDC	26.1	0.0	0.0	10.7	8	0	0	8	356	238	123	304	77	1097	356	238	123	304	77	0	0	1098
215	EDC	401.4	0.0	0.0	143.8	88	0	0	88	3571	722	277	4026	737	9334	3571	722	277	4026	737	0	0	9333
216	EDC	17.4	0.0	0.0	7.1	6	0	0	6	216	165	98	205	74	758	216	165	98	205	74	0	0	758

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
217	EDC	30.7	0.0	0.0	11.0	2	0	0	2	295	72	36	368	50	820	295	72	36	368	50	0	0	821
218	EDC	78.1	0.0	0.0	28.0	12	0	0	12	681	174	77	893	156	1980	681	174	77	893	156	0	0	1981
219	EDC	91.2	77.0	0.0	33.0	976	575	74	1625	851	202	101	1089	324	2567	851	202	101	1089	324	575	74	3216
220	EDC	24.9	0.0	0.0	9.0	1	0	0	1	232	57	29	271	33	622	232	57	29	271	33	0	0	622
221	EDC	2445.6	0.0	0.0	941.0	578	0	0	578	22895	5547	1699	20318	4112	54571	22895	5547	1699	20318	4112	0	0	54571
222	EDC	71.5	26.0	0.0	26.9	231	641	121	994	623	111	31	445	350	1559	623	111	31	445	350	641	121	2322
223	EDC	295.7	0.0	0.0	111.5	28	0	0	28	2558	449	163	1917	334	5421	2558	449	163	1917	334	0	0	5421
224	EDC	267.5	29.0	0.0	100.9	318	161	11	490	2589	577	175	2369	474	6184	2589	577	175	2369	474	161	11	6356
225	EDC	369.9	88.1	944.0	127.8	1066	3711	479	5255	3290	811	1692	3381	1568	10742	3290	811	1692	3381	1568	3711	479	14932
226	EDC	1173.2	84.7	566.0	405.5	960	2295	156	3411	10255	2158	1067	9022	1973	24475	10255	2158	1067	9022	1973	2295	156	26926
227	EDC	456.2	2.0	0.0	186.0	86	3	0	89	3823	823	289	3341	560	8837	3823	823	289	3341	560	3	0	8839
228	EDC	1758.7	20.0	0.0	717.2	472	241	12	726	13832	2576	1113	11414	1811	30747	13832	2576	1113	11414	1811	241	12	30999
229	EDC	257.3	0.0	0.0	99.0	34	0	0	34	2226	505	143	1975	372	5221	2226	505	143	1975	372	0	0	5221
230	EDC	1446.9	0.0	0.0	487.0	303	0	0	303	11844	2638	1112	12334	2197	30125	11844	2638	1112	12334	2197	0	0	30125
231	EDC	59.2	28.0	0.0	20.5	189	180	10	379	468	109	39	426	84	1126	468	109	39	426	84	180	10	1316
232	EDC	109.2	0.0	0.0	39.5	15	0	0	15	1154	295	111	1266	208	3035	1154	295	111	1266	208	0	0	3034
233	EDC	248.0	101.0	0.0	108.1	769	1393	193	2356	1834	363	111	1509	762	4579	1834	363	111	1509	762	1393	193	6165
234	EDC	2423.7	716.1	0.0	1056.8	6198	7181	727	14106	17840	3131	1256	15318	5118	42663	17840	3131	1256	15318	5118	7181	727	50571
235	EDC	2596.9	0.0	0.0	959.0	489	0	0	489	21551	3877	2002	18284	3375	49090	21551	3877	2002	18284	3375	0	0	49089
236	EDC	1276.1	9.0	0.0	471.2	252	39	2	293	10419	2000	750	8677	1450	23296	10419	2000	750	8677	1450	39	2	23337
237	EDC	176.5	0.0	0.0	76.9	23	0	0	23	1389	252	75	1243	260	3218	1389	252	75	1243	260	0	0	3219
238	EDC	903.0	254.7	0.0	368.3	2728	2084	171	4984	7269	1244	630	6564	1726	17432	7269	1244	630	6564	1726	2084	171	19688
239	EDC	178.8	16.0	0.0	67.4	124	345	27	496	1528	247	104	1082	296	3257	1528	247	104	1082	296	345	27	3629
240	EDC	339.9	0.0	0.0	128.2	72	0	0	72	3727	860	426	3499	645	9158	3727	860	426	3499	645	0	0	9157
241	EDC	463.9	2.0	0.0	175.0	73	12	1	85	4254	745	308	3140	577	9024	4254	745	308	3140	577	12	1	9037
242	EDC	61.8	0.0	0.0	23.3	2	0	0	2	521	76	35	351	46	1029	521	76	35	351	46	0	0	1029
243	EDC	153.3	13.0	0.0	57.8	86	52	3	141	1386	238	96	994	164	2879	1386	238	96	994	164	52	3	2933
244	EDC	63.7	0.0	0.0	25.4	7	0	0	7	688	265	86	715	104	1857	688	265	86	715	104	0	0	1858
245	EDC	30.0	0.0	0.0	10.0	5	0	0	5	336	94	66	429	71	995	336	94	66	429	71	0	0	996
246	EDC	189.0	0.0	0.0	63.0	31	0	0	31	2312	533	386	2151	343	5725	2312	533	386	2151	343	0	0	5725
247	EDC	636.3	0.0	0.0	296.0	327	0	0	327	5858	2275	641	5723	1457	15954	5858	2275	641	5723	1457	0	0	15954
248	EDC	437.6	0.0	0.0	184.6	176	0	0	176	5697	1264	654	4324	1019	12958	5697	1264	654	4324	1019	0	0	12958
249	EDC	57.8	0.0	0.0	26.9	17	0	0	17	533	278	106	879	171	1967	533	278	106	879	171	0	0	1967
250	EDC	124.1	0.0	0.0	53.0	32	0	0	32	1591	360	193	1373	268	3785	1591	360	193	1373	268	0	0	3785
251	EDC	245.9	0.0	0.0	94.1	58	0	0	58	2136	372	143	2231	439	5320	2136	372	143	2231	439	0	0	5321
252	EDC	1217.5	0.0	0.0	461.9	412	0	0	412	10702	1969	737	10114	2113	25635	10702	1969	737	10114	2113	0	0	25635
253	EDC	405.0	0.0	0.0	147.2	119	0	0	119	4091	884	458	4111	766	10311	4091	884	458	4111	766	0	0	10310
254	EDC	303.9	0.0	0.0	116.4	83	0	0	83	2772	552	222	2960	589	7094	2772	552	222	2960	589	0	0	7095
255	EDC	0.0	717.5	0.0	0.0	9077	7757	3502	20335	0	0	0	0	0	0	0	0	0	0	0	7757	3502	11259
256	EDC	174.6	1152.7	0.0	83.0	15571	13652	5170	34393	986	92	95	959	2061	4193	986	92	95	959	2061	13652	5170	23015
257	EDC	868.6	1222.1	0.0	332.6	15101	8248	1244	24594	5351	673	372	5681	2841	14917	5351	673	372	5681	2841	8248	1244	24410
258	EDC	62.6	2.0	0.0	22.8	24	1	0	25	619	155	116	681	87	1659	619	155	116	681	87	1	0	1659
259	EDC	85.3	0.0	0.0	32.4	11	0	0	11	850	217	105	902	134	2207	850	217	105	902	134	0	0	2208
260	EDC	10.1	167.6	0.0	3.5	2229	1870	730	4828	35	4	3	25	75	143	35	4	3	25	75	1870	730	2742
261	EDC	292.3	291.9	0.0	106.3	3919	3473	712	8104	1924	225	83	1791	1373	5396	1924	225	83	1791	1373	3473	712	9581
262	EDC	422.7	258.5	0.0	161.8	3401	2546	402	6349	2584	328	111	2480	1323	6827	2584	328	111	2480	1323	2546	402	9774
263	EDC	314.7	35.0	0.0	114.4	522	550	56	1127	2228	269	89	1943	631	5160	2228	269	89	1943	631	550	56	5766
264	EDC	202.5	45.0	0.0	73.6	660	850	120	1631	1426	168	58	1251	596	3500	1426	168	58	1251	596	850	120	4469
265	EDC	118.3	0.0	0.0	44.9	18	0	0	18	1025	223	93	1125	196	2661	1025	223	93	1125	196	0	0	2662
266	EDC	90.1	26.2	0.0	41.9	554	495	80	1128	691	179	55	719	399	2044	691	179	55	719	399	495	80	2618
267	EDC	375.2	0.0	0.0	142.3	103	0	0	103	3042	576	215	2934	482	7249	3042	576	215	2934	482	0	0	7249
268	EDC	182.9	6.0	0.0	69.4	103	18	1	122	1446	298	116	1425	279	3563	1446	298	116	1425	279	18	1	3583
269	EDC	528.7	1.0	0.0	205.5	194	0	0	194	5043	776	277	3963	973	11031	5043	776	277	3963	973	0	0	11032
270	EDC	113.1	0.0	0.0	45.2	21	0	0	21	1298	294	114	1073	198	2977	1298	294	114	1073	198	0	0	2977
271	EDC	392.5	5.0	0.0	152.6	168	15	2	185	4338	918	389	3776	796	10217	4338	918	389	3776	796	15	2	10234
272	EDC	372.1	23.0	0.0	132.7	313	160	11	484	3514	530	113	2831	571	7559	3514	530	113	2831	571	160	11	7730
273	EDC	390.2	12.0	0.0	134.5	230	61	4	294	4485	839	348	3604	670	9946	4485	839	348	3604	670	61	4	10011
274	EDC	713.5	98.9	645.0	254.4	1333	2708	234	4275	6643	1102	1187	5267	1636	15835	6643	1102	1187	5267	1636	2708	234	18777
275	EDC	840.5	13.0	0.0	328.0	459	140	11	610	8078	1138	358	6571	1586	17732	8078	1138	358	6571	1586	140	11	17882
276	EDC	1048.5	34.5	0.0	427.6	619	426	30	1075	8550	1386	510	7384	1620	19449	8550	1386	510	7384	1620	426	30	19906
277	EDC	414.1	0.0	0.0	170.7	70	0	0	70	3268	495	121	2646	538	7068	3268	495	121	2646	538	0	0	7068
278	EDC	244.1	0.0	0.0	92.1	48	0	0	48	2664	643	191	2575	472	6545	2664	643	191	2575	472	0	0	6545
279	EDC	122.4	0.0	0.0	46.2	18	0	0	18	1367	352	157	1241	203	3321	1367	352	157	1241	203	0	0	3320
280	EDC	103.7	0.0	0.0	37.0	11	0	0	11	966	129	24	811	128	2058	966	129	24	811	128	0	0	2058
281	EDC	174.1	40.0	359.0	62.1	592	1433	160	2186	1597	210	851	1360	614	4632	1597	210	851	1360	614	1433	160	6225
282	EDC	109.4	0.0	0.0	39.0	10	0	0	10	961	119	18	763	118	1978	961	119	18	763	118	0	0	1979
283	EDC	0.0	179.4	2054.0	0.0	2278	6864	1475	10617	0	0	3972	0	801	4773	0	0	3972	0	801	6864	1475	13112
284	EDC	73.8	25.0	0.0	30.4	272	163	12	447	486	62	9	397	104	1058	486	62	9	397	104	163	12	1233
285	EDC	49.3	66.0	400.0	17.0	884	1540	224	2648	304	44	952	282	307	1889	304	44	952	282	307	1540	224	3653
286	EDC	101.0	0.0	0.0	36.0	10	0	0	10	1029	205	72	865	140	2311	1029	205	72	865	140	0	0	2311
287	EDC	87.1	0.0	0.0	34.0	7	0	0	7	882	158	36	701	115	1893	882	158	36	701	115	0	0	1892
288	EDC	142.7	0.0	0.0	50.9	17	0	0	17	1411	246	82	1221	204	3165	1411	246	82	1221	204	0	0	3164

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
289	EDC	23.2	0.0	0.0	8.0	0	0	0	0	209	29	18	133	8	397	209	29	18	133	8	0	0	397
290	EDC	127.7	0.0	0.0	44.0	13	0	0	13	1383	231	103	1039	173	2928	1383	231	103	1039	173	0	0	2929
291	EDC	498.7	27.9	0.0	195.9	474	178	18	670	6263	1489	414	4804	995	13965	6263	1489	414	4804	995	178	18	14161
292	EDC	209.0	0.0	0.0	72.0	35	0	0	35	2442	613	391	2024	305	5775	2442	613	391	2024	305	0	0	5775
293	EDC	76.1	0.0	0.0	34.8	11	0	0	11	490	91	32	462	103	1178	490	91	32	462	103	0	0	1178
294	EDC	250.5	0.0	0.0	100.8	65	0	0	65	1911	301	85	1643	378	4318	1911	301	85	1643	378	0	0	4318
295	EDC	281.9	1491.0	0.0	110.0	32355	39597	17110	89062	2410	153	192	1562	5556	9873	2410	153	192	1562	5556	39597	17110	66580
296	EDC	330.8	56.0	438.0	125.5	856	1619	160	2636	2541	368	1161	2237	865	7172	2541	368	1161	2237	865	1619	160	8951
297	EDC	184.5	0.0	0.0	70.0	30	0	0	30	1253	222	71	1124	134	2805	1253	222	71	1124	134	0	0	2804
298	EDC	208.3	0.0	0.0	79.0	43	0	0	43	1582	244	108	1401	277	3612	1582	244	108	1401	277	0	0	3612
299	EDC	275.1	0.0	0.0	106.9	74	0	0	74	2740	411	191	2278	504	6126	2740	411	191	2278	504	0	0	6124
300	EDC	77.2	0.0	0.0	30.0	8	0	0	8	674	97	37	479	93	1380	674	97	37	479	93	0	0	1380
301	EDC	7.1	0.0	0.0	3.2	0	0	0	0	8	4	2	10	1	26	8	4	2	10	1	0	0	25
302	EDC	133.1	33.0	152.0	60.9	508	545	53	1106	805	155	525	741	308	2534	805	155	525	741	308	545	53	3132
303	EDC	227.8	0.0	0.0	106.0	57	0	0	57	1299	293	59	1382	322	3355	1299	293	59	1382	322	0	0	3355
304	EDC	26.1	275.4	0.0	12.0	3259	2019	553	5832	105	24	8	101	190	428	105	24	8	101	190	2019	553	3000
305	EDC	2.2	283.0	0.0	1.0	3440	1821	479	5740	0	0	0	0	0	0	0	0	0	0	0	1821	479	2300
306	EDC	21.5	55.0	0.0	10.0	635	240	15	890	123	29	3	98	39	292	123	29	3	98	39	240	15	547
307	EDC	36.7	2.0	0.0	16.0	17	7	1	25	168	39	9	155	40	410	168	39	9	155	40	7	1	419
308	EDC	25.3	1.0	0.0	11.0	4	1	0	5	111	24	7	90	17	249	111	24	7	90	17	1	0	250
309	EDC	30.6	4.0	0.0	14.0	30	18	2	50	122	28	7	106	30	293	122	28	7	106	30	18	2	313
310	EDC	59.6	122.0	0.0	26.0	1400	746	118	2263	270	64	13	251	198	796	270	64	13	251	198	746	118	1660
311	EDC	83.0	158.0	0.0	38.0	2437	1922	584	4943	433	74	22	366	545	1440	433	74	22	366	545	1922	584	3946
312	EDC	71.1	43.3	0.0	31.0	596	521	99	1216	332	70	13	284	246	944	332	70	13	284	246	521	99	1565
313	EDC	105.4	506.0	1583.0	42.0	7459	4848	719	13026	579	96	3138	367	722	4901	579	96	3138	367	722	4848	719	10469
314	EDC	201.3	8.0	0.0	81.0	126	17	1	144	1205	145	63	936	200	2550	1205	145	63	936	200	17	1	2567
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	28.4	0.0	0.0	13.0	1	0	0	1	95	24	8	106	18	252	95	24	8	106	18	0	0	251
317	EDC	17.5	0.0	0.0	8.0	0	0	0	0	64	11	3	47	7	132	64	11	3	47	7	0	0	132
318	EDC	334.2	2.0	0.0	134.5	118	1	0	118	2034	269	88	1639	373	4404	2034	269	88	1639	373	1	0	4404
319	EDC	95.4	6.0	0.0	38.0	68	7	1	76	478	66	16	328	64	952	478	66	16	328	64	7	1	960
320	EDC	46.1	39.0	351.0	18.1	552	1518	242	2312	468	98	1120	256	321	2263	468	98	1120	256	321	1518	242	4023
321	EDC	268.3	0.0	0.0	105.4	67	0	0	67	3245	686	124	2372	487	6913	3245	686	124	2372	487	0	0	6914
322	EDC	420.9	33.0	0.0	163.6	567	175	22	765	3905	730	228	3018	717	8598	3905	730	228	3018	717	175	22	8795
323	EDC	136.1	4.0	0.0	52.9	69	14	3	86	1513	371	107	1276	252	3519	1513	371	107	1276	252	14	3	3536
324	EDC	163.0	0.0	0.0	65.1	37	0	0	37	1951	454	164	1575	296	4440	1951	454	164	1575	296	0	0	4440
325	EDC	41.9	0.0	0.0	16.5	4	0	0	4	418	81	14	235	51	799	418	81	14	235	51	0	0	799
326	EDC	127.2	1.0	0.0	49.9	32	1	1	34	1395	273	67	880	166	2780	1395	273	67	880	166	1	1	2783
327	Placerville (not	113.4	0.0	0.0	45.3	17	0	0	17	1095	149	55	634	126	2060	1095	149	55	634	126	0	0	2059
328	EDC	47.5	0.0	0.0	19.0	3	0	0	3	433	77	23	245	53	831	433	77	23	245	53	0	0	831
329	Placerville (not	338.1	0.0	0.0	146.5	98	0	0	98	2689	428	111	1822	483	5533	2689	428	111	1822	483	0	0	5533
330	EDC	193.7	0.0	0.0	77.4	36	0	0	36	1634	202	68	928	210	3042	1634	202	68	928	210	0	0	3042
331	EDC	280.7	0.0	0.0	112.4	87	0	0	87	3267	658	181	2406	561	7073	3267	658	181	2406	561	0	0	7073
332	EDC	105.2	0.0	0.0	47.0	21	0	0	21	696	182	61	581	114	1634	696	182	61	581	114	0	0	1634
333	EDC	224.9	0.0	0.0	91.0	65	0	0	65	1983	676	218	2055	368	5299	1983	676	218	2055	368	0	0	5300
334	EDC	58.2	110.0	0.0	26.0	1469	505	41	2015	376	122	37	380	122	1037	376	122	37	380	122	505	41	1583
335	EDC	165.0	5.0	0.0	76.9	101	5	1	107	1198	230	198	954	191	2770	1198	230	198	954	191	5	1	2777
336	EDC	66.4	0.0	0.0	30.0	10	0	0	10	432	133	44	427	78	1115	432	133	44	427	78	0	0	1114
337	EDC	297.7	62.0	320.0	121.4	914	1278	95	2286	2666	954	970	2232	699	7521	2666	954	970	2232	699	1278	95	8894
338	EDC	836.5	14.0	0.0	325.3	371	173	9	554	7901	1780	973	5569	1102	17325	7901	1780	973	5569	1102	173	9	17507
339	EDC	435.6	0.0	0.0	192.3	119	0	0	119	5338	2873	188	3203	762	12364	5338	2873	188	3203	762	0	0	12364
340	EDC	198.7	14.0	0.0	93.2	269	285	63	616	2481	2025	351	1997	842	7695	2481	2025	351	1997	842	285	63	8044
341	EDC	68.8	8.0	0.0	31.4	91	19	2	112	583	442	5	334	86	1450	583	442	5	334	86	19	2	1471
342	EDC	123.4	0.0	0.0	48.0	26	0	0	26	1207	302	191	1037	171	2908	1207	302	191	1037	171	0	0	2908
343	EDC	126.8	0.0	0.0	56.0	41	0	0	41	1676	590	406	1324	295	4291	1676	590	406	1324	295	0	0	4291
344	EDC	134.5	0.0	0.0	59.4	46	0	0	46	1817	654	423	1406	309	4609	1817	654	423	1406	309	0	0	4609
345	EDC	67.0	0.0	0.0	29.6	16	0	0	16	789	223	103	642	132	1889	789	223	103	642	132	0	0	1889
346	EDC	49.2	0.0	0.0	22.1	11	0	0	11	462	167	49	439	83	1200	462	167	49	439	83	0	0	1200
347	EDC	108.0	0.0	0.0	42.0	22	0	0	22	1178	356	365	1055	171	3124	1178	356	365	1055	171	0	0	3125
348	EDC	108.7	0.0	0.0	48.9	31	0	0	31	1002	321	113	1066	222	2724	1002	321	113	1066	222	0	0	2724
349	EDC	173.4	18.0	0.0	84.3	287	175	40	502	2315	2023	209	1754	691	6992	2315	2023	209	1754	691	175	40	7207
350	EDC	49.3	0.0	0.0	21.8	16	0	0	16	582	447	15	357	109	1511	582	447	15	357	109	0	0	1510
351	EDC	54.3	0.0	0.0	23.9	10	0	0	10	647	412	187	386	68	1700	647	412	187	386	68	0	0	1700
352	EDC	68.1	0.0	0.0	30.1	15	0	0	15	999	572	338	545	94	2548	999	572	338	545	94	0	0	2548
353	EDC	387.2	1.0	0.0	170.9	91	3	0	94	5000	3045	1481	2552	459	12537	5000	3045	1481	2552	459	3	0	12540
354	EDC	124.1	77.0	590.0	54.8	828	2010	195	3033	1209	704	3061	482	573	6029	1209	704	3061	482	573	2010	195	8234
355	Placerville (in C	971.7	260.3	0.0	421.0	3596	1994	275	5864	5256	601	248	3848	1775	11728	5256	601	248	3848	1775	1994	275	13997
356	Placerville (in C	188.8	0.0	0.0	88.0	46	0	0	46	948	205	61	817	189	2220	948	205	61	817	189	0	0	2220
357	EDC	208.7	21.0	0.0	94.3	401	412	62	874	1303	353	118	1279	563	3615	1303	353	118	1279	563	412	62	4090
358	Placerville (not	191.8	352.1	0.0	86.7	5019	2320	505	7844	973	206	66	901	782	2928	973	206	66	901	782	2320	505	5753
359	EDC	247.3	0.0	0.0	105.0	64	0	0	64	1921	407	166	1623	353	4470	1921	407	166	1623	353	0	0	4470
360	EDC	230.5	10.0	0.0	97.9	224	113	9	345	2066	499	256	1978	483	5282	2066	499	256	1978	483	113	9	5404

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
361	Placerville (in C	971.1	392.1	0.0	466.0	4634	1555	162	6351	4306	835	134	3880	1235	10390	4306	835	134	3880	1235	1555	162	12107
362	Placerville (in C	701.7	913.2	0.0	298.0	13773	9373	2925	26072	3076	327	188	2262	3236	9089	3076	327	188	2262	3236	9373	2925	21387
363	EDC	34.7	0.0	0.0	13.7	1	0	0	1	139	28	15	101	20	302	139	28	15	101	20	0	0	303
364	Placerville (not	389.8	42.0	0.0	154.0	617	187	17	821	1786	231	160	1461	401	4039	1786	231	160	1461	401	187	17	4243
365	EDC	1013.8	125.0	0.0	478.0	2042	1342	167	3551	4495	948	221	4401	1678	11743	4495	948	221	4401	1678	1342	167	13252
366	EDC	32.3	4.0	0.0	15.0	21	9	1	31	67	22	4	74	20	188	67	22	4	74	20	9	1	197
367	EDC	0.0	197.0	0.0	0.0	2097	748	103	2948	0	0	0	0	0	0	0	0	0	0	0	748	103	851
368	EDC	156.8	0.0	0.0	68.0	23	0	0	23	674	153	17	611	105	1561	674	153	17	611	105	0	0	1560
369	EDC	1368.2	41.6	0.0	610.0	881	330	30	1241	6426	1105	280	5475	1537	14823	6426	1105	280	5475	1537	330	30	15183
370	EDC	0.0	303.0	0.0	0.0	3239	1147	217	4604	0	0	0	0	0	0	0	0	0	0	0	1147	217	1364
371	EDC	47.1	0.0	0.0	21.0	4	0	0	4	274	61	10	237	45	628	274	61	10	237	45	0	0	627
372	EDC	771.6	327.7	1178.0	344.0	3788	3911	438	8137	3862	777	2851	3486	1710	12686	3862	777	2851	3486	1710	3911	438	17035
373	EDC	59.7	0.0	0.0	26.0	3	0	0	3	231	41	11	194	33	509	231	41	11	194	33	0	0	510
374	EDC	30.0	2.0	0.0	13.0	10	6	0	16	107	27	4	92	20	250	107	27	4	92	20	6	0	256
375	EDC	32.1	0.0	0.0	14.0	1	0	0	1	161	31	8	112	20	332	161	31	8	112	20	0	0	332
376	EDC	78.0	3.0	0.0	34.0	33	2	0	35	366	65	18	305	61	816	366	65	18	305	61	2	0	817
377	EDC	29.8	14.0	120.0	13.0	141	256	25	422	102	22	298	80	60	561	102	22	298	80	60	256	25	843
378	EDC	62.2	0.0	0.0	27.0	4	0	0	4	246	60	7	205	39	557	246	60	7	205	39	0	0	557
379	EDC	110.6	0.0	0.0	48.0	12	0	0	12	423	98	14	376	79	989	423	98	14	376	79	0	0	990
380	EDC	27.6	0.0	0.0	12.0	1	0	0	1	73	19	5	70	10	176	73	19	5	70	10	0	0	177
381	EDC	16.1	0.0	0.0	7.0	0	0	0	0	40	10	2	41	6	98	40	10	2	41	6	0	0	99
382	EDC	25.4	0.0	0.0	11.0	1	0	0	1	79	18	5	62	13	177	79	18	5	62	13	0	0	177
383	EDC	112.5	0.0	0.0	50.1	18	0	0	18	752	164	43	591	121	1670	752	164	43	591	121	0	0	1671
384	EDC	269.2	0.0	0.0	120.0	59	0	0	59	1661	330	81	1292	309	3673	1661	330	81	1292	309	0	0	3673
385	EDC	1011.6	26.6	0.0	451.0	619	312	23	954	5777	1121	250	4654	1097	12899	5777	1121	250	4654	1097	312	23	13234
386	EDC	201.9	0.0	0.0	90.0	35	0	0	35	1196	250	59	911	206	2622	1196	250	59	911	206	0	0	2622
387	EDC	80.7	8.0	0.0	36.0	84	47	4	134	364	74	15	282	82	817	364	74	15	282	82	47	4	868
388	EDC	0.0	303.0	0.0	0.0	3288	1149	217	4654	0	0	0	0	0	0	0	0	0	0	0	1149	217	1366
389	EDC	4.7	264.0	0.0	2.0	2801	1142	290	4233	1	1	0	5	8	14	1	1	0	5	8	1142	290	1447
390	EDC	392.3	53.5	0.0	182.0	735	426	42	1203	1444	322	58	1516	460	3800	1444	322	58	1516	460	426	42	4268
391	EDC	23.7	69.5	0.0	11.0	766	573	187	1526	46	17	2	52	103	220	46	17	2	52	103	573	187	980
392	EDC	60.4	0.0	0.0	28.0	6	0	0	6	220	42	8	206	38	514	220	42	8	206	38	0	0	514
393	EDC	614.8	68.0	0.0	268.0	1088	639	66	1794	2619	364	124	2459	804	6370	2619	364	124	2459	804	639	66	7075
394	EDC	17.6	0.0	0.0	8.0	0	0	0	0	36	8	2	30	5	81	36	8	2	30	5	0	0	81
395	Placerville (in C	186.0	2323.7	0.0	88.0	29599	12266	4356	46221	678	92	36	603	1448	2856	678	92	36	603	1448	12266	4356	19479
396	EDC	0.0	456.7	0.0	0.0	7393	7301	3838	18532	0	0	0	0	0	0	0	0	0	0	0	7301	3838	11139
397	EDC	109.2	3.0	0.0	50.0	41	1	0	42	482	77	26	400	87	1072	482	77	26	400	87	1	0	1073
398	EDC	32.1	3.0	0.0	14.0	20	10	1	31	124	20	9	92	24	269	124	20	9	92	24	10	1	280
399	EDC	98.7	0.0	0.0	43.0	12	0	0	12	437	71	24	360	71	962	437	71	24	360	71	0	0	963
400	EDC	34.5	11.0	0.0	16.0	123	84	10	217	68	19	5	82	45	220	68	19	5	82	45	84	10	313
401	Placerville (not	86.2	213.0	0.0	40.8	2976	1823	622	5421	356	49	15	264	451	1136	356	49	15	264	451	1823	622	3580
402	EDC	128.0	117.1	0.0	51.0	1279	450	33	1761	537	58	28	397	130	1151	537	58	28	397	130	450	33	1633
403	EDC	267.3	654.0	724.0	124.0	8456	5328	1085	14869	933	164	1904	1023	1356	5380	933	164	1904	1023	1356	5328	1085	11793
404	EDC	43.8	49.0	0.0	19.0	460	144	7	612	131	28	6	113	32	309	131	28	6	113	32	144	7	461
405	EDC	20.8	0.0	0.0	9.0	0	0	0	0	65	10	3	49	9	136	65	10	3	49	9	0	0	136
406	EDC	55.3	286.0	0.0	24.0	4512	4647	2205	11364	180	27	9	153	505	874	180	27	9	153	505	4647	2205	7726
407	EDC	2.2	293.0	535.0	1.0	3415	2854	902	7171	0	0	1075	1	451	1527	0	0	1075	1	451	2854	902	5283
408	EDC	2.1	182.0	0.0	1.0	1849	794	164	2807	3	2	0	5	9	20	3	2	0	5	9	794	164	977
409	Placerville (not	328.8	460.2	0.0	129.9	6651	3664	882	11197	1606	188	110	1326	1344	4573	1606	188	110	1326	1344	3664	882	9120
410	EDC	1003.2	331.9	0.0	426.0	4974	3630	555	9158	5962	823	381	4724	2589	14479	5962	823	381	4724	2589	3630	555	18664
411	Placerville (in C	708.3	1289.3	0.0	299.0	15776	9585	3082	28444	2533	323	167	2055	3138	8217	2533	323	167	2055	3138	9585	3082	20883
412	EDC	211.6	0.0	0.0	89.3	52	0	0	52	1408	210	90	1027	251	2987	1408	210	90	1027	251	0	0	2986
413	Placerville (not	376.0	0.0	0.0	158.7	97	0	0	97	2068	302	126	1488	387	4372	2068	302	126	1488	387	0	0	4371
414	EDC	15.1	120.0	0.0	7.0	1195	453	55	1703	17	10	2	30	29	88	17	10	2	30	29	453	55	596
415	EDC	38.2	0.0	0.0	18.0	2	0	0	2	142	38	8	124	24	336	142	38	8	124	24	0	0	336
416	EDC	19.4	0.0	0.0	9.0	0	0	0	0	44	15	4	53	11	128	44	15	4	53	11	0	0	127
417	Placerville (in C	101.9	294.5	0.0	45.0	3458	2017	667	6142	363	60	20	266	454	1162	363	60	20	266	454	2017	667	3847
418	Placerville (in C	0.0	63.6	0.0	0.0	769	678	375	1822	0	0	0	0	0	0	0	0	0	0	0	678	375	1053
419	Placerville (in C	0.0	84.8	0.0	0.0	956	688	348	1991	0	0	0	0	0	0	0	0	0	0	0	688	348	1036
420	Placerville (in C	116.1	52.0	0.0	49.0	525	120	7	652	433	65	27	309	68	902	433	65	27	309	68	120	7	1029
421	Placerville (in C	170.6	5.0	0.0	72.0	75	2	0	78	664	102	41	477	110	1394	664	102	41	477	110	2	0	1396
422	Placerville (in C	661.7	2042.5	475.0	281.0	29774	7519	1311	38604	2215	355	1005	1847	1733	7154	2215	355	1005	1847	1733	7519	1311	15985
423	EDC	48.1	0.0	0.0	20.3	2	0	0	2	188	32	12	117	25	373	188	32	12	117	25	0	0	374
424	Placerville (not	399.3	249.1	0.0	173.0	3100	1786	253	5139	2262	298	58	1561	852	5031	2262	298	58	1561	852	1786	253	7070
425	Placerville (not	2817.0	600.6	2141.0	1266.7	7598	9540	1236	18373	14412	2077	5662	9831	5392	37374	14412	2077	5662	9831	5392	9540	1236	48150
426	Placerville (not	81.4	0.0	0.0	32.6	6	0	0	6	449	59	7	220	45	780	449	59	7	220	45	0	0	780
427	EDC	235.0	0.0	0.0	94.1	61	0	0	61	2184	321	63	1377	345	4290	2184	321	63	1377	345	0	0	4290
428	EDC	55.0	0.0	0.0	22.0	3	0	0	3	338	51	6	167	33	595	338	51	6	167	33	0	0	595
429	EDC	86.7	0.0	0.0	35.0	13	0	0	13	657	134	50	564	58	1463	657	134	50	564	58	0	0	1463
430	EDC	143.9	10.0	0.0	58.1	153	25	3	180	983	164	91	806	186	2230	983	164	91	806	186	25	3	2258
431	Placerville (in C	60.4	60.0	0.0	29.0	719	239	23	981	230	49	14	179	82	553	230	49	14	179	82	239	23	816
432	EDC	781.3	234.1	0.0	315.5	3100	1112	114	4325	4598	836	425	3720	1216	10795	4598	836	425	3720	1216	1112	114	12021

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
433	Placerville (in C	1016.7	68.3	0.0	493.0	1206	341	36	1583	3605	726	211	3483	1041	9066	3605	726	211	3483	1041	341	36	9443
434	Placerville (in C	77.2	0.0	0.0	36.0	8	0	0	8	204	47	14	180	44	490	204	47	14	180	44	0	0	489
435	Placerville (in C	77.2	48.6	0.0	36.0	545	196	28	769	202	46	14	179	103	544	202	46	14	179	103	196	28	768
436	EDC	63.4	0.0	0.0	25.8	7	0	0	7	428	111	33	340	63	974	428	111	33	340	63	0	0	975
437	EDC	303.9	12.0	0.0	120.5	239	113	10	363	2546	403	199	1780	480	5407	2546	403	199	1780	480	113	10	5531
438	EDC	267.7	11.0	0.0	126.2	228	228	22	478	1781	576	131	1751	538	4776	1781	576	131	1751	538	228	22	5027
439	EDC	334.2	3.0	0.0	157.5	150	2	0	153	2139	585	144	2186	454	5509	2139	585	144	2186	454	2	0	5510
440	EDC	60.2	15.0	0.0	28.4	165	58	4	227	320	108	23	326	81	858	320	108	23	326	81	58	4	920
441	Placerville (in C	31.3	0.0	0.0	13.2	1	0	0	1	165	30	8	104	22	328	165	30	8	104	22	0	0	329
442	Placerville (in C	769.1	69.0	143.0	305.0	1176	991	111	2278	4649	606	521	3139	1233	10149	4649	606	521	3139	1233	991	111	11250
443	EDC	85.9	0.0	0.0	40.5	18	0	0	18	520	166	36	534	119	1375	520	166	36	534	119	0	0	1375
444	EDC	18.9	0.0	0.0	8.0	0	0	0	0	70	16	6	49	10	152	70	16	6	49	10	0	0	151
445	Placerville (not	61.1	11.0	94.0	24.2	136	229	20	385	377	64	265	224	108	1039	377	64	265	224	108	229	20	1287
446	Placerville (in C	61.7	19.0	0.0	26.2	257	218	35	510	334	58	23	206	141	762	334	58	23	206	141	218	35	1015
447	EDC	187.9	0.0	0.0	76.6	47	0	0	47	1507	416	117	1377	266	3683	1507	416	117	1377	266	0	0	3683
448	Placerville (not	145.8	4.0	0.0	57.8	69	17	1	87	969	149	75	621	109	1924	969	149	75	621	109	17	1	1941
449	EDC	30.0	0.0	0.0	14.0	2	0	0	2	161	55	23	138	25	403	161	55	23	138	25	0	0	402
450	EDC	180.2	31.0	0.0	84.0	399	95	9	503	981	225	63	842	239	2352	981	225	63	842	239	95	9	2454
451	EDC	57.9	0.0	0.0	27.0	10	0	0	10	328	95	30	323	72	848	328	95	30	323	72	0	0	848
452	Placerville (not	286.8	33.0	428.0	133.7	529	951	100	1580	1280	239	1094	1095	510	4216	1280	239	1094	1095	510	951	100	5269
453	Placerville (in C	313.2	1.0	0.0	146.0	92	0	0	93	1145	227	59	1066	175	2671	1145	227	59	1066	175	0	0	2672
454	EDC	56.0	0.0	0.0	26.1	5	0	0	5	174	49	14	159	35	430	174	49	14	159	35	0	0	431
455	EDC	180.8	0.0	0.0	73.0	39	0	0	39	1264	251	129	968	218	2830	1264	251	129	968	218	0	0	2830
456	EDC	109.5	0.0	0.0	51.0	26	0	0	26	731	208	67	666	154	1826	731	208	67	666	154	0	0	1826
457	EDC	141.3	5.0	0.0	62.7	97	7	1	104	1251	313	131	946	191	2832	1251	313	131	946	191	7	1	2840
458	Placerville (not	152.1	69.0	0.0	68.8	1140	768	127	2035	847	183	63	770	447	2310	847	183	63	770	447	768	127	3205
459	Placerville (not	40.9	0.0	0.0	18.5	2	0	0	2	178	48	13	146	26	411	178	48	13	146	26	0	0	411
460	EDC	47.2	20.0	0.0	22.0	254	69	6	329	301	84	26	290	72	773	301	84	26	290	72	69	6	848
461	EDC	13.2	59.0	0.0	6.0	673	238	20	931	30	19	4	43	20	117	30	19	4	43	20	238	20	374
462	EDC	66.5	125.0	0.0	31.0	1999	753	144	2896	386	64	69	352	242	1114	386	64	69	352	242	753	144	2010
463	EDC	187.5	0.0	0.0	85.5	41	0	0	41	2028	2180	291	1345	216	6059	2028	2180	291	1345	216	0	0	6060
464	EDC	112.1	0.0	0.0	47.9	34	0	0	34	1348	531	194	990	196	3259	1348	531	194	990	196	0	0	3259
465	EDC	147.7	16.0	0.0	58.8	128	35	4	167	1686	1880	617	1134	211	5529	1686	1880	617	1134	211	35	4	5567
466	EDC	134.9	22.0	0.0	61.5	214	102	13	328	1328	1125	84	1005	258	3798	1328	1125	84	1005	258	102	13	3915
467	EDC	88.1	0.0	0.0	40.2	25	0	0	25	1000	1294	320	732	148	3494	1000	1294	320	732	148	0	0	3494
468	EDC	249.0	6.0	0.0	120.9	139	16	2	157	3021	2360	164	2142	616	8302	3021	2360	164	2142	616	16	2	8321
469	EDC	134.3	15.0	0.0	60.3	154	47	9	209	1774	1893	284	1083	289	5322	1774	1893	284	1083	289	47	9	5379
470	EDC	70.4	1.0	0.0	32.1	26	0	0	27	782	864	117	555	128	2447	782	864	117	555	128	0	0	2446
471	EDC	51.3	6.0	0.0	23.4	62	10	1	73	498	620	107	373	81	1680	498	620	107	373	81	10	1	1690
472	EDC	57.1	20.0	0.0	26.0	166	43	6	216	558	647	84	423	94	1806	558	647	84	423	94	43	6	1855
473	EDC	26.0	2.0	0.0	10.4	27	26	3	56	169	101	16	160	56	503	169	101	16	160	56	26	3	531
474	EDC	85.2	0.0	0.0	37.6	23	0	0	23	927	298	77	606	119	2027	927	298	77	606	119	0	0	2027
475	EDC	87.2	0.0	0.0	38.5	23	0	0	23	959	355	110	662	131	2216	959	355	110	662	131	0	0	2217
476	EDC	41.1	0.0	0.0	16.0	7	0	0	7	360	135	76	322	47	940	360	135	76	322	47	0	0	940
477	EDC	75.6	15.0	0.0	30.1	132	34	5	170	775	702	108	603	107	2296	775	702	108	603	107	34	5	2334
478	EDC	66.4	0.0	0.0	30.0	17	0	0	17	628	255	71	534	95	1583	628	255	71	534	95	0	0	1583
479	EDC	131.2	37.0	0.0	52.3	474	454	57	985	1217	363	210	988	400	3178	1217	363	210	988	400	454	57	3689
480	EDC	46.7	0.0	0.0	21.3	13	0	0	13	495	627	199	465	105	1891	495	627	199	465	105	0	0	1891
481	EDC	45.3	0.0	0.0	20.5	12	0	0	12	600	642	201	466	116	2025	600	642	201	466	116	0	0	2025
482	EDC	171.1	3.0	0.0	77.3	90	7	1	98	2315	2000	883	2058	417	7672	2315	2000	883	2058	417	7	1	7681
483	EDC	253.5	9.0	0.0	116.9	156	50	5	210	2033	748	158	1794	368	5102	2033	748	158	1794	368	50	5	5156
484	EDC	237.2	114.0	0.0	92.5	1036	474	30	1539	2217	768	275	1718	364	5341	2217	768	275	1718	364	474	30	5846
485	EDC	46.0	0.0	0.0	18.0	8	0	0	8	540	253	160	369	60	1383	540	253	160	369	60	0	0	1382
486	EDC	167.2	0.0	0.0	74.0	41	0	0	41	2285	961	538	1250	237	5271	2285	961	538	1250	237	0	0	5271
487	EDC	490.8	36.0	0.0	221.8	823	557	66	1446	3786	1023	373	3786	1188	10156	3786	1023	373	3786	1188	557	66	10779
488	EDC	246.6	0.0	0.0	109.1	73	0	0	73	3322	1040	385	1740	343	6830	3322	1040	385	1740	343	0	0	6830
489	EDC	307.1	58.0	0.0	135.8	697	283	22	1002	3229	765	151	2012	479	6637	3229	765	151	2012	479	283	22	6941
490	EDC	62.1	0.0	0.0	25.3	9	0	0	9	544	169	61	466	73	1313	544	169	61	466	73	0	0	1313
491	EDC	398.7	3.0	0.0	162.5	160	39	3	203	3597	909	403	2945	612	8466	3597	909	403	2945	612	39	3	8508
492	EDC	176.9	18.0	0.0	71.6	237	125	10	372	1659	639	208	1527	317	4350	1659	639	208	1527	317	125	10	4485
493	EDC	180.0	26.0	159.0	72.8	370	601	42	1013	1555	586	479	1405	398	4424	1555	586	479	1405	398	601	42	5066
494	EDC	167.7	10.0	0.0	68.4	136	33	2	170	1528	546	54	1330	232	3690	1528	546	54	1330	232	33	2	3725
495	EDC	39.6	0.0	0.0	16.1	3	0	0	3	298	85	31	223	34	671	298	85	31	223	34	0	0	671
496	EDC	204.0	67.0	69.0	82.5	928	1492	208	2628	1836	387	225	1400	798	4647	1836	387	225	1400	798	1492	208	6346
497	EDC	218.3	3.0	0.0	90.5	82	10	1	92	2432	665	213	1638	292	5240	2432	665	213	1638	292	10	1	5251
498	EDC	160.3	6.0	0.0	70.9	93	12	1	107	1985	518	152	1138	226	4019	1985	518	152	1138	226	12	1	4032
499	EDC	75.9	0.0	0.0	30.9	13	0	0	13	670	244	55	491	81	1543	670	244	55	491	81	0	0	1541
500	EDC	24.3	51.0	416.0	11.0	643	1250	206	2100	158	53	740	104	221	1276	158	53	740	104	221	1250	206	2732
501	EDC	49.2	83.0	0.0	22.0	835	322	20	1177	333	120	17	287	73	830	333	120	17	287	73	322	20	1172
502	EDC	286.5	18.0	0.0	120.5	347	285	25	657	2835	817	858	2338	543	7390	2835	817	858	2338	543	285	25	7701
503	EDC	2.2	76.0	0.0	1.0	1165	1133	632	2930	0	0	0	2	5	7	0	0	0	2	5	1133	632	1772
504	EDC	315.3	19.0	0.0	140.9	326	112	11	448	2564	696	205	2290	540	6296	2564	696	205	2290	540	112	11	6418

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	25	7	3	16	1	52	25	7	3	16	1	0	0	52
506	EDC	62.7	0.0	0.0	28.0	9	0	0	9	443	137	38	375	66	1058	443	137	38	375	66	0	0	1059
507	EDC	121.9	37.0	0.0	51.3	405	117	8	530	913	290	68	801	152	2225	913	290	68	801	152	117	8	2349
508	EDC	184.3	186.0	0.0	85.0	2055	701	50	2806	1286	482	78	1150	283	3279	1286	482	78	1150	283	701	50	4030
509	EDC	26.9	30.9	0.0	12.0	286	116	10	412	158	47	7	120	41	374	158	47	7	120	41	116	10	499
510	EDC	199.5	10.0	0.0	92.0	137	65	6	208	1351	460	54	1196	261	3323	1351	460	54	1196	261	65	6	3393
511	EDC	107.2	33.0	0.0	45.1	375	295	37	708	708	218	42	588	240	1796	708	218	42	588	240	295	37	2128
512	EDC	90.2	27.0	0.0	37.9	380	267	33	680	720	191	95	657	238	1902	720	191	95	657	238	267	33	2201
513	EDC	375.0	0.0	0.0	146.3	80	0	0	80	4058	1673	848	2817	423	9819	4058	1673	848	2817	423	0	0	9819
514	EDC	1622.8	0.0	0.0	633.0	327	0	0	327	17408	7628	4782	10896	1648	42362	17408	7628	4782	10896	1648	0	0	42362
515	EDC	169.1	8.0	0.0	70.1	99	14	1	114	1868	660	238	1246	205	4218	1868	660	238	1246	205	14	1	4232
516	EDC	348.4	0.0	0.0	144.4	79	0	0	79	4317	1869	883	2673	425	10168	4317	1869	883	2673	425	0	0	10167
517	EDC	887.3	122.9	0.0	400.0	1493	1483	109	3085	8123	1959	1425	5261	1333	18102	8123	1959	1425	5261	1333	1483	109	19693
518	EDC	673.0	25.3	0.0	293.2	398	181	12	591	5793	1903	730	4308	831	13564	5793	1903	730	4308	831	181	12	13758
519	EDC	331.3	24.3	0.0	144.3	315	275	17	607	2832	896	373	2067	394	6563	2832	896	373	2067	394	275	17	6854
520	EDC	618.5	15.3	0.0	269.5	305	142	9	456	5801	1702	885	4069	728	13185	5801	1702	885	4069	728	142	9	13336
521	EDC	648.3	115.9	0.0	292.3	1165	1233	86	2485	5090	1166	400	3255	803	10715	5090	1166	400	3255	803	1233	86	12033
522	EDC	212.4	0.0	0.0	86.3	47	0	0	47	2899	586	434	1387	250	5555	2899	586	434	1387	250	0	0	5556
523	EDC	572.5	206.1	6.0	247.4	2238	2987	497	5723	4910	509	573	2691	1205	9888	4910	509	573	2691	1205	2987	497	13372
524	EDC	476.7	103.0	519.0	206.1	1230	2335	211	3776	4598	1841	1653	2957	903	11952	4598	1841	1653	2957	903	2335	211	14498
525	EDC	207.6	0.0	0.0	86.4	45	0	0	45	2261	1587	956	1922	496	7221	2261	1587	956	1922	496	0	0	7222
526	EDC	28.4	0.0	0.0	11.0	5	0	0	5	277	81	81	284	78	802	277	81	81	284	78	0	0	801
527	EDC	395.9	38.0	0.0	164.8	372	284	55	711	3785	1500	316	2864	632	9097	3785	1500	316	2864	632	284	55	9436
528	EDC	2428.4	72.0	0.0	1008.2	923	750	160	1833	30963	15956	6718	24313	7549	85499	30963	15956	6718	24313	7549	750	160	86409
529	EDC	37.7	0.0	0.0	15.5	9	0	0	9	380	137	55	472	158	1201	380	137	55	472	158	0	0	1202
530	EDC	475.3	0.0	0.0	195.1	172	0	0	172	5832	2851	1597	5988	1569	17837	5832	2851	1597	5988	1569	0	0	17837
531	EDC	90.0	0.0	0.0	37.0	27	0	0	27	1171	604	360	1124	334	3592	1171	604	360	1124	334	0	0	3593
532	EDC	149.4	0.0	0.0	61.4	47	0	0	47	1768	720	391	1939	594	5412	1768	720	391	1939	594	0	0	5412
533	EDC	268.4	34.0	0.0	110.6	693	1025	412	2129	2701	806	708	3347	1167	8730	2701	806	708	3347	1167	1025	412	10166
534	EDC	133.8	0.0	0.0	54.9	45	0	0	45	1663	784	442	1813	560	5262	1663	784	442	1813	560	0	0	5262
535	EDC	235.9	0.0	0.0	91.5	65	0	0	65	2968	1103	486	3051	952	8561	2968	1103	486	3051	952	0	0	8560
536	EDC	218.8	0.0	0.0	84.8	57	0	0	57	2712	949	377	2719	862	7620	2712	949	377	2719	862	0	0	7619
537	EDC	439.0	0.0	0.0	170.2	107	0	0	107	5858	2356	1008	5256	1671	16148	5858	2356	1008	5256	1671	0	0	16149
538	EDC	139.2	36.9	0.0	57.8	554	888	410	1853	1399	327	122	1654	996	4498	1399	327	122	1654	996	888	410	5796
539	EDC	16.0	166.0	338.0	6.6	2427	4861	3055	10344	95	15	805	149	539	1604	95	15	805	149	539	4861	3055	9519
540	EDC	0.0	53.0	0.0	0.0	655	1045	803	2503	0	0	0	0	0	0	0	0	0	0	0	1045	803	1848
541	EDC	43.3	6.0	0.0	18.0	61	57	14	132	349	83	131	363	107	1032	349	83	131	363	107	57	14	1104
542	EDC	123.6	37.0	0.0	52.4	417	464	71	953	1248	462	50	925	247	2932	1248	462	50	925	247	464	71	3467
543	EDC	116.3	107.0	0.0	49.1	2047	3182	1020	6249	1036	125	93	873	826	2953	1036	125	93	873	826	3182	1020	7155
544	EDC	35.3	8.0	0.0	14.9	89	53	18	160	290	70	35	297	66	759	290	70	35	297	66	53	18	829
545	EDC	55.6	0.0	0.0	23.5	15	0	0	15	638	387	131	724	261	2140	638	387	131	724	261	0	0	2141
546	EDC	164.3	0.0	0.0	69.4	57	0	0	57	2156	1508	620	2509	787	7579	2156	1508	620	2509	787	0	0	7580
547	EDC	24.5	46.0	0.0	10.4	539	1895	843	3277	165	24	59	157	233	638	165	24	59	157	233	1895	843	3376
548	EDC	920.2	22.0	0.0	388.2	472	204	27	704	9766	4095	337	7266	1281	22744	9766	4095	337	7266	1281	204	27	22976
549	EDC	102.9	0.0	0.0	43.4	20	0	0	20	1023	350	93	1038	192	2697	1023	350	93	1038	192	0	0	2696
550	EDC	27.6	0.0	0.0	11.0	2	0	0	2	249	56	18	167	29	518	249	56	18	167	29	0	0	519
551	EDC	104.2	54.0	0.0	41.6	866	1307	318	2491	1067	167	69	736	483	2522	1067	167	69	736	483	1307	318	4147
552	EDC	19.8	32.0	0.0	8.4	526	681	227	1434	145	30	9	118	138	440	145	30	9	118	138	681	227	1348
553	EDC	76.6	0.0	0.0	32.4	15	0	0	15	841	295	46	688	130	1999	841	295	46	688	130	0	0	2000
554	EDC	225.4	4.0	0.0	95.2	86	52	10	148	2480	1031	187	1795	312	5805	2480	1031	187	1795	312	52	10	5867
555	EDC	81.7	0.0	0.0	34.6	21	0	0	21	829	390	87	685	182	2172	829	390	87	685	182	0	0	2173
556	EDC	196.2	0.0	0.0	82.8	56	0	0	56	2399	1428	531	2156	536	7050	2399	1428	531	2156	536	0	0	7050
557	EDC	82.6	1.0	0.0	34.9	28	9	2	40	779	190	207	665	204	2045	779	190	207	665	204	9	2	2056
558	EDC	87.6	19.0	0.0	36.5	178	192	40	410	870	640	399	875	232	3016	870	640	399	875	232	192	40	3248
559	EDC	60.9	0.0	0.0	25.4	16	0	0	16	584	271	161	572	174	1762	584	271	161	572	174	0	0	1762
560	EDC	64.2	10.0	0.0	27.1	97	112	28	237	634	256	64	515	153	1622	634	256	64	515	153	112	28	1762
561	EDC	52.2	0.0	0.0	22.1	13	0	0	13	551	251	56	450	114	1422	551	251	56	450	114	0	0	1422
562	EDC	152.0	0.0	0.0	63.3	39	0	0	39	1757	1397	738	1516	379	5787	1757	1397	738	1516	379	0	0	5787
563	EDC	74.2	0.0	0.0	32.9	15	0	0	15	1175	925	356	698	108	3263	1175	925	356	698	108	0	0	3262
564	EDC	35.9	0.0	0.0	15.5	4	0	0	4	300	139	7	259	42	747	300	139	7	259	42	0	0	747
565	EDC	119.1	0.0	0.0	57.5	31	0	0	31	1236	640	65	827	207	2975	1236	640	65	827	207	0	0	2975
566	EDC	224.9	1.0	0.0	95.2	60	23	5	88	2314	967	117	1587	345	5331	2314	967	117	1587	345	23	5	5358
567	EDC	40.0	2.0	0.0	19.3	20	10	2	32	275	96	8	203	51	632	275	96	8	203	51	10	2	645
568	EDC	61.3	0.0	0.0	26.0	11	0	0	11	554	146	13	328	71	1110	554	146	13	328	71	0	0	1112
569	EDC	147.0	31.0	0.0	62.3	305	714	148	1167	1339	314	32	799	334	2818	1339	314	32	799	334	714	148	3680
570	EDC	85.9	92.3	251.0	41.5	853	1418	218	2490	632	176	374	410	259	1851	632	176	374	410	259	1418	218	3487
571	EDC	69.6	0.0	0.0	33.6	17	0	0	17	610	256	17	433	110	1426	610	256	17	433	110	0	0	1426
572	EDC	61.6	34.0	0.0	26.6	264	199	29	492	548	161	13	338	84	1143	548	161	13	338	84	199	29	1372
573	EDC	210.7	2.0	0.0	93.5	88	13	1	103	2711	1393	1035	2448	564	8151	2711	1393	1035	2448	564	13	1	8165
574	EDC	168.9	0.0	0.0	73.0	28	0	0	28	2465	2267	728	1453	198	7112	2465	2267	728	1453	198	0	0	7111
575	EDC	69.3	0.0	0.0	29.9	15	0	0	15	1087	1122	420	1047	172	3847	1087	1122	420	1047	172	0	0	3848
576	EDC	42.8	1.0	0.0	19.0	11	22	3	36	599	334	152	306	55	1445	599	334	152	306	55	22	3	1471

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
577	EDC	29.6	0.0	0.0	13.1	3	0	0	3	413	177	86	193	30	899	413	177	86	193	30	0	0	899
578	EDC	855.7	0.0	0.0	379.7	101	0	0	101	12626	11703	4957	8069	1069	38423	12626	11703	4957	8069	1069	0	0	38424
579	EDC	89.9	12.0	0.0	38.4	99	41	5	144	1503	1373	461	1230	178	4745	1503	1373	461	1230	178	41	5	4791
580	EDC	84.0	5.0	19.0	35.8	58	76	7	141	1395	1225	145	822	143	3729	1395	1225	145	822	143	76	7	3813
581	EDC	101.2	32.0	0.0	45.7	309	80	16	405	1450	1588	700	1403	283	5423	1450	1588	700	1403	283	80	16	5520
582	EDC	32.6	0.0	0.0	13.2	11	0	0	11	519	267	202	391	80	1460	519	267	202	391	80	0	0	1459
583	EDC	803.7	10.0	28.0	363.2	232	169	19	421	13025	14321	5023	10539	1716	44625	13025	14321	5023	10539	1716	169	19	44812
584	EDC	39.4	3.0	19.0	18.5	64	136	38	237	470	605	159	635	266	2135	470	605	159	635	266	136	38	2309
585	EDC	280.6	0.0	0.0	126.8	74	0	0	74	4226	4120	1803	3497	617	14263	4226	4120	1803	3497	617	0	0	14263
586	EDC	96.7	92.0	0.0	51.6	1737	740	118	2595	1124	240	134	849	402	2749	1124	240	134	849	402	740	118	3607
587	EDC	96.7	0.0	0.0	40.1	11	0	0	11	1259	445	147	532	67	2450	1259	445	147	532	67	0	0	2450
588	EDC	835.6	0.0	0.0	326.0	120	0	0	120	10819	4720	2253	5451	681	23924	10819	4720	2253	5451	681	0	0	23924
589	EDC	7.2	0.0	0.0	3.6	1	0	0	1	2	49	0	42	5	97	2	49	0	42	5	0	0	98
590	EDC	44.4	120.0	0.0	18.6	1636	1581	444	3660	356	49	37	194	320	955	356	49	37	194	320	1581	444	2981
591	EDC	7.2	0.0	0.0	3.0	0	0	0	0	26	4	5	20	2	57	26	4	5	20	2	0	0	57
592	EDC	757.6	91.0	384.0	341.6	836	1279	79	2194	5414	986	499	3176	739	10814	5414	986	499	3176	739	1279	79	12172
593	EDC	361.4	28.0	0.0	151.5	268	92	5	366	3561	719	185	1834	307	6606	3561	719	185	1834	307	92	5	6703
594	EDC	745.6	5.0	0.0	312.5	180	10	1	191	8930	2748	451	4630	707	17465	8930	2748	451	4630	707	10	1	17477
595	EDC	62.1	31.0	265.0	27.5	276	857	70	1203	778	203	296	296	185	1758	778	203	296	296	185	857	70	2685
596	EDC	94.8	25.0	0.0	37.0	232	294	23	549	1071	352	73	532	175	2203	1071	352	73	532	175	294	23	2520
597	EDC	239.4	325.5	0.0	107.9	2676	2916	501	6092	1551	277	79	896	757	3559	1551	277	79	896	757	2916	501	6977
598	EDC	31.3	35.0	0.0	14.1	276	420	79	774	158	33	10	86	99	385	158	33	10	86	99	420	79	885
599	EDC	37.9	0.0	0.0	17.1	7	0	0	7	371	99	25	213	35	743	371	99	25	213	35	0	0	743
600	EDC	457.8	130.0	0.0	206.4	1428	796	53	2277	4165	1017	438	2721	581	8923	4165	1017	438	2721	581	796	53	9771
601	EDC	22.4	0.0	0.0	10.1	5	0	0	5	121	381	180	1048	197	1928	121	381	180	1048	197	0	0	1927
602	EDC	5.6	2.0	0.0	3.0	49	40	14	103	16	9	0	32	33	89	16	9	0	32	33	40	14	144
603	EDC	20.8	2.0	0.0	11.1	82	57	15	154	329	120	15	172	80	716	329	120	15	172	80	57	15	788
604	EDC	30.8	3.0	0.0	17.0	113	23	7	143	584	410	15	226	88	1323	584	410	15	226	88	23	7	1353
605	EDC	39.9	2.0	16.0	18.4	86	71	7	165	531	417	155	329	95	1528	531	417	155	329	95	71	7	1605
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	46.8	0.0	0.0	19.0	13	0	0	13	1464	928	507	1708	469	5077	1464	928	507	1708	469	0	0	5076
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	32	0	32	0	0	0	32	0	0	0	32
609	EDC	74.6	4.0	0.0	34.4	137	147	44	327	1288	779	553	1114	451	4186	1288	779	553	1114	451	147	44	4376
610	EDC	0.0	2315.2	932.0	0.0	23117	10277	3531	36925	0	0	1351	0	928	2279	0	0	1351	0	928	10277	3531	16087
611	EDC	1530.3	47.2	469.0	599.0	925	1132	123	2180	10421	1718	1132	11131	3009	27410	10421	1718	1132	11131	3009	1132	123	28666
612	EDC	2043.8	3488.0	393.0	800.0	33553	14056	2247	49857	11724	1963	1148	13737	5926	34498	11724	1963	1148	13737	5926	14056	2247	50801
613	EDC	5.8	0.0	0.0	2.2	0	0	0	0	17	3	1	18	0	40	17	3	1	18	0	0	0	39
614	EDC	2343.6	65.3	904.0	885.2	1117	2785	283	4185	18047	3622	2142	16959	4682	45452	18047	3622	2142	16959	4682	2785	283	48520
615	EDC	2677.5	0.0	0.0	1021.1	603	0	0	603	17872	3110	866	18636	3631	44115	17872	3110	866	18636	3631	0	0	44115
616	EDC	2668.0	365.3	1179.0	1024.1	3880	4304	464	8648	15808	2411	2442	17707	4866	43234	15808	2411	2442	17707	4866	4304	464	48002
617	EDC	552.6	131.5	2484.0	187.0	1311	7275	1145	9731	3745	771	3893	3864	2390	14664	3745	771	3893	3864	2390	7275	1145	23083
618	EDC	0.0	146.0	0.0	0.0	1167	738	103	2009	0	0	0	0	0	0	0	0	0	0	0	738	103	841
619	EDC	0.0	151.0	0.0	0.0	1242	892	199	2333	0	0	0	0	0	0	0	0	0	0	0	892	199	1091
620	EDC	0.0	196.5	3969.0	0.0	1835	11542	2856	16233	0	0	6372	0	1605	7977	0	0	6372	0	1605	11542	2856	22375
621	EDC	963.4	0.0	0.0	326.1	181	0	0	181	7152	1619	347	7651	1422	18191	7152	1619	347	7651	1422	0	0	18191
622	EDC	1093.5	150.1	607.0	370.0	1594	2510	246	4350	7785	1687	1274	8380	2224	21350	7785	1687	1274	8380	2224	2510	246	24106
623	EDC	0.0	16.0	0.0	0.0	135	76	7	217	0	0	0	0	0	0	0	0	0	0	0	76	7	83
624	EDC	917.5	102.6	920.0	308.9	1135	2785	298	4217	6104	1059	1587	6648	1990	17389	6104	1059	1587	6648	1990	2785	298	20471
625	EDC	0.0	40.0	0.0	0.0	305	132	34	471	0	0	0	0	0	0	0	0	0	0	0	132	34	166
626	EDC	385.6	98.0	0.0	164.0	1068	548	50	1666	2428	532	152	2923	692	6727	2428	532	152	2923	692	548	50	7325
627	EDC	0.0	897.0	0.0	0.0	11805	15877	8441	36124	0	0	0	0	0	0	0	0	0	0	0	15877	8441	24318
628	EDC	1347.6	0.0	0.0	525.0	412	0	0	412	11499	1665	773	10886	2504	27329	11499	1665	773	10886	2504	0	0	27327
629	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
631	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
632	Project Residen	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
633	Proj Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
634	Proj Hotel	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
635	Program Reside	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
636	Program Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2040 No Project

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	544200	308773	74180	927153	438825	232191	111078	588541	413854	1784488	438825	232191	111078	588541	413854	308773	74180	2167442
651	gateway	0.0	0.0	0.0	0.0	4465	3250	645	8360	4770	3287	1657	5593	3814	19122	4770	3287	1657	5593	3814	3250	645	23016
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	58142	40731	7931	106804	56913	31209	13361	71683	50644	223810	56913	31209	13361	71683	50644	40731	7931	272472
654	gateway	0.0	0.0	0.0	0.0	2813	1908	400	5121	2739	1495	630	3518	2441	10822	2739	1495	630	3518	2441	1908	400	13131
655	gateway	0.0	0.0	0.0	0.0	35729	21965	5184	62877	30111	17090	7824	42064	29266	126354	30111	17090	7824	42064	29266	21965	5184	153504
656	gateway	0.0	0.0	0.0	0.0	7331	2576	623	10530	3528	2220	1304	5438	3727	16217	3528	2220	1304	5438	3727	2576	623	19416
657	gateway	0.0	0.0	0.0	0.0	3709	1513	352	5574	2095	1200	715	2944	2041	8994	2095	1200	715	2944	2041	1513	352	10860
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	967	455	89	1511	657	401	162	830	552	2602	657	401	162	830	552	455	89	3146
660	gateway	0.0	0.0	0.0	0.0	35887	18824	4626	59337	25248	14218	6954	36643	25319	108382	25248	14218	6954	36643	25319	18824	4626	131832
661	gateway	0.0	0.0	0.0	0.0	26116	14354	3519	43989	19558	11016	5068	27996	19378	83016	19558	11016	5068	27996	19378	14354	3519	100889
662	gateway	0.0	0.0	0.0	0.0	130945	77578	18014	226537	107582	51510	28726	145691	100537	434046	107582	51510	28726	145691	100537	77578	18014	529638
663	gateway	0.0	0.0	0.0	0.0	84763	53338	12065	150166	74057	33680	18489	97300	67728	291254	74057	33680	18489	97300	67728	53338	12065	356657
664	gateway	0.0	0.0	0.0	0.0	66193	49454	9920	125567	72140	28498	17769	84491	57400	260297	72140	28498	17769	84491	57400	49454	9920	319672
665	gateway	0.0	0.0	0.0	0.0	36866	21030	4176	62071	29978	10179	6823	33991	22664	103635	29978	10179	6823	33991	22664	21030	4176	128841
666	gateway	0.0	0.0	0.0	0.0	17891	12160	2394	32444	17475	6335	3821	19631	13262	60524	17475	6335	3821	19631	13262	12160	2394	75078
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	90786	16530	107316	132314	63582	17825	148825	103855	466400	132314	63582	17825	148825	103855	90786	16530	573717
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	33344	24593	5377	63314	41503	21839	9144	42288	23548	138323	41503	21839	9144	42288	23548	24593	5377	168292
672	gateway	0.0	0.0	0.0	0.0	0	11698	2521	14219	11727	7099	1984	19257	12714	52781	11727	7099	1984	19257	12714	11698	2521	67000
673	gateway	0.0	0.0	0.0	0.0	0	4810	1018	5829	5196	3337	902	7722	5457	22614	5196	3337	902	7722	5457	4810	1018	28442
674	gateway	0.0	0.0	0.0	0.0	0	10651	2163	12814	11465	6978	1994	16470	11409	48317	11465	6978	1994	16470	11409	10651	2163	61130
EDC Total		162,164.1	38,882.0	32,672.0	64,990.6	487,350.0	428,437.0	120,778.0	1,036,563.0	1,327,422.0	367,078.0	187,110.0	1,168,099.0	319,108.0	3,368,817.0	1,327,422.0	367,078.0	187,110.0	1,168,099.0	319,108.0	428,437.0	120,778.0	3,918,032.0

2018 No Project El Dorado County VMT/Employee **26.3**
85% Threshold **22.3**

2018 No Project El Dorado County VMT/Resident **22.1**
85% Threshold **18.8**

2040 El Dorado County VMT/Service Population **19.5**

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	97.1	16.0	0.0	46.1	414	927	277	1618	1193	513	615	1133	629	4083	1193	513	615	1133	629	927	277	5287
2	EDC	1204.8	34.0	214.0	533.0	487	678	35	1200	14998	2651	654	5907	1199	25407	14998	2651	654	5907	1199	678	35	26121
3	EDC	94.3	0.0	0.0	38.8	31	0	0	31	1008	536	316	1625	398	3884	1008	536	316	1625	398	0	0	3884
4	EDC	34.8	2.0	0.0	16.0	60	123	28	211	427	283	253	430	135	1527	427	283	253	430	135	123	28	1678
5	EDC	73.0	0.0	0.0	33.0	22	0	0	22	1104	1093	457	1171	261	4086	1104	1093	457	1171	261	0	0	4086
6	EDC	651.0	9.0	0.0	281.5	351	87	18	457	6567	1980	503	5603	1073	15725	6567	1980	503	5603	1073	87	18	15831
7	EDC	1130.1	71.0	0.0	521.9	1058	544	57	1659	13033	7450	1138	8872	1748	32241	13033	7450	1138	8872	1748	544	57	32842
8	EDC	35.4	60.1	0.0	14.1	822	644	123	1589	303	70	16	193	134	715	303	70	16	193	134	644	123	1483
9	EDC	1230.2	117.0	283.0	491.2	1881	1927	184	3992	14319	4584	689	10114	2137	31844	14319	4584	689	10114	2137	1927	184	33955
10	outside EDC	4030.5	55.6	476.0	1571.0	1739	1501	149	3388	26317	5169	2680	31361	7252	72779	26317	5169	2680	31361	7252	1501	149	74428
11	outside EDC	7196.5	607.8	1963.0	2805.0	8735	10454	1336	20525	40107	6238	5808	49691	14431	116274	40107	6238	5808	49691	14431	10454	1336	128065
12	outside EDC	4509.8	264.5	1790.0	1644.0	3728	5561	692	9981	25115	2461	3818	27499	8192	67085	25115	2461	3818	27499	8192	5561	692	73338
13	outside EDC	2683.6	0.0	0.0	989.0	635	0	0	635	18374	2338	1627	17509	4167	44014	18374	2338	1627	17509	4167	0	0	44014
14	outside EDC	4136.1	80.8	855.0	1517.0	1676	2398	263	4336	26957	4240	3615	26196	7348	68356	26957	4240	3615	26196	7348	2398	263	71016
15	outside EDC	28.6	0.0	0.0	10.0	2	0	0	2	216	33	24	253	34	560	216	33	24	253	34	0	0	560
16	outside EDC	1173.3	1089.3	0.0	479.0	13408	11900	4057	29365	5668	797	485	7639	6398	20987	5668	797	485	7639	6398	11900	4057	36944
17	outside EDC	1622.6	0.0	0.0	637.0	559	0	0	559	15846	5901	2681	17581	2761	44771	15846	5901	2681	17581	2761	0	0	44771
18	outside EDC	4528.9	27.9	238.0	1879.0	1761	961	114	2836	38525	14921	4931	41117	11484	110979	38525	14921	4931	41117	11484	961	114	112054
19	outside EDC	1111.2	86.1	739.0	491.0	1255	2515	418	4189	6691	2857	1404	9474	3421	23847	6691	2857	1404	9474	3421	2515	418	26780
20	outside EDC	3.5	5.0	0.0	1.0	63	20	2	85	6	5	9	31	5	55	6	5	9	31	5	20	2	77
21	outside EDC	2.0	111.9	0.0	1.0	1518	532	320	2371	10	4	0	11	17	42	10	4	0	11	17	532	320	895
22	outside EDC	2.0	22.7	0.0	2.0	345	219	231	795	21	4	0	12	44	81	21	4	0	12	44	219	231	531
23	outside EDC	277.4	375.3	2047.0	99.0	6280	6445	2628	15353	1156	530	9523	2660	6092	19961	1156	530	9523	2660	6092	6445	2628	29034
24	outside EDC	124.0	110.9	0.0	124.0	2069	1190	854	4113	1179	373	0	966	1827	4344	1179	373	0	966	1827	1190	854	6388
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	2004.7	86.0	0.0	885.0	1956	1354	224	3535	12889	6764	2455	21345	7168	50621	12889	6764	2455	21345	7168	1354	224	52199
27	outside EDC	5.0	21.9	0.0	2.0	285	133	53	471	23	10	0	39	33	105	23	10	0	39	33	133	53	291
28	outside EDC	322.4	6.0	0.0	124.0	210	26	4	239	2214	974	621	4197	1089	9096	2214	974	621	4197	1089	26	4	9125
29	outside EDC	205.7	5.0	0.0	72.0	131	23	3	158	1453	691	504	3016	715	6379	1453	691	504	3016	715	23	3	6405
30	outside EDC	0.0	133.0	0.0	0.0	1690	817	253	2760	0	0	0	0	0	0	0	0	0	0	0	817	253	1070
31	outside EDC	119.4	45.7	0.0	46.0	637	344	51	1031	1129	472	272	1754	535	4163	1129	472	272	1754	535	344	51	4557
32	outside EDC	2148.2	0.0	0.0	821.0	656	0	0	656	18522	6417	2301	20368	5456	53063	18522	6417	2301	20368	5456	0	0	53063
33	outside EDC	56.0	0.0	0.0	22.0	11	0	0	11	461	165	65	544	136	1372	461	165	65	544	136	0	0	1372
34	outside EDC	176.4	15.7	0.0	78.0	390	127	20	537	2050	1032	366	3244	981	7673	2050	1032	366	3244	981	127	20	7820
35	outside EDC	2429.2	183.2	0.0	943.0	3468	742	102	4312	11182	3612	2738	19416	5116	42064	11182	3612	2738	19416	5116	742	102	42908
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2208	864	455	3527	0	0	0	0	0	0	0	0	0	0	0	864	455	1319
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1560.6	259.2	0.0	680.0	3048	1044	110	4202	6360	1095	594	8584	1901	18533	6360	1095	594	8584	1901	1044	110	19687
40	outside EDC	2268.4	1871.7	0.0	979.0	17848	17145	6291	41284	9984	918	627	10006	9686	31221	9984	918	627	10006	9686	17145	6291	54657
41	outside EDC	1292.1	203.3	0.0	559.0	3111	904	148	4163	6735	1977	1086	11167	3598	24562	6735	1977	1086	11167	3598	904	148	25614
42	outside EDC	4511.7	691.3	447.0	1838.0	10976	10360	2469	23804	23595	7443	3502	35949	17060	87550	23595	7443	3502	35949	17060	10360	2469	100378
43	outside EDC	2109.0	58.2	497.0	825.0	1102	1554	216	2872	14610	4203	1557	15947	5018	41336	14610	4203	1557	15947	5018	1554	216	43106
44	outside EDC	6452.0	463.5	2387.0	2533.0	6276	10663	1879	18818	39068	11142	5564	45179	17858	118812	39068	11142	5564	45179	17858	10663	1879	131353
45	outside EDC	2600.1	1639.2	125.0	1136.0	18270	18393	7012	43675	11134	1029	1056	12470	11710	37399	11134	1029	1056	12470	11710	18393	7012	62803
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	3453.7	0.0	0.0	49868	16439	15613	81921	0	0	0	0	0	0	0	0	0	0	0	16439	15613	32052
48	outside EDC	3165.2	172.0	549.0	1248.0	3041	1834	327	5202	9643	4253	4480	23995	7827	50197	9643	4253	4480	23995	7827	1834	327	52359
49	outside EDC	357.5	4925.2	0.0	144.0	61028	17693	11937	90659	964	367	419	2773	3723	8245	964	367	419	2773	3723	17693	11937	37875
50	outside EDC	2608.3	1467.3	1537.0	1029.0	19685	6161	1409	27255	6981	3460	6428	18483	8504	43856	6981	3460	6428	18483	8504	6161	1409	51426
51	outside EDC	4421.3	1254.2	384.0	1837.0	16766	11560	4173	32499	13477	4111	3048	29956	19195	69788	13477	4111	3048	29956	19195	11560	4173	85521
52	outside EDC	674.0	279.6	3880.0	299.0	3462	8342	2304	14108	2504	915	10966	4856	5548	24788	2504	915	10966	4856	5548	8342	2304	35435
53	outside EDC	4029.1	1058.8	482.0	1563.0	14925	8935	2780	26639	12973	4648	4243	28791	16649	67304	12973	4648	4243	28791	16649	8935	2780	79018
54	outside EDC	1199.8	1874.4	0.0	486.0	25608	6163	1503	33273	3887	2365	1167	11009	4845	23273	3887	2365	1167	11009	4845	6163	1503	30939
55	outside EDC	1793.9	869.6	2114.0	779.0	13016	8877	3000	24894	6109	3562	9022	16345	12811	47848	6109	3562	9022	16345	12811	8877	3000	59726
56	outside EDC	3224.3	282.5	0.0	1203.0	5608	1916	375	7899	9284	5633	4719	29565	10058	59259	9284	5633	4719	29565	10058	1916	375	61550
57	outside EDC	595.3	8063.1	0.0	268.0	105770	24008	12608	142386	1245	1146	653	5495	5185	13724	1245	1146	653	5495	5185	24008	12608	50341
58	outside EDC	1574.4	424.7	0.0	608.0	6825	3411	1129	11366	4806	2738	2158	14074	8385	32162	4806	2738	2158	14074	8385	3411	1129	36702
59	outside EDC	5.0	9.4	0.0	2.0	96	31	8	134	13	3	10	40	20	85	13	3	10	40	20	31	8	124
60	outside EDC	508.0	4670.1	0.0	238.0	62692	15841	8936	87469	1529	923	356	4163	4409	11380	1529	923	356	4163	4409	15841	8936	36157
61	outside EDC	5414.5	1410.8	404.0	2304.0	21679	10190	3012	34881	18421	9324	6957	43982	24565	103250	18421	9324	6957	43982	24565	10190	3012	116452
62	outside EDC	13.3	1648.9	0.0	4.0	20564	5818	3791	30173	34	18	20	107	139	319	34	18	20	107	139	5818	3791	9928
63	outside EDC	877.8	3971.1	0.0	359.0	46839	15839	8545	71223	2844	1393	1013	7325	7599	20174	2844	1393	1013	7325	7599	15839	8545	44558
64	outside EDC	3935.6	648.5	0.0	1582.0	9027	3396	664	13087	15461	5858	3568	29974	11136	65997	15461	5858	3568	29974	11136	3396	664	70057
65	outside EDC	356.2	0.0	0.0	138.0	120	0	0	120	2144	685	405	3207	1008	7450	2144	685	405	3207	1008	0	0	7450
66	outside EDC	1998.1	192.2	346.0	837.0	3079	2221	545	5845	5872	2770	2311	14115	6409	31477	5872	2770	2311	14115	6409	2221	545	34243
67	outside EDC	2626.8	935.5	0.0	1210.0	16013	7696	2508	26216	8041	5393	2868	24495	14191	54989	8041	5393	2868	24495	14191	7696	2508	65193
68	outside EDC	1475.8	820.5	0.0	707.0	9888	3710	1121	14719	4169	2317	1039	10748	5797	24070	4169	2317	1039	10748	5797	3710	1121	28900
69	outside EDC	6315.2	7270.8	416.0	2381.0	105363	26105	9961	141429	17200	5874	7573	39882	28471	99000	17200	5874	7573	39882	28471	26105	9961	135066
70	outside EDC	0.0	7350.2	2505.0	0.0	94046	22445	14069	130560	0	0	2564	0	2037	4601	0	0	2564	0	2037	22445	14069	41115
71	outside EDC	7725.4	828.3	1399.0	2980.0	15741	12052	2282	30075	42837	16385	9015	75714	27617	171567	42837	16385	9015	75714	27617	12052	2282	185901

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
72	outside EDC	220.4	8975.0	0.0	85.0	131186	26936	21098	179220	498	272	218	1529	2361	4878	498	272	218	1529	2361	26936	21098	52912
73	outside EDC	0.0	5746.2	0.0	0.0	68516	13762	7768	90046	0	0	0	0	0	0	0	0	0	0	0	13762	7768	21530
74	outside EDC	1134.7	5779.3	0.0	464.0	76211	19386	13447	109044	2810	1038	1046	7716	9847	22458	2810	1038	1046	7716	9847	19386	13447	55291
75	outside EDC	4513.9	2939.3	0.0	1937.0	40140	7370	1256	48767	12046	5313	4435	30794	9213	61800	12046	5313	4435	30794	9213	7370	1256	70426
76	outside EDC	1388.8	297.3	0.0	518.0	4575	3205	1223	9003	3912	1261	1212	9505	6383	22274	3912	1261	1212	9505	6383	3205	1223	26702
77	outside EDC	2910.5	1701.1	993.0	1158.0	22889	8666	2504	34058	8488	4017	5206	22667	12293	52670	8488	4017	5206	22667	12293	8666	2504	63839
78	outside EDC	251.5	1804.6	73.0	107.0	24934	13926	16473	55333	822	219	216	1719	4123	7099	822	219	216	1719	4123	13926	16473	37497
79	outside EDC	0.0	20.4	0.0	0.0	225	136	156	517	0	0	0	0	0	0	0	0	0	0	0	136	156	292
80	outside EDC	0.0	1473.9	0.0	0.0	17319	5137	4884	27340	0	0	0	0	0	0	0	0	0	0	0	5137	4884	10021
81	outside EDC	0.0	6290.8	0.0	0.0	76975	20423	17458	114857	0	0	0	0	0	0	0	0	0	0	0	20423	17458	37881
82	outside EDC	0.0	1787.3	0.0	0.0	20357	6128	4151	30637	0	0	0	0	0	0	0	0	0	0	0	6128	4151	10279
83	outside EDC	1418.7	219.7	1881.0	545.0	3681	5178	1045	9904	8177	2628	6003	13076	6122	36007	8177	2628	6003	13076	6122	5178	1045	42230
84	outside EDC	2887.3	407.0	0.0	1236.0	5916	3556	883	10355	12582	2952	1954	19170	9502	46159	12582	2952	1954	19170	9502	3556	883	50597
85	outside EDC	3258.6	262.1	905.0	1303.0	4213	4476	981	9670	14712	3880	3556	22997	10254	55399	14712	3880	3556	22997	10254	4476	981	60856
86	outside EDC	4494.6	774.9	1521.0	1977.0	10732	10289	2910	23931	16213	4385	5072	29249	16172	71091	16213	4385	5072	29249	16172	10289	2910	84290
87	outside EDC	4961.4	901.4	313.0	2291.0	13017	7021	1920	21958	15211	4668	3989	33582	16208	73658	15211	4668	3989	33582	16208	7021	1920	82598
88	outside EDC	2813.1	761.9	0.0	1127.0	10591	7895	2507	20993	12728	3139	2295	20160	13010	51332	12728	3139	2295	20160	13010	7895	2507	61733
89	outside EDC	0.0	292.1	0.0	0.0	3917	1707	1442	7066	0	0	0	0	0	0	0	0	0	0	0	1707	1442	3150
90	outside EDC	210.2	1019.5	0.0	123.0	16439	8978	10358	35776	567	256	124	1547	3448	5942	567	256	124	1547	3448	8978	10358	25278
91	outside EDC	1739.8	4670.1	34.0	679.0	50181	19749	8460	78390	6860	1668	1578	11986	10606	32697	6860	1668	1578	11986	10606	19749	8460	60906
92	outside EDC	2784.2	141.5	836.0	1159.0	2629	2338	415	5383	13703	3968	4114	21709	8006	51501	13703	3968	4114	21709	8006	2338	415	54254
93	outside EDC	1029.6	249.9	0.0	409.0	4192	1943	341	6476	7033	1316	857	8543	3326	21075	7033	1316	857	8543	3326	1943	341	23359
94	outside EDC	12.0	0.0	0.0	6.0	0	0	0	0	161	25	0	67	29	282	161	25	0	67	29	0	0	282
95	outside EDC	0.0	27.2	0.0	0.0	340	154	75	569	0	0	0	0	0	0	0	0	0	0	0	154	75	229
96	outside EDC	2827.4	456.4	408.0	1151.0	8326	6883	1182	16390	20455	3199	1952	25073	9627	60306	20455	3199	1952	25073	9627	6883	1182	68371
97	outside EDC	3283.3	0.0	0.0	1289.0	1078	0	0	1078	28976	10361	4646	32623	7750	84356	28976	10361	4646	32623	7750	0	0	84356
98	outside EDC	913.1	2957.6	0.0	348.0	32451	15828	6449	54728	4060	541	677	5535	5603	16416	4060	541	677	5535	5603	15828	6449	38693
99	outside EDC	1939.1	1040.5	501.0	791.0	11532	5069	969	17570	9754	1226	1855	11319	5066	29219	9754	1226	1855	11319	5066	5069	969	35257
100	outside EDC	1218.2	157.4	0.0	486.0	2503	1453	216	4173	10444	3074	1547	13066	4207	32338	10444	3074	1547	13066	4207	1453	216	34007
101	outside EDC	3677.1	617.7	467.0	1418.0	7805	5605	902	14311	25328	7398	3143	30550	10838	77257	25328	7398	3143	30550	10838	5605	902	83763
102	outside EDC	195.6	53.0	0.0	76.0	617	273	39	929	1299	444	258	2059	581	4641	1299	444	258	2059	581	273	39	4953
103	outside EDC	5354.4	511.2	765.0	2275.0	6813	8529	1388	16731	35276	11231	2868	40218	14683	104275	35276	11231	2868	40218	14683	8529	1388	114193
104	outside EDC	267.0	0.0	0.0	109.0	89	0	0	89	1951	570	338	2744	687	6289	1951	570	338	2744	687	0	0	6289
105	outside EDC	3393.4	70.9	0.0	1365.0	1913	1255	165	3333	26587	8061	2658	29098	8569	74974	26587	8061	2658	29098	8569	1255	165	76394
106	outside EDC	0.0	70.3	0.0	0.0	747	413	103	1263	0	0	0	0	0	0	0	0	0	0	0	413	103	517
107	outside EDC	4863.6	3741.3	927.0	2202.0	46530	22561	5597	74687	19989	3906	4971	36227	17661	82753	19989	3906	4971	36227	17661	22561	5597	110910
108	outside EDC	1796.3	842.0	0.0	673.0	10562	3415	451	14428	10548	1083	2064	12869	3757	30320	10548	1083	2064	12869	3757	3415	451	34186
109	outside EDC	1569.7	701.7	0.0	639.0	10861	6827	2113	19801	8426	1654	1688	13194	8420	33382	8426	1654	1688	13194	8420	6827	2113	42322
110	outside EDC	620.8	1922.3	0.0	262.0	26256	10261	3709	40226	2763	785	693	5679	4191	14111	2763	785	693	5679	4191	10261	3709	28081
111	outside EDC	1186.8	1667.5	0.0	517.0	26253	22513	14955	63722	5065	724	1014	8748	12355	27906	5065	724	1014	8748	12355	22513	14955	65375
112	outside EDC	2018.4	2144.3	194.0	749.0	30554	22698	11019	64270	10398	1131	2270	13904	15638	43341	10398	1131	2270	13904	15638	22698	11019	77057
113	outside EDC	0.0	4221.5	0.0	0.0	44291	16183	7942	68415	0	0	0	0	0	0	0	0	0	0	0	16183	7942	24124
114	outside EDC	2119.4	711.2	0.0	801.0	7110	3104	388	10601	11143	1490	1171	12286	3609	29699	11143	1490	1171	12286	3609	3104	388	33190
115	outside EDC	5916.2	1339.3	1547.0	2306.0	20974	20461	4561	45996	34495	6101	6158	44869	22451	114073	34495	6101	6158	44869	22451	20461	4561	139096
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1646.6	1491.8	2300.0	585.0	15903	10383	1840	28126	8382	1362	4392	10969	5038	30144	8382	1362	4392	10969	5038	10383	1840	42367
118	outside EDC	6343.0	186.4	551.0	2399.0	3406	2912	394	6712	28074	4229	3708	37000	10569	83579	28074	4229	3708	37000	10569	2912	394	86885
119	outside EDC	1272.5	6545.1	0.0	509.0	58578	24333	7864	90775	6109	853	559	7346	6169	21036	6109	853	559	7346	6169	24333	7864	53234
120	outside EDC	289.9	5099.5	0.0	113.0	51704	37796	22394	111894	1213	137	105	1642	3840	6937	1213	137	105	1642	3840	37796	22394	67127
121	outside EDC	4220.4	1760.6	651.0	1645.0	20220	24511	7480	52210	18771	2060	2644	23135	17152	63761	18771	2060	2644	23135	17152	24511	7480	95752
122	outside EDC	1805.8	1224.4	3643.0	771.0	11758	11775	2178	25710	7363	1087	739	9830	4299	23318	7363	1087	739	9830	4299	11775	2178	37271
123	outside EDC	569.2	855.2	0.0	208.0	8831	9035	3864	21730	2746	271	302	3141	3726	10186	2746	271	302	3141	3726	9035	3864	23085
124	outside EDC	2653.4	461.3	401.0	1243.0	6784	8357	1900	17041	15682	2807	2553	18730	10334	50105	15682	2807	2553	18730	10334	8357	1900	60362
125	outside EDC	834.5	1004.3	0.0	423.0	11217	10381	5143	26741	3425	385	247	4056	5003	13115	3425	385	247	4056	5003	10381	5143	28639
126	outside EDC	406.0	279.1	0.0	185.0	3514	3125	1226	7864	2177	211	187	2133	2168	6877	2177	211	187	2133	2168	3125	1226	11227
127	outside EDC	1765.6	117.0	0.0	828.0	1817	1285	202	3304	11747	1545	1005	10843	4274	29415	11747	1545	1005	10843	4274	1285	202	30902
128	outside EDC	2039.9	767.4	0.0	990.0	10394	9930	2676	23000	13231	1831	1310	13878	9346	39597	13231	1831	1310	13878	9346	9930	2676	52202
129	outside EDC	2269.4	0.0	0.0	1030.0	707	0	0	707	13739	2834	2021	16199	4934	39727	13739	2834	2021	16199	4934	0	0	39727
130	outside EDC	924.4	478.2	578.0	402.0	4454	4919	1389	10761	3695	328	945	3989	3032	11989	3695	328	945	3989	3032	4919	1389	18297
131	outside EDC	1290.2	1327.4	1635.0	629.0	12359	11307	3319	26985	5471	599	2935	6169	5505	20679	5471	599	2935	6169	5505	11307	3319	35305
132	outside EDC	925.3	300.9	0.0	409.0	3862	3299	763	7924	5439	969	642	6685	3586	17322	5439	969	642	6685	3586	3299	763	21384
133	outside EDC	5279.7	1484.3	1837.0	2116.0	14565	16386	3651	34603	23275	1990	3232	22977	13288	64762	23275	1990	3232	22977	13288	16386	3651	84800
134	outside EDC	2660.9	1568.3	0.0	1151.0	17028	7819	1291	26138	10235	1781	947	14658	5262	32883	10235	1781	947	14658	5262	7819	1291	41993
135	outside EDC	0.0	2114.0	0.0	0.0	21164	8090	2023	31277	0	0	0	0	0	0	0	0	0	0	0	8090	2023	10114
136	outside EDC	1710.8	110.3	0.0	670.0	1835	1676	257	3768	11450	1445	1094	10867	4181	29037	11450	1445	1094	10867	4181	1676	257	30970
137	outside EDC	6779.1	673.0	610.0	2354.0	9140	12860	2243	24243	37367	4850	5229	40422	17289	105158	37367	4850	5229	40422	17289	12860	2243	120261
138	EDC	378.1	25.0	0.0	173.0	454	155	11	620	2191	376	128	2147	456	5298	2191	376	128	2147	456	155	11	5464
139	EDC	133.2	106.9	0.0	62.0	1433	1250	275	2958	620	141	14	573	544	1893	620	141	14	573	544	1250	275	3418
140	EDC	22.0	442.5	0.0	10.0	7025	6757	3399	17181	47	9	1	47	212	316	47	9	1	47	212	6757	3399	10471
141	EDC	49.2	2.0	0.0	21.0	57	50	5	113	659	181	125	757	219	1941	659	181	125	757	219	50	5	1997
142	EDC	348.9	0.0	0.0	156.9	141	0	0	141	3132	808	186	2916	730	7772	3132	808	186	2916	730	0	0	7772
143	EDC	210.8	4.0	0.0	94.8	104	6	0	111	1506	332	53	1307	313	3512	1506	332	53	1307	313	6	0	3518

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
144	EDC	186.9	19.0	0.0	74.7	278	84	11	373	1872	303	70	1224	294	3762	1872	303	70	1224	294	84	11	3857
145	EDC	69.3	0.0	0.0	30.0	8	0	0	8	366	47	16	218	46	694	366	47	16	218	46	0	0	694
146	EDC	146.8	58.7	25.0	64.0	794	643	97	1535	690	128	73	611	378	1879	690	128	73	611	378	643	97	2619
147	EDC	364.7	0.0	0.0	159.0	104	0	0	104	1875	324	86	1711	345	4341	1875	324	86	1711	345	0	0	4341
148	outside EDC	5292.4	137.7	0.0	2260.0	5652	1410	157	7220	61633	30752	16542	80172	21314	210413	61633	30752	16542	80172	21314	1410	157	211980
149	EDC	125.8	214.2	0.0	44.9	3140	3229	953	7322	903	94	23	695	961	2676	903	94	23	695	961	3229	953	6857
150	EDC	257.8	3.0	0.0	108.8	148	33	3	184	2959	693	287	3248	800	7987	2959	693	287	3248	800	33	3	8022
151	EDC	66.8	0.0	0.0	23.0	5	0	0	5	735	176	125	623	77	1736	735	176	125	623	77	0	0	1736
152	EDC	391.5	99.0	0.0	161.4	1517	1376	177	3070	2975	392	99	2814	1134	7415	2975	392	99	2814	1134	1376	177	8968
153	EDC	411.6	32.5	0.0	191.5	636	448	51	1135	2594	579	127	2752	937	6989	2594	579	127	2752	937	448	51	7488
154	EDC	245.5	16.0	0.0	104.4	202	58	4	264	1412	158	127	1593	308	3598	1412	158	127	1593	308	58	4	3660
155	EDC	285.3	0.0	0.0	108.2	63	0	0	63	2203	359	98	2145	373	5177	2203	359	98	2145	373	0	0	5177
156	EDC	68.0	0.0	0.0	27.0	23	0	0	23	834	290	218	1128	210	2680	834	290	218	1128	210	0	0	2680
157	EDC	790.4	0.0	0.0	273.1	125	0	0	125	4725	868	174	5550	969	12285	4725	868	174	5550	969	0	0	12285
158	EDC	1409.8	72.0	0.0	614.8	1044	346	26	1416	9862	1318	774	8862	2012	22828	9862	1318	774	8862	2012	346	26	23200
159	EDC	993.8	1.0	0.0	409.6	235	0	0	235	7323	968	603	6280	1206	16380	7323	968	603	6280	1206	0	0	16380
160	EDC	847.9	0.0	0.0	349.5	243	0	0	243	6590	932	173	5728	1146	14568	6590	932	173	5728	1146	0	0	14568
161	EDC	283.3	0.0	0.0	109.0	52	0	0	52	2501	541	206	2626	528	6402	2501	541	206	2626	528	0	0	6402
162	EDC	4465.2	0.0	0.0	1503.0	901	0	0	901	35727	8341	2306	35781	6219	88375	35727	8341	2306	35781	6219	0	0	88375
163	EDC	430.2	230.0	0.0	144.8	2720	3636	926	7282	2808	425	176	3204	2280	8893	2808	425	176	3204	2280	3636	926	13455
164	EDC	0.0	2237.6	0.0	0.0	21795	8333	3459	33587	0	0	0	0	0	0	0	0	0	0	0	8333	3459	11792
165	EDC	1313.9	0.0	0.0	528.8	343	0	0	343	8405	1395	645	10130	2161	22735	8405	1395	645	10130	2161	0	0	22735
166	EDC	1954.3	58.8	756.0	762.0	1072	2058	243	3374	11728	1997	1993	13396	3863	32977	11728	1997	1993	13396	3863	2058	243	35278
167	EDC	3477.7	55.2	256.0	1497.3	1606	740	73	2418	23058	4554	1359	24267	6035	59273	23058	4554	1359	24267	6035	740	73	60085
168	EDC	2628.9	9.0	0.0	1131.8	735	24	2	760	13926	1908	788	16145	2664	35432	13926	1908	788	16145	2664	24	2	35457
169	EDC	531.7	1939.0	0.0	214.0	20549	23704	12787	57041	2508	324	193	3230	6248	12503	2508	324	193	3230	6248	23704	12787	48994
170	EDC	1217.5	1590.4	0.0	490.0	14643	6279	850	21773	6005	861	472	7792	2592	17721	6005	861	472	7792	2592	6279	850	24851
171	EDC	1080.7	93.7	0.0	441.0	1226	415	41	1681	7139	1190	478	8070	1885	18762	7139	1190	478	8070	1885	415	41	19218
172	EDC	0.0	178.2	0.0	0.0	1767	2005	1443	5214	0	0	0	0	0	0	0	0	0	0	0	2005	1443	3448
173	EDC	0.0	547.0	0.0	0.0	5513	7057	4987	17557	0	0	0	0	0	0	0	0	0	0	0	7057	4987	12044
174	EDC	37.8	11.0	52.0	15.0	200	289	37	526	421	144	190	559	198	1514	421	144	190	559	198	289	37	1840
175	EDC	25.8	5.0	0.0	10.9	63	22	1	86	315	58	32	277	45	726	315	58	32	277	45	22	1	749
176	EDC	76.8	0.0	0.0	32.4	21	0	0	21	844	178	76	960	207	2264	844	178	76	960	207	0	0	2264
177	EDC	66.6	7.0	0.0	26.4	92	32	3	126	587	155	60	790	161	1752	587	155	60	790	161	32	3	1786
178	EDC	94.6	0.0	0.0	36.9	22	0	0	22	1038	211	99	1173	222	2742	1038	211	99	1173	222	0	0	2742
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	EDC	1173.1	0.0	0.0	457.0	331	0	0	331	11346	2153	842	10559	2382	27282	11346	2153	842	10559	2382	0	0	27282
181	EDC	274.3	81.0	453.0	104.6	856	2010	279	3145	2083	369	593	2027	952	6024	2083	369	593	2027	952	2010	279	8313
182	EDC	3251.4	0.0	0.0	1240.0	767	0	0	767	26002	4403	1560	22661	4596	59222	26002	4403	1560	22661	4596	0	0	59222
183	EDC	667.9	0.0	0.0	284.1	182	0	0	182	4591	1096	322	5732	1180	12920	4591	1096	322	5732	1180	0	0	12920
184	EDC	1039.1	461.2	1110.0	396.3	5212	8426	1232	14869	7827	1243	1487	7470	3692	21719	7827	1243	1487	7470	3692	8426	1232	31376
185	EDC	346.2	0.0	0.0	150.9	56	0	0	56	2487	436	131	2320	501	5874	2487	436	131	2320	501	0	0	5874
186	EDC	258.1	185.1	0.0	112.5	2131	2719	590	5440	1753	283	92	1680	1257	5066	1753	283	92	1680	1257	2719	590	8375
187	EDC	559.9	85.0	0.0	244.2	970	440	36	1446	3834	522	255	3729	869	9208	3834	522	255	3729	869	440	36	9684
188	EDC	468.1	69.0	0.0	204.1	756	363	23	1142	2946	348	211	2799	514	6818	2946	348	211	2799	514	363	23	7204
189	EDC	103.0	0.0	0.0	36.9	25	0	0	25	1098	332	180	1484	284	3379	1098	332	180	1484	284	0	0	3379
190	EDC	704.5	0.0	0.0	252.4	148	0	0	148	5898	1034	446	6144	1126	14648	5898	1034	446	6144	1126	0	0	14648
191	EDC	75.4	0.0	0.0	27.0	5	0	0	5	569	90	36	575	87	1358	569	90	36	575	87	0	0	1358
192	EDC	69.2	0.0	0.0	25.0	5	0	0	5	504	87	29	457	82	1159	504	87	29	457	82	0	0	1159
193	EDC	2977.0	93.0	0.0	1135.3	1485	558	48	2092	22381	4848	881	21699	4782	54590	22381	4848	881	21699	4782	558	48	55197
194	EDC	1297.4	0.0	0.0	439.0	232	0	0	232	8874	1940	176	9147	1641	21778	8874	1940	176	9147	1641	0	0	21778
195	EDC	26.5	46.6	0.0	10.0	535	809	402	1747	170	29	16	170	291	675	170	29	16	170	291	809	402	1887
196	outside EDC	3646.7	88.2	593.0	1309.0	1677	2200	210	4088	28056	5873	2687	28023	6878	71516	28056	5873	2687	28023	6878	2200	210	73927
197	EDC	225.1	0.0	0.0	85.1	34	0	0	34	1711	314	113	1660	354	4152	1711	314	113	1660	354	0	0	4152
198	EDC	2475.8	470.9	740.0	887.0	5001	10121	1465	16587	17909	2599	1774	17731	7094	47108	17909	2599	1774	17731	7094	10121	1465	58694
199	EDC	173.1	120.0	0.0	62.0	1382	2245	765	4392	1198	219	105	1284	1290	4097	1198	219	105	1284	1290	2245	765	7107
200	EDC	18.5	113.0	0.0	7.0	1210	1383	702	3295	109	21	7	116	238	492	109	21	7	116	238	1383	702	2577
201	EDC	443.3	301.0	0.0	150.0	2674	1790	187	4652	2957	602	191	3272	905	7928	2957	602	191	3272	905	1790	187	9906
202	EDC	2116.9	199.0	0.0	758.4	2465	3545	403	6413	16200	2478	1154	16541	4841	41214	16200	2478	1154	16541	4841	3545	403	45162
203	EDC	3669.5	139.0	0.0	1268.1	1887	817	55	2760	29671	6810	1831	29180	5426	72917	29671	6810	1831	29180	5426	817	55	73790
204	EDC	1048.1	40.9	815.0	362.0	543	2246	223	3012	6633	1364	1312	7224	1964	18496	6633	1364	1312	7224	1964	2246	223	20966
205	EDC	327.1	80.0	0.0	113.0	731	360	29	1120	1943	353	105	2392	438	5231	1943	353	105	2392	438	360	29	5619
206	EDC	147.7	0.0	0.0	51.1	14	0	0	14	910	186	21	1014	157	2288	910	186	21	1014	157	0	0	2288
207	EDC	876.4	0.0	0.0	302.8	185	0	0	185	7142	1554	541	7575	1505	18316	7142	1554	541	7575	1505	0	0	18316
208	EDC	26.0	0.0	0.0	9.0	0	0	0	0	169	40	14	180	22	425	169	40	14	180	22	0	0	425
209	EDC	242.6	14.0	0.0	83.8	153	62	5	220	1911	386	132	1979	376	4783	1911	386	132	1979	376	62	5	4851
210	EDC	465.6	0.0	0.0	157.5	77	0	0	77	3388	748	217	3675	678	8706	3388	748	217	3675	678	0	0	8706
211	EDC	11.3	0.0	0.0	4.0	0	0	0	0	73	8	6	67	3	157	73	8	6	67	3	0	0	157
212	EDC	107.5	0.0	0.0	37.1	13	0	0	13	948	218	76	989	171	2402	948	218	76	989	171	0	0	2402
213	EDC	346.5	0.0	0.0	125.2	72	0	0	72	3282	817	303	3573	691	8666	3282	817	303	3573	691	0	0	8666
214	EDC	26.1	0.0	0.0	10.7	8	0	0	8	357	238	123	302	77	1097	357	238	123	302	77	0	0	1097
215	EDC	401.4	0.0	0.0	143.8	87	0	0	87	3568	721	280	4030	738	9338	3568	721	280	4030	738	0	0	9338

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
216	EDC	17.4	0.0	0.0	7.1	6	0	0	6	214	166	98	204	74	757	214	166	98	204	74	0	0	757
217	EDC	30.7	0.0	0.0	11.0	2	0	0	2	295	72	37	367	50	821	295	72	37	367	50	0	0	821
218	EDC	78.1	0.0	0.0	28.0	12	0	0	12	681	174	78	894	156	1982	681	174	78	894	156	0	0	1982
219	EDC	91.2	77.0	0.0	33.0	974	576	74	1623	850	202	103	1088	325	2567	850	202	103	1088	325	576	74	3217
220	EDC	24.9	0.0	0.0	9.0	1	0	0	1	231	57	30	272	33	623	231	57	30	272	33	0	0	623
221	EDC	2445.6	0.0	0.0	941.0	576	0	0	576	22902	5574	1738	20263	4096	54573	22902	5574	1738	20263	4096	0	0	54573
222	EDC	71.5	26.0	0.0	26.9	231	638	121	990	622	112	32	445	350	1561	622	112	32	445	350	638	121	2319
223	EDC	295.7	0.0	0.0	111.5	28	0	0	28	2557	453	165	1918	334	5426	2557	453	165	1918	334	0	0	5426
224	EDC	267.5	29.0	0.0	100.9	317	161	11	489	2584	581	177	2368	473	6182	2584	581	177	2368	473	161	11	6354
225	EDC	369.9	88.1	944.0	127.8	1060	3705	477	5243	3280	816	1683	3378	1567	10724	3280	816	1683	3378	1567	3705	477	14906
226	EDC	1173.2	84.7	566.0	405.5	956	2287	155	3398	10233	2170	1075	9007	1970	24456	10233	2170	1075	9007	1970	2287	155	26898
227	EDC	456.2	2.0	0.0	186.0	86	3	0	89	3828	830	294	3341	558	8851	3828	830	294	3341	558	3	0	8854
228	EDC	1758.7	20.0	0.0	717.2	470	240	12	722	13808	2594	1126	11427	1813	30768	13808	2594	1126	11427	1813	240	12	31020
229	EDC	257.3	0.0	0.0	99.0	32	0	0	32	2221	508	146	1972	369	5216	2221	508	146	1972	369	0	0	5216
230	EDC	1446.9	0.0	0.0	487.0	297	0	0	297	11828	2651	1131	12307	2173	30089	11828	2651	1131	12307	2173	0	0	30089
231	EDC	59.2	28.0	0.0	20.5	188	178	10	376	467	109	40	422	83	1121	467	109	40	422	83	178	10	1309
232	EDC	109.2	0.0	0.0	39.5	14	0	0	14	1152	297	114	1256	207	3026	1152	297	114	1256	207	0	0	3026
233	EDC	248.0	101.0	0.0	108.1	769	1388	192	2349	1835	367	112	1512	763	4589	1835	367	112	1512	763	1388	192	6169
234	EDC	2423.7	716.1	0.0	1056.8	6171	7162	722	14055	17842	3159	1277	15326	5117	42720	17842	3159	1277	15326	5117	7162	722	50603
235	EDC	2596.9	0.0	0.0	959.0	488	0	0	488	21547	3909	2037	18285	3370	49149	21547	3909	2037	18285	3370	0	0	49149
236	EDC	1276.1	9.0	0.0	471.2	251	39	2	292	10396	2014	759	8664	1448	23280	10396	2014	759	8664	1448	39	2	23321
237	EDC	176.5	0.0	0.0	76.9	23	0	0	23	1388	255	76	1243	259	3221	1388	255	76	1243	259	0	0	3221
238	EDC	903.0	254.7	0.0	368.3	2714	2079	170	4963	7267	1252	638	6569	1726	17451	7267	1252	638	6569	1726	2079	170	19700
239	EDC	178.8	16.0	0.0	67.4	124	344	26	495	1528	250	106	1084	296	3264	1528	250	106	1084	296	344	26	3634
240	EDC	339.9	0.0	0.0	128.2	72	0	0	72	3729	865	436	3496	645	9171	3729	865	436	3496	645	0	0	9171
241	EDC	463.9	2.0	0.0	175.0	72	12	1	85	4257	751	313	3144	575	9040	4257	751	313	3144	575	12	1	9053
242	EDC	61.8	0.0	0.0	23.3	2	0	0	2	522	76	35	352	46	1031	522	76	35	352	46	0	0	1031
243	EDC	153.3	13.0	0.0	57.8	86	51	3	140	1387	240	97	993	163	2881	1387	240	97	993	163	51	3	2935
244	EDC	63.7	0.0	0.0	25.4	7	0	0	7	687	265	86	713	103	1854	687	265	86	713	103	0	0	1854
245	EDC	30.0	0.0	0.0	10.0	5	0	0	5	352	93	67	428	70	1009	352	93	67	428	70	0	0	1009
246	EDC	189.0	0.0	0.0	63.0	31	0	0	31	2309	536	395	2150	343	5733	2309	536	395	2150	343	0	0	5733
247	EDC	636.3	0.0	0.0	296.0	328	0	0	328	5854	2276	645	5720	1458	15952	5854	2276	645	5720	1458	0	0	15952
248	EDC	437.6	0.0	0.0	184.6	177	0	0	177	5681	1270	670	4327	1019	12967	5681	1270	670	4327	1019	0	0	12967
249	EDC	57.8	0.0	0.0	26.9	16	0	0	16	533	279	107	878	169	1967	533	279	107	878	169	0	0	1967
250	EDC	124.1	0.0	0.0	53.0	32	0	0	32	1589	362	198	1371	268	3788	1589	362	198	1371	268	0	0	3788
251	EDC	245.9	0.0	0.0	94.1	58	0	0	58	2136	374	144	2233	439	5326	2136	374	144	2233	439	0	0	5326
252	EDC	1217.5	0.0	0.0	461.9	412	0	0	412	10698	1978	744	10133	2116	25668	10698	1978	744	10133	2116	0	0	25668
253	EDC	405.0	0.0	0.0	147.2	119	0	0	119	4090	888	467	4121	768	10334	4090	888	467	4121	768	0	0	10334
254	EDC	303.9	0.0	0.0	116.4	83	0	0	83	2769	555	224	2963	588	7099	2769	555	224	2963	588	0	0	7099
255	EDC	0.0	717.5	0.0	0.0	9025	7742	3488	20254	0	0	0	0	0	0	0	0	0	0	0	7742	3488	11230
256	EDC	174.6	1152.7	0.0	83.0	15489	13621	5144	34254	986	93	96	962	2081	4218	986	93	96	962	2081	13621	5144	22983
257	EDC	868.6	1222.1	0.0	332.6	15046	8232	1235	24514	5355	679	375	5695	2845	14949	5355	679	375	5695	2845	8232	1235	24416
258	EDC	62.6	2.0	0.0	22.8	24	1	0	25	618	156	118	682	88	1661	618	156	118	682	88	1	0	1663
259	EDC	85.3	0.0	0.0	32.4	11	0	0	11	852	218	105	903	133	2211	852	218	105	903	133	0	0	2211
260	EDC	10.1	167.6	0.0	3.5	2223	1868	727	4818	35	4	3	26	75	143	35	4	3	26	75	1868	727	2738
261	EDC	292.3	291.9	0.0	106.3	3912	3469	708	8089	1924	227	84	1796	1378	5409	1924	227	84	1796	1378	3469	708	9586
262	EDC	422.7	258.5	0.0	161.8	3394	2542	399	6335	2581	330	113	2488	1324	6836	2581	330	113	2488	1324	2542	399	9777
263	EDC	314.7	35.0	0.0	114.4	520	548	55	1123	2227	270	89	1948	629	5163	2227	270	89	1948	629	548	55	5766
264	EDC	202.5	45.0	0.0	73.6	658	848	120	1626	1425	169	58	1255	598	3505	1425	169	58	1255	598	848	120	4472
265	EDC	118.3	0.0	0.0	44.9	18	0	0	18	1024	223	95	1125	196	2663	1024	223	95	1125	196	0	0	2663
266	EDC	90.1	26.2	0.0	41.9	554	494	79	1128	690	180	55	719	399	2043	690	180	55	719	399	494	79	2617
267	EDC	375.2	0.0	0.0	142.3	103	0	0	103	3035	576	217	2939	481	7248	3035	576	217	2939	481	0	0	7248
268	EDC	182.9	6.0	0.0	69.4	102	18	1	122	1444	298	117	1429	278	3566	1444	298	117	1429	278	18	1	3586
269	EDC	528.7	1.0	0.0	205.5	195	0	0	195	5035	775	276	3971	974	11031	5035	775	276	3971	974	0	0	11031
270	EDC	113.1	0.0	0.0	45.2	21	0	0	21	1294	293	113	1069	198	2967	1294	293	113	1069	198	0	0	2967
271	EDC	392.5	5.0	0.0	152.6	168	15	2	185	4335	920	393	3780	795	10223	4335	920	393	3780	795	15	2	10240
272	EDC	372.1	23.0	0.0	132.7	313	160	11	484	3511	533	113	2838	570	7565	3511	533	113	2838	570	160	11	7735
273	EDC	390.2	12.0	0.0	134.5	230	60	4	295	4483	840	352	3610	671	9955	4483	840	352	3610	671	60	4	10020
274	EDC	713.5	98.9	645.0	254.4	1332	2703	233	4268	6639	1107	1180	5275	1637	15839	6639	1107	1180	5275	1637	2703	233	18775
275	EDC	840.5	13.0	0.0	328.0	459	141	11	611	8068	1142	363	6587	1585	17745	8068	1142	363	6587	1585	141	11	17897
276	EDC	1048.5	34.5	0.0	427.6	617	425	30	1072	8548	1397	514	7391	1615	19464	8548	1397	514	7391	1615	425	30	19919
277	EDC	414.1	0.0	0.0	170.7	70	0	0	70	3268	499	123	2648	534	7071	3268	499	123	2648	534	0	0	7071
278	EDC	244.1	0.0	0.0	92.1	48	0	0	48	2663	646	194	2575	472	6550	2663	646	194	2575	472	0	0	6550
279	EDC	122.4	0.0	0.0	46.2	18	0	0	18	1365	353	160	1240	204	3322	1365	353	160	1240	204	0	0	3322
280	EDC	103.7	0.0	0.0	37.0	11	0	0	11	964	130	24	812	127	2058	964	130	24	812	127	0	0	2058
281	EDC	174.1	40.0	359.0	62.1	590	1431	159	2180	1594	212	847	1363	614	4631	1594	212	847	1363	614	1431	159	6221
282	EDC	109.4	0.0	0.0	39.0	10	0	0	10	960	120	18	764	118	1981	960	120	18	764	118	0	0	1981
283	EDC	0.0	179.4	2054.0	0.0	2271	6850	1473	10594	0	0	3947	0	799	4746	0	0	3947	0	799	6850	1473	13069
284	EDC	73.8	25.0	0.0	30.4	271	163	12	447	487	63	9	398	104	1060	487	63	9	398	104	163	12	1235
285	EDC	49.3	66.0	400.0	17.0	880	1536	223	2640	304	44	946	283	308	1885	304	44	946	283	308	1536	223	3644
286	EDC	101.0	0.0	0.0	36.0	10	0	0	10	1029	205	73	863	140	2311	1029	205	73	863	140	0	0	2311
287	EDC	87.1	0.0	0.0	34.0	7	0	0	7	882	159	37	702	116	1895	882	159	37	702	116	0	0	1895

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
288	EDC	142.7	0.0	0.0	50.9	17	0	0	17	1408	247	83	1222	205	3165	1408	247	83	1222	205	0	0	3165
289	EDC	23.2	0.0	0.0	8.0	0	0	0	0	209	29	18	132	8	397	209	29	18	132	8	0	0	397
290	EDC	127.7	0.0	0.0	44.0	13	0	0	13	1382	231	103	1039	173	2929	1382	231	103	1039	173	0	0	2929
291	EDC	498.7	27.9	0.0	195.9	475	178	18	671	6260	1492	413	4804	997	13967	6260	1492	413	4804	997	178	18	14163
292	EDC	209.0	0.0	0.0	72.0	35	0	0	35	2481	615	403	2035	305	5839	2481	615	403	2035	305	0	0	5839
293	EDC	76.1	0.0	0.0	34.8	11	0	0	11	488	91	32	461	103	1177	488	91	32	461	103	0	0	1177
294	EDC	250.5	0.0	0.0	100.8	64	0	0	64	1907	301	85	1644	376	4314	1907	301	85	1644	376	0	0	4314
295	EDC	281.9	1491.0	0.0	110.0	32297	39539	17042	88879	2407	153	194	1566	5629	9948	2407	153	194	1566	5629	39539	17042	66530
296	EDC	330.8	56.0	438.0	125.5	857	1614	160	2631	2542	369	1156	2241	867	7175	2542	369	1156	2241	867	1614	160	8949
297	EDC	184.5	0.0	0.0	70.0	30	0	0	30	1252	223	72	1126	135	2807	1252	223	72	1126	135	0	0	2807
298	EDC	208.3	0.0	0.0	79.0	44	0	0	44	1580	244	109	1406	278	3616	1580	244	109	1406	278	0	0	3616
299	EDC	275.1	0.0	0.0	106.9	74	0	0	74	2737	412	191	2283	505	6129	2737	412	191	2283	505	0	0	6129
300	EDC	77.2	0.0	0.0	30.0	8	0	0	8	673	97	37	479	93	1379	673	97	37	479	93	0	0	1379
301	EDC	7.1	0.0	0.0	3.2	0	0	0	0	8	4	3	10	1	25	8	4	3	10	1	0	0	25
302	EDC	133.1	33.0	152.0	60.9	508	543	53	1104	803	155	528	741	308	2535	803	155	528	741	308	543	53	3131
303	EDC	227.8	0.0	0.0	106.0	56	0	0	56	1297	293	59	1384	323	3355	1297	293	59	1384	323	0	0	3355
304	EDC	26.1	275.4	0.0	12.0	3256	2017	551	5824	105	24	9	100	189	427	105	24	9	100	189	2017	551	2994
305	EDC	2.2	283.0	0.0	1.0	3442	1818	478	5738	0	0	0	0	0	0	0	0	0	0	0	1818	478	2297
306	EDC	21.5	55.0	0.0	10.0	635	240	15	890	122	30	3	98	39	291	122	30	3	98	39	240	15	547
307	EDC	36.7	2.0	0.0	16.0	17	7	1	25	168	39	9	155	40	410	168	39	9	155	40	7	1	418
308	EDC	25.3	1.0	0.0	11.0	4	1	0	5	111	24	7	90	17	249	111	24	7	90	17	1	0	250
309	EDC	30.6	4.0	0.0	14.0	30	18	2	50	121	28	7	106	30	292	121	28	7	106	30	18	2	312
310	EDC	59.6	122.0	0.0	26.0	1400	745	117	2262	269	63	13	251	199	796	269	63	13	251	199	745	117	1658
311	EDC	83.0	158.0	0.0	38.0	2437	1920	583	4940	431	74	22	365	544	1436	431	74	22	365	544	1920	583	3939
312	EDC	71.1	43.3	0.0	31.0	595	521	99	1215	331	70	13	285	247	945	331	70	13	285	247	521	99	1565
313	EDC	105.4	506.0	1583.0	42.0	7466	4847	716	13029	578	95	3148	368	725	4913	578	95	3148	368	725	4847	716	10476
314	EDC	201.3	8.0	0.0	81.0	126	17	1	145	1203	144	63	936	200	2546	1203	144	63	936	200	17	1	2565
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	28.4	0.0	0.0	13.0	1	0	0	1	95	24	8	106	18	251	95	24	8	106	18	0	0	251
317	EDC	17.5	0.0	0.0	8.0	0	0	0	0	64	11	3	47	7	133	64	11	3	47	7	0	0	133
318	EDC	334.2	2.0	0.0	134.5	118	1	0	119	2031	269	88	1640	374	4402	2031	269	88	1640	374	1	0	4403
319	EDC	95.4	6.0	0.0	38.0	68	7	1	76	477	66	16	329	63	951	477	66	16	329	63	7	1	959
320	EDC	46.1	39.0	351.0	18.1	553	1517	241	2311	467	97	1130	255	321	2270	467	97	1130	255	321	1517	241	4028
321	EDC	268.3	0.0	0.0	105.4	68	0	0	68	3240	685	123	2372	488	6907	3240	685	123	2372	488	0	0	6907
322	EDC	420.9	33.0	0.0	163.6	568	175	22	766	3899	728	227	3023	717	8595	3899	728	227	3023	717	175	22	8792
323	EDC	136.1	4.0	0.0	52.9	70	14	3	86	1509	370	108	1273	252	3511	1509	370	108	1273	252	14	3	3528
324	EDC	163.0	0.0	0.0	65.1	37	0	0	37	1948	452	163	1577	296	4437	1948	452	163	1577	296	0	0	4437
325	EDC	41.9	0.0	0.0	16.5	4	0	0	4	418	81	14	234	51	797	418	81	14	234	51	0	0	797
326	EDC	127.2	1.0	0.0	49.9	32	1	1	34	1393	273	67	878	166	2776	1393	273	67	878	166	1	1	2778
327	Placerville (not	113.4	0.0	0.0	45.3	17	0	0	17	1092	149	55	634	126	2057	1092	149	55	634	126	0	0	2057
328	EDC	47.5	0.0	0.0	19.0	3	0	0	3	431	77	23	245	53	828	431	77	23	245	53	0	0	828
329	Placerville (not	338.1	0.0	0.0	146.5	98	0	0	98	2685	427	111	1821	483	5528	2685	427	111	1821	483	0	0	5528
330	EDC	193.7	0.0	0.0	77.4	36	0	0	36	1629	202	68	927	209	3035	1629	202	68	927	209	0	0	3035
331	EDC	280.7	0.0	0.0	112.4	87	0	0	87	3259	657	181	2407	561	7065	3259	657	181	2407	561	0	0	7065
332	EDC	105.2	0.0	0.0	47.0	21	0	0	21	694	181	60	581	114	1630	694	181	60	581	114	0	0	1630
333	EDC	224.9	0.0	0.0	91.0	65	0	0	65	1981	674	216	2051	367	5289	1981	674	216	2051	367	0	0	5289
334	EDC	58.2	110.0	0.0	26.0	1473	505	41	2019	375	121	36	380	122	1035	375	121	36	380	122	505	41	1580
335	EDC	165.0	5.0	0.0	76.9	102	5	1	107	1196	230	198	951	189	2764	1196	230	198	951	189	5	1	2770
336	EDC	66.4	0.0	0.0	30.0	10	0	0	10	430	133	44	427	78	1113	430	133	44	427	78	0	0	1113
337	EDC	297.7	62.0	320.0	121.4	916	1278	95	2289	2660	952	980	2228	699	7520	2660	952	980	2228	699	1278	95	8892
338	EDC	836.5	14.0	0.0	325.3	372	173	9	554	7883	1776	973	5562	1102	17297	7883	1776	973	5562	1102	173	9	17479
339	EDC	435.6	0.0	0.0	192.3	120	0	0	120	5328	2882	188	3192	761	12351	5328	2882	188	3192	761	0	0	12351
340	EDC	198.7	14.0	0.0	93.2	269	285	62	616	2478	2028	351	1987	841	7687	2478	2028	351	1987	841	285	62	8034
341	EDC	68.8	8.0	0.0	31.4	91	19	2	111	583	443	5	332	86	1450	583	443	5	332	86	19	2	1470
342	EDC	123.4	0.0	0.0	48.0	26	0	0	26	1204	303	191	1031	171	2899	1204	303	191	1031	171	0	0	2899
343	EDC	126.8	0.0	0.0	56.0	41	0	0	41	1677	590	412	1331	295	4304	1677	590	412	1331	295	0	0	4304
344	EDC	134.5	0.0	0.0	59.4	45	0	0	45	1815	656	428	1404	308	4610	1815	656	428	1404	308	0	0	4610
345	EDC	67.0	0.0	0.0	29.6	16	0	0	16	787	223	104	643	131	1888	787	223	104	643	131	0	0	1888
346	EDC	49.2	0.0	0.0	22.1	11	0	0	11	462	167	49	438	83	1199	462	167	49	438	83	0	0	1199
347	EDC	108.0	0.0	0.0	42.0	22	0	0	22	1177	357	369	1055	172	3129	1177	357	369	1055	172	0	0	3129
348	EDC	108.7	0.0	0.0	48.9	30	0	0	30	1001	323	114	1066	223	2726	1001	323	114	1066	223	0	0	2726
349	EDC	173.4	18.0	0.0	84.3	287	175	40	502	2312	2029	208	1747	689	6985	2312	2029	208	1747	689	175	40	7200
350	EDC	49.3	0.0	0.0	21.8	16	0	0	16	580	449	15	356	109	1509	580	449	15	356	109	0	0	1509
351	EDC	54.3	0.0	0.0	23.9	10	0	0	10	647	416	187	385	68	1704	647	416	187	385	68	0	0	1704
352	EDC	68.1	0.0	0.0	30.1	15	0	0	15	997	576	338	537	94	2542	997	576	338	537	94	0	0	2542
353	EDC	387.2	1.0	0.0	170.9	92	3	0	95	4992	3060	1481	2553	459	12544	4992	3060	1481	2553	459	3	0	12547
354	EDC	124.1	77.0	590.0	54.8	830	2011	195	3035	1206	706	3099	479	571	6061	1206	706	3099	479	571	2011	195	8266
355	Placerville (in C	971.7	260.3	0.0	421.0	3601	1991	274	5867	5243	599	247	3845	1777	11711	5243	599	247	3845	1777	1991	274	13977
356	Placerville (in C	188.8	0.0	0.0	88.0	46	0	0	46	944	205	61	819	189	2217	944	205	61	819	189	0	0	2217
357	EDC	208.7	21.0	0.0	94.3	401	412	62	875	1299	352	118	1277	564	3609	1299	352	118	1277	564	412	62	4082
358	Placerville (not	191.8	352.1	0.0	86.7	5031	2319	503	7854	968	205	66	901	784	2924	968	205	66	901	784	2319	503	5747
359	EDC	247.3	0.0	0.0	105.0	64	0	0	64	1917	407	167	1625	354	4470	1917	407	167	1625	354	0	0	4470

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
360	EDC	230.5	10.0	0.0	97.9	224	112	9	346	2061	498	258	1977	484	5279	2061	498	258	1977	484	112	9	5400
361	Placerville (in C	971.1	392.1	0.0	466.0	4644	1551	162	6357	4294	833	133	3881	1236	10377	4294	833	133	3881	1236	1551	162	12090
362	Placerville (in C	701.7	913.2	0.0	298.0	13817	9379	2924	26120	3070	326	187	2264	3246	9093	3070	326	187	2264	3246	9379	2924	21396
363	EDC	34.7	0.0	0.0	13.7	1	0	0	1	137	27	15	101	20	300	137	27	15	101	20	0	0	300
364	Placerville (not	389.8	42.0	0.0	154.0	617	187	17	821	1781	230	160	1461	402	4034	1781	230	160	1461	402	187	17	4237
365	EDC	1013.8	125.0	0.0	478.0	2048	1339	167	3554	4479	946	221	4400	1678	11723	4479	946	221	4400	1678	1339	167	13229
366	EDC	32.3	4.0	0.0	15.0	21	9	1	31	67	22	4	74	20	188	67	22	4	74	20	9	1	198
367	EDC	0.0	197.0	0.0	0.0	2099	747	103	2949	0	0	0	0	0	0	0	0	0	0	0	747	103	850
368	EDC	156.8	0.0	0.0	68.0	23	0	0	23	673	153	17	611	105	1560	673	153	17	611	105	0	0	1560
369	EDC	1368.2	41.6	0.0	610.0	884	329	30	1243	6397	1102	280	5477	1537	14794	6397	1102	280	5477	1537	329	30	15153
370	EDC	0.0	303.0	0.0	0.0	3244	1147	217	4609	0	0	0	0	0	0	0	0	0	0	0	1147	217	1365
371	EDC	47.1	0.0	0.0	21.0	3	0	0	3	273	61	10	237	45	626	273	61	10	237	45	0	0	626
372	EDC	771.6	327.7	1178.0	344.0	3789	3904	438	8132	3856	776	2870	3487	1714	12703	3856	776	2870	3487	1714	3904	438	17045
373	EDC	59.7	0.0	0.0	26.0	3	0	0	3	230	41	11	194	33	508	230	41	11	194	33	0	0	508
374	EDC	30.0	2.0	0.0	13.0	10	6	0	16	107	27	4	92	20	250	107	27	4	92	20	6	0	256
375	EDC	32.1	0.0	0.0	14.0	1	0	0	1	160	31	8	112	20	330	160	31	8	112	20	0	0	330
376	EDC	78.0	3.0	0.0	34.0	33	2	0	35	365	65	18	305	61	815	365	65	18	305	61	2	0	817
377	EDC	29.8	14.0	120.0	13.0	140	256	25	421	101	22	301	80	60	564	101	22	301	80	60	256	25	845
378	EDC	62.2	0.0	0.0	27.0	4	0	0	4	245	60	8	204	39	556	245	60	8	204	39	0	0	556
379	EDC	110.6	0.0	0.0	48.0	12	0	0	12	421	98	14	375	79	987	421	98	14	375	79	0	0	987
380	EDC	27.6	0.0	0.0	12.0	1	0	0	1	72	19	5	70	10	175	72	19	5	70	10	0	0	175
381	EDC	16.1	0.0	0.0	7.0	0	0	0	0	39	10	2	41	6	98	39	10	2	41	6	0	0	98
382	EDC	25.4	0.0	0.0	11.0	1	0	0	1	78	18	5	62	13	176	78	18	5	62	13	0	0	176
383	EDC	112.5	0.0	0.0	50.1	18	0	0	18	750	163	43	590	121	1667	750	163	43	590	121	0	0	1667
384	EDC	269.2	0.0	0.0	120.0	60	0	0	60	1660	329	81	1290	309	3669	1660	329	81	1290	309	0	0	3669
385	EDC	1011.6	26.6	0.0	451.0	621	311	23	955	5768	1119	250	4659	1097	12894	5768	1119	250	4659	1097	311	23	13228
386	EDC	201.9	0.0	0.0	90.0	34	0	0	34	1194	249	59	912	205	2620	1194	249	59	912	205	0	0	2620
387	EDC	80.7	8.0	0.0	36.0	84	47	4	135	363	73	15	283	82	816	363	73	15	283	82	47	4	866
388	EDC	0.0	303.0	0.0	0.0	3293	1149	217	4658	0	0	0	0	0	0	0	0	0	0	0	1149	217	1366
389	EDC	4.7	264.0	0.0	2.0	2799	1140	290	4229	1	1	0	5	8	14	1	1	0	5	8	1140	290	1445
390	EDC	392.3	53.5	0.0	182.0	738	426	42	1206	1437	321	58	1514	460	3791	1437	321	58	1514	460	426	42	4259
391	EDC	23.7	69.5	0.0	11.0	769	571	186	1526	46	17	2	52	103	220	46	17	2	52	103	571	186	977
392	EDC	60.4	0.0	0.0	28.0	6	0	0	6	219	42	8	206	38	513	219	42	8	206	38	0	0	513
393	EDC	614.8	68.0	0.0	268.0	1090	638	66	1793	2610	363	124	2462	805	6365	2610	363	124	2462	805	638	66	7068
394	EDC	17.6	0.0	0.0	8.0	0	0	0	0	36	8	2	30	5	81	36	8	2	30	5	0	0	81
395	Placerville (in C	186.0	2323.7	0.0	88.0	29619	12259	4343	46220	676	92	36	603	1460	2866	676	92	36	603	1460	12259	4343	19468
396	EDC	0.0	456.7	0.0	0.0	7406	7294	3831	18532	0	0	0	0	0	0	0	0	0	0	0	7294	3831	11126
397	EDC	109.2	3.0	0.0	50.0	41	1	0	42	481	77	26	401	87	1073	481	77	26	401	87	1	0	1074
398	EDC	32.1	3.0	0.0	14.0	19	10	1	31	124	20	9	92	24	269	124	20	9	92	24	10	1	280
399	EDC	98.7	0.0	0.0	43.0	12	0	0	12	435	70	24	361	71	961	435	70	24	361	71	0	0	961
400	EDC	34.5	11.0	0.0	16.0	123	84	10	217	68	19	5	82	45	219	68	19	5	82	45	84	10	313
401	Placerville (not	86.2	213.0	0.0	40.8	2982	1822	621	5425	356	49	15	265	454	1139	356	49	15	265	454	1822	621	3582
402	EDC	128.0	117.1	0.0	51.0	1280	449	33	1762	535	58	28	398	130	1149	535	58	28	398	130	449	33	1631
403	EDC	267.3	654.0	724.0	124.0	8466	5324	1082	14872	930	164	1922	1021	1359	5397	930	164	1922	1021	1359	5324	1082	11803
404	EDC	43.8	49.0	0.0	19.0	458	143	7	608	129	27	6	113	31	307	129	27	6	113	31	143	7	457
405	EDC	20.8	0.0	0.0	9.0	0	0	0	0	65	10	3	49	9	136	65	10	3	49	9	0	0	136
406	EDC	55.3	286.0	0.0	24.0	4517	4643	2199	11360	180	27	9	152	512	881	180	27	9	152	512	4643	2199	7724
407	EDC	2.2	293.0	535.0	1.0	3420	2851	900	7171	0	0	1084	1	454	1539	0	0	1084	1	454	2851	900	5291
408	EDC	2.1	182.0	0.0	1.0	1855	794	163	2812	3	2	0	5	9	20	3	2	0	5	9	794	163	977
409	Placerville (not	328.8	460.2	0.0	129.9	6662	3660	879	11202	1602	187	110	1327	1347	4573	1602	187	110	1327	1347	3660	879	9113
410	EDC	1003.2	331.9	0.0	426.0	4985	3626	554	9165	5928	820	382	4724	2592	14446	5928	820	382	4724	2592	3626	554	18626
411	Placerville (in C	708.3	1289.3	0.0	299.0	15821	9577	3077	28475	2525	322	165	2055	3146	8213	2525	322	165	2055	3146	9577	3077	20866
412	EDC	211.6	0.0	0.0	89.3	52	0	0	52	1402	210	90	1029	251	2982	1402	210	90	1029	251	0	0	2982
413	Placerville (not	376.0	0.0	0.0	158.7	97	0	0	97	2060	301	125	1488	388	4363	2060	301	125	1488	388	0	0	4363
414	EDC	15.1	120.0	0.0	7.0	1200	452	55	1707	17	10	2	30	28	88	17	10	2	30	28	452	55	594
415	EDC	38.2	0.0	0.0	18.0	2	0	0	2	141	38	9	123	24	335	141	38	9	123	24	0	0	335
416	EDC	19.4	0.0	0.0	9.0	0	0	0	0	44	15	4	53	11	127	44	15	4	53	11	0	0	127
417	Placerville (in C	101.9	294.5	0.0	45.0	3469	2017	666	6151	362	60	19	266	457	1164	362	60	19	266	457	2017	666	3846
418	Placerville (in C	0.0	63.6	0.0	0.0	771	677	375	1824	0	0	0	0	0	0	0	0	0	0	0	677	375	1053
419	Placerville (in C	0.0	84.8	0.0	0.0	958	688	348	1994	0	0	0	0	0	0	0	0	0	0	0	688	348	1035
420	Placerville (in C	116.1	52.0	0.0	49.0	528	120	7	655	430	65	27	309	68	900	430	65	27	309	68	120	7	1027
421	Placerville (in C	170.6	5.0	0.0	72.0	75	2	0	78	660	102	40	477	110	1389	660	102	40	477	110	2	0	1391
422	Placerville (in C	661.7	2042.5	475.0	281.0	29866	7517	1309	38692	2206	353	1013	1847	1737	7156	2206	353	1013	1847	1737	7517	1309	15981
423	EDC	48.1	0.0	0.0	20.3	2	0	0	2	187	32	12	117	25	373	187	32	12	117	25	0	0	373
424	Placerville (not	399.3	249.1	0.0	173.0	3108	1784	253	5145	2258	297	58	1559	853	5024	2258	297	58	1559	853	1784	253	7062
425	Placerville (not	2817.0	600.6	2141.0	1266.7	7615	9535	1232	18382	14372	2070	5722	9830	5398	37392	14372	2070	5722	9830	5398	9535	1232	48159
426	Placerville (not	81.4	0.0	0.0	32.6	6	0	0	6	447	59	7	219	45	777	447	59	7	219	45	0	0	777
427	EDC	235.0	0.0	0.0	94.1	62	0	0	62	2178	319	63	1378	344	4282	2178	319	63	1378	344	0	0	4282
428	EDC	55.0	0.0	0.0	22.0	3	0	0	3	337	51	6	166	33	593	337	51	6	166	33	0	0	593
429	EDC	86.7	0.0	0.0	35.0	13	0	0	13	654	134	50	565	58	1461	654	134	50	565	58	0	0	1461
430	EDC	143.9	10.0	0.0	58.1	153	25	3	180	983	164	91	805	186	2228	983	164	91	805	186	25	3	2255
431	Placerville (in C	60.4	60.0	0.0	29.0	721	238	23	983	230	49	14	178	82	552	230	49	14	178	82	238	23	814

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
432	EDC	781.3	234.1	0.0	315.5	3108	1111	114	4334	4587	834	424	3718	1218	10781	4587	834	424	3718	1218	1111	114	12007
433	Placerville (in C	1016.7	68.3	0.0	493.0	1208	341	36	1585	3594	723	210	3479	1041	9048	3594	723	210	3479	1041	341	36	9426
434	Placerville (in C	77.2	0.0	0.0	36.0	8	0	0	8	203	47	14	180	44	488	203	47	14	180	44	0	0	488
435	Placerville (in C	77.2	48.6	0.0	36.0	547	196	28	771	201	46	14	179	103	543	201	46	14	179	103	196	28	767
436	EDC	63.4	0.0	0.0	25.8	7	0	0	7	426	110	32	339	63	971	426	110	32	339	63	0	0	971
437	EDC	303.9	12.0	0.0	120.5	241	113	10	364	2537	401	198	1777	479	5392	2537	401	198	1777	479	113	10	5515
438	EDC	267.7	11.0	0.0	126.2	228	228	22	479	1778	574	130	1749	538	4769	1778	574	130	1749	538	228	22	5020
439	EDC	334.2	3.0	0.0	157.5	150	2	0	153	2134	585	145	2188	454	5507	2134	585	145	2188	454	2	0	5509
440	EDC	60.2	15.0	0.0	28.4	164	58	4	226	319	107	23	326	81	856	319	107	23	326	81	58	4	918
441	Placerville (in C	31.3	0.0	0.0	13.2	1	0	0	1	164	30	8	103	22	326	164	30	8	103	22	0	0	326
442	Placerville (in C	769.1	69.0	143.0	305.0	1178	993	111	2281	4641	605	523	3138	1235	10141	4641	605	523	3138	1235	993	111	11245
443	EDC	85.9	0.0	0.0	40.5	18	0	0	18	517	166	36	534	119	1371	517	166	36	534	119	0	0	1371
444	EDC	18.9	0.0	0.0	8.0	0	0	0	0	70	16	6	49	10	151	70	16	6	49	10	0	0	151
445	Placerville (not	61.1	11.0	94.0	24.2	137	229	20	385	375	64	268	223	108	1038	375	64	268	223	108	229	20	1286
446	Placerville (in C	61.7	19.0	0.0	26.2	258	218	35	511	334	58	23	205	140	760	334	58	23	205	140	218	35	1013
447	EDC	187.9	0.0	0.0	76.6	47	0	0	47	1504	416	116	1374	266	3675	1504	416	116	1374	266	0	0	3675
448	Placerville (not	145.8	4.0	0.0	57.8	69	17	1	87	965	148	74	623	109	1920	965	148	74	623	109	17	1	1938
449	EDC	30.0	0.0	0.0	14.0	2	0	0	2	161	55	23	137	25	401	161	55	23	137	25	0	0	401
450	EDC	180.2	31.0	0.0	84.0	400	94	9	504	979	225	63	842	239	2349	979	225	63	842	239	94	9	2453
451	EDC	57.9	0.0	0.0	27.0	10	0	0	10	327	95	30	323	72	847	327	95	30	323	72	0	0	847
452	Placerville (not	286.8	33.0	428.0	133.7	532	950	100	1582	1275	238	1105	1092	510	4221	1275	238	1105	1092	510	950	100	5271
453	Placerville (in C	313.2	1.0	0.0	146.0	93	0	0	93	1141	226	59	1064	175	2665	1141	226	59	1064	175	0	0	2665
454	EDC	56.0	0.0	0.0	26.1	5	0	0	5	172	49	14	159	35	429	172	49	14	159	35	0	0	429
455	EDC	180.8	0.0	0.0	73.0	39	0	0	39	1259	250	129	967	217	2822	1259	250	129	967	217	0	0	2822
456	EDC	109.5	0.0	0.0	51.0	26	0	0	26	730	207	68	667	154	1826	730	207	68	667	154	0	0	1826
457	EDC	141.3	5.0	0.0	62.7	97	7	1	105	1250	311	130	947	191	2829	1250	311	130	947	191	7	1	2836
458	Placerville (not	152.1	69.0	0.0	68.8	1143	767	127	2036	845	182	63	769	447	2306	845	182	63	769	447	767	127	3200
459	Placerville (not	40.9	0.0	0.0	18.5	2	0	0	2	177	48	13	146	26	409	177	48	13	146	26	0	0	409
460	EDC	47.2	20.0	0.0	22.0	254	69	6	328	297	83	26	290	72	769	297	83	26	290	72	69	6	843
461	EDC	13.2	59.0	0.0	6.0	675	237	20	932	30	19	4	43	20	117	30	19	4	43	20	237	20	374
462	EDC	66.5	125.0	0.0	31.0	2005	752	144	2901	385	63	69	351	242	1110	385	63	69	351	242	752	144	2006
463	EDC	187.5	0.0	0.0	85.5	41	0	0	41	2026	2189	289	1340	216	6060	2026	2189	289	1340	216	0	0	6060
464	EDC	112.1	0.0	0.0	47.9	34	0	0	34	1343	534	195	988	196	3257	1343	534	195	988	196	0	0	3257
465	EDC	147.7	16.0	0.0	58.8	128	35	4	168	1684	1887	618	1127	211	5527	1684	1887	618	1127	211	35	4	5567
466	EDC	134.9	22.0	0.0	61.5	214	102	13	329	1323	1130	83	998	258	3792	1323	1130	83	998	258	102	13	3907
467	EDC	88.1	0.0	0.0	40.2	25	0	0	25	997	1299	319	727	148	3489	997	1299	319	727	148	0	0	3489
468	EDC	249.0	6.0	0.0	120.9	140	16	2	158	3014	2366	164	2131	615	8290	3014	2366	164	2131	615	16	2	8308
469	EDC	134.3	15.0	0.0	60.3	154	47	9	210	1770	1901	286	1076	288	5320	1770	1901	286	1076	288	47	9	5376
470	EDC	70.4	1.0	0.0	32.1	27	0	0	27	781	867	117	552	128	2444	781	867	117	552	128	0	0	2445
471	EDC	51.3	6.0	0.0	23.4	62	10	1	73	497	623	107	370	81	1679	497	623	107	370	81	10	1	1690
472	EDC	57.1	20.0	0.0	26.0	166	43	6	216	555	650	84	420	94	1804	555	650	84	420	94	43	6	1854
473	EDC	26.0	2.0	0.0	10.4	27	26	3	56	168	102	16	160	56	503	168	102	16	160	56	26	3	532
474	EDC	85.2	0.0	0.0	37.6	23	0	0	23	924	297	77	604	120	2022	924	297	77	604	120	0	0	2022
475	EDC	87.2	0.0	0.0	38.5	24	0	0	24	956	354	110	661	131	2212	956	354	110	661	131	0	0	2212
476	EDC	41.1	0.0	0.0	16.0	7	0	0	7	359	136	76	322	47	940	359	136	76	322	47	0	0	940
477	EDC	75.6	15.0	0.0	30.1	132	34	5	170	774	705	108	600	107	2294	774	705	108	600	107	34	5	2333
478	EDC	66.4	0.0	0.0	30.0	17	0	0	17	626	254	71	533	95	1580	626	254	71	533	95	0	0	1580
479	EDC	131.2	37.0	0.0	52.3	476	454	56	987	1213	363	209	985	400	3170	1213	363	209	985	400	454	56	3681
480	EDC	46.7	0.0	0.0	21.3	13	0	0	13	495	628	201	461	105	1891	495	628	201	461	105	0	0	1891
481	EDC	45.3	0.0	0.0	20.5	12	0	0	12	597	643	202	462	116	2020	597	643	202	462	116	0	0	2020
482	EDC	171.1	3.0	0.0	77.3	90	7	1	98	2315	2008	887	2050	417	7678	2315	2008	887	2050	417	7	1	7686
483	EDC	253.5	9.0	0.0	116.9	156	50	5	210	2025	745	157	1792	368	5087	2025	745	157	1792	368	50	5	5142
484	EDC	237.2	114.0	0.0	92.5	1038	474	30	1542	2212	767	273	1711	364	5328	2212	767	273	1711	364	474	30	5831
485	EDC	46.0	0.0	0.0	18.0	8	0	0	8	539	254	160	368	60	1380	539	254	160	368	60	0	0	1380
486	EDC	167.2	0.0	0.0	74.0	42	0	0	42	2283	965	539	1247	237	5270	2283	965	539	1247	237	0	0	5270
487	EDC	490.8	36.0	0.0	221.8	827	557	66	1449	3781	1020	372	3777	1187	10137	3781	1020	372	3777	1187	557	66	10760
488	EDC	246.6	0.0	0.0	109.1	73	0	0	73	3317	1039	385	1737	343	6821	3317	1039	385	1737	343	0	0	6821
489	EDC	307.1	58.0	0.0	135.8	700	283	22	1006	3224	764	150	2007	478	6622	3224	764	150	2007	478	283	22	6928
490	EDC	62.1	0.0	0.0	25.3	9	0	0	9	542	169	60	466	73	1310	542	169	60	466	73	0	0	1310
491	EDC	398.7	3.0	0.0	162.5	160	39	3	203	3591	907	405	2941	613	8456	3591	907	405	2941	613	39	3	8499
492	EDC	176.9	18.0	0.0	71.6	237	125	10	372	1655	639	208	1524	317	4343	1655	639	208	1524	317	125	10	4478
493	EDC	180.0	26.0	159.0	72.8	370	601	43	1013	1552	585	482	1400	397	4417	1552	585	482	1400	397	601	43	5060
494	EDC	167.7	10.0	0.0	68.4	136	32	2	171	1524	544	54	1326	232	3680	1524	544	54	1326	232	32	2	3714
495	EDC	39.6	0.0	0.0	16.1	3	0	0	3	298	85	32	222	34	671	298	85	32	222	34	0	0	671
496	EDC	204.0	67.0	69.0	82.5	932	1491	208	2632	1833	386	226	1394	798	4636	1833	386	226	1394	798	1491	208	6335
497	EDC	218.3	3.0	0.0	90.5	82	10	1	93	2426	664	212	1634	292	5228	2426	664	212	1634	292	10	1	5238
498	EDC	160.3	6.0	0.0	70.9	93	12	1	107	1980	517	151	1136	225	4010	1980	517	151	1136	225	12	1	4023
499	EDC	75.9	0.0	0.0	30.9	13	0	0	13	669	244	55	490	81	1539	669	244	55	490	81	0	0	1539
500	EDC	24.3	51.0	416.0	11.0	644	1250	206	2101	158	53	747	103	221	1281	158	53	747	103	221	1250	206	2737
501	EDC	49.2	83.0	0.0	22.0	838	322	20	1180	332	120	17	285	73	827	332	120	17	285	73	322	20	1169
502	EDC	286.5	18.0	0.0	120.5	349	284	25	657	2831	817	855	2332	543	7379	2831	817	855	2332	543	284	25	7687
503	EDC	2.2	76.0	0.0	1.0	1169	1133	631	2934	0	0	0	2	5	7	0	0	0	2	5	1133	631	1771

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
504	EDC	315.3	19.0	0.0	140.9	327	111	11	449	2560	694	204	2284	540	6282	2560	694	204	2284	540	111	11	6403
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	24	7	3	16	1	51	24	7	3	16	1	0	0	51
506	EDC	62.7	0.0	0.0	28.0	9	0	0	9	441	137	37	374	66	1056	441	137	37	374	66	0	0	1056
507	EDC	121.9	37.0	0.0	51.3	404	117	8	530	912	288	68	800	151	2219	912	288	68	800	151	117	8	2344
508	EDC	184.3	186.0	0.0	85.0	2062	699	50	2811	1281	480	78	1146	283	3267	1281	480	78	1146	283	699	50	4016
509	EDC	26.9	30.9	0.0	12.0	286	116	10	413	157	47	7	120	41	372	157	47	7	120	41	116	10	498
510	EDC	199.5	10.0	0.0	92.0	138	64	6	209	1346	459	54	1194	261	3314	1346	459	54	1194	261	64	6	3384
511	EDC	107.2	33.0	0.0	45.1	377	294	37	709	705	217	41	586	240	1790	705	217	41	586	240	294	37	2121
512	EDC	90.2	27.0	0.0	37.9	381	267	33	681	717	191	95	657	238	1899	717	191	95	657	238	267	33	2199
513	EDC	375.0	0.0	0.0	146.3	80	0	0	80	4051	1676	844	2807	423	9802	4051	1676	844	2807	423	0	0	9802
514	EDC	1622.8	0.0	0.0	633.0	327	0	0	327	17380	7648	4778	10862	1648	42316	17380	7648	4778	10862	1648	0	0	42316
515	EDC	169.1	8.0	0.0	70.1	99	14	1	114	1865	663	237	1240	205	4211	1865	663	237	1240	205	14	1	4226
516	EDC	348.4	0.0	0.0	144.4	80	0	0	80	4312	1871	883	2664	426	10155	4312	1871	883	2664	426	0	0	10155
517	EDC	887.3	122.9	0.0	400.0	1499	1483	109	3090	8103	1949	1415	5240	1333	18040	8103	1949	1415	5240	1333	1483	109	19632
518	EDC	673.0	25.3	0.0	293.2	399	180	12	591	5782	1897	725	4291	830	13524	5782	1897	725	4291	830	180	12	13717
519	EDC	331.3	24.3	0.0	144.3	317	275	17	609	2826	893	370	2059	394	6541	2826	893	370	2059	394	275	17	6833
520	EDC	618.5	15.3	0.0	269.5	306	142	9	457	5789	1694	881	4054	727	13145	5789	1694	881	4054	727	142	9	13296
521	EDC	648.3	115.9	0.0	292.3	1170	1234	86	2490	5080	1159	397	3232	803	10671	5080	1159	397	3232	803	1234	86	11991
522	EDC	212.4	0.0	0.0	86.3	47	0	0	47	2892	583	431	1384	250	5540	2892	583	431	1384	250	0	0	5540
523	EDC	572.5	206.1	6.0	247.4	2246	2988	497	5731	4898	507	568	2675	1204	9853	4898	507	568	2675	1204	2988	497	13337
524	EDC	476.7	103.0	519.0	206.1	1234	2337	211	3782	4588	1841	1682	2945	903	11960	4588	1841	1682	2945	903	2337	211	14507
525	EDC	207.6	0.0	0.0	86.4	46	0	0	46	2259	1591	956	1916	495	7217	2259	1591	956	1916	495	0	0	7217
526	EDC	28.4	0.0	0.0	11.0	5	0	0	5	276	81	81	282	78	799	276	81	81	282	78	0	0	799
527	EDC	395.9	38.0	0.0	164.8	373	284	55	713	3777	1497	314	2855	632	9076	3777	1497	314	2855	632	284	55	9415
528	EDC	2428.4	72.0	0.0	1008.2	927	751	160	1837	30940	15983	6713	24243	7546	85427	30940	15983	6713	24243	7546	751	160	86337
529	EDC	37.7	0.0	0.0	15.5	9	0	0	9	379	137	55	472	158	1201	379	137	55	472	158	0	0	1201
530	EDC	475.3	0.0	0.0	195.1	172	0	0	172	5829	2856	1605	5978	1568	17836	5829	2856	1605	5978	1568	0	0	17836
531	EDC	90.0	0.0	0.0	37.0	28	0	0	28	1170	608	362	1121	334	3595	1170	608	362	1121	334	0	0	3595
532	EDC	149.4	0.0	0.0	61.4	47	0	0	47	1769	719	392	1932	593	5405	1769	719	392	1932	593	0	0	5405
533	EDC	268.4	34.0	0.0	110.6	696	1024	410	2130	2700	804	709	3340	1167	8720	2700	804	709	3340	1167	1024	410	10154
534	EDC	133.8	0.0	0.0	54.9	45	0	0	45	1662	786	444	1810	559	5261	1662	786	444	1810	559	0	0	5261
535	EDC	235.9	0.0	0.0	91.5	65	0	0	65	2967	1103	485	3048	952	8554	2967	1103	485	3048	952	0	0	8554
536	EDC	218.8	0.0	0.0	84.8	57	0	0	57	2709	948	376	2715	862	7610	2709	948	376	2715	862	0	0	7610
537	EDC	439.0	0.0	0.0	170.2	107	0	0	107	5852	2359	1008	5241	1671	16130	5852	2359	1008	5241	1671	0	0	16130
538	EDC	139.2	36.9	0.0	57.8	556	889	410	1854	1398	327	122	1650	996	4493	1398	327	122	1650	996	889	410	5791
539	EDC	16.0	166.0	338.0	6.6	2436	4862	3050	10348	95	16	815	149	543	1618	95	16	815	149	543	4862	3050	9530
540	EDC	0.0	53.0	0.0	0.0	657	1045	802	2505	0	0	0	0	0	0	0	0	0	0	0	1045	802	1847
541	EDC	43.3	6.0	0.0	18.0	61	57	13	132	349	84	130	362	107	1032	349	84	130	362	107	57	13	1103
542	EDC	123.6	37.0	0.0	52.4	419	463	71	954	1246	459	50	924	247	2926	1246	459	50	924	247	463	71	3460
543	EDC	116.3	107.0	0.0	49.1	2055	3180	1020	6256	1032	124	93	870	828	2948	1032	124	93	870	828	3180	1020	7148
544	EDC	35.3	8.0	0.0	14.9	90	53	18	160	291	70	35	297	66	759	291	70	35	297	66	53	18	829
545	EDC	55.6	0.0	0.0	23.5	15	0	0	15	638	387	129	723	260	2137	638	387	129	723	260	0	0	2137
546	EDC	164.3	0.0	0.0	69.4	57	0	0	57	2154	1511	619	2506	787	7577	2154	1511	619	2506	787	0	0	7577
547	EDC	24.5	46.0	0.0	10.4	541	1895	842	3278	165	23	58	157	233	636	165	23	58	157	233	1895	842	3374
548	EDC	920.2	22.0	0.0	388.2	474	204	27	705	9750	4096	335	7245	1281	22706	9750	4096	335	7245	1281	204	27	22938
549	EDC	102.9	0.0	0.0	43.4	20	0	0	20	1021	349	93	1035	192	2690	1021	349	93	1035	192	0	0	2690
550	EDC	27.6	0.0	0.0	11.0	2	0	0	2	248	56	17	167	29	517	248	56	17	167	29	0	0	517
551	EDC	104.2	54.0	0.0	41.6	868	1308	317	2492	1064	166	69	734	483	2516	1064	166	69	734	483	1308	317	4140
552	EDC	19.8	32.0	0.0	8.4	526	682	227	1434	145	30	10	118	138	440	145	30	10	118	138	682	227	1349
553	EDC	76.6	0.0	0.0	32.4	15	0	0	15	840	294	46	687	130	1997	840	294	46	687	130	0	0	1997
554	EDC	225.4	4.0	0.0	95.2	87	51	10	148	2478	1031	185	1786	312	5792	2478	1031	185	1786	312	51	10	5853
555	EDC	81.7	0.0	0.0	34.6	21	0	0	21	827	390	87	681	182	2167	827	390	87	681	182	0	0	2167
556	EDC	196.2	0.0	0.0	82.8	56	0	0	56	2399	1435	533	2145	535	7046	2399	1435	533	2145	535	0	0	7046
557	EDC	82.6	1.0	0.0	34.9	29	9	2	41	779	191	206	664	204	2044	779	191	206	664	204	9	2	2056
558	EDC	87.6	19.0	0.0	36.5	178	192	40	410	870	644	399	873	232	3017	870	644	399	873	232	192	40	3249
559	EDC	60.9	0.0	0.0	25.4	16	0	0	16	585	270	161	571	173	1761	585	270	161	571	173	0	0	1761
560	EDC	64.2	10.0	0.0	27.1	97	112	28	237	633	256	64	514	153	1619	633	256	64	514	153	112	28	1759
561	EDC	52.2	0.0	0.0	22.1	13	0	0	13	551	251	56	449	114	1421	551	251	56	449	114	0	0	1421
562	EDC	152.0	0.0	0.0	63.3	39	0	0	39	1755	1402	737	1511	379	5784	1755	1402	737	1511	379	0	0	5784
563	EDC	74.2	0.0	0.0	32.9	15	0	0	15	1176	927	358	694	108	3264	1176	927	358	694	108	0	0	3264
564	EDC	35.9	0.0	0.0	15.5	4	0	0	4	298	139	7	259	42	745	298	139	7	259	42	0	0	745
565	EDC	119.1	0.0	0.0	57.5	31	0	0	31	1235	644	65	824	207	2974	1235	644	65	824	207	0	0	2974
566	EDC	224.9	1.0	0.0	95.2	60	23	5	88	2309	965	117	1581	345	5316	2309	965	117	1581	345	23	5	5344
567	EDC	40.0	2.0	0.0	19.3	20	10	2	32	274	95	7	202	51	628	274	95	7	202	51	10	2	641
568	EDC	61.3	0.0	0.0	26.0	11	0	0	11	552	145	13	326	71	1106	552	145	13	326	71	0	0	1106
569	EDC	147.0	31.0	0.0	62.3	307	714	148	1168	1337	313	32	796	334	2812	1337	313	32	796	334	714	148	3673
570	EDC	85.9	92.3	251.0	41.5	857	1418	217	2493	629	174	378	408	258	1848	629	174	378	408	258	1418	217	3483
571	EDC	69.6	0.0	0.0	33.6	17	0	0	17	607	256	17	432	110	1422	607	256	17	432	110	0	0	1422
572	EDC	61.6	34.0	0.0	26.6	265	199	29	493	548	159	13	336	84	1140	548	159	13	336	84	199	29	1369
573	EDC	210.7	2.0	0.0	93.5	89	13	1	103	2710	1401	1035	2440	562	8148	2710	1401	1035	2440	562	13	1	8162
574	EDC	168.9	0.0	0.0	73.0	28	0	0	28	2465	2272	727	1442	198	7104	2465	2272	727	1442	198	0	0	7104
575	EDC	69.3	0.0	0.0	29.9	15	0	0	15	1084	1127	421	1036	172	3840	1084	1127	421	1036	172	0	0	3840

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
576	EDC	42.8	1.0	0.0	19.0	11	22	3	36	599	333	151	304	55	1442	599	333	151	304	55	22	3	1467
577	EDC	29.6	0.0	0.0	13.1	3	0	0	3	410	177	85	192	30	894	410	177	85	192	30	0	0	894
578	EDC	855.7	0.0	0.0	379.7	101	0	0	101	12612	11743	4962	8008	1068	38393	12612	11743	4962	8008	1068	0	0	38393
579	EDC	89.9	12.0	0.0	38.4	99	41	5	145	1499	1374	460	1221	176	4732	1499	1374	460	1221	176	41	5	4777
580	EDC	84.0	5.0	19.0	35.8	58	76	7	141	1393	1228	144	816	143	3724	1393	1228	144	816	143	76	7	3807
581	EDC	101.2	32.0	0.0	45.7	310	80	16	406	1445	1590	707	1393	281	5416	1445	1590	707	1393	281	80	16	5512
582	EDC	32.6	0.0	0.0	13.2	11	0	0	11	518	266	204	389	80	1458	518	266	204	389	80	0	0	1458
583	EDC	803.7	10.0	28.0	363.2	232	169	19	421	13019	14349	5024	10476	1715	44583	13019	14349	5024	10476	1715	169	19	44771
584	EDC	39.4	3.0	19.0	18.5	64	136	38	237	469	607	161	631	266	2135	469	607	161	631	266	136	38	2308
585	EDC	280.6	0.0	0.0	126.8	75	0	0	75	4221	4129	1805	3480	617	14251	4221	4129	1805	3480	617	0	0	14251
586	EDC	96.7	92.0	0.0	51.6	1743	739	118	2600	1120	238	133	847	401	2739	1120	238	133	847	401	739	118	3596
587	EDC	96.7	0.0	0.0	40.1	11	0	0	11	1255	444	145	530	67	2440	1255	444	145	530	67	0	0	2440
588	EDC	835.6	0.0	0.0	326.0	121	0	0	121	10801	4728	2238	5426	681	23874	10801	4728	2238	5426	681	0	0	23874
589	EDC	7.2	0.0	0.0	3.6	1	0	0	1	2	49	0	41	5	98	2	49	0	41	5	0	0	98
590	EDC	44.4	120.0	0.0	18.6	1641	1580	444	3664	356	48	37	193	319	953	356	48	37	193	319	1580	444	2976
591	EDC	7.2	0.0	0.0	3.0	0	0	0	0	26	4	5	19	2	56	26	4	5	19	2	0	0	56
592	EDC	757.6	91.0	384.0	341.6	838	1280	78	2196	5399	980	498	3160	738	10776	5399	980	498	3160	738	1280	78	12134
593	EDC	361.4	28.0	0.0	151.5	269	92	6	366	3549	714	183	1821	307	6574	3549	714	183	1821	307	92	6	6672
594	EDC	745.6	5.0	0.0	312.5	181	10	1	191	8908	2743	447	4608	707	17412	8908	2743	447	4608	707	10	1	17422
595	EDC	62.1	31.0	265.0	27.5	277	857	70	1204	776	201	299	294	185	1756	776	201	299	294	185	857	70	2683
596	EDC	94.8	25.0	0.0	37.0	233	294	23	550	1069	349	73	528	175	2194	1069	349	73	528	175	294	23	2511
597	EDC	239.4	325.5	0.0	107.9	2685	2916	501	6102	1544	276	78	893	756	3548	1544	276	78	893	756	2916	501	6965
598	EDC	31.3	35.0	0.0	14.1	276	420	79	775	157	33	10	86	99	385	157	33	10	86	99	420	79	883
599	EDC	37.9	0.0	0.0	17.1	7	0	0	7	370	98	25	211	35	740	370	98	25	211	35	0	0	740
600	EDC	457.8	130.0	0.0	206.4	1434	797	53	2284	4153	1011	435	2711	581	8892	4153	1011	435	2711	581	797	53	9742
601	EDC	22.4	0.0	0.0	10.1	5	0	0	5	122	385	178	1045	196	1926	122	385	178	1045	196	0	0	1926
602	EDC	5.6	2.0	0.0	3.0	49	40	14	103	16	9	0	32	33	89	16	9	0	32	33	40	14	143
603	EDC	20.8	2.0	0.0	11.1	82	57	15	154	328	119	15	170	80	712	328	119	15	170	80	57	15	784
604	EDC	30.8	3.0	0.0	17.0	113	23	7	143	582	413	15	226	88	1323	582	413	15	226	88	23	7	1354
605	EDC	39.9	2.0	16.0	18.4	86	71	7	165	528	417	157	325	94	1522	528	417	157	325	94	71	7	1601
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	46.8	0.0	0.0	19.0	13	0	0	13	1462	931	509	1701	468	5070	1462	931	509	1701	468	0	0	5070
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	31	0	31	0	0	0	31	0	0	0	31
609	EDC	74.6	4.0	0.0	34.4	137	147	44	328	1283	775	555	1104	448	4166	1283	775	555	1104	448	147	44	4357
610	EDC	0.0	2315.2	932.0	0.0	22973	10265	3530	36768	0	0	1333	0	922	2255	0	0	1333	0	922	10265	3530	16050
611	EDC	1530.3	47.2	469.0	599.0	918	1132	123	2173	10394	1725	1130	11147	3005	27401	10394	1725	1130	11147	3005	1132	123	28656
612	EDC	2043.8	3488.0	393.0	800.0	33317	14122	2245	49684	11785	1975	1152	13790	5935	34638	11785	1975	1152	13790	5935	14122	2245	51005
613	EDC	5.8	0.0	0.0	2.2	0	0	0	0	17	4	1	18	0	40	17	4	1	18	0	0	0	40
614	EDC	2343.6	65.3	904.0	885.2	1117	2782	283	4182	17944	3626	2139	16963	4684	45356	17944	3626	2139	16963	4684	2782	283	48421
615	EDC	2677.5	0.0	0.0	1021.1	599	0	0	599	17853	3126	876	18647	3628	44130	17853	3126	876	18647	3628	0	0	44130
616	EDC	2668.0	365.3	1179.0	1024.1	3857	4283	463	8603	15650	2417	2422	17686	4852	43028	15650	2417	2422	17686	4852	4283	463	47773
617	EDC	552.6	131.5	2484.0	187.0	1304	7259	1143	9706	3738	772	3823	3876	2381	14589	3738	772	3823	3876	2381	7259	1143	22992
618	EDC	0.0	146.0	0.0	0.0	1159	736	102	1998	0	0	0	0	0	0	0	0	0	0	0	736	102	839
619	EDC	0.0	151.0	0.0	0.0	1233	891	199	2322	0	0	0	0	0	0	0	0	0	0	0	891	199	1089
620	EDC	0.0	196.5	3969.0	0.0	1825	11529	2870	16224	0	0	6292	0	1587	7880	0	0	6292	0	1587	11529	2870	22278
621	EDC	963.4	0.0	0.0	326.1	179	0	0	179	7135	1621	351	7647	1420	18174	7135	1621	351	7647	1420	0	0	18174
622	EDC	1093.5	150.1	607.0	370.0	1589	2508	245	4342	7782	1692	1265	8383	2224	21346	7782	1692	1265	8383	2224	2508	245	24099
623	EDC	0.0	16.0	0.0	0.0	134	76	7	217	0	0	0	0	0	0	0	0	0	0	0	76	7	83
624	EDC	917.5	102.6	920.0	308.9	1126	2779	296	4201	6108	1062	1557	6639	1984	17350	6108	1062	1557	6639	1984	2779	296	20425
625	EDC	0.0	40.0	0.0	0.0	302	131	34	467	0	0	0	0	0	0	0	0	0	0	0	131	34	165
626	EDC	385.6	98.0	0.0	164.0	1056	546	49	1651	2428	539	156	2923	690	6735	2428	539	156	2923	690	546	49	7330
627	EDC	0.0	897.0	0.0	0.0	11741	15845	8398	35985	0	0	0	0	0	0	0	0	0	0	0	15845	8398	24244
628	EDC	1347.6	0.0	0.0	525.0	413	0	0	413	11929	1722	807	11183	2534	28176	11929	1722	807	11183	2534	0	0	28176
629	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
631	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
632	Project Residen	157.8	0.0	0.0	56.0	20	0	0	20	1060	293	184	1782	224	3543	1060	293	184	1782	224	0	0	3543
633	Proj Retail	0.0	34.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
634	Proj Hotel	0.0	111.0	0.0	0.0	1037	639	101	1777	0	0	0	0	0	0	0	0	0	0	0	639	101	740
635	Program Reside	1978.0	0.0	0.0	702.0	543	0	0	543	13815	3894	2410	23149	3363	46630	13815	3894	2410	23149	3363	0	0	46630
636	Program Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2040 With Project and Program (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	547954	308943	74253	931150	438541	231751	111468	588613	414127	1784500	438541	231751	111468	588613	414127	308943	74253	2167696
651	gateway	0.0	0.0	0.0	0.0	4484	3250	643	8377	4760	3280	1650	5593	3811	19094	4760	3280	1650	5593	3811	3250	643	22987
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	58381	40730	7928	107039	56858	31139	13379	71670	50658	223703	56858	31139	13379	71670	50658	40730	7928	272361
654	gateway	0.0	0.0	0.0	0.0	2827	1909	400	5136	2731	1491	631	3515	2440	10808	2731	1491	631	3515	2440	1909	400	13117
655	gateway	0.0	0.0	0.0	0.0	35775	21974	5186	62936	30099	17041	7852	42065	29273	126330	30099	17041	7852	42065	29273	21974	5186	153490
656	gateway	0.0	0.0	0.0	0.0	7338	2577	623	10538	3523	2208	1314	5440	3726	16211	3523	2208	1314	5440	3726	2577	623	19412
657	gateway	0.0	0.0	0.0	0.0	3712	1513	352	5577	2093	1194	720	2943	2040	8992	2093	1194	720	2943	2040	1513	352	10856
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	975	455	89	1519	657	398	162	830	550	2598	657	398	162	830	550	455	89	3142
660	gateway	0.0	0.0	0.0	0.0	35936	18813	4626	59375	25192	14164	6979	36608	25304	108245	25192	14164	6979	36608	25304	18813	4626	131685
661	gateway	0.0	0.0	0.0	0.0	26168	14362	3521	44051	19562	10986	5092	28018	19387	83046	19562	10986	5092	28018	19387	14362	3521	100928
662	gateway	0.0	0.0	0.0	0.0	131611	77609	18036	227256	107502	51358	28808	145719	100580	433967	107502	51358	28808	145719	100580	77609	18036	529612
663	gateway	0.0	0.0	0.0	0.0	85059	53397	12090	150546	74070	33827	18517	97467	67944	291825	74070	33827	18517	97467	67944	53397	12090	357312
664	gateway	0.0	0.0	0.0	0.0	66351	49512	9923	125786	72131	28536	17775	84590	57466	260498	72131	28536	17775	84590	57466	49512	9923	319932
665	gateway	0.0	0.0	0.0	0.0	36998	21062	4179	62240	29975	10182	6832	34069	22707	103766	29975	10182	6832	34069	22707	21062	4179	129007
666	gateway	0.0	0.0	0.0	0.0	17955	12173	2396	32523	17473	6334	3821	19663	13285	60577	17473	6334	3821	19663	13285	12173	2396	75146
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	90799	16521	107320	132518	63648	17840	148820	103874	466699	132518	63648	17840	148820	103874	90799	16521	574019
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	33449	24601	5363	63412	41487	21837	9167	42259	23573	138323	41487	21837	9167	42259	23573	24601	5363	168286
672	gateway	0.0	0.0	0.0	0.0	0	11700	2507	14207	11708	7121	1989	19232	12740	52791	11708	7121	1989	19232	12740	11700	2507	66998
673	gateway	0.0	0.0	0.0	0.0	0	4812	1005	5817	5194	3340	896	7714	5466	22610	5194	3340	896	7714	5466	4812	1005	28427
674	gateway	0.0	0.0	0.0	0.0	0	10652	2147	12798	11460	6989	1995	16457	11452	48353	11460	6989	1995	16457	11452	10652	2147	61151
EDC Total		164,255.5	39,027.0	32,672.0	65,731.5	487,659.0	428,525.0	120,480.0	1,036,688.0	1,340,404.0	372,070.0	190,161.0	1,191,930.0	322,386.0	3,416,959.0	1,340,404.0	372,070.0	190,161.0	1,191,930.0	322,386.0	428,525.0	120,480.0	3,965,966.0

2018 No Project El Dorado County VMT/Employee 26.3
85% Threshold 22.3

Project VMT/Employee 12.3
Adjusted Project VMT/Employee 6.7
Adjusted by removing 112/145*HBW VMT for employee housing
(Assumes 2 hotel employees per cottage)

2018 No Project El Dorado County VMT/Resident 22.1
85% Threshold 18.8

Project VMT/Resident 22.5
Adjusted Project VMT/Resident 15.7
(Adjusted by removing HBW VMT for Employee housing)

Program VMT/Resident 23.6

El Dorado County VMT/Service Population 19.5

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	97.1	16.0	0.0	46.1	414	926	273	1613	1192	517	615	1137	623	4083	1192	517	615	1137	623	926	273	5282
2	EDC	1204.8	34.0	214.0	533.0	487	674	35	1196	14998	2666	654	5923	1200	25442	14998	2666	654	5923	1200	674	35	26151
3	EDC	94.3	0.0	0.0	38.8	31	0	0	31	1006	533	316	1621	397	3872	1006	533	316	1621	397	0	0	3872
4	EDC	34.8	2.0	0.0	16.0	60	122	28	209	424	284	253	434	136	1531	424	284	253	434	136	122	28	1680
5	EDC	73.0	0.0	0.0	33.0	22	0	0	22	1095	1084	454	1172	261	4066	1095	1084	454	1172	261	0	0	4066
6	EDC	651.0	9.0	0.0	281.5	351	87	18	457	6555	1983	504	5604	1073	15719	6555	1983	504	5604	1073	87	18	15824
7	EDC	1130.1	71.0	0.0	521.9	1057	543	57	1657	13024	7423	1138	8898	1749	32233	13024	7423	1138	8898	1749	543	57	32833
8	EDC	35.4	60.1	0.0	14.1	823	643	123	1589	303	70	16	193	133	715	303	70	16	193	133	643	123	1481
9	EDC	1230.2	117.0	283.0	491.2	1883	1921	185	3988	14291	4590	691	10114	2141	31826	14291	4590	691	10114	2141	1921	185	33932
10	outside EDC	4030.5	55.6	476.0	1571.0	1740	1491	147	3379	26241	5168	2666	31166	7206	72447	26241	5168	2666	31166	7206	1491	147	74086
11	outside EDC	7196.5	607.8	1963.0	2805.0	8748	10406	1327	20481	40042	6248	5777	49432	14351	115850	40042	6248	5777	49432	14351	10406	1327	127583
12	outside EDC	4509.8	264.5	1790.0	1644.0	3732	5530	686	9948	25114	2466	3793	27347	8149	66869	25114	2466	3793	27347	8149	5530	686	73085
13	outside EDC	2683.6	0.0	0.0	989.0	637	0	0	637	18305	2339	1618	17421	4148	43831	18305	2339	1618	17421	4148	0	0	43831
14	outside EDC	4136.1	80.8	855.0	1517.0	1676	2386	261	4323	26900	4239	3603	26096	7317	68156	26900	4239	3603	26096	7317	2386	261	70803
15	outside EDC	28.6	0.0	0.0	10.0	2	0	0	2	214	33	24	252	33	555	214	33	24	252	33	0	0	555
16	outside EDC	1173.3	1089.3	0.0	479.0	13426	11840	4025	29292	5686	798	481	7596	6368	20929	5686	798	481	7596	6368	11840	4025	36794
17	outside EDC	1622.6	0.0	0.0	637.0	559	0	0	559	15920	5917	2683	17618	2764	44903	15920	5917	2683	17618	2764	0	0	44903
18	outside EDC	4528.9	27.9	238.0	1879.0	1763	962	114	2838	38750	14996	4945	41240	11506	111438	38750	14996	4945	41240	11506	962	114	112514
19	outside EDC	1111.2	86.1	739.0	491.0	1256	2514	418	4187	6726	2875	1406	9502	3433	23942	6726	2875	1406	9502	3433	2514	418	26873
20	outside EDC	3.5	5.0	0.0	1.0	62	20	2	84	6	5	9	31	5	56	6	5	9	31	5	20	2	78
21	outside EDC	2.0	111.9	0.0	1.0	1520	532	319	2371	10	4	0	11	18	43	10	4	0	11	18	532	319	895
22	outside EDC	2.0	22.7	0.0	2.0	347	219	231	796	22	4	0	12	45	83	22	4	0	12	45	219	231	532
23	outside EDC	277.4	375.3	2047.0	99.0	6306	6434	2617	15357	1207	532	9548	2663	6109	20059	1207	532	9548	2663	6109	6434	2617	29110
24	outside EDC	124.0	110.9	0.0	124.0	2081	1187	838	4106	1224	375	0	965	1844	4409	1224	375	0	965	1844	1187	838	6435
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	2004.7	86.0	0.0	885.0	1955	1354	224	3533	12945	6796	2456	21387	7178	50762	12945	6796	2456	21387	7178	1354	224	52340
27	outside EDC	5.0	21.9	0.0	2.0	286	132	53	471	24	10	0	39	33	106	24	10	0	39	33	132	53	291
28	outside EDC	322.4	6.0	0.0	124.0	210	26	4	239	2281	979	622	4203	1091	9176	2281	979	622	4203	1091	26	4	9205
29	outside EDC	205.7	5.0	0.0	72.0	132	23	3	158	1490	693	504	3020	714	6422	1490	693	504	3020	714	23	3	6448
30	outside EDC	0.0	133.0	0.0	0.0	1691	817	253	2760	0	0	0	0	0	0	0	0	0	0	0	817	253	1069
31	outside EDC	119.4	45.7	0.0	46.0	636	342	50	1029	1136	471	269	1747	533	4156	1136	471	269	1747	533	342	50	4549
32	outside EDC	2148.2	0.0	0.0	821.0	657	0	0	657	18636	6445	2307	20427	5465	53279	18636	6445	2307	20427	5465	0	0	53279
33	outside EDC	56.0	0.0	0.0	22.0	11	0	0	11	463	166	65	546	136	1376	463	166	65	546	136	0	0	1376
34	outside EDC	176.4	15.7	0.0	78.0	389	127	20	536	2052	1033	366	3248	980	7679	2052	1033	366	3248	980	127	20	7827
35	outside EDC	2429.2	183.2	0.0	943.0	3469	741	102	4312	11282	3631	2749	19460	5122	42244	11282	3631	2749	19460	5122	741	102	43087
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2205	862	454	3520	0	0	0	0	0	0	0	0	0	0	0	862	454	1315
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1560.6	259.2	0.0	680.0	3051	1055	112	4218	6369	1095	594	8595	1912	18565	6369	1095	594	8595	1912	1055	112	19732
40	outside EDC	2268.4	1871.7	0.0	979.0	17821	17244	6312	41377	10003	922	626	10010	9696	31257	10003	922	626	10010	9696	17244	6312	54813
41	outside EDC	1292.1	203.3	0.0	559.0	3041	898	148	4087	6642	1932	1081	11083	3558	24296	6642	1932	1081	11083	3558	898	148	25342
42	outside EDC	4511.7	691.3	447.0	1838.0	10950	10340	2456	23747	23919	7475	3500	36003	17105	88001	23919	7475	3500	36003	17105	10340	2456	100798
43	outside EDC	2109.0	58.2	497.0	825.0	1103	1553	216	2872	14682	4226	1557	15980	5031	41476	14682	4226	1557	15980	5031	1553	216	43245
44	outside EDC	6452.0	463.5	2387.0	2533.0	6275	10647	1875	18797	39215	11200	5555	45253	17907	119130	39215	11200	5555	45253	17907	10647	1875	131652
45	outside EDC	2600.1	1639.2	125.0	1136.0	18229	18482	7038	43749	11087	1029	1054	12460	11702	37332	11087	1029	1054	12460	11702	18482	7038	62852
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	3453.7	0.0	0.0	49724	16477	15654	81855	0	0	0	0	0	0	0	0	0	0	0	16477	15654	32131
48	outside EDC	3165.2	172.0	549.0	1248.0	3037	1811	328	5176	9204	4242	4233	23690	7773	49142	9204	4242	4233	23690	7773	1811	328	51282
49	outside EDC	357.5	4925.2	0.0	144.0	60844	17644	11935	90423	956	368	418	2774	3723	8239	956	368	418	2774	3723	17644	11935	37818
50	outside EDC	2608.3	1467.3	1537.0	1029.0	19691	6146	1405	27242	7044	3471	6417	18493	8513	43938	7044	3471	6417	18493	8513	6146	1405	51489
51	outside EDC	4421.3	1254.2	384.0	1837.0	16686	11542	4158	32387	13609	4139	3053	29994	19237	70032	13609	4139	3053	29994	19237	11542	4158	85733
52	outside EDC	674.0	279.6	3880.0	299.0	3459	8325	2311	14095	2450	919	10959	4863	5555	24745	2450	919	10959	4863	5555	8325	2311	35381
53	outside EDC	4029.1	1058.8	482.0	1563.0	14913	8900	2789	26602	12629	4666	4234	28793	16635	66958	12629	4666	4234	28793	16635	8900	2789	78647
54	outside EDC	1199.8	1874.4	0.0	486.0	25696	6153	1488	33337	4069	2378	1172	11029	4865	23514	4069	2378	1172	11029	4865	6153	1488	31155
55	outside EDC	1793.9	869.6	2114.0	779.0	13101	8855	2976	24932	6400	3579	9038	16360	12847	48224	6400	3579	9038	16360	12847	8855	2976	60055
56	outside EDC	3224.3	282.5	0.0	1203.0	5634	1914	373	7920	9523	5668	4733	29639	10077	59639	9523	5668	4733	29639	10077	1914	373	61926
57	outside EDC	595.3	8063.1	0.0	268.0	106226	23985	12604	142814	1279	1152	655	5508	5219	13813	1279	1152	655	5508	5219	23985	12604	50401
58	outside EDC	1574.4	424.7	0.0	608.0	6846	3405	1122	11373	4924	2752	2159	14099	8406	32339	4924	2752	2159	14099	8406	3405	1122	36866
59	outside EDC	5.0	9.4	0.0	2.0	97	31	8	135	14	3	10	40	20	87	14	3	10	40	20	31	8	125
60	outside EDC	508.0	4670.1	0.0	238.0	63000	15820	8906	87725	1606	928	357	4173	4464	11528	1606	928	357	4173	4464	15820	8906	36254
61	outside EDC	5414.5	1410.8	404.0	2304.0	21831	10168	2978	34977	19227	9366	6966	44043	24631	104233	19227	9366	6966	44043	24631	10168	2978	117379
62	outside EDC	13.3	1648.9	0.0	4.0	20596	5812	3797	30205	36	18	20	107	141	324	36	18	20	107	141	5812	3797	9933
63	outside EDC	877.8	3971.1	0.0	359.0	47009	15804	8521	71334	2907	1399	1014	7336	7645	20302	2907	1399	1014	7336	7645	15804	8521	44627
64	outside EDC	3935.6	648.5	0.0	1582.0	9041	3391	659	13091	15769	5883	3572	30026	11156	66405	15769	5883	3572	30026	11156	3391	659	70455
65	outside EDC	356.2	0.0	0.0	138.0	122	0	0	122	2196	693	411	3233	1019	7552	2196	693	411	3233	1019	0	0	7552
66	outside EDC	1998.1	192.2	346.0	837.0	3084	2219	543	5846	5930	2782	2315	14135	6420	31582	5930	2782	2315	14135	6420	2219	543	34344
67	outside EDC	2626.8	935.5	0.0	1210.0	16090	7682	2495	26267	8203	5405	2870	24525	14218	55222	8203	5405	2870	24525	14218	7682	2495	65399
68	outside EDC	1475.8	820.5	0.0	707.0	9899	3700	1119	14719	4150	2323	1036	10751	5796	24056	4150	2323	1036	10751	5796	3700	1119	28876
69	outside EDC	6315.2	7270.8	416.0	2381.0	105080	26159	9977	141215	17458	5919	7578	40149	28684	99789	17458	5919	7578	40149	28684	26159	9977	135924
70	outside EDC	0.0	7350.2	2505.0	0.0	93911	22442	14101	130454	0	0	2559	0	2038	4597	0	0	0	2559	0	2038	22442	14101	41140
71	outside EDC	7725.4	828.3	1399.0	2980.0	15754	12008	2275	30038	42746	16407	8995	75710	27609	171469	42746	16407	8995	75710	27609	12008	2275	185752

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
72	outside EDC	220.4	8975.0	0.0	85.0	131604	26861	21108	179573	485	272	218	1528	2350	4852	485	272	218	1528	2350	26861	21108	52822
73	outside EDC	0.0	5746.2	0.0	0.0	68240	13731	7773	89744	0	0	0	0	0	0	0	0	0	0	0	13731	7773	21504
74	outside EDC	1134.7	5779.3	0.0	464.0	76038	19348	13424	108810	2848	1040	1045	7721	9880	22534	2848	1040	1045	7721	9880	19348	13424	55305
75	outside EDC	4513.9	2939.3	0.0	1937.0	40026	7354	1260	48640	11772	5324	4424	30795	9204	61518	11772	5324	4424	30795	9204	7354	1260	70132
76	outside EDC	1388.8	297.3	0.0	518.0	4552	3198	1219	8970	3951	1268	1214	9515	6396	22344	3951	1268	1214	9515	6396	3198	1219	26761
77	outside EDC	2910.5	1701.1	993.0	1158.0	22862	8576	2511	33950	8162	4016	4963	22456	12219	51815	8162	4016	4963	22456	12219	8576	2511	62903
78	outside EDC	251.5	1804.6	73.0	107.0	24817	13899	16453	55169	831	220	216	1742	4166	7175	831	220	216	1742	4166	13899	16453	37527
79	outside EDC	0.0	20.4	0.0	0.0	224	137	156	517	0	0	0	0	0	0	0	0	0	0	0	137	156	293
80	outside EDC	0.0	1473.9	0.0	0.0	17291	5132	4890	27314	0	0	0	0	0	0	0	0	0	0	0	5132	4890	10023
81	outside EDC	0.0	6290.8	0.0	0.0	76966	20430	17486	114882	0	0	0	0	0	0	0	0	0	0	0	20430	17486	37916
82	outside EDC	0.0	1787.3	0.0	0.0	20357	6134	4158	30650	0	0	0	0	0	0	0	0	0	0	0	6134	4158	10292
83	outside EDC	1418.7	219.7	1881.0	545.0	3678	5177	1042	9897	8262	2641	6007	13107	6140	36157	8262	2641	6007	13107	6140	5177	1042	42376
84	outside EDC	2887.3	407.0	0.0	1236.0	5876	3549	882	10306	12533	2967	1955	19182	9497	46133	12533	2967	1955	19182	9497	3549	882	50564
85	outside EDC	3258.6	262.1	905.0	1303.0	4193	4471	987	9652	14424	3903	3560	23031	10253	55171	14424	3903	3560	23031	10253	4471	987	60629
86	outside EDC	4494.6	774.9	1521.0	1977.0	10683	10272	2900	23855	16298	4415	5071	29292	16198	71273	16298	4415	5071	29292	16198	10272	2900	84444
87	outside EDC	4961.4	901.4	313.0	2291.0	12968	7012	1912	21892	15360	4693	3992	33641	16233	73919	15360	4693	3992	33641	16233	7012	1912	82843
88	outside EDC	2813.1	761.9	0.0	1127.0	10632	7878	2505	21015	12659	3140	2295	20154	12991	51238	12659	3140	2295	20154	12991	7878	2505	61621
89	outside EDC	0.0	292.1	0.0	0.0	3910	1703	1442	7055	0	0	0	0	0	0	0	0	0	0	0	1703	1442	3146
90	outside EDC	210.2	1019.5	0.0	123.0	16373	8951	10362	35686	562	257	124	1547	3448	5938	562	257	124	1547	3448	8951	10362	25251
91	outside EDC	1739.8	4670.1	34.0	679.0	49784	19686	8447	77917	6829	1672	1576	11982	10598	32657	6829	1672	1576	11982	10598	19686	8447	60790
92	outside EDC	2784.2	141.5	836.0	1159.0	2580	2325	413	5317	13639	3918	4101	21625	7953	51235	13639	3918	4101	21625	7953	2325	413	53973
93	outside EDC	1029.6	249.9	0.0	409.0	4189	1936	341	6466	6984	1318	852	8518	3319	20991	6984	1318	852	8518	3319	1936	341	23268
94	outside EDC	12.0	0.0	0.0	6.0	0	0	0	0	161	25	0	67	29	282	161	25	0	67	29	0	0	282
95	outside EDC	0.0	27.2	0.0	0.0	339	157	75	571	0	0	0	0	0	0	0	0	0	0	0	157	75	232
96	outside EDC	2827.4	456.4	408.0	1151.0	8324	6860	1176	16360	20413	3203	1933	24953	9580	60082	20413	3203	1933	24953	9580	6860	1176	68118
97	outside EDC	3283.3	0.0	0.0	1289.0	1081	0	0	1081	29114	10393	4653	32695	7765	84620	29114	10393	4653	32695	7765	0	0	84620
98	outside EDC	913.1	2957.6	0.0	348.0	32296	15739	6413	54448	4029	540	672	5515	5580	16335	4029	540	672	5515	5580	15739	6413	38487
99	outside EDC	1939.1	1040.5	501.0	791.0	11467	5040	964	17470	9652	1222	1832	11271	5036	29013	9652	1222	1832	11271	5036	5040	964	35017
100	outside EDC	1218.2	157.4	0.0	486.0	2504	1463	217	4184	10606	3090	1563	13158	4236	32654	10606	3090	1563	13158	4236	1463	217	34334
101	outside EDC	3677.1	617.7	467.0	1418.0	7814	5607	899	14319	25559	7446	3152	30634	10868	77659	25559	7446	3152	30634	10868	5607	899	84164
102	outside EDC	195.6	53.0	0.0	76.0	617	276	40	933	1318	445	262	2077	586	4689	1318	445	262	2077	586	276	40	5004
103	outside EDC	5354.4	511.2	765.0	2275.0	6817	8530	1385	16732	35492	11308	2874	40341	14727	104741	35492	11308	2874	40341	14727	8530	1385	114656
104	outside EDC	267.0	0.0	0.0	109.0	89	0	0	89	1984	575	344	2771	694	6368	1984	575	344	2771	694	0	0	6368
105	outside EDC	3393.4	70.9	0.0	1365.0	1913	1255	165	3333	26728	8105	2663	29177	8588	75261	26728	8105	2663	29177	8588	1255	165	76680
106	outside EDC	0.0	70.3	0.0	0.0	746	418	104	1268	0	0	0	0	0	0	0	0	0	0	0	418	104	522
107	outside EDC	4863.6	3741.3	927.0	2202.0	46557	22429	5588	74574	19652	3904	4908	36025	17566	82055	19652	3904	4908	36025	17566	22429	5588	110072
108	outside EDC	1796.3	842.0	0.0	673.0	10550	3403	451	14404	10427	1077	2056	12835	3741	30136	10427	1077	2056	12835	3741	3403	451	33990
109	outside EDC	1569.7	701.7	0.0	639.0	10831	6800	2112	19743	8356	1654	1670	13164	8401	33245	8356	1654	1670	13164	8401	6800	2112	42157
110	outside EDC	620.8	1922.3	0.0	262.0	25614	10179	3677	39470	2725	758	686	5624	4123	13916	2725	758	686	5624	4123	10179	3677	27772
111	outside EDC	1186.8	1667.5	0.0	517.0	26200	22362	14860	63422	4991	723	999	8699	12264	27676	4991	723	999	8699	12264	22362	14860	64898
112	outside EDC	2018.4	2144.3	194.0	749.0	30278	22591	10978	63847	10328	1117	2247	13787	15524	43002	10328	1117	2247	13787	15524	22591	10978	76571
113	outside EDC	0.0	4221.5	0.0	0.0	44056	16076	7894	68026	0	0	0	0	0	0	0	0	0	0	0	16076	7894	23970
114	outside EDC	2119.4	711.2	0.0	801.0	7110	3085	385	10580	11168	1490	1163	12228	3595	29643	11168	1490	1163	12228	3595	3085	385	33113
115	outside EDC	5916.2	1339.3	1547.0	2306.0	20992	20426	4552	45969	34462	6104	6134	44756	22397	113852	34462	6104	6134	44756	22397	20426	4552	138830
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1646.6	1491.8	2300.0	585.0	15884	10325	1829	28038	8316	1359	4359	10917	5010	29961	8316	1359	4359	10917	5010	10325	1829	42115
118	outside EDC	6343.0	186.4	551.0	2399.0	3386	2891	391	6668	27834	4222	3676	36818	10506	83056	27834	4222	3676	36818	10506	2891	391	86339
119	outside EDC	1272.5	6545.1	0.0	509.0	58235	24131	7816	90182	6020	853	556	7313	6135	20878	6020	853	556	7313	6135	24131	7816	52825
120	outside EDC	289.9	5099.5	0.0	113.0	51802	37810	22362	111975	1213	137	104	1637	3827	6917	1213	137	104	1637	3827	37810	22362	67089
121	outside EDC	4220.4	1760.6	651.0	1645.0	20229	24382	7439	52050	18704	2064	2628	23034	17078	63509	18704	2064	2628	23034	17078	24382	7439	95329
122	outside EDC	1805.8	1224.4	3643.0	771.0	11768	11706	2163	25637	7344	1087	733	9782	4279	23225	7344	1087	733	9782	4279	11706	2163	37093
123	outside EDC	569.2	855.2	0.0	208.0	8846	8986	3841	21673	2746	273	300	3124	3714	10157	2746	273	300	3124	3714	8986	3841	22984
124	outside EDC	2653.4	461.3	401.0	1243.0	6777	8245	1890	16911	15293	2803	2535	18566	10268	49465	15293	2803	2535	18566	10268	8245	1890	59599
125	outside EDC	834.5	1004.3	0.0	423.0	11204	10193	5083	26480	3324	383	241	4001	4949	12898	3324	383	241	4001	4949	10193	5083	28174
126	outside EDC	406.0	279.1	0.0	185.0	3503	3070	1216	7789	2105	210	183	2104	2145	6748	2105	210	183	2104	2145	3070	1216	11033
127	outside EDC	1765.6	117.0	0.0	828.0	1814	1262	200	3276	11409	1540	987	10703	4231	28871	11409	1540	987	10703	4231	1262	200	30333
128	outside EDC	2039.9	767.4	0.0	990.0	10374	9776	2656	22806	12867	1831	1292	13727	9274	38991	12867	1831	1292	13727	9274	9776	2656	51423
129	outside EDC	2269.4	0.0	0.0	1030.0	706	0	0	706	13392	2829	1995	16028	4895	39139	13392	2829	1995	16028	4895	0	0	39139
130	outside EDC	924.4	478.2	578.0	402.0	4426	4889	1380	10695	3674	328	941	3973	3019	11935	3674	328	941	3973	3019	4889	1380	18204
131	outside EDC	1290.2	1327.4	1635.0	629.0	12327	11124	3295	26746	5306	596	2893	6102	5454	20352	5306	596	2893	6102	5454	11124	3295	34772
132	outside EDC	925.3	300.9	0.0	409.0	3854	3247	756	7857	5292	968	635	6612	3556	17063	5292	968	635	6612	3556	3247	756	21066
133	outside EDC	5279.7	1484.3	1837.0	2116.0	14548	16433	3662	34642	23154	1989	3214	22943	13275	64575	23154	1989	3214	22943	13275	16433	3662	84670
134	outside EDC	2660.9	1568.3	0.0	1151.0	17032	7853	1295	26180	10239	1784	944	14646	5266	32880	10239	1784	944	14646	5266	7853	1295	42029
135	outside EDC	0.0	2114.0	0.0	0.0	21154	7970	2010	31134	0	0	0	0	0	0	0	0	0	0	0	7970	2010	9980
136	outside EDC	1710.8	110.3	0.0	670.0	1833	1666	254	3753	11413	1448	1087	10820	4155	28923	11413	1448	1087	10820	4155	1666	254	30843
137	outside EDC	6779.1	673.0	610.0	2354.0	9133	12794	2231	24158	37267	4854	5209	40275	17229	104833	37267	4854	5209	40275	17229	12794	2231	119858
138	EDC	378.1	25.0	0.0	173.0	454	154	11	620	2188	377	128	2147	457	5296	2188	377	128	2147	457	154	11	5462
139	EDC	133.2	106.9	0.0	62.0	1432	1247	277	2956	618	142	14	574	544	1893	618	142	14	574	544	1247	277	3416
140	EDC	22.0	442.5	0.0	10.0	7021	6723	3402	17147	46	9	1	47	212	316	46	9	1	47	212	6723	3402	10441
141	EDC	49.2	2.0	0.0	21.0	58	50	5	113	658	180	124	751	219	1933	658	180	124	751	219	50	5	1988
142	EDC	348.9	0.0	0.0	156.9	141	0	0	141	3124	807	186	2916	730	7762	3124	807	186	2916	730	0	0	7762
143	EDC	210.8	4.0	0.0	94.8	104	5	0	110	1503	333	53	1306	313	3508	1503	333	53	1306	313	5	0	3514

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
144	EDC	186.9	19.0	0.0	74.7	278	82	11	371	1869	304	70	1224	294	3761	1869	304	70	1224	294	82	11	3854
145	EDC	69.3	0.0	0.0	30.0	8	0	0	8	366	47	16	219	46	694	366	47	16	219	46	0	0	694
146	EDC	146.8	58.7	25.0	64.0	794	638	98	1530	689	128	73	611	378	1878	689	128	73	611	378	638	98	2615
147	EDC	364.7	0.0	0.0	159.0	105	0	0	105	1872	324	86	1713	346	4342	1872	324	86	1713	346	0	0	4342
148	outside EDC	5292.4	137.7	0.0	2260.0	5658	1409	157	7224	61893	30721	16554	80226	21301	210695	61893	30721	16554	80226	21301	1409	157	212261
149	EDC	125.8	214.2	0.0	44.9	3142	3214	952	7308	900	94	23	691	958	2666	900	94	23	691	958	3214	952	6832
150	EDC	257.8	3.0	0.0	108.8	148	32	3	183	2955	689	287	3228	799	7958	2955	689	287	3228	799	32	3	7994
151	EDC	66.8	0.0	0.0	23.0	5	0	0	5	732	175	125	622	77	1731	732	175	125	622	77	0	0	1731
152	EDC	391.5	99.0	0.0	161.4	1519	1369	177	3064	2966	390	99	2804	1131	7390	2966	390	99	2804	1131	1369	177	8935
153	EDC	411.6	32.5	0.0	191.5	636	446	51	1133	2587	580	127	2748	938	6981	2587	580	127	2748	938	446	51	7477
154	EDC	245.5	16.0	0.0	104.4	202	57	4	264	1405	157	127	1585	307	3581	1405	157	127	1585	307	57	4	3642
155	EDC	285.3	0.0	0.0	108.2	63	0	0	63	2198	358	98	2138	374	5166	2198	358	98	2138	374	0	0	5166
156	EDC	68.0	0.0	0.0	27.0	22	0	0	22	830	288	219	1120	211	2668	830	288	219	1120	211	0	0	2668
157	EDC	790.4	0.0	0.0	273.1	126	0	0	126	4708	864	173	5514	963	12223	4708	864	173	5514	963	0	0	12223
158	EDC	1409.8	72.0	0.0	614.8	1043	344	26	1413	9815	1306	772	8808	2004	22704	9815	1306	772	8808	2004	344	26	23074
159	EDC	993.8	1.0	0.0	409.6	235	0	0	235	7289	961	603	6246	1205	16306	7289	961	603	6246	1205	0	0	16306
160	EDC	847.9	0.0	0.0	349.5	245	0	0	245	6565	926	173	5703	1144	14510	6565	926	173	5703	1144	0	0	14510
161	EDC	283.3	0.0	0.0	109.0	52	0	0	52	2480	503	206	2598	515	6301	2480	503	206	2598	515	0	0	6301
162	EDC	4465.2	0.0	0.0	1503.0	901	0	0	901	35547	8097	2302	35464	6172	87582	35547	8097	2302	35464	6172	0	0	87582
163	EDC	430.2	230.0	0.0	144.8	2724	3613	914	7251	2798	418	176	3186	2251	8829	2798	418	176	3186	2251	3613	914	13356
164	EDC	0.0	2237.6	0.0	0.0	21814	8313	3444	33570	0	0	0	0	0	0	0	0	0	0	0	8313	3444	11757
165	EDC	1313.9	0.0	0.0	528.8	344	0	0	344	8389	1385	642	10062	2148	22626	8389	1385	642	10062	2148	0	0	22626
166	EDC	1954.3	58.8	756.0	762.0	1075	2047	241	3364	11694	2000	1985	13318	3838	32835	11694	2000	1985	13318	3838	2047	241	35124
167	EDC	3477.7	55.2	256.0	1497.3	1608	737	72	2417	23044	4531	1354	24105	6007	59040	23044	4531	1354	24105	6007	737	72	59849
168	EDC	2628.9	9.0	0.0	1131.8	736	24	2	761	13895	1900	787	16040	2649	35271	13895	1900	787	16040	2649	24	2	35296
169	EDC	531.7	1939.0	0.0	214.0	20562	23593	12721	56876	2502	322	192	3206	6215	12438	2502	322	192	3206	6215	23593	12721	48753
170	EDC	1217.5	1590.4	0.0	490.0	14653	6251	846	21750	5990	858	469	7739	2580	17636	5990	858	469	7739	2580	6251	846	24733
171	EDC	1080.7	93.7	0.0	441.0	1226	412	41	1679	7129	1184	476	8018	1873	18681	7129	1184	476	8018	1873	412	41	19133
172	EDC	0.0	178.2	0.0	0.0	1768	1997	1437	5202	0	0	0	0	0	0	0	0	0	0	0	1997	1437	3434
173	EDC	0.0	547.0	0.0	0.0	5516	7025	4960	17500	0	0	0	0	0	0	0	0	0	0	0	7025	4960	11985
174	EDC	37.8	11.0	52.0	15.0	200	288	37	525	420	144	191	556	198	1509	420	144	191	556	198	288	37	1835
175	EDC	25.8	5.0	0.0	10.9	63	22	1	86	312	57	32	275	44	721	312	57	32	275	44	22	1	744
176	EDC	76.8	0.0	0.0	32.4	21	0	0	21	841	177	75	952	206	2252	841	177	75	952	206	0	0	2252
177	EDC	66.6	7.0	0.0	26.4	93	32	3	127	586	154	60	783	158	1742	586	154	60	783	158	32	3	1776
178	EDC	94.6	0.0	0.0	36.9	22	0	0	22	1037	210	99	1164	219	2730	1037	210	99	1164	219	0	0	2730
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	EDC	1173.1	0.0	0.0	457.0	330	0	0	330	11276	2029	841	10444	2330	26921	11276	2029	841	10444	2330	0	0	26921
181	EDC	274.3	81.0	453.0	104.6	853	1991	273	3116	2051	345	592	1995	927	5910	2051	345	592	1995	927	1991	273	8173
182	EDC	3251.4	0.0	0.0	1240.0	766	0	0	766	26119	4266	1562	22498	4551	58996	26119	4266	1562	22498	4551	0	0	58996
183	EDC	667.9	0.0	0.0	284.1	182	0	0	182	4564	1079	322	5688	1168	12821	4564	1079	322	5688	1168	0	0	12821
184	EDC	1039.1	461.2	1110.0	396.3	5216	8368	1219	14802	7786	1208	1486	7419	3653	21552	7786	1208	1486	7419	3653	8368	1219	31139
185	EDC	346.2	0.0	0.0	150.9	55	0	0	55	2472	429	131	2298	498	5830	2472	429	131	2298	498	0	0	5830
186	EDC	258.1	185.1	0.0	112.5	2132	2702	587	5421	1741	279	92	1663	1247	5022	1741	279	92	1663	1247	2702	587	8311
187	EDC	559.9	85.0	0.0	244.2	971	438	36	1445	3819	516	254	3703	864	9155	3819	516	254	3703	864	438	36	9630
188	EDC	468.1	69.0	0.0	204.1	756	362	23	1141	2932	345	211	2783	510	6782	2932	345	211	2783	510	362	23	7167
189	EDC	103.0	0.0	0.0	36.9	25	0	0	25	1097	331	181	1479	283	3371	1097	331	181	1479	283	0	0	3371
190	EDC	704.5	0.0	0.0	252.4	148	0	0	148	5881	1033	446	6125	1123	14608	5881	1033	446	6125	1123	0	0	14608
191	EDC	75.4	0.0	0.0	27.0	5	0	0	5	568	89	36	570	88	1351	568	89	36	570	88	0	0	1351
192	EDC	69.2	0.0	0.0	25.0	5	0	0	5	504	87	29	455	82	1157	504	87	29	455	82	0	0	1157
193	EDC	2977.0	93.0	0.0	1135.3	1486	555	48	2088	22281	4826	880	21604	4765	54356	22281	4826	880	21604	4765	555	48	54958
194	EDC	1297.4	0.0	0.0	439.0	232	0	0	232	8886	1921	176	9091	1635	21708	8886	1921	176	9091	1635	0	0	21708
195	EDC	26.5	46.6	0.0	10.0	535	805	401	1741	169	29	16	168	290	672	169	29	16	168	290	805	401	1879
196	outside EDC	3646.7	88.2	593.0	1309.0	1680	2189	209	4079	28035	5873	2680	27912	6855	71356	28035	5873	2680	27912	6855	2189	209	73754
197	EDC	225.1	0.0	0.0	85.1	34	0	0	34	1706	314	113	1653	354	4139	1706	314	113	1653	354	0	0	4139
198	EDC	2475.8	470.9	740.0	887.0	4999	10086	1464	16549	17864	2589	1772	17663	7087	46974	17864	2589	1772	17663	7087	10086	1464	58524
199	EDC	173.1	120.0	0.0	62.0	1382	2234	763	4379	1196	218	105	1277	1287	4082	1196	218	105	1277	1287	2234	763	7079
200	EDC	18.5	113.0	0.0	7.0	1209	1377	702	3288	108	21	6	115	237	488	108	21	6	115	237	1377	702	2567
201	EDC	443.3	301.0	0.0	150.0	2675	1784	187	4646	2951	600	191	3261	903	7907	2951	600	191	3261	903	1784	187	9878
202	EDC	2116.9	199.0	0.0	758.4	2463	3532	403	6398	16165	2473	1153	16478	4836	41105	16165	2473	1153	16478	4836	3532	403	45040
203	EDC	3669.5	139.0	0.0	1268.1	1888	811	55	2754	29538	6644	1827	28926	5386	72322	29538	6644	1827	28926	5386	811	55	73188
204	EDC	1048.1	40.9	815.0	362.0	544	2235	222	3001	6605	1351	1308	7172	1951	18387	6605	1351	1308	7172	1951	2235	222	20844
205	EDC	327.1	80.0	0.0	113.0	732	359	28	1119	1935	350	105	2374	434	5199	1935	350	105	2374	434	359	28	5586
206	EDC	147.7	0.0	0.0	51.1	14	0	0	14	907	185	21	1008	157	2277	907	185	21	1008	157	0	0	2277
207	EDC	876.4	0.0	0.0	302.8	184	0	0	184	7130	1550	540	7546	1503	18269	7130	1550	540	7546	1503	0	0	18269
208	EDC	26.0	0.0	0.0	9.0	0	0	0	0	168	40	14	180	22	423	168	40	14	180	22	0	0	423
209	EDC	242.6	14.0	0.0	83.8	153	62	5	220	1905	385	131	1972	374	4768	1905	385	131	1972	374	62	5	4835
210	EDC	465.6	0.0	0.0	157.5	77	0	0	77	3389	746	217	3660	680	8691	3389	746	217	3660	680	0	0	8691
211	EDC	11.3	0.0	0.0	4.0	0	0	0	0	73	8	6	66	3	156	73	8	6	66	3	0	0	156
212	EDC	107.5	0.0	0.0	37.1	13	0	0	13	945	216	76	983	169	2389	945	216	76	983	169	0	0	2389
213	EDC	346.5	0.0	0.0	125.2	72	0	0	72	3275	813	303	3557	688	8636	3275	813	303	3557	688	0	0	8636
214	EDC	26.1	0.0	0.0	10.7	8	0	0	8	355	236	123	303	76	1093	355	236	123	303	76	0	0	1093
215	EDC	401.4	0.0	0.0	143.8	87	0	0	87	3558	721	280	4015	736	9309	3558	721	280	4015	736	0	0	9309

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
216	EDC	17.4	0.0	0.0	7.1	6	0	0	6	214	164	97	204	74	754	214	164	97	204	74	0	0	754
217	EDC	30.7	0.0	0.0	11.0	2	0	0	2	294	72	36	366	49	817	294	72	36	366	49	0	0	817
218	EDC	78.1	0.0	0.0	28.0	12	0	0	12	680	173	78	888	155	1974	680	173	78	888	155	0	0	1974
219	EDC	91.2	77.0	0.0	33.0	977	573	74	1624	849	202	103	1084	325	2563	849	202	103	1084	325	573	74	3210
220	EDC	24.9	0.0	0.0	9.0	1	0	0	1	231	57	30	271	32	620	231	57	30	271	32	0	0	620
221	EDC	2445.6	0.0	0.0	941.0	575	0	0	575	22686	5297	1720	20016	4056	53775	22686	5297	1720	20016	4056	0	0	53775
222	EDC	71.5	26.0	0.0	26.9	231	633	121	985	618	110	32	441	349	1550	618	110	32	441	349	633	121	2304
223	EDC	295.7	0.0	0.0	111.5	28	0	0	28	2546	446	165	1906	333	5396	2546	446	165	1906	333	0	0	5396
224	EDC	267.5	29.0	0.0	100.9	317	160	11	488	2579	573	177	2357	472	6159	2579	573	177	2357	472	160	11	6330
225	EDC	369.9	88.1	944.0	127.8	1062	3683	476	5221	3270	801	1683	3357	1563	10673	3270	801	1683	3357	1563	3683	476	14832
226	EDC	1173.2	84.7	566.0	405.5	956	2272	155	3383	10182	2126	1074	8938	1960	24280	10182	2126	1074	8938	1960	2272	155	26707
227	EDC	456.2	2.0	0.0	186.0	86	3	0	89	3811	818	294	3321	558	8803	3811	818	294	3321	558	3	0	8806
228	EDC	1758.7	20.0	0.0	717.2	471	239	12	722	13743	2573	1126	11369	1814	30624	13743	2573	1126	11369	1814	239	12	30876
229	EDC	257.3	0.0	0.0	99.0	32	0	0	32	2202	478	146	1945	363	5134	2202	478	146	1945	363	0	0	5134
230	EDC	1446.9	0.0	0.0	487.0	298	0	0	298	11725	2488	1129	12180	2134	29657	11725	2488	1129	12180	2134	0	0	29657
231	EDC	59.2	28.0	0.0	20.5	187	175	10	372	464	103	39	417	83	1105	464	103	39	417	83	175	10	1290
232	EDC	109.2	0.0	0.0	39.5	15	0	0	15	1148	291	114	1245	206	3004	1148	291	114	1245	206	0	0	3004
233	EDC	248.0	101.0	0.0	108.1	768	1384	193	2345	1826	364	112	1504	763	4569	1826	364	112	1504	763	1384	193	6145
234	EDC	2423.7	716.1	0.0	1056.8	6177	7129	722	14028	17752	3124	1276	15234	5103	42489	17752	3124	1276	15234	5103	7129	722	50340
235	EDC	2596.9	0.0	0.0	959.0	488	0	0	488	21440	3855	2036	18170	3359	48861	21440	3855	2036	18170	3359	0	0	48861
236	EDC	1276.1	9.0	0.0	471.2	252	38	2	292	10343	1975	758	8597	1443	23116	10343	1975	758	8597	1443	38	2	23156
237	EDC	176.5	0.0	0.0	76.9	22	0	0	22	1381	249	76	1233	258	3196	1381	249	76	1233	258	0	0	3196
238	EDC	903.0	254.7	0.0	368.3	2715	2069	170	4954	7238	1244	637	6535	1722	17376	7238	1244	637	6535	1722	2069	170	19615
239	EDC	178.8	16.0	0.0	67.4	124	342	26	493	1523	247	106	1079	295	3250	1523	247	106	1079	295	342	26	3619
240	EDC	339.9	0.0	0.0	128.2	72	0	0	72	3713	856	437	3474	640	9120	3713	856	437	3474	640	0	0	9120
241	EDC	463.9	2.0	0.0	175.0	72	12	1	85	4236	743	313	3130	575	8996	4236	743	313	3130	575	12	1	9009
242	EDC	61.8	0.0	0.0	23.3	2	0	0	2	518	76	35	350	46	1026	518	76	35	350	46	0	0	1026
243	EDC	153.3	13.0	0.0	57.8	86	50	3	139	1382	238	97	987	163	2868	1382	238	97	987	163	50	3	2921
244	EDC	63.7	0.0	0.0	25.4	7	0	0	7	686	264	86	710	102	1848	686	264	86	710	102	0	0	1848
245	EDC	30.0	0.0	0.0	10.0	5	0	0	5	351	93	67	426	70	1006	351	93	67	426	70	0	0	1006
246	EDC	189.0	0.0	0.0	63.0	31	0	0	31	2301	527	396	2139	342	5706	2301	527	396	2139	342	0	0	5706
247	EDC	636.3	0.0	0.0	296.0	328	0	0	328	5839	2275	646	5720	1463	15943	5839	2275	646	5720	1463	0	0	15943
248	EDC	437.6	0.0	0.0	184.6	177	0	0	177	5671	1266	672	4315	1019	12942	5671	1266	672	4315	1019	0	0	12942
249	EDC	57.8	0.0	0.0	26.9	16	0	0	16	532	277	107	876	169	1961	532	277	107	876	169	0	0	1961
250	EDC	124.1	0.0	0.0	53.0	31	0	0	31	1590	361	200	1366	268	3784	1590	361	200	1366	268	0	0	3784
251	EDC	245.9	0.0	0.0	94.1	58	0	0	58	2123	373	144	2223	439	5302	2123	373	144	2223	439	0	0	5302
252	EDC	1217.5	0.0	0.0	461.9	412	0	0	412	10655	1974	743	10104	2115	25592	10655	1974	743	10104	2115	0	0	25592
253	EDC	405.0	0.0	0.0	147.2	119	0	0	119	4072	886	467	4106	764	10296	4072	886	467	4106	764	0	0	10296
254	EDC	303.9	0.0	0.0	116.4	83	0	0	83	2760	553	224	2952	589	7078	2760	553	224	2952	589	0	0	7078
255	EDC	0.0	717.5	0.0	0.0	9029	7706	3483	20217	0	0	0	0	0	0	0	0	0	0	0	7706	3483	11189
256	EDC	174.6	1152.7	0.0	83.0	15496	13560	5138	34193	982	93	96	956	2070	4196	982	93	96	956	2070	13560	5138	22893
257	EDC	868.6	1222.1	0.0	332.6	15058	8194	1234	24486	5337	675	375	5671	2840	14897	5337	675	375	5671	2840	8194	1234	24326
258	EDC	62.6	2.0	0.0	22.8	24	1	0	25	618	155	118	678	88	1657	618	155	118	678	88	1	0	1659
259	EDC	85.3	0.0	0.0	32.4	11	0	0	11	848	217	106	899	132	2203	848	217	106	899	132	0	0	2203
260	EDC	10.1	167.6	0.0	3.5	2224	1857	728	4810	35	4	3	25	74	142	35	4	3	25	74	1857	728	2728
261	EDC	292.3	291.9	0.0	106.3	3910	3450	708	8068	1918	225	84	1788	1375	5390	1918	225	84	1788	1375	3450	708	9548
262	EDC	422.7	258.5	0.0	161.8	3396	2527	399	6322	2577	329	112	2479	1323	6820	2577	329	112	2479	1323	2527	399	9746
263	EDC	314.7	35.0	0.0	114.4	520	545	55	1121	2220	269	89	1943	631	5152	2220	269	89	1943	631	545	55	5752
264	EDC	202.5	45.0	0.0	73.6	658	844	120	1622	1420	169	58	1249	598	3494	1420	169	58	1249	598	844	120	4458
265	EDC	118.3	0.0	0.0	44.9	18	0	0	18	1020	223	94	1122	196	2655	1020	223	94	1122	196	0	0	2655
266	EDC	90.1	26.2	0.0	41.9	555	492	79	1126	688	179	55	720	397	2040	688	179	55	720	397	492	79	2611
267	EDC	375.2	0.0	0.0	142.3	103	0	0	103	3029	576	217	2934	481	7238	3029	576	217	2934	481	0	0	7238
268	EDC	182.9	6.0	0.0	69.4	102	18	1	121	1440	298	117	1425	277	3556	1440	298	117	1425	277	18	1	3575
269	EDC	528.7	1.0	0.0	205.5	195	0	0	195	5029	777	276	3967	975	11023	5029	777	276	3967	975	0	0	11023
270	EDC	113.1	0.0	0.0	45.2	21	0	0	21	1292	294	113	1069	197	2966	1292	294	113	1069	197	0	0	2966
271	EDC	392.5	5.0	0.0	152.6	168	15	2	185	4318	920	394	3767	797	10196	4318	920	394	3767	797	15	2	10213
272	EDC	372.1	23.0	0.0	132.7	313	159	10	482	3500	530	113	2822	569	7535	3500	530	113	2822	569	159	10	7704
273	EDC	390.2	12.0	0.0	134.5	230	60	4	293	4470	840	352	3599	667	9929	4470	840	352	3599	667	60	4	9992
274	EDC	713.5	98.9	645.0	254.4	1332	2687	234	4252	6610	1103	1180	5252	1637	15783	6610	1103	1180	5252	1637	2687	234	18704
275	EDC	840.5	13.0	0.0	328.0	459	139	11	609	8049	1142	363	6574	1588	17716	8049	1142	363	6574	1588	139	11	17866
276	EDC	1048.5	34.5	0.0	427.6	618	423	30	1070	8506	1387	514	7354	1611	19373	8506	1387	514	7354	1611	423	30	19825
277	EDC	414.1	0.0	0.0	170.7	70	0	0	70	3251	496	122	2634	535	7038	3251	496	122	2634	535	0	0	7038
278	EDC	244.1	0.0	0.0	92.1	48	0	0	48	2654	639	194	2563	471	6520	2654	639	194	2563	471	0	0	6520
279	EDC	122.4	0.0	0.0	46.2	18	0	0	18	1361	352	160	1235	203	3311	1361	352	160	1235	203	0	0	3311
280	EDC	103.7	0.0	0.0	37.0	11	0	0	11	962	129	24	809	126	2051	962	129	24	809	126	0	0	2051
281	EDC	174.1	40.0	359.0	62.1	589	1424	160	2173	1592	211	847	1357	615	4621	1592	211	847	1357	615	1424	160	6204
282	EDC	109.4	0.0	0.0	39.0	10	0	0	10	956	119	18	757	118	1969	956	119	18	757	118	0	0	1969
283	EDC	0.0	179.4	2054.0	0.0	2273	6817	1476	10566	0	0	3946	0	794	4740	0	0	3946	0	794	6817	1476	13033
284	EDC	73.8	25.0	0.0	30.4	272	162	12	446	486	63	9	396	103	1057	486	63	9	396	103	162	12	1231
285	EDC	49.3	66.0	400.0	17.0	881	1527	225	2634	302	44	946	282	306	1879	302	44	946	282	306	1527	225	3631
286	EDC	101.0	0.0	0.0	36.0	10	0	0	10	1024	205	73	861	141	2304	1024	205	73	861	141	0	0	2304
287	EDC	87.1	0.0	0.0	34.0	7	0	0	7	877	159	37	700	115	1888	877	159	37	700	115	0	0	1888

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
288	EDC	142.7	0.0	0.0	50.9	17	0	0	17	1404	245	83	1220	204	3156	1404	245	83	1220	204	0	0	3156
289	EDC	23.2	0.0	0.0	8.0	0	0	0	0	208	29	18	132	8	395	208	29	18	132	8	0	0	395
290	EDC	127.7	0.0	0.0	44.0	13	0	0	13	1377	231	103	1036	173	2920	1377	231	103	1036	173	0	0	2920
291	EDC	498.7	27.9	0.0	195.9	474	177	18	670	6242	1491	415	4796	997	13941	6242	1491	415	4796	997	177	18	14136
292	EDC	209.0	0.0	0.0	72.0	34	0	0	34	2478	612	403	2030	306	5829	2478	612	403	2030	306	0	0	5829
293	EDC	76.1	0.0	0.0	34.8	11	0	0	11	488	91	32	460	104	1175	488	91	32	460	104	0	0	1175
294	EDC	250.5	0.0	0.0	100.8	64	0	0	64	1904	301	85	1643	379	4313	1904	301	85	1643	379	0	0	4313
295	EDC	281.9	1491.0	0.0	110.0	32281	39360	17086	88727	2400	153	194	1566	5609	9921	2400	153	194	1566	5609	39360	17086	66367
296	EDC	330.8	56.0	438.0	125.5	857	1605	160	2622	2535	368	1156	2236	866	7160	2535	368	1156	2236	866	1605	160	8925
297	EDC	184.5	0.0	0.0	70.0	30	0	0	30	1247	223	72	1122	135	2798	1247	223	72	1122	135	0	0	2798
298	EDC	208.3	0.0	0.0	79.0	44	0	0	44	1576	244	109	1403	279	3610	1576	244	109	1403	279	0	0	3610
299	EDC	275.1	0.0	0.0	106.9	74	0	0	74	2730	412	191	2281	506	6119	2730	412	191	2281	506	0	0	6119
300	EDC	77.2	0.0	0.0	30.0	8	0	0	8	670	97	37	479	93	1376	670	97	37	479	93	0	0	1376
301	EDC	7.1	0.0	0.0	3.2	0	0	0	0	8	4	3	10	1	25	8	4	3	10	1	0	0	25
302	EDC	133.1	33.0	152.0	60.9	508	540	53	1102	801	155	528	740	308	2532	801	155	528	740	308	540	53	3125
303	EDC	227.8	0.0	0.0	106.0	57	0	0	57	1293	293	59	1383	322	3350	1293	293	59	1383	322	0	0	3350
304	EDC	26.1	275.4	0.0	12.0	3259	2005	554	5818	105	24	9	100	189	426	105	24	9	100	189	2005	554	2985
305	EDC	2.2	283.0	0.0	1.0	3444	1812	478	5735	0	0	0	0	0	0	0	0	0	0	0	1812	478	2291
306	EDC	21.5	55.0	0.0	10.0	635	238	15	888	122	29	3	98	38	291	122	29	3	98	38	238	15	544
307	EDC	36.7	2.0	0.0	16.0	17	7	1	24	167	39	9	155	39	409	167	39	9	155	39	7	1	416
308	EDC	25.3	1.0	0.0	11.0	4	1	0	5	110	24	7	90	17	247	110	24	7	90	17	1	0	248
309	EDC	30.6	4.0	0.0	14.0	30	18	2	50	122	28	7	106	30	292	122	28	7	106	30	18	2	312
310	EDC	59.6	122.0	0.0	26.0	1401	741	118	2260	268	64	13	251	198	795	268	64	13	251	198	741	118	1654
311	EDC	83.0	158.0	0.0	38.0	2436	1912	586	4934	431	74	22	365	544	1436	431	74	22	365	544	1912	586	3934
312	EDC	71.1	43.3	0.0	31.0	594	517	99	1210	330	70	13	285	246	945	330	70	13	285	246	517	99	1561
313	EDC	105.4	506.0	1583.0	42.0	7470	4823	720	13012	577	95	3149	368	725	4915	577	95	3149	368	725	4823	720	10457
314	EDC	201.3	8.0	0.0	81.0	126	17	1	144	1200	145	63	937	200	2546	1200	145	63	937	200	17	1	2564
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	28.4	0.0	0.0	13.0	1	0	0	1	95	24	8	106	18	251	95	24	8	106	18	0	0	251
317	EDC	17.5	0.0	0.0	8.0	0	0	0	0	64	11	3	46	7	132	64	11	3	46	7	0	0	132
318	EDC	334.2	2.0	0.0	134.5	118	1	0	119	2027	269	88	1642	375	4401	2027	269	88	1642	375	1	0	4402
319	EDC	95.4	6.0	0.0	38.0	68	7	1	76	476	66	16	329	63	950	476	66	16	329	63	7	1	958
320	EDC	46.1	39.0	351.0	18.1	553	1512	242	2307	465	98	1130	254	321	2268	465	98	1130	254	321	1512	242	4022
321	EDC	268.3	0.0	0.0	105.4	68	0	0	68	3237	687	123	2371	488	6906	3237	687	123	2371	488	0	0	6906
322	EDC	420.9	33.0	0.0	163.6	569	175	22	766	3895	730	227	3020	718	8590	3895	730	227	3020	718	175	22	8787
323	EDC	136.1	4.0	0.0	52.9	69	14	3	86	1505	371	107	1274	252	3509	1505	371	107	1274	252	14	3	3526
324	EDC	163.0	0.0	0.0	65.1	37	0	0	37	1944	453	163	1577	295	4433	1944	453	163	1577	295	0	0	4433
325	EDC	41.9	0.0	0.0	16.5	4	0	0	4	415	81	14	233	50	794	415	81	14	233	50	0	0	794
326	EDC	127.2	1.0	0.0	49.9	32	1	1	34	1388	273	67	880	166	2774	1388	273	67	880	166	1	1	2776
327	Placerville (not	113.4	0.0	0.0	45.3	17	0	0	17	1089	149	55	636	126	2056	1089	149	55	636	126	0	0	2056
328	EDC	47.5	0.0	0.0	19.0	3	0	0	3	430	77	23	244	53	827	430	77	23	244	53	0	0	827
329	Placerville (not	338.1	0.0	0.0	146.5	98	0	0	98	2680	428	111	1824	484	5526	2680	428	111	1824	484	0	0	5526
330	EDC	193.7	0.0	0.0	77.4	36	0	0	36	1629	202	68	929	210	3037	1629	202	68	929	210	0	0	3037
331	EDC	280.7	0.0	0.0	112.4	87	0	0	87	3257	658	181	2408	561	7065	3257	658	181	2408	561	0	0	7065
332	EDC	105.2	0.0	0.0	47.0	21	0	0	21	695	181	60	581	114	1631	695	181	60	581	114	0	0	1631
333	EDC	224.9	0.0	0.0	91.0	64	0	0	64	1971	676	217	2055	367	5286	1971	676	217	2055	367	0	0	5286
334	EDC	58.2	110.0	0.0	26.0	1473	503	41	2017	375	122	36	380	122	1034	375	122	36	380	122	503	41	1579
335	EDC	165.0	5.0	0.0	76.9	102	5	1	107	1196	229	198	953	189	2765	1196	229	198	953	189	5	1	2771
336	EDC	66.4	0.0	0.0	30.0	10	0	0	10	429	133	45	427	78	1113	429	133	45	427	78	0	0	1113
337	EDC	297.7	62.0	320.0	121.4	915	1274	95	2284	2654	954	980	2232	700	7520	2654	954	980	2232	700	1274	95	8890
338	EDC	836.5	14.0	0.0	325.3	372	172	9	553	7869	1779	973	5571	1104	17295	7869	1779	973	5571	1104	172	9	17477
339	EDC	435.6	0.0	0.0	192.3	120	0	0	120	5322	2869	188	3199	759	12337	5322	2869	188	3199	759	0	0	12337
340	EDC	198.7	14.0	0.0	93.2	270	283	63	615	2474	2016	352	1992	841	7674	2474	2016	352	1992	841	283	63	8020
341	EDC	68.8	8.0	0.0	31.4	91	19	2	112	581	439	5	333	86	1444	581	439	5	333	86	19	2	1465
342	EDC	123.4	0.0	0.0	48.0	26	0	0	26	1201	302	191	1032	170	2895	1201	302	191	1032	170	0	0	2895
343	EDC	126.8	0.0	0.0	56.0	41	0	0	41	1673	589	412	1332	295	4301	1673	589	412	1332	295	0	0	4301
344	EDC	134.5	0.0	0.0	59.4	45	0	0	45	1812	653	428	1404	308	4605	1812	653	428	1404	308	0	0	4605
345	EDC	67.0	0.0	0.0	29.6	16	0	0	16	786	223	104	643	131	1887	786	223	104	643	131	0	0	1887
346	EDC	49.2	0.0	0.0	22.1	11	0	0	11	460	167	49	438	82	1196	460	167	49	438	82	0	0	1196
347	EDC	108.0	0.0	0.0	42.0	22	0	0	22	1175	355	370	1052	171	3123	1175	355	370	1052	171	0	0	3123
348	EDC	108.7	0.0	0.0	48.9	30	0	0	30	999	321	115	1066	223	2724	999	321	115	1066	223	0	0	2724
349	EDC	173.4	18.0	0.0	84.3	287	175	40	502	2309	2014	209	1751	689	6972	2309	2014	209	1751	689	175	40	7186
350	EDC	49.3	0.0	0.0	21.8	16	0	0	16	579	446	15	356	109	1504	579	446	15	356	109	0	0	1504
351	EDC	54.3	0.0	0.0	23.9	10	0	0	10	644	410	188	386	68	1696	644	410	188	386	68	0	0	1696
352	EDC	68.1	0.0	0.0	30.1	15	0	0	15	997	569	339	537	94	2535	997	569	339	537	94	0	0	2535
353	EDC	387.2	1.0	0.0	170.9	91	3	0	94	4982	3042	1483	2560	458	12524	4982	3042	1483	2560	458	3	0	12528
354	EDC	124.1	77.0	590.0	54.8	829	2001	194	3024	1202	705	3102	480	571	6059	1202	705	3102	480	571	2001	194	8255
355	Placerville (in C	971.7	260.3	0.0	421.0	3600	1980	275	5855	5237	600	247	3850	1782	11715	5237	600	247	3850	1782	1980	275	13971
356	Placerville (in C	188.8	0.0	0.0	88.0	45	0	0	45	945	205	61	819	188	2219	945	205	61	819	188	0	0	2219
357	EDC	208.7	21.0	0.0	94.3	400	410	62	872	1298	352	117	1278	565	3611	1298	352	117	1278	565	410	62	4084
358	Placerville (not	191.8	352.1	0.0	86.7	5031	2313	503	7847	969	206	66	901	783	2925	969	206	66	901	783	2313	503	5741
359	EDC	247.3	0.0	0.0	105.0	64	0	0	64	1913	407	166	1625	354	4465	1913	407	166	1625	354	0	0	4465

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
360	EDC	230.5	10.0	0.0	97.9	224	111	9	344	2056	498	257	1975	484	5270	2056	498	257	1975	484	111	9	5390
361	Placerville (in C	971.1	392.1	0.0	466.0	4645	1547	162	6354	4290	835	133	3888	1238	10385	4290	835	133	3888	1238	1547	162	12094
362	Placerville (in C	701.7	913.2	0.0	298.0	13805	9338	2928	26070	3067	328	187	2266	3247	9095	3067	328	187	2266	3247	9338	2928	21360
363	EDC	34.7	0.0	0.0	13.7	1	0	0	1	136	28	15	100	20	299	136	28	15	100	20	0	0	299
364	Placerville (not	389.8	42.0	0.0	154.0	617	185	17	819	1780	231	160	1463	404	4038	1780	231	160	1463	404	185	17	4239
365	EDC	1013.8	125.0	0.0	478.0	2045	1334	167	3546	4471	947	221	4402	1683	11724	4471	947	221	4402	1683	1334	167	13225
366	EDC	32.3	4.0	0.0	15.0	21	9	1	31	67	22	4	74	20	187	67	22	4	74	20	9	1	197
367	EDC	0.0	197.0	0.0	0.0	2100	742	103	2945	0	0	0	0	0	0	0	0	0	0	0	742	103	845
368	EDC	156.8	0.0	0.0	68.0	23	0	0	23	671	153	17	612	104	1558	671	153	17	612	104	0	0	1558
369	EDC	1368.2	41.6	0.0	610.0	883	327	30	1241	6384	1105	280	5483	1541	14792	6384	1105	280	5483	1541	327	30	15149
370	EDC	0.0	303.0	0.0	0.0	3242	1143	218	4602	0	0	0	0	0	0	0	0	0	0	0	1143	218	1361
371	EDC	47.1	0.0	0.0	21.0	4	0	0	4	272	61	10	237	45	626	272	61	10	237	45	0	0	626
372	EDC	771.6	327.7	1178.0	344.0	3790	3888	440	8117	3850	776	2870	3489	1715	12701	3850	776	2870	3489	1715	3888	440	17028
373	EDC	59.7	0.0	0.0	26.0	3	0	0	3	230	41	11	194	33	508	230	41	11	194	33	0	0	508
374	EDC	30.0	2.0	0.0	13.0	10	6	0	16	106	27	4	92	20	249	106	27	4	92	20	6	0	255
375	EDC	32.1	0.0	0.0	14.0	1	0	0	1	161	31	8	112	20	331	161	31	8	112	20	0	0	331
376	EDC	78.0	3.0	0.0	34.0	33	2	0	35	364	65	18	305	61	814	364	65	18	305	61	2	0	816
377	EDC	29.8	14.0	120.0	13.0	141	254	25	419	101	22	301	80	60	564	101	22	301	80	60	254	25	842
378	EDC	62.2	0.0	0.0	27.0	4	0	0	4	245	60	8	204	39	555	245	60	8	204	39	0	0	555
379	EDC	110.6	0.0	0.0	48.0	12	0	0	12	421	98	14	375	79	987	421	98	14	375	79	0	0	987
380	EDC	27.6	0.0	0.0	12.0	1	0	0	1	73	19	5	69	10	176	73	19	5	69	10	0	0	176
381	EDC	16.1	0.0	0.0	7.0	0	0	0	0	39	10	2	41	6	97	39	10	2	41	6	0	0	97
382	EDC	25.4	0.0	0.0	11.0	1	0	0	1	79	18	5	61	13	176	79	18	5	61	13	0	0	176
383	EDC	112.5	0.0	0.0	50.1	18	0	0	18	745	163	43	591	121	1663	745	163	43	591	121	0	0	1663
384	EDC	269.2	0.0	0.0	120.0	60	0	0	60	1655	330	81	1293	310	3669	1655	330	81	1293	310	0	0	3669
385	EDC	1011.6	26.6	0.0	451.0	621	309	23	953	5755	1120	250	4664	1101	12891	5755	1120	250	4664	1101	309	23	13223
386	EDC	201.9	0.0	0.0	90.0	35	0	0	35	1191	249	59	911	206	2617	1191	249	59	911	206	0	0	2617
387	EDC	80.7	8.0	0.0	36.0	84	46	4	134	361	73	15	282	82	813	361	73	15	282	82	46	4	863
388	EDC	0.0	303.0	0.0	0.0	3291	1145	217	4653	0	0	0	0	0	0	0	0	0	0	0	1145	217	1362
389	EDC	4.7	264.0	0.0	2.0	2800	1135	291	4226	1	1	0	5	8	14	1	1	0	5	8	1135	291	1440
390	EDC	392.3	53.5	0.0	182.0	737	422	42	1201	1434	322	58	1517	461	3792	1434	322	58	1517	461	422	42	4256
391	EDC	23.7	69.5	0.0	11.0	769	571	186	1525	44	17	2	52	103	218	44	17	2	52	103	571	186	974
392	EDC	60.4	0.0	0.0	28.0	6	0	0	6	220	42	8	206	38	513	220	42	8	206	38	0	0	513
393	EDC	614.8	68.0	0.0	268.0	1090	635	66	1791	2608	364	124	2465	806	6367	2608	364	124	2465	806	635	66	7069
394	EDC	17.6	0.0	0.0	8.0	0	0	0	0	36	8	2	30	5	80	36	8	2	30	5	0	0	80
395	Placerville (in C	186.0	2323.7	0.0	88.0	29615	12210	4353	46178	675	92	36	603	1458	2864	675	92	36	603	1458	12210	4353	19427
396	EDC	0.0	456.7	0.0	0.0	7400	7263	3842	18505	0	0	0	0	0	0	0	0	0	0	0	7263	3842	11106
397	EDC	109.2	3.0	0.0	50.0	41	1	0	42	480	77	26	402	87	1072	480	77	26	402	87	1	0	1073
398	EDC	32.1	3.0	0.0	14.0	19	10	1	30	124	20	9	92	24	269	124	20	9	92	24	10	1	280
399	EDC	98.7	0.0	0.0	43.0	12	0	0	12	433	71	24	361	71	959	433	71	24	361	71	0	0	959
400	EDC	34.5	11.0	0.0	16.0	123	83	10	216	67	19	5	82	44	218	67	19	5	82	44	83	10	311
401	Placerville (not	86.2	213.0	0.0	40.8	2980	1812	624	5415	354	49	15	265	453	1137	354	49	15	265	453	1812	624	3572
402	EDC	128.0	117.1	0.0	51.0	1281	446	33	1759	535	58	28	398	131	1150	535	58	28	398	131	446	33	1629
403	EDC	267.3	654.0	724.0	124.0	8463	5304	1087	14854	930	164	1922	1024	1360	5400	930	164	1922	1024	1360	5304	1087	11792
404	EDC	43.8	49.0	0.0	19.0	459	143	7	609	130	27	6	113	31	308	130	27	6	113	31	143	7	458
405	EDC	20.8	0.0	0.0	9.0	0	0	0	0	64	10	3	49	9	136	64	10	3	49	9	0	0	136
406	EDC	55.3	286.0	0.0	24.0	4512	4626	2209	11347	178	27	9	152	512	879	178	27	9	152	512	4626	2209	7714
407	EDC	2.2	293.0	535.0	1.0	3416	2841	903	7160	0	0	1085	1	454	1540	0	0	1085	1	454	2841	903	5284
408	EDC	2.1	182.0	0.0	1.0	1855	789	164	2808	3	2	0	5	9	20	3	2	0	5	9	789	164	973
409	Placerville (not	328.8	460.2	0.0	129.9	6658	3644	882	11184	1598	187	110	1329	1346	4571	1598	187	110	1329	1346	3644	882	9097
410	EDC	1003.2	331.9	0.0	426.0	4984	3613	555	9152	5924	822	382	4727	2593	14447	5924	822	382	4727	2593	3613	555	18616
411	Placerville (in C	708.3	1289.3	0.0	299.0	15813	9540	3086	28439	2525	323	166	2059	3150	8224	2525	323	166	2059	3150	9540	3086	20849
412	EDC	211.6	0.0	0.0	89.3	52	0	0	52	1401	210	90	1029	250	2981	1401	210	90	1029	250	0	0	2981
413	Placerville (not	376.0	0.0	0.0	158.7	97	0	0	97	2061	302	125	1489	388	4366	2061	302	125	1489	388	0	0	4366
414	EDC	15.1	120.0	0.0	7.0	1200	450	54	1704	17	10	2	30	28	87	17	10	2	30	28	450	54	592
415	EDC	38.2	0.0	0.0	18.0	2	0	0	2	142	38	9	123	24	336	142	38	9	123	24	0	0	336
416	EDC	19.4	0.0	0.0	9.0	0	0	0	0	44	15	4	53	11	127	44	15	4	53	11	0	0	127
417	Placerville (in C	101.9	294.5	0.0	45.0	3466	2006	666	6138	362	60	19	266	456	1163	362	60	19	266	456	2006	666	3834
418	Placerville (in C	0.0	63.6	0.0	0.0	771	672	377	1820	0	0	0	0	0	0	0	0	0	0	0	672	377	1049
419	Placerville (in C	0.0	84.8	0.0	0.0	957	682	348	1988	0	0	0	0	0	0	0	0	0	0	0	682	348	1031
420	Placerville (in C	116.1	52.0	0.0	49.0	528	120	7	654	431	65	27	309	68	901	431	65	27	309	68	120	7	1027
421	Placerville (in C	170.6	5.0	0.0	72.0	75	2	0	78	663	102	41	478	110	1394	663	102	41	478	110	2	0	1397
422	Placerville (in C	661.7	2042.5	475.0	281.0	29858	7493	1310	38661	2207	354	1014	1849	1736	7159	2207	354	1014	1849	1736	7493	1310	15962
423	EDC	48.1	0.0	0.0	20.3	2	0	0	2	185	32	12	117	25	371	185	32	12	117	25	0	0	371
424	Placerville (not	399.3	249.1	0.0	173.0	3106	1778	253	5138	2255	298	58	1562	853	5025	2255	298	58	1562	853	1778	253	7057
425	Placerville (not	2817.0	600.6	2141.0	1266.7	7612	9510	1238	18360	14388	2081	5730	9870	5412	37481	14388	2081	5730	9870	5412	9510	1238	48228
426	Placerville (not	81.4	0.0	0.0	32.6	6	0	0	6	446	59	7	219	45	776	446	59	7	219	45	0	0	776
427	EDC	235.0	0.0	0.0	94.1	61	0	0	61	2175	320	63	1377	344	4280	2175	320	63	1377	344	0	0	4280
428	EDC	55.0	0.0	0.0	22.0	3	0	0	3	337	51	6	166	33	594	337	51	6	166	33	0	0	594
429	EDC	86.7	0.0	0.0	35.0	14	0	0	14	653	134	50	565	58	1461	653	134	50	565	58	0	0	1461
430	EDC	143.9	10.0	0.0	58.1	153	25	3	180	980	165	91	807	186	2228	980	165	91	807	186	25	3	2255
431	Placerville (in C	60.4	60.0	0.0	29.0	721	238	23	983	229	49	14	178	82	552	229	49	14	178	82	238	23	813

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
432	EDC	781.3	234.1	0.0	315.5	3107	1108	114	4329	4578	834	423	3715	1218	10768	4578	834	423	3715	1218	1108	114	11990
433	Placerville (in C	1016.7	68.3	0.0	493.0	1207	340	36	1583	3592	726	210	3485	1044	9056	3592	726	210	3485	1044	340	36	9432
434	Placerville (in C	77.2	0.0	0.0	36.0	8	0	0	8	204	47	14	181	44	489	204	47	14	181	44	0	0	489
435	Placerville (in C	77.2	48.6	0.0	36.0	546	195	28	769	202	46	14	179	103	544	202	46	14	179	103	195	28	767
436	EDC	63.4	0.0	0.0	25.8	7	0	0	7	424	110	32	338	63	968	424	110	32	338	63	0	0	968
437	EDC	303.9	12.0	0.0	120.5	240	112	10	363	2538	402	197	1777	480	5395	2538	402	197	1777	480	112	10	5518
438	EDC	267.7	11.0	0.0	126.2	228	227	22	478	1772	575	130	1754	537	4769	1772	575	130	1754	537	227	22	5018
439	EDC	334.2	3.0	0.0	157.5	150	2	0	153	2131	584	144	2186	454	5499	2131	584	144	2186	454	2	0	5501
440	EDC	60.2	15.0	0.0	28.4	164	58	4	226	318	108	23	325	80	855	318	108	23	325	80	58	4	917
441	Placerville (in C	31.3	0.0	0.0	13.2	1	0	0	1	164	30	8	103	22	327	164	30	8	103	22	0	0	327
442	Placerville (in C	769.1	69.0	143.0	305.0	1178	989	111	2279	4635	607	523	3142	1236	10143	4635	607	523	3142	1236	989	111	11243
443	EDC	85.9	0.0	0.0	40.5	18	0	0	18	517	166	36	534	119	1371	517	166	36	534	119	0	0	1371
444	EDC	18.9	0.0	0.0	8.0	0	0	0	0	68	16	6	49	10	150	68	16	6	49	10	0	0	150
445	Placerville (not	61.1	11.0	94.0	24.2	137	226	20	383	376	64	268	224	108	1039	376	64	268	224	108	226	20	1285
446	Placerville (in C	61.7	19.0	0.0	26.2	257	217	35	509	333	58	23	205	140	759	333	58	23	205	140	217	35	1010
447	EDC	187.9	0.0	0.0	76.6	47	0	0	47	1500	416	117	1376	267	3675	1500	416	117	1376	267	0	0	3675
448	Placerville (not	145.8	4.0	0.0	57.8	69	17	1	87	968	149	74	623	109	1923	968	149	74	623	109	17	1	1941
449	EDC	30.0	0.0	0.0	14.0	2	0	0	2	160	55	23	136	25	399	160	55	23	136	25	0	0	399
450	EDC	180.2	31.0	0.0	84.0	400	94	9	503	977	225	63	843	239	2347	977	225	63	843	239	94	9	2450
451	EDC	57.9	0.0	0.0	27.0	10	0	0	10	326	95	30	323	72	847	326	95	30	323	72	0	0	847
452	Placerville (not	286.8	33.0	428.0	133.7	531	946	100	1578	1272	238	1104	1094	511	4220	1272	238	1104	1094	511	946	100	5267
453	Placerville (in C	313.2	1.0	0.0	146.0	93	0	0	93	1141	227	59	1067	175	2669	1141	227	59	1067	175	0	0	2670
454	EDC	56.0	0.0	0.0	26.1	5	0	0	5	172	49	14	158	35	428	172	49	14	158	35	0	0	428
455	EDC	180.8	0.0	0.0	73.0	39	0	0	39	1258	250	129	968	216	2821	1258	250	129	968	216	0	0	2821
456	EDC	109.5	0.0	0.0	51.0	26	0	0	26	727	207	68	667	152	1821	727	207	68	667	152	0	0	1821
457	EDC	141.3	5.0	0.0	62.7	97	7	1	105	1246	312	131	947	191	2826	1246	312	131	947	191	7	1	2833
458	Placerville (not	152.1	69.0	0.0	68.8	1143	764	127	2034	843	182	63	771	447	2306	843	182	63	771	447	764	127	3197
459	Placerville (not	40.9	0.0	0.0	18.5	2	0	0	2	178	48	13	146	26	411	178	48	13	146	26	0	0	411
460	EDC	47.2	20.0	0.0	22.0	254	68	6	328	299	84	26	289	72	770	299	84	26	289	72	68	6	844
461	EDC	13.2	59.0	0.0	6.0	677	236	20	933	30	19	4	43	20	117	30	19	4	43	20	236	20	373
462	EDC	66.5	125.0	0.0	31.0	2002	749	144	2895	385	64	69	351	242	1110	385	64	69	351	242	749	144	2003
463	EDC	187.5	0.0	0.0	85.5	41	0	0	41	2021	2175	289	1341	216	6042	2021	2175	289	1341	216	0	0	6042
464	EDC	112.1	0.0	0.0	47.9	34	0	0	34	1342	532	195	989	196	3255	1342	532	195	989	196	0	0	3255
465	EDC	147.7	16.0	0.0	58.8	128	35	4	168	1680	1873	618	1130	211	5512	1680	1873	618	1130	211	35	4	5552
466	EDC	134.9	22.0	0.0	61.5	214	102	13	329	1321	1120	83	998	257	3779	1321	1120	83	998	257	102	13	3893
467	EDC	88.1	0.0	0.0	40.2	25	0	0	25	991	1290	321	728	145	3476	991	1290	321	728	145	0	0	3476
468	EDC	249.0	6.0	0.0	120.9	139	16	2	157	3008	2353	164	2138	615	8278	3008	2353	164	2138	615	16	2	8296
469	EDC	134.3	15.0	0.0	60.3	154	47	9	210	1768	1882	285	1080	286	5301	1768	1882	285	1080	286	47	9	5357
470	EDC	70.4	1.0	0.0	32.1	26	0	0	27	779	862	118	553	128	2440	779	862	118	553	128	0	0	2441
471	EDC	51.3	6.0	0.0	23.4	62	10	1	73	495	618	108	372	80	1673	495	618	108	372	80	10	1	1684
472	EDC	57.1	20.0	0.0	26.0	167	43	6	216	553	645	85	421	93	1797	553	645	85	421	93	43	6	1847
473	EDC	26.0	2.0	0.0	10.4	27	26	3	55	168	101	16	160	56	502	168	101	16	160	56	26	3	530
474	EDC	85.2	0.0	0.0	37.6	23	0	0	23	924	298	77	605	120	2022	924	298	77	605	120	0	0	2022
475	EDC	87.2	0.0	0.0	38.5	23	0	0	23	952	355	110	661	131	2210	952	355	110	661	131	0	0	2210
476	EDC	41.1	0.0	0.0	16.0	7	0	0	7	358	135	76	321	47	938	358	135	76	321	47	0	0	938
477	EDC	75.6	15.0	0.0	30.1	132	34	5	171	772	703	108	601	107	2290	772	703	108	601	107	34	5	2329
478	EDC	66.4	0.0	0.0	30.0	17	0	0	17	626	254	71	534	95	1579	626	254	71	534	95	0	0	1579
479	EDC	131.2	37.0	0.0	52.3	475	452	56	983	1211	363	209	987	400	3170	1211	363	209	987	400	452	56	3678
480	EDC	46.7	0.0	0.0	21.3	13	0	0	13	495	620	201	462	104	1882	495	620	201	462	104	0	0	1882
481	EDC	45.3	0.0	0.0	20.5	12	0	0	12	596	638	202	462	116	2015	596	638	202	462	116	0	0	2015
482	EDC	171.1	3.0	0.0	77.3	90	7	1	98	2309	1993	885	2055	417	7659	2309	1993	885	2055	417	7	1	7668
483	EDC	253.5	9.0	0.0	116.9	156	50	5	210	2026	747	157	1796	367	5094	2026	747	157	1796	367	50	5	5148
484	EDC	237.2	114.0	0.0	92.5	1038	473	30	1541	2206	768	273	1716	364	5326	2206	768	273	1716	364	473	30	5829
485	EDC	46.0	0.0	0.0	18.0	8	0	0	8	536	254	160	368	60	1377	536	254	160	368	60	0	0	1377
486	EDC	167.2	0.0	0.0	74.0	42	0	0	42	2280	962	537	1249	237	5265	2280	962	537	1249	237	0	0	5265
487	EDC	490.8	36.0	0.0	221.8	826	556	66	1448	3782	1023	373	3781	1189	10147	3782	1023	373	3781	1189	556	66	10768
488	EDC	246.6	0.0	0.0	109.1	73	0	0	73	3313	1041	385	1741	343	6823	3313	1041	385	1741	343	0	0	6823
489	EDC	307.1	58.0	0.0	135.8	700	282	22	1005	3221	765	150	2011	477	6625	3221	765	150	2011	477	282	22	6929
490	EDC	62.1	0.0	0.0	25.3	9	0	0	9	542	169	60	466	72	1310	542	169	60	466	72	0	0	1310
491	EDC	398.7	3.0	0.0	162.5	161	39	3	203	3586	908	404	2943	613	8456	3586	908	404	2943	613	39	3	8498
492	EDC	176.9	18.0	0.0	71.6	238	125	10	372	1650	639	208	1526	316	4339	1650	639	208	1526	316	125	10	4473
493	EDC	180.0	26.0	159.0	72.8	370	597	42	1009	1549	585	484	1403	398	4419	1549	585	484	1403	398	597	42	5058
494	EDC	167.7	10.0	0.0	68.4	136	32	2	170	1522	545	54	1329	232	3681	1522	545	54	1329	232	32	2	3715
495	EDC	39.6	0.0	0.0	16.1	3	0	0	3	297	85	32	222	34	670	297	85	32	222	34	0	0	670
496	EDC	204.0	67.0	69.0	82.5	929	1485	208	2622	1830	386	226	1396	798	4635	1830	386	226	1396	798	1485	208	6328
497	EDC	218.3	3.0	0.0	90.5	82	10	1	92	2419	665	212	1635	292	5223	2419	665	212	1635	292	10	1	5233
498	EDC	160.3	6.0	0.0	70.9	94	12	1	107	1978	517	151	1139	225	4010	1978	517	151	1139	225	12	1	4024
499	EDC	75.9	0.0	0.0	30.9	13	0	0	13	667	244	55	489	81	1536	667	244	55	489	81	0	0	1536
500	EDC	24.3	51.0	416.0	11.0	645	1244	205	2095	156	53	746	103	221	1279	156	53	746	103	221	1244	205	2728
501	EDC	49.2	83.0	0.0	22.0	837	319	20	1177	332	120	17	285	73	827	332	120	17	285	73	319	20	1166
502	EDC	286.5	18.0	0.0	120.5	349	283	25	657	2830	817	857	2335	543	7382	2830	817	857	2335	543	283	25	7690
503	EDC	2.2	76.0	0.0	1.0	1169	1127	632	2928	0	0	0	2	4	7	0	0	0	2	4	1127	632	1766

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
504	EDC	315.3	19.0	0.0	140.9	326	110	11	447	2559	696	204	2288	539	6286	2559	696	204	2288	539	110	11	6407
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	24	7	3	16	1	51	24	7	3	16	1	0	0	51
506	EDC	62.7	0.0	0.0	28.0	9	0	0	9	442	137	37	375	66	1057	442	137	37	375	66	0	0	1057
507	EDC	121.9	37.0	0.0	51.3	405	116	8	529	912	289	68	801	151	2221	912	289	68	801	151	116	8	2345
508	EDC	184.3	186.0	0.0	85.0	2061	696	50	2808	1284	481	78	1148	282	3273	1284	481	78	1148	282	696	50	4020
509	EDC	26.9	30.9	0.0	12.0	286	115	10	411	157	47	7	120	41	372	157	47	7	120	41	115	10	497
510	EDC	199.5	10.0	0.0	92.0	137	64	6	208	1347	460	54	1196	260	3316	1347	460	54	1196	260	64	6	3386
511	EDC	107.2	33.0	0.0	45.1	376	294	37	707	704	218	41	587	240	1790	704	218	41	587	240	294	37	2122
512	EDC	90.2	27.0	0.0	37.9	380	265	33	679	717	190	95	658	238	1897	717	190	95	658	238	265	33	2196
513	EDC	375.0	0.0	0.0	146.3	80	0	0	80	4044	1674	846	2815	423	9802	4044	1674	846	2815	423	0	0	9802
514	EDC	1622.8	0.0	0.0	633.0	327	0	0	327	17379	7633	4783	10890	1647	42332	17379	7633	4783	10890	1647	0	0	42332
515	EDC	169.1	8.0	0.0	70.1	99	14	1	114	1862	660	237	1244	205	4207	1862	660	237	1244	205	14	1	4222
516	EDC	348.4	0.0	0.0	144.4	79	0	0	79	4303	1868	883	2671	425	10151	4303	1868	883	2671	425	0	0	10151
517	EDC	887.3	122.9	0.0	400.0	1498	1475	109	3082	8103	1960	1417	5254	1333	18068	8103	1960	1417	5254	1333	1475	109	19651
518	EDC	673.0	25.3	0.0	293.2	399	178	12	590	5780	1903	725	4304	831	13543	5780	1903	725	4304	831	178	12	13733
519	EDC	331.3	24.3	0.0	144.3	316	274	17	607	2825	896	371	2064	393	6549	2825	896	371	2064	393	274	17	6840
520	EDC	618.5	15.3	0.0	269.5	306	140	9	455	5783	1704	882	4061	728	13158	5783	1704	882	4061	728	140	9	13308
521	EDC	648.3	115.9	0.0	292.3	1170	1229	86	2484	5083	1167	397	3244	803	10693	5083	1167	397	3244	803	1229	86	12008
522	EDC	212.4	0.0	0.0	86.3	47	0	0	47	2890	586	431	1387	250	5544	2890	586	431	1387	250	0	0	5544
523	EDC	572.5	206.1	6.0	247.4	2242	2979	496	5717	4891	506	569	2685	1205	9856	4891	506	569	2685	1205	2979	496	13331
524	EDC	476.7	103.0	519.0	206.1	1234	2327	211	3771	4590	1842	1682	2950	903	11968	4590	1842	1682	2950	903	2327	211	14506
525	EDC	207.6	0.0	0.0	86.4	46	0	0	46	2255	1583	956	1918	494	7207	2255	1583	956	1918	494	0	0	7207
526	EDC	28.4	0.0	0.0	11.0	5	0	0	5	276	81	81	282	78	798	276	81	81	282	78	0	0	798
527	EDC	395.9	38.0	0.0	164.8	372	284	55	711	3775	1502	314	2861	631	9084	3775	1502	314	2861	631	284	55	9423
528	EDC	2428.4	72.0	0.0	1008.2	926	750	159	1835	30920	15914	6719	24274	7541	85369	30920	15914	6719	24274	7541	750	159	86278
529	EDC	37.7	0.0	0.0	15.5	9	0	0	9	378	136	56	471	158	1199	378	136	56	471	158	0	0	1199
530	EDC	475.3	0.0	0.0	195.1	172	0	0	172	5825	2846	1605	5970	1568	17814	5825	2846	1605	5970	1568	0	0	17814
531	EDC	90.0	0.0	0.0	37.0	27	0	0	27	1168	602	361	1121	333	3584	1168	602	361	1121	333	0	0	3584
532	EDC	149.4	0.0	0.0	61.4	47	0	0	47	1765	720	392	1935	593	5404	1765	720	392	1935	593	0	0	5404
533	EDC	268.4	34.0	0.0	110.6	695	1021	410	2126	2694	803	709	3339	1165	8711	2694	803	709	3339	1165	1021	410	10143
534	EDC	133.8	0.0	0.0	54.9	45	0	0	45	1661	784	444	1809	559	5257	1661	784	444	1809	559	0	0	5257
535	EDC	235.9	0.0	0.0	91.5	65	0	0	65	2968	1101	486	3047	952	8555	2968	1101	486	3047	952	0	0	8555
536	EDC	218.8	0.0	0.0	84.8	57	0	0	57	2709	948	376	2715	861	7608	2709	948	376	2715	861	0	0	7608
537	EDC	439.0	0.0	0.0	170.2	107	0	0	107	5850	2349	1008	5244	1668	16120	5850	2349	1008	5244	1668	0	0	16120
538	EDC	139.2	36.9	0.0	57.8	555	887	410	1852	1393	325	122	1651	996	4486	1393	325	122	1651	996	887	410	5783
539	EDC	16.0	166.0	338.0	6.6	2433	4854	3047	10334	94	15	816	149	544	1618	94	15	816	149	544	4854	3047	9519
540	EDC	0.0	53.0	0.0	0.0	656	1044	801	2501	0	0	0	0	0	0	0	0	0	0	0	1044	801	1845
541	EDC	43.3	6.0	0.0	18.0	61	57	14	132	348	82	131	362	107	1029	348	82	131	362	107	57	14	1100
542	EDC	123.6	37.0	0.0	52.4	419	462	71	953	1243	460	50	926	247	2926	1243	460	50	926	247	462	71	3459
543	EDC	116.3	107.0	0.0	49.1	2051	3172	1020	6243	1032	125	93	871	827	2948	1032	125	93	871	827	3172	1020	7140
544	EDC	35.3	8.0	0.0	14.9	89	53	18	160	290	70	35	297	66	758	290	70	35	297	66	53	18	829
545	EDC	55.6	0.0	0.0	23.5	15	0	0	15	638	387	129	723	260	2137	638	387	129	723	260	0	0	2137
546	EDC	164.3	0.0	0.0	69.4	57	0	0	57	2150	1505	619	2506	786	7565	2150	1505	619	2506	786	0	0	7565
547	EDC	24.5	46.0	0.0	10.4	540	1891	841	3272	164	23	58	157	233	635	164	23	58	157	233	1891	841	3367
548	EDC	920.2	22.0	0.0	388.2	473	204	27	704	9739	4092	335	7255	1280	22701	9739	4092	335	7255	1280	204	27	22932
549	EDC	102.9	0.0	0.0	43.4	20	0	0	20	1022	348	93	1035	192	2690	1022	348	93	1035	192	0	0	2690
550	EDC	27.6	0.0	0.0	11.0	2	0	0	2	248	56	17	166	28	516	248	56	17	166	28	0	0	516
551	EDC	104.2	54.0	0.0	41.6	867	1302	317	2486	1062	167	69	735	483	2516	1062	167	69	735	483	1302	317	4135
552	EDC	19.8	32.0	0.0	8.4	526	680	227	1432	144	30	10	117	138	440	144	30	10	117	138	680	227	1346
553	EDC	76.6	0.0	0.0	32.4	15	0	0	15	837	294	46	686	130	1993	837	294	46	686	130	0	0	1993
554	EDC	225.4	4.0	0.0	95.2	87	51	10	148	2472	1029	186	1787	312	5786	2472	1029	186	1787	312	51	10	5847
555	EDC	81.7	0.0	0.0	34.6	21	0	0	21	827	389	87	683	182	2168	827	389	87	683	182	0	0	2168
556	EDC	196.2	0.0	0.0	82.8	56	0	0	56	2395	1424	532	2152	534	7038	2395	1424	532	2152	534	0	0	7038
557	EDC	82.6	1.0	0.0	34.9	28	9	2	40	778	189	206	664	204	2041	778	189	206	664	204	9	2	2053
558	EDC	87.6	19.0	0.0	36.5	178	192	40	410	867	640	399	874	231	3011	867	640	399	874	231	192	40	3243
559	EDC	60.9	0.0	0.0	25.4	16	0	0	16	583	272	161	571	173	1759	583	272	161	571	173	0	0	1759
560	EDC	64.2	10.0	0.0	27.1	97	112	28	236	631	254	64	514	153	1616	631	254	64	514	153	112	28	1756
561	EDC	52.2	0.0	0.0	22.1	13	0	0	13	550	250	56	448	114	1418	550	250	56	448	114	0	0	1418
562	EDC	152.0	0.0	0.0	63.3	39	0	0	39	1750	1391	736	1515	378	5770	1750	1391	736	1515	378	0	0	5770
563	EDC	74.2	0.0	0.0	32.9	15	0	0	15	1173	921	357	696	108	3256	1173	921	357	696	108	0	0	3256
564	EDC	35.9	0.0	0.0	15.5	4	0	0	4	297	139	7	258	42	743	297	139	7	258	42	0	0	743
565	EDC	119.1	0.0	0.0	57.5	31	0	0	31	1235	640	65	826	207	2972	1235	640	65	826	207	0	0	2972
566	EDC	224.9	1.0	0.0	95.2	60	23	5	88	2307	968	117	1583	346	5320	2307	968	117	1583	346	23	5	5348
567	EDC	40.0	2.0	0.0	19.3	20	10	2	32	274	96	7	202	51	630	274	96	7	202	51	10	2	642
568	EDC	61.3	0.0	0.0	26.0	11	0	0	11	552	145	13	327	71	1107	552	145	13	327	71	0	0	1107
569	EDC	147.0	31.0	0.0	62.3	306	710	148	1164	1336	314	32	796	334	2813	1336	314	32	796	334	710	148	3671
570	EDC	85.9	92.3	251.0	41.5	856	1416	217	2489	628	175	379	408	259	1850	628	175	379	408	259	1416	217	3483
571	EDC	69.6	0.0	0.0	33.6	17	0	0	17	608	255	17	432	110	1423	608	255	17	432	110	0	0	1423
572	EDC	61.6	34.0	0.0	26.6	264	198	29	491	546	159	13	336	84	1139	546	159	13	336	84	198	29	1366
573	EDC	210.7	2.0	0.0	93.5	88	13	1	102	2704	1392	1036	2445	561	8138	2704	1392	1036	2445	561	13	1	8153
574	EDC	168.9	0.0	0.0	73.0	28	0	0	28	2460	2256	729	1448	198	7091	2460	2256	729	1448	198	0	0	7091
575	EDC	69.3	0.0	0.0	29.9	15	0	0	15	1082	1116	421	1042	171	3832	1082	1116	421	1042	171	0	0	3832

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
576	EDC	42.8	1.0	0.0	19.0	11	22	3	36	598	333	152	305	55	1442	598	333	152	305	55	22	3	1467
577	EDC	29.6	0.0	0.0	13.1	3	0	0	3	411	174	85	193	30	892	411	174	85	193	30	0	0	892
578	EDC	855.7	0.0	0.0	379.7	101	0	0	101	12596	11651	4959	8041	1067	38314	12596	11651	4959	8041	1067	0	0	38314
579	EDC	89.9	12.0	0.0	38.4	99	41	5	145	1497	1364	461	1225	176	4722	1497	1364	461	1225	176	41	5	4768
580	EDC	84.0	5.0	19.0	35.8	58	76	7	141	1392	1223	145	818	143	3720	1392	1223	145	818	143	76	7	3803
581	EDC	101.2	32.0	0.0	45.7	310	80	16	406	1439	1580	704	1399	282	5404	1439	1580	704	1399	282	80	16	5500
582	EDC	32.6	0.0	0.0	13.2	11	0	0	11	518	265	204	389	80	1456	518	265	204	389	80	0	0	1456
583	EDC	803.7	10.0	28.0	363.2	232	169	19	421	13011	14275	5029	10513	1710	44538	13011	14275	5029	10513	1710	169	19	44727
584	EDC	39.4	3.0	19.0	18.5	64	136	38	237	467	604	161	631	265	2129	467	604	161	631	265	136	38	2302
585	EDC	280.6	0.0	0.0	126.8	75	0	0	75	4212	4106	1801	3490	617	14227	4212	4106	1801	3490	617	0	0	14227
586	EDC	96.7	92.0	0.0	51.6	1741	737	118	2595	1120	239	133	848	401	2740	1120	239	133	848	401	737	118	3595
587	EDC	96.7	0.0	0.0	40.1	11	0	0	11	1258	445	145	532	67	2446	1258	445	145	532	67	0	0	2446
588	EDC	835.6	0.0	0.0	326.0	121	0	0	121	10805	4725	2241	5443	681	23895	10805	4725	2241	5443	681	0	0	23895
589	EDC	7.2	0.0	0.0	3.6	1	0	0	1	2	47	0	41	5	96	2	47	0	41	5	0	0	96
590	EDC	44.4	120.0	0.0	18.6	1641	1573	443	3657	355	49	37	193	320	953	355	49	37	193	320	1573	443	2969
591	EDC	7.2	0.0	0.0	3.0	0	0	0	0	27	4	5	19	2	57	27	4	5	19	2	0	0	57
592	EDC	757.6	91.0	384.0	341.6	838	1276	78	2192	5398	985	499	3170	738	10790	5398	985	499	3170	738	1276	78	12144
593	EDC	361.4	28.0	0.0	151.5	268	92	5	366	3547	719	183	1829	306	6583	3547	719	183	1829	306	92	5	6681
594	EDC	745.6	5.0	0.0	312.5	181	10	1	191	8911	2750	447	4624	706	17438	8911	2750	447	4624	706	10	1	17449
595	EDC	62.1	31.0	265.0	27.5	277	852	70	1199	775	203	299	294	185	1757	775	203	299	294	185	852	70	2679
596	EDC	94.8	25.0	0.0	37.0	233	293	23	548	1068	352	73	530	175	2197	1068	352	73	530	175	293	23	2512
597	EDC	239.4	325.5	0.0	107.9	2684	2906	500	6089	1545	277	79	894	756	3551	1545	277	79	894	756	2906	500	6956
598	EDC	31.3	35.0	0.0	14.1	276	417	79	772	157	33	10	86	99	384	157	33	10	86	99	417	79	880
599	EDC	37.9	0.0	0.0	17.1	7	0	0	7	370	99	25	211	35	740	370	99	25	211	35	0	0	740
600	EDC	457.8	130.0	0.0	206.4	1433	795	53	2281	4157	1019	436	2716	581	8909	4157	1019	436	2716	581	795	53	9757
601	EDC	22.4	0.0	0.0	10.1	5	0	0	5	121	379	179	1044	194	1917	121	379	179	1044	194	0	0	1917
602	EDC	5.6	2.0	0.0	3.0	49	40	14	103	16	9	0	32	33	89	16	9	0	32	33	40	14	143
603	EDC	20.8	2.0	0.0	11.1	82	58	16	155	327	118	15	170	80	709	327	118	15	170	80	58	16	783
604	EDC	30.8	3.0	0.0	17.0	113	23	7	143	581	405	15	225	88	1313	581	405	15	225	88	23	7	1344
605	EDC	39.9	2.0	16.0	18.4	86	71	7	164	527	416	157	326	94	1519	527	416	157	326	94	71	7	1598
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	46.8	0.0	0.0	19.0	13	0	0	13	1461	921	511	1704	468	5065	1461	921	511	1704	468	0	0	5065
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	32	0	32	0	0	0	32	0	0	0	32
609	EDC	74.6	4.0	0.0	34.4	137	147	44	328	1284	777	555	1105	447	4168	1284	777	555	1105	447	147	44	4359
610	EDC	0.0	2315.2	932.0	0.0	22986	10229	3511	36726	0	0	1331	0	917	2247	0	0	1331	0	917	10229	3511	15987
611	EDC	1530.3	47.2	469.0	599.0	919	1126	122	2167	10380	1715	1127	11076	2988	27287	10380	1715	1127	11076	2988	1126	122	28535
612	EDC	2043.8	3488.0	393.0	800.0	33347	14073	2233	49653	11784	1967	1147	13700	5906	34504	11784	1967	1147	13700	5906	14073	2233	50810
613	EDC	5.8	0.0	0.0	2.2	0	0	0	0	17	4	1	18	0	40	17	4	1	18	0	0	0	40
614	EDC	2343.6	65.3	904.0	885.2	1116	2765	282	4163	17885	3617	2137	16885	4671	45196	17885	3617	2137	16885	4671	2765	282	48242
615	EDC	2677.5	0.0	0.0	1021.1	601	0	0	601	17770	3107	875	18548	3614	43914	17770	3107	875	18548	3614	0	0	43914
616	EDC	2668.0	365.3	1179.0	1024.1	3859	4264	460	8582	15658	2407	2415	17578	4827	42885	15658	2407	2415	17578	4827	4264	460	47608
617	EDC	552.6	131.5	2484.0	187.0	1305	7222	1138	9665	3728	764	3815	3848	2369	14524	3728	764	3815	3848	2369	7222	1138	22885
618	EDC	0.0	146.0	0.0	0.0	1160	732	100	1992	0	0	0	0	0	0	0	0	0	0	0	732	100	832
619	EDC	0.0	151.0	0.0	0.0	1234	887	198	2319	0	0	0	0	0	0	0	0	0	0	0	887	198	1085
620	EDC	0.0	196.5	3969.0	0.0	1827	11472	2862	16161	0	0	6280	0	1577	7857	0	0	6280	0	1577	11472	2862	22191
621	EDC	963.4	0.0	0.0	326.1	179	0	0	179	7117	1611	350	7609	1415	18103	7117	1611	350	7609	1415	0	0	18103
622	EDC	1093.5	150.1	607.0	370.0	1589	2496	244	4329	7763	1679	1261	8335	2212	21250	7763	1679	1261	8335	2212	2496	244	23990
623	EDC	0.0	16.0	0.0	0.0	135	75	7	217	0	0	0	0	0	0	0	0	0	0	0	75	7	82
624	EDC	917.5	102.6	920.0	308.9	1126	2763	294	4183	6082	1051	1555	6588	1970	17246	6082	1051	1555	6588	1970	2763	294	20304
625	EDC	0.0	40.0	0.0	0.0	303	130	34	467	0	0	0	0	0	0	0	0	0	0	0	130	34	164
626	EDC	385.6	98.0	0.0	164.0	1057	542	49	1647	2415	530	156	2898	682	6680	2415	530	156	2898	682	542	49	7271
627	EDC	0.0	897.0	0.0	0.0	11748	15773	8392	35913	0	0	0	0	0	0	0	0	0	0	0	15773	8392	24165
628	EDC	1347.6	0.0	0.0	525.0	415	0	0	415	11896	1712	807	11108	2520	28042	11896	1712	807	11108	2520	0	0	28042
629	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
630	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
631	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
632	Project Residen	157.8	0.0	0.0	56.0	19	0	0	19	1059	260	181	1744	213	3457	1059	260	181	1744	213	0	0	3457
633	Proj Retail	0.0	34.0	0.0	0.0	513	938	817	2268	0	0	0	0	0	0	0	0	0	0	0	938	817	1755
634	Proj Hotel	0.0	111.0	0.0	0.0	1031	628	98	1757	0	0	0	0	0	0	0	0	0	0	0	628	98	726
635	Program Reside	1978.0	0.0	0.0	702.0	539	0	0	539	13581	3426	2416	22660	3245	45327	13581	3426	2416	22660	3245	0	0	45327
636	Program Retail	0.0	180.0	0.0	0.0	3022	5129	4577	12728	0	0	0	0	0	0	0	0	0	0	0	5129	4577	9706
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2040 With Project and Program

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	543455	308299	74042	925796	438871	232358	111440	588482	414110	1785261	438871	232358	111440	588482	414110	308299	74042	2167602
651	gateway	0.0	0.0	0.0	0.0	4484	3246	644	8374	4767	3280	1650	5600	3813	19110	4767	3280	1650	5600	3813	3246	644	23000
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	58384	40677	7915	106975	56889	31256	13368	71705	50691	223909	56889	31256	13368	71705	50691	40677	7915	272500
654	gateway	0.0	0.0	0.0	0.0	2826	1904	399	5129	2737	1501	630	3519	2442	10829	2737	1501	630	3519	2442	1904	399	13132
655	gateway	0.0	0.0	0.0	0.0	35923	21923	5173	63018	30123	17131	7850	42055	29278	126438	30123	17131	7850	42055	29278	21923	5173	153533
656	gateway	0.0	0.0	0.0	0.0	7390	2567	620	10578	3533	2235	1313	5435	3727	16243	3533	2235	1313	5435	3727	2567	620	19430
657	gateway	0.0	0.0	0.0	0.0	3734	1509	351	5595	2095	1206	721	2944	2040	9006	2095	1206	721	2944	2040	1509	351	10866
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	975	455	88	1519	655	402	162	832	551	2602	655	402	162	832	551	455	88	3146
660	gateway	0.0	0.0	0.0	0.0	36028	18769	4609	59406	25259	14247	6975	36635	25332	108447	25259	14247	6975	36635	25332	18769	4609	131825
661	gateway	0.0	0.0	0.0	0.0	26295	14325	3510	44130	19567	11050	5086	28018	19411	83133	19567	11050	5086	28018	19411	14325	3510	100969
662	gateway	0.0	0.0	0.0	0.0	131445	77594	18025	227063	107760	51689	28843	146150	100986	435428	107760	51689	28843	146150	100986	77594	18025	531047
663	gateway	0.0	0.0	0.0	0.0	83416	53130	11945	148491	73998	33509	18457	96898	67246	290107	73998	33509	18457	96898	67246	53130	11945	355183
664	gateway	0.0	0.0	0.0	0.0	66304	49193	9905	125403	71426	28546	17739	84387	57437	259534	71426	28546	17739	84387	57437	49193	9905	318633
665	gateway	0.0	0.0	0.0	0.0	37000	20834	4170	62004	29456	10185	6791	33919	22681	103033	29456	10185	6791	33919	22681	20834	4170	128037
666	gateway	0.0	0.0	0.0	0.0	17911	12068	2390	32369	17227	6337	3808	19605	13266	60243	17227	6337	3808	19605	13266	12068	2390	74701
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	90697	16509	107205	132363	63449	17845	148827	103885	466370	132363	63449	17845	148827	103885	90697	16509	573576
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	33428	24544	5373	63345	41516	21820	9166	42286	23568	138357	41516	21820	9166	42286	23568	24544	5373	168274
672	gateway	0.0	0.0	0.0	0.0	0	11684	2497	14181	11717	7105	1991	19220	12755	52787	11717	7105	1991	19220	12755	11684	2497	66968
673	gateway	0.0	0.0	0.0	0.0	0	4800	1003	5803	5200	3328	895	7715	5474	22612	5200	3328	895	7715	5474	4800	1003	28415
674	gateway	0.0	0.0	0.0	0.0	0	10626	2137	12763	11461	6977	1995	16482	11479	48394	11461	6977	1995	16482	11479	10626	2137	61157
EDC Total		164,255.5	39,207.0	32,672.0	65,731.5	491,258.0	432,693.0	125,739.0	1,049,680.0	1,336,937.0	369,078.0	190,099.0	1,187,535.0	321,298.0	3,404,955.0	1,336,937.0	369,078.0	190,099.0	1,187,535.0	321,298.0	432,693.0	125,739.0	3,963,396.0

2018 No Project El Dorado County VMT/Employee 26.3
85% Threshold 22.3

Project VMT/Employee 27.8
Adjusted Project VMT/Employee 19.5
Adjusted by removing 112/145*HBW VMT for employee housing
(Assumes 2 hotel employees per cottage)

2018 No Project El Dorado County VMT/Resident 22.1
85% Threshold 18.8

Project VMT/Resident 21.9
Adjusted Project VMT/Resident 15.2
(Adjusted by removing HBW VMT for Employee housing)

Program VMT/Resident 22.9

El Dorado County VMT/Service Population 19.5

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	97.1	16.0	0.0	46.1	420	913	258	1591	1181	507	613	1067	588	3956	1181	507	613	1067	588	913	258	5128
2	EDC	1204.8	34.0	214.0	533.0	495	670	35	1200	14787	2618	626	5819	1201	25052	14787	2618	626	5819	1201	670	35	25756
3	EDC	94.3	0.0	0.0	38.8	31	0	0	31	996	530	318	1613	397	3854	996	530	318	1613	397	0	0	3854
4	EDC	34.8	2.0	0.0	16.0	61	117	26	204	422	284	252	412	126	1497	422	284	252	412	126	117	26	1641
5	EDC	73.0	0.0	0.0	33.0	22	0	0	22	1090	1096	452	1153	253	4045	1090	1096	452	1153	253	0	0	4045
6	EDC	651.0	9.0	0.0	281.5	357	88	18	463	6486	1970	494	5621	1081	15652	6486	1970	494	5621	1081	88	18	15758
7	EDC	1130.1	71.0	0.0	521.9	1076	537	55	1669	12896	7612	1068	8783	1745	32104	12896	7612	1068	8783	1745	537	55	32696
8	EDC	35.4	60.1	0.0	14.1	832	637	123	1593	297	69	16	193	134	709	297	69	16	193	134	637	123	1469
9	EDC	1230.2	117.0	283.0	491.2	1907	1913	182	4002	14131	4604	674	10196	2167	31772	14131	4604	674	10196	2167	1913	182	33867
10	outside EDC	4030.5	55.6	476.0	1571.0	1713	1485	147	3344	26011	5127	2679	31196	7188	72201	26011	5127	2679	31196	7188	1485	147	73832
11	outside EDC	7196.5	607.8	1963.0	2805.0	8699	10395	1333	20427	39611	6224	5790	49524	14360	115509	39611	6224	5790	49524	14360	10395	1333	127237
12	outside EDC	4509.8	264.5	1790.0	1644.0	3724	5523	694	9942	24611	2466	3813	27414	8168	66472	24611	2466	3813	27414	8168	5523	694	72690
13	outside EDC	2683.6	0.0	0.0	989.0	635	0	0	635	18143	2330	1605	17435	4147	43660	18143	2330	1605	17435	4147	0	0	43660
14	outside EDC	4136.1	80.8	855.0	1517.0	1686	2383	264	4333	26509	4223	3570	26100	7325	67727	26509	4223	3570	26100	7325	2383	264	70374
15	outside EDC	28.6	0.0	0.0	10.0	1	0	0	1	211	33	24	250	34	551	211	33	24	250	34	0	0	551
16	outside EDC	1173.3	1089.3	0.0	479.0	13303	11808	4038	29148	5577	797	481	7606	6348	20810	5577	797	481	7606	6348	11808	4038	36655
17	outside EDC	1622.6	0.0	0.0	637.0	573	0	0	573	15862	5881	2611	17511	2763	44629	15862	5881	2611	17511	2763	0	0	44629
18	outside EDC	4528.9	27.9	238.0	1879.0	1811	960	114	2886	38531	14859	4765	40890	11495	110540	38531	14859	4765	40890	11495	960	114	111615
19	outside EDC	1111.2	86.1	739.0	491.0	1291	2513	421	4224	6683	2840	1403	9427	3428	23782	6683	2840	1403	9427	3428	2513	421	26715
20	outside EDC	3.5	5.0	0.0	1.0	64	20	2	86	6	5	9	30	5	55	6	5	9	30	5	20	2	77
21	outside EDC	2.0	111.9	0.0	1.0	1555	532	321	2409	10	4	0	11	18	43	10	4	0	11	18	532	321	897
22	outside EDC	2.0	22.7	0.0	2.0	355	220	232	807	22	4	0	12	45	83	22	4	0	12	45	220	232	534
23	outside EDC	277.4	375.3	2047.0	99.0	6427	6426	2609	15463	1185	527	9599	2639	6101	20052	1185	527	9599	2639	6101	6426	2609	29088
24	outside EDC	124.0	110.9	0.0	124.0	2119	1185	842	4146	1204	371	0	959	1836	4370	1204	371	0	959	1836	1185	842	6397
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	2004.7	86.0	0.0	885.0	2009	1354	226	3589	12873	6731	2375	21222	7164	50364	12873	6731	2375	21222	7164	1354	226	51945
27	outside EDC	5.0	21.9	0.0	2.0	294	132	54	480	24	10	0	39	33	105	24	10	0	39	33	132	54	291
28	outside EDC	322.4	6.0	0.0	124.0	214	26	4	244	2259	971	609	4175	1087	9102	2259	971	609	4175	1087	26	4	9132
29	outside EDC	205.7	5.0	0.0	72.0	134	23	3	160	1467	690	497	3008	713	6376	1467	690	497	3008	713	23	3	6402
30	outside EDC	0.0	133.0	0.0	0.0	1729	815	252	2797	0	0	0	0	0	0	0	0	0	0	0	815	252	1067
31	outside EDC	119.4	45.7	0.0	46.0	653	343	51	1046	1128	472	267	1738	533	4138	1128	472	267	1738	533	343	51	4531
32	outside EDC	2148.2	0.0	0.0	821.0	676	0	0	676	18535	6386	2222	20261	5459	52863	18535	6386	2222	20261	5459	0	0	52863
33	outside EDC	56.0	0.0	0.0	22.0	11	0	0	11	460	165	63	543	136	1366	460	165	63	543	136	0	0	1366
34	outside EDC	176.4	15.7	0.0	78.0	398	127	20	545	2048	1033	362	3238	980	7660	2048	1033	362	3238	980	127	20	7806
35	outside EDC	2429.2	183.2	0.0	943.0	3535	741	102	4378	11340	3591	2652	19313	5121	42017	11340	3591	2652	19313	5121	741	102	42860
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2232	861	455	3548	0	0	0	0	0	0	0	0	0	0	0	861	455	1316
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1560.6	259.2	0.0	680.0	3087	1051	112	4249	6460	1086	586	8599	1914	18644	6460	1086	586	8599	1914	1051	112	19807
40	outside EDC	2268.4	1871.7	0.0	979.0	18068	17063	6284	41416	10114	912	610	9977	9671	31284	10114	912	610	9977	9671	17063	6284	54631
41	outside EDC	1292.1	203.3	0.0	559.0	3129	902	149	4180	6640	1959	1059	11109	3584	24352	6640	1959	1059	11109	3584	902	149	25403
42	outside EDC	4511.7	691.3	447.0	1838.0	11237	10343	2476	24056	23748	7393	3404	35717	17072	87333	23748	7393	3404	35717	17072	10343	2476	100153
43	outside EDC	2109.0	58.2	497.0	825.0	1136	1551	218	2905	14587	4177	1531	15842	5026	41163	14587	4177	1531	15842	5026	1551	218	42932
44	outside EDC	6452.0	463.5	2387.0	2533.0	6462	10652	1890	19003	38976	11068	5511	44854	17876	118285	38976	11068	5511	44854	17876	10652	1890	130826
45	outside EDC	2600.1	1639.2	125.0	1136.0	18534	18292	6995	43821	11243	1018	1030	12407	11664	37363	11243	1018	1030	12407	11664	18292	6995	62650
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	3453.7	0.0	0.0	50581	16418	15623	82621	0	0	0	0	0	0	0	0	0	0	0	16418	15623	32041
48	outside EDC	3165.2	172.0	549.0	1248.0	3119	1831	331	5281	9535	4210	4328	23730	7811	49614	9535	4210	4328	23730	7811	1831	331	51776
49	outside EDC	357.5	4925.2	0.0	144.0	61877	17660	11975	91511	941	361	406	2757	3693	8158	941	361	406	2757	3693	17660	11975	37793
50	outside EDC	2608.3	1467.3	1537.0	1029.0	20282	6135	1415	27832	7096	3419	6262	18254	8481	43513	7096	3419	6262	18254	8481	6135	1415	51062
51	outside EDC	4421.3	1254.2	384.0	1837.0	17089	11521	4166	32776	13788	4075	2945	29667	19176	69651	13788	4075	2945	29667	19176	11521	4166	85338
52	outside EDC	674.0	279.6	3880.0	299.0	3536	8319	2312	14167	2480	907	10945	4815	5544	24692	2480	907	10945	4815	5544	8319	2312	35322
53	outside EDC	4029.1	1058.8	482.0	1563.0	15242	8902	2804	26947	12839	4611	4074	28484	16596	66604	12839	4611	4074	28484	16596	8902	2804	78309
54	outside EDC	1199.8	1874.4	0.0	486.0	26227	6141	1500	33868	3988	2358	1121	10929	4844	23241	3988	2358	1121	10929	4844	6141	1500	30882
55	outside EDC	1793.9	869.6	2114.0	779.0	13401	8841	2991	25233	6285	3538	9016	16206	12803	47847	6285	3538	9016	16206	12803	8841	2991	59680
56	outside EDC	3224.3	282.5	0.0	1203.0	5771	1910	375	8056	9571	5598	4609	29331	10052	59161	9571	5598	4609	29331	10052	1910	375	61446
57	outside EDC	595.3	8063.1	0.0	268.0	108749	23938	12601	145287	1285	1138	637	5455	5183	13699	1285	1138	637	5455	5183	23938	12601	50237
58	outside EDC	1574.4	424.7	0.0	608.0	7027	3395	1126	11548	4962	2717	2103	13952	8378	32112	4962	2717	2103	13952	8378	3395	1126	36634
59	outside EDC	5.0	9.4	0.0	2.0	98	30	8	136	14	3	9	40	19	85	14	3	9	40	19	30	8	123
60	outside EDC	508.0	4670.1	0.0	238.0	64176	15779	8920	88875	1572	915	343	4129	4415	11373	1572	915	343	4129	4415	15779	8920	36073
61	outside EDC	5414.5	1410.8	404.0	2304.0	22263	10152	3011	35426	18848	9243	6766	43546	24528	102931	18848	9243	6766	43546	24528	10152	3011	116093
62	outside EDC	13.3	1648.9	0.0	4.0	21051	5802	3791	30644	36	18	20	106	140	319	36	18	20	106	140	5802	3791	9912
63	outside EDC	877.8	3971.1	0.0	359.0	47965	15801	8530	72296	2950	1386	982	7269	7613	20201	2950	1386	982	7269	7613	15801	8530	44532
64	outside EDC	3935.6	648.5	0.0	1582.0	9272	3389	662	13323	15941	5819	3439	29746	11139	66084	15941	5819	3439	29746	11139	3389	662	70135
65	outside EDC	356.2	0.0	0.0	138.0	124	0	0	124	2216	689	398	3211	1018	7532	2216	689	398	3211	1018	0	0	7532
66	outside EDC	1998.1	192.2	346.0	837.0	3163	2226	549	5938	6016	2750	2258	14009	6430	31463	6016	2750	2258	14009	6430	2226	549	34238
67	outside EDC	2626.8	935.5	0.0	1210.0	16506	7662	2502	26670	8310	5345	2791	24278	14180	54904	8310	5345	2791	24278	14180	7662	2502	65068
68	outside EDC	1475.8	820.5	0.0	707.0	10139	3701	1126	14965	4197	2295	992	10641	5781	23906	4197	2295	992	10641	5781	3701	1126	28733
69	outside EDC	6315.2	7270.8	416.0	2381.0	107023	26127	10071	143220	17203	5832	7367	39591	28460	98453	17203	5832	7367	39591	28460	26127	10071	134650
70	outside EDC	0.0	7350.2	2505.0	0.0	95500	22441	14060	132002	0	0	2606	0	2076	4682	0	0	2606	0	2076	22441	14060	41183
71	outside EDC	7725.4	828.3	1399.0	2980.0	16120	11988	2293	30402	42384	16219	8730	74986	27531	169850	42384	16219	8730	74986	27531	11988	2293	184132
72	outside EDC	220.4	8975.0	0.0	85.0	134154	26856	21113	182123	489	268	209	1511	2329	4806	489	268	209	1511	2329	26856	21113	52775

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
73	outside EDC	0.0	5746.2	0.0	0.0	69715	13729	7762	91207	0	0	0	0	0	0	0	0	0	0	0	13729	7762	21492
74	outside EDC	1134.7	5779.3	0.0	464.0	77460	19345	13491	110296	2814	1026	1003	7642	9781	22265	2814	1026	1003	7642	9781	19345	13491	55102
75	outside EDC	4513.9	2939.3	0.0	1937.0	40945	7357	1271	49573	11894	5263	4263	30495	9196	61110	11894	5263	4263	30495	9196	7357	1271	69739
76	outside EDC	1388.8	297.3	0.0	518.0	4657	3194	1225	9076	4007	1249	1162	9414	6383	22215	4007	1249	1162	9414	6383	3194	1225	26634
77	outside EDC	2910.5	1701.1	993.0	1158.0	23366	8650	2531	34547	8377	3980	5045	22440	12257	52099	8377	3980	5045	22440	12257	8650	2531	63280
78	outside EDC	251.5	1804.6	73.0	107.0	25318	13720	16281	55320	834	215	204	1711	4135	7100	834	215	204	1711	4135	13720	16281	37101
79	outside EDC	0.0	20.4	0.0	0.0	230	136	155	522	0	0	0	0	0	0	0	0	0	0	0	136	155	292
80	outside EDC	0.0	1473.9	0.0	0.0	17612	5132	4886	27630	0	0	0	0	0	0	0	0	0	0	0	5132	4886	10019
81	outside EDC	0.0	6290.8	0.0	0.0	78192	20414	17462	116068	0	0	0	0	0	0	0	0	0	0	0	20414	17462	37876
82	outside EDC	0.0	1787.3	0.0	0.0	20764	6121	4151	31036	0	0	0	0	0	0	0	0	0	0	0	6121	4151	10272
83	outside EDC	1418.7	219.7	1881.0	545.0	3762	5172	1046	9980	8185	2613	6049	13001	6126	35975	8185	2613	6049	13001	6126	5172	1046	42193
84	outside EDC	2887.3	407.0	0.0	1236.0	6024	3545	892	10460	12311	2918	1892	19008	9464	45593	12311	2918	1892	19008	9464	3545	892	50029
85	outside EDC	3258.6	262.1	905.0	1303.0	4304	4469	989	9763	14584	3851	3502	22822	10241	55001	14584	3851	3502	22822	10241	4469	989	60459
86	outside EDC	4494.6	774.9	1521.0	1977.0	10972	10253	2900	24125	16491	4345	5030	28992	16165	71023	16491	4345	5030	28992	16165	10253	2900	84176
87	outside EDC	4961.4	901.4	313.0	2291.0	13257	7007	1922	22185	15548	4623	3872	33333	16220	73595	15548	4623	3872	33333	16220	7007	1922	82524
88	outside EDC	2813.1	761.9	0.0	1127.0	10732	7909	2536	21177	12500	3122	2242	20051	12970	50885	12500	3122	2242	20051	12970	7909	2536	61330
89	outside EDC	0.0	292.1	0.0	0.0	3966	1706	1444	7116	0	0	0	0	0	0	0	0	0	0	0	1706	1444	3150
90	outside EDC	210.2	1019.5	0.0	123.0	16666	8960	10397	36022	553	253	120	1540	3428	5894	553	253	120	1540	3428	8960	10397	25251
91	outside EDC	1739.8	4670.1	34.0	679.0	50996	19652	8494	79143	6695	1646	1530	11872	10502	32245	6695	1646	1530	11872	10502	19652	8494	60392
92	outside EDC	2784.2	141.5	836.0	1159.0	2629	2348	421	5398	13530	3988	4065	21659	8012	51253	13530	3988	4065	21659	8012	2348	421	54022
93	outside EDC	1029.6	249.9	0.0	409.0	4216	1934	343	6493	6965	1308	838	8519	3319	20948	6965	1308	838	8519	3319	1934	343	23225
94	outside EDC	12.0	0.0	0.0	6.0	1	0	0	1	160	25	0	67	29	281	160	25	0	67	29	0	0	281
95	outside EDC	0.0	27.2	0.0	0.0	347	157	75	579	0	0	0	0	0	0	0	0	0	0	0	157	75	233
96	outside EDC	2827.4	456.4	408.0	1151.0	8362	6842	1174	16378	20377	3165	1894	24950	9557	59943	20377	3165	1894	24950	9557	6842	1174	67959
97	outside EDC	3283.3	0.0	0.0	1289.0	1108	0	0	1108	29015	10317	4514	32497	7765	84108	29015	10317	4514	32497	7765	0	0	84108
98	outside EDC	913.1	2957.6	0.0	348.0	32723	15783	6441	54947	4094	538	662	5517	5578	16388	4094	538	662	5517	5578	15783	6441	38612
99	outside EDC	1939.1	1040.5	501.0	791.0	11620	5053	971	17645	9697	1215	1828	11276	5048	29064	9697	1215	1828	11276	5048	5053	971	35089
100	outside EDC	1218.2	157.4	0.0	486.0	2554	1453	217	4224	10465	3062	1510	13035	4212	32285	10465	3062	1510	13035	4212	1453	217	33954
101	outside EDC	3677.1	617.7	467.0	1418.0	7994	5605	908	14507	25312	7356	3057	30405	10859	76989	25312	7356	3057	30405	10859	5605	908	83502
102	outside EDC	195.6	53.0	0.0	76.0	628	275	40	942	1315	443	255	2069	587	4670	1315	443	255	2069	587	275	40	4984
103	outside EDC	5354.4	511.2	765.0	2275.0	7000	8530	1397	16927	35256	11151	2792	40005	14707	103910	35256	11151	2792	40005	14707	8530	1397	113837
104	outside EDC	267.0	0.0	0.0	109.0	93	0	0	93	1979	571	335	2761	694	6339	1979	571	335	2761	694	0	0	6339
105	outside EDC	3393.4	70.9	0.0	1365.0	1962	1254	166	3382	26607	8017	2564	28991	8592	74771	26607	8017	2564	28991	8592	1254	166	76191
106	outside EDC	0.0	70.3	0.0	0.0	761	417	104	1282	0	0	0	0	0	0	0	0	0	0	0	417	104	521
107	outside EDC	4863.6	3741.3	927.0	2202.0	47017	22480	5617	75113	19734	3852	4848	36007	17545	81987	19734	3852	4848	36007	17545	22480	5617	110083
108	outside EDC	1796.3	842.0	0.0	673.0	10670	3409	453	14532	10484	1062	2014	12827	3744	30130	10484	1062	2014	12827	3744	3409	453	33992
109	outside EDC	1569.7	701.7	0.0	639.0	10971	6816	2131	19918	8319	1677	1644	13176	8433	33249	8319	1677	1644	13176	8433	6816	2131	42196
110	outside EDC	620.8	1922.3	0.0	262.0	26391	10239	3722	40352	2706	778	677	5652	4159	13972	2706	778	677	5652	4159	10239	3722	27933
111	outside EDC	1186.8	1667.5	0.0	517.0	26442	22490	14983	63915	5033	712	988	8728	12294	27755	5033	712	988	8728	12294	22490	14983	65228
112	outside EDC	2018.4	2144.3	194.0	749.0	30700	22702	11058	64460	10390	1107	2238	13814	15545	43095	10390	1107	2238	13814	15545	22702	11058	76854
113	outside EDC	0.0	4221.5	0.0	0.0	44647	16118	7906	68671	0	0	0	0	0	0	0	0	0	0	0	16118	7906	24024
114	outside EDC	2119.4	711.2	0.0	801.0	7153	3081	389	10623	10977	1485	1153	12244	3600	29459	10977	1485	1153	12244	3600	3081	389	32929
115	outside EDC	5916.2	1339.3	1547.0	2306.0	21084	20394	4553	46030	34410	6052	6058	44727	22363	113609	34410	6052	6058	44727	22363	20394	4553	138556
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1646.6	1491.8	2300.0	585.0	15970	10322	1824	28116	8462	1350	4400	10923	5018	30152	8462	1350	4400	10923	5018	10322	1824	42298
118	outside EDC	6343.0	186.4	551.0	2399.0	3433	2890	391	6714	28356	4197	3633	36769	10506	83461	28356	4197	3633	36769	10506	2890	391	86742
119	outside EDC	1272.5	6545.1	0.0	509.0	59093	24494	7943	91530	6082	850	551	7359	6160	21002	6082	850	551	7359	6160	24494	7943	53439
120	outside EDC	289.9	5099.5	0.0	113.0	51845	37816	22440	112101	1198	137	102	1641	3830	6907	1198	137	102	1641	3830	37816	22440	67163
121	outside EDC	4220.4	1760.6	651.0	1645.0	20300	24382	7511	52193	18340	2064	2622	23073	17081	63180	18340	2064	2622	23073	17081	24382	7511	95073
122	outside EDC	1805.8	1224.4	3643.0	771.0	11808	11710	2182	25700	7191	1087	725	9805	4277	23085	7191	1087	725	9805	4277	11710	2182	36977
123	outside EDC	569.2	855.2	0.0	208.0	8858	8978	3868	21705	2706	273	298	3126	3701	10104	2706	273	298	3126	3701	8978	3868	22950
124	outside EDC	2653.4	461.3	401.0	1243.0	6905	8322	1905	17133	15807	2776	2490	18629	10287	49989	15807	2776	2490	18629	10287	8322	1905	60217
125	outside EDC	834.5	1004.3	0.0	423.0	11429	10319	5111	26859	3469	381	238	4023	4966	13078	3469	381	238	4023	4966	10319	5111	28508
126	outside EDC	406.0	279.1	0.0	185.0	3563	3056	1210	7829	2150	209	181	2105	2139	6785	2150	209	181	2105	2139	3056	1210	11051
127	outside EDC	1765.6	117.0	0.0	828.0	1851	1257	200	3309	11603	1531	968	10688	4220	29010	11603	1531	968	10688	4220	1257	200	30467
128	outside EDC	2039.9	767.4	0.0	990.0	10571	9736	2653	22960	13074	1814	1283	13717	9247	39135	13074	1814	1283	13717	9247	9736	2653	51524
129	outside EDC	2269.4	0.0	0.0	1030.0	726	0	0	726	13597	2809	1973	16016	4886	39281	13597	2809	1973	16016	4886	0	0	39281
130	outside EDC	924.4	478.2	578.0	402.0	4524	4898	1386	10808	3746	325	939	3972	3022	12003	3746	325	939	3972	3022	4898	1386	18287
131	outside EDC	1290.2	1327.4	1635.0	629.0	12556	11259	3308	27123	5535	594	2924	6135	5483	20671	5535	594	2924	6135	5483	11259	3308	35238
132	outside EDC	925.3	300.9	0.0	409.0	3929	3236	758	7923	5381	959	620	6604	3549	17112	5381	959	620	6604	3549	3236	758	21106
133	outside EDC	5279.7	1484.3	1837.0	2116.0	14746	16212	3642	34600	23207	1973	3191	22790	13216	64376	23207	1973	3191	22790	13216	16212	3642	84230
134	outside EDC	2660.9	1568.3	0.0	1151.0	17250	7745	1289	26284	10232	1772	921	14575	5246	32746	10232	1772	921	14575	5246	7745	1289	41780
135	outside EDC	0.0	2114.0	0.0	0.0	21458	8051	2016	31525	0	0	0	0	0	0	0	0	0	0	0	8051	2016	10067
136	outside EDC	1710.8	110.3	0.0	670.0	1841	1665	257	3763	11277	1442	1076	10831	4162	28789	11277	1442	1076	10831	4162	1665	257	30711
137	outside EDC	6779.1	673.0	610.0	2354.0	9233	12789	2260	24282	36675	4835	5131	40305	17249	104196	36675	4835	5131	40305	17249	12789	2260	119245
138	EDC	378.1	25.0	0.0	173.0	457	154	12	622	2140	374	129	2184	462	5288	2140	374	129	2184	462	154	12	5453
139	EDC	133.2	106.9	0.0	62.0	1429	1234	281	2944	604	141	14	582	550	1891	604	141	14	582	550	1234	281	3406
140	EDC	22.0	442.5	0.0	10.0	7028	6661	3440	17128	46	9	1	48	212	316	46	9	1	48	212	6661	3440	10416
141	EDC	49.2	2.0	0.0	21.0	57	48	5	110	653	180	127	748	216	1924	653	180	127	748	216	48	5	1978
142	EDC	348.9	0.0	0.0	156.9	142	0	0	142	3080	804	185	2950	735	7754	3080	804	185	2950	735	0	0	7754
143	EDC	210.8	4.0	0.0	94.8	106	5	0	112	1475	330	53	1326	317	3499	1475	330	53	1326	317	5	0	3505
144	EDC	186.9	19.0	0.0	74.7	282	83	11	377	1840	301	69	1235	296	3740	1840	301	69	1235	296	83	11	3834

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
145	EDC	69.3	0.0	0.0	30.0	8	0	0	8	355	47	16	223	48	689	355	47	16	223	48	0	0	689
146	EDC	146.8	58.7	25.0	64.0	796	632	100	1528	676	127	72	620	383	1877	676	127	72	620	383	632	100	2609
147	EDC	364.7	0.0	0.0	159.0	105	0	0	105	1836	321	86	1738	352	4333	1836	321	86	1738	352	0	0	4333
148	outside EDC	5292.4	137.7	0.0	2260.0	5792	1405	156	7353	61971	30767	16515	79773	21182	210209	61971	30767	16515	79773	21182	1405	156	211769
149	EDC	125.8	214.2	0.0	44.9	3053	3157	954	7165	885	96	25	704	963	2673	885	96	25	704	963	3157	954	6784
150	EDC	257.8	3.0	0.0	108.8	147	32	3	182	2922	681	293	3227	793	7916	2922	681	293	3227	793	32	3	7952
151	EDC	66.8	0.0	0.0	23.0	5	0	0	5	726	178	129	629	80	1743	726	178	129	629	80	0	0	1743
152	EDC	391.5	99.0	0.0	161.4	1471	1337	175	2983	2913	405	104	2848	1128	7397	2913	405	104	2848	1128	1337	175	8908
153	EDC	411.6	32.5	0.0	191.5	631	440	51	1122	2542	580	128	2799	945	6995	2542	580	128	2799	945	440	51	7486
154	EDC	245.5	16.0	0.0	104.4	188	54	4	247	1376	167	130	1591	303	3566	1376	167	130	1591	303	54	4	3625
155	EDC	285.3	0.0	0.0	108.2	62	0	0	62	2142	366	102	2176	376	5162	2142	366	102	2176	376	0	0	5162
156	EDC	68.0	0.0	0.0	27.0	22	0	0	22	827	288	221	1120	209	2665	827	288	221	1120	209	0	0	2665
157	EDC	790.4	0.0	0.0	273.1	123	0	0	123	4635	838	177	5534	956	12141	4635	838	177	5534	956	0	0	12141
158	EDC	1409.8	72.0	0.0	614.8	1006	337	26	1369	9664	1372	799	8941	2012	22788	9664	1372	799	8941	2012	337	26	23151
159	EDC	993.8	1.0	0.0	409.6	232	0	0	232	7164	1011	624	6323	1205	16327	7164	1011	624	6323	1205	0	0	16327
160	EDC	847.9	0.0	0.0	349.5	235	0	0	235	6437	968	181	5799	1147	14532	6437	968	181	5799	1147	0	0	14532
161	EDC	283.3	0.0	0.0	109.0	46	0	0	46	2399	520	208	2514	488	6128	2399	520	208	2514	488	0	0	6128
162	EDC	4465.2	0.0	0.0	1503.0	872	0	0	872	34778	7983	2343	35184	6132	86421	34778	7983	2343	35184	6132	0	0	86421
163	EDC	430.2	230.0	0.0	144.8	2580	3553	891	7024	2753	393	178	3126	2186	8636	2753	393	178	3126	2186	3553	891	13080
164	EDC	0.0	2237.6	0.0	0.0	21502	8315	3438	33255	0	0	0	0	0	0	0	0	0	0	0	8315	3438	11753
165	EDC	1313.9	0.0	0.0	528.8	341	0	0	341	8324	1385	652	10065	2143	22570	8324	1385	652	10065	2143	0	0	22570
166	EDC	1954.3	58.8	756.0	762.0	1061	2038	240	3340	11605	1989	2000	13327	3829	32751	11605	1989	2000	13327	3829	2038	240	35030
167	EDC	3477.7	55.2	256.0	1497.3	1591	737	73	2401	22723	4483	1362	24135	6000	58703	22723	4483	1362	24135	6000	737	73	59513
168	EDC	2628.9	9.0	0.0	1131.8	721	23	2	745	13697	1872	799	16158	2631	35157	13697	1872	799	16158	2631	23	2	35182
169	EDC	531.7	1939.0	0.0	214.0	20289	23537	12688	56514	2461	319	195	3235	6185	12395	2461	319	195	3235	6185	23537	12688	48620
170	EDC	1217.5	1590.4	0.0	490.0	14403	6237	845	21485	5905	851	477	7744	2570	17547	5905	851	477	7744	2570	6237	845	24629
171	EDC	1080.7	93.7	0.0	441.0	1213	411	41	1665	7139	1177	486	8042	1867	18711	7139	1177	486	8042	1867	411	41	19163
172	EDC	0.0	178.2	0.0	0.0	1748	1990	1424	5162	0	0	0	0	0	0	0	0	0	0	0	1990	1424	3414
173	EDC	0.0	547.0	0.0	0.0	5431	6990	4920	17340	0	0	0	0	0	0	0	0	0	0	0	6990	4920	11910
174	EDC	37.8	11.0	52.0	15.0	200	288	37	525	422	142	181	554	197	1496	422	142	181	554	197	288	37	1821
175	EDC	25.8	5.0	0.0	10.9	64	22	2	87	315	58	31	273	47	724	315	58	31	273	47	22	2	748
176	EDC	76.8	0.0	0.0	32.4	20	0	0	20	833	175	77	949	205	2239	833	175	77	949	205	0	0	2239
177	EDC	66.6	7.0	0.0	26.4	93	32	3	128	580	152	61	781	157	1730	580	152	61	781	157	32	3	1765
178	EDC	94.6	0.0	0.0	36.9	22	0	0	22	1029	207	100	1155	218	2708	1029	207	100	1155	218	0	0	2708
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	EDC	1173.1	0.0	0.0	457.0	296	0	0	296	10818	2078	822	9991	2195	25904	10818	2078	822	9991	2195	0	0	25904
181	EDC	274.3	81.0	453.0	104.6	790	1926	262	2977	2011	368	581	1970	913	5843	2011	368	581	1970	913	1926	262	8030
182	EDC	3251.4	0.0	0.0	1240.0	718	0	0	718	25615	4550	1646	22628	4529	58968	25615	4550	1646	22628	4529	0	0	58968
183	EDC	667.9	0.0	0.0	284.1	166	0	0	166	4438	1128	328	5561	1112	12568	4438	1128	328	5561	1112	0	0	12568
184	EDC	1039.1	461.2	1110.0	396.3	4877	8132	1176	14184	7585	1289	1478	7340	3600	21292	7585	1289	1478	7340	3600	8132	1176	30600
185	EDC	346.2	0.0	0.0	150.9	54	0	0	54	2399	455	135	2286	484	5759	2399	455	135	2286	484	0	0	5759
186	EDC	258.1	185.1	0.0	112.5	1984	2620	566	5170	1694	297	96	1654	1225	4966	1694	297	96	1654	1225	2620	566	8152
187	EDC	559.9	85.0	0.0	244.2	917	426	35	1378	3731	545	264	3723	852	9116	3731	545	264	3723	852	426	35	9577
188	EDC	468.1	69.0	0.0	204.1	716	349	22	1087	2873	365	218	2809	509	6774	2873	365	218	2809	509	349	22	7145
189	EDC	103.0	0.0	0.0	36.9	26	0	0	26	1080	327	183	1470	285	3345	1080	327	183	1470	285	0	0	3345
190	EDC	704.5	0.0	0.0	252.4	149	0	0	149	5808	1027	446	6132	1129	14542	5808	1027	446	6132	1129	0	0	14542
191	EDC	75.4	0.0	0.0	27.0	6	0	0	6	559	89	37	571	89	1344	559	89	37	571	89	0	0	1344
192	EDC	69.2	0.0	0.0	25.0	5	0	0	5	496	86	29	456	82	1149	496	86	29	456	82	0	0	1149
193	EDC	2977.0	93.0	0.0	1135.3	1484	551	48	2084	22004	4780	894	21626	4770	54073	22004	4780	894	21626	4770	551	48	54672
194	EDC	1297.4	0.0	0.0	439.0	228	0	0	228	8650	1877	180	9077	1632	21415	8650	1877	180	9077	1632	0	0	21415
195	EDC	26.5	46.6	0.0	10.0	541	803	404	1748	166	29	17	168	287	665	166	29	17	168	287	803	404	1872
196	outside EDC	3646.7	88.2	593.0	1309.0	1684	2181	211	4076	27499	5837	2656	27938	6870	70801	27499	5837	2656	27938	6870	2181	211	73193
197	EDC	225.1	0.0	0.0	85.1	35	0	0	35	1677	313	112	1656	354	4112	1677	313	112	1656	354	0	0	4112
198	EDC	2475.8	470.9	740.0	887.0	5044	10035	1479	16559	17620	2579	1768	17685	7129	46781	17620	2579	1768	17685	7129	10035	1479	58295
199	EDC	173.1	120.0	0.0	62.0	1398	2232	769	4399	1182	218	104	1280	1287	4071	1182	218	104	1280	1287	2232	769	7072
200	EDC	18.5	113.0	0.0	7.0	1224	1374	702	3300	107	21	7	115	236	486	107	21	7	115	236	1374	702	2563
201	EDC	443.3	301.0	0.0	150.0	2689	1779	189	4657	2909	598	193	3264	907	7872	2909	598	193	3264	907	1779	189	9840
202	EDC	2116.9	199.0	0.0	758.4	2490	3521	407	6418	15998	2464	1156	16516	4871	41005	15998	2464	1156	16516	4871	3521	407	44933
203	EDC	3669.5	139.0	0.0	1268.1	1839	799	54	2692	28886	6527	1858	28726	5349	71345	28886	6527	1858	28726	5349	799	54	72199
204	EDC	1048.1	40.9	815.0	362.0	534	2211	220	2965	6450	1307	1302	7203	1934	18196	6450	1307	1302	7203	1934	2211	220	20627
205	EDC	327.1	80.0	0.0	113.0	724	355	28	1107	1910	348	108	2363	432	5162	1910	348	108	2363	432	355	28	5545
206	EDC	147.7	0.0	0.0	51.1	14	0	0	14	888	182	21	1008	156	2255	888	182	21	1008	156	0	0	2255
207	EDC	876.4	0.0	0.0	302.8	186	0	0	186	7051	1530	546	7553	1509	18189	7051	1530	546	7553	1509	0	0	18189
208	EDC	26.0	0.0	0.0	9.0	0	0	0	0	164	40	14	181	21	421	164	40	14	181	21	0	0	421
209	EDC	242.6	14.0	0.0	83.8	155	61	5	221	1876	382	132	1970	376	4736	1876	382	132	1970	376	61	5	4802
210	EDC	465.6	0.0	0.0	157.5	78	0	0	78	3318	735	219	3652	679	8603	3318	735	219	3652	679	0	0	8603
211	EDC	11.3	0.0	0.0	4.0	0	0	0	0	73	8	6	65	3	155	73	8	6	65	3	0	0	155
212	EDC	107.5	0.0	0.0	37.1	13	0	0	13	934	216	77	986	168	2381	934	216	77	986	168	0	0	2381
213	EDC	346.5	0.0	0.0	125.2	73	0	0	73	3229	810	307	3553	692	8592	3229	810	307	3553	692	0	0	8592
214	EDC	26.1	0.0	0.0	10.7	8	0	0	8	355	237	122	301	74	1088	355	237	122	301	74	0	0	1088
215	EDC	401.4	0.0	0.0	143.8	89	0	0	89	3507	713	280	4016	736	9251	3507	713	280	4016	736	0	0	9251
216	EDC	17.4	0.0	0.0	7.1	6	0	0	6	212	169	96	204	73	755	212	169	96	204	73	0	0	755

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
217	EDC	30.7	0.0	0.0	11.0	2	0	0	2	290	71	37	364	49	811	290	71	37	364	49	0	0	811
218	EDC	78.1	0.0	0.0	28.0	12	0	0	12	671	171	78	887	155	1961	671	171	78	887	155	0	0	1961
219	EDC	91.2	77.0	0.0	33.0	980	570	74	1623	834	198	103	1082	326	2543	834	198	103	1082	326	570	74	3186
220	EDC	24.9	0.0	0.0	9.0	1	0	0	1	227	56	30	270	32	615	227	56	30	270	32	0	0	615
221	EDC	2445.6	0.0	0.0	941.0	545	0	0	545	22104	5459	1761	19890	4036	53250	22104	5459	1761	19890	4036	0	0	53250
222	EDC	71.5	26.0	0.0	26.9	224	620	120	965	596	114	32	442	350	1535	596	114	32	442	350	620	120	2276
223	EDC	295.7	0.0	0.0	111.5	28	0	0	28	2496	465	168	1926	335	5389	2496	465	168	1926	335	0	0	5389
224	EDC	267.5	29.0	0.0	100.9	313	158	11	483	2546	594	180	2368	479	6167	2546	594	180	2368	479	158	11	6337
225	EDC	369.9	88.1	944.0	127.8	1047	3629	475	5151	3210	818	1691	3363	1573	10656	3210	818	1691	3363	1573	3629	475	14759
226	EDC	1173.2	84.7	566.0	405.5	925	2222	153	3300	9893	2196	1097	8946	1965	24097	9893	2196	1097	8946	1965	2222	153	26472
227	EDC	456.2	2.0	0.0	186.0	84	3	0	87	3750	851	302	3351	567	8820	3750	851	302	3351	567	3	0	8823
228	EDC	1758.7	20.0	0.0	717.2	467	237	12	717	13431	2667	1152	11524	1839	30612	13431	2667	1152	11524	1839	237	12	30862
229	EDC	257.3	0.0	0.0	99.0	30	0	0	30	2126	491	147	1914	355	5034	2126	491	147	1914	355	0	0	5034
230	EDC	1446.9	0.0	0.0	487.0	271	0	0	271	11361	2559	1133	11881	2079	29013	11361	2559	1133	11881	2079	0	0	29013
231	EDC	59.2	28.0	0.0	20.5	176	167	10	352	448	105	40	410	81	1085	448	105	40	410	81	167	10	1261
232	EDC	109.2	0.0	0.0	39.5	14	0	0	14	1130	297	116	1239	203	2985	1130	297	116	1239	203	0	0	2985
233	EDC	248.0	101.0	0.0	108.1	759	1359	193	2311	1787	377	114	1516	771	4565	1787	377	114	1516	771	1359	193	6117
234	EDC	2423.7	716.1	0.0	1056.8	6001	6978	714	13693	17359	3258	1314	15347	5129	42407	17359	3258	1314	15347	5129	6978	714	50099
235	EDC	2596.9	0.0	0.0	959.0	473	0	0	473	20935	4014	2082	18201	3358	48591	20935	4014	2082	18201	3358	0	0	48591
236	EDC	1276.1	9.0	0.0	471.2	245	37	2	285	10058	2052	768	8634	1452	22963	10058	2052	768	8634	1452	37	2	23002
237	EDC	176.5	0.0	0.0	76.9	21	0	0	21	1345	261	78	1231	252	3168	1345	261	78	1231	252	0	0	3168
238	EDC	903.0	254.7	0.0	368.3	2652	2032	170	4853	7083	1295	657	6602	1738	17375	7083	1295	657	6602	1738	2032	170	19576
239	EDC	178.8	16.0	0.0	67.4	122	339	26	487	1490	257	108	1093	298	3244	1490	257	108	1093	298	339	26	3610
240	EDC	339.9	0.0	0.0	128.2	71	0	0	71	3621	884	448	3483	642	9077	3621	884	448	3483	642	0	0	9077
241	EDC	463.9	2.0	0.0	175.0	71	12	1	84	4160	773	320	3160	584	8997	4160	773	320	3160	584	12	1	9010
242	EDC	61.8	0.0	0.0	23.3	2	0	0	2	509	79	37	354	47	1026	509	79	37	354	47	0	0	1026
243	EDC	153.3	13.0	0.0	57.8	85	51	3	138	1356	246	99	997	165	2863	1356	246	99	997	165	51	3	2917
244	EDC	63.7	0.0	0.0	25.4	7	0	0	7	696	266	86	716	101	1865	696	266	86	716	101	0	0	1865
245	EDC	30.0	0.0	0.0	10.0	5	0	0	5	346	92	68	424	71	1001	346	92	68	424	71	0	0	1001
246	EDC	189.0	0.0	0.0	63.0	31	0	0	31	2282	547	406	2151	347	5734	2282	547	406	2151	347	0	0	5734
247	EDC	636.3	0.0	0.0	296.0	329	0	0	329	5770	2282	646	5770	1467	15935	5770	2282	646	5770	1467	0	0	15935
248	EDC	437.6	0.0	0.0	184.6	176	0	0	176	5665	1302	701	4367	1024	13058	5665	1302	701	4367	1024	0	0	13058
249	EDC	57.8	0.0	0.0	26.9	17	0	0	17	529	282	109	876	170	1966	529	282	109	876	170	0	0	1966
250	EDC	124.1	0.0	0.0	53.0	31	0	0	31	1581	370	207	1378	267	3804	1581	370	207	1378	267	0	0	3804
251	EDC	245.9	0.0	0.0	94.1	58	0	0	58	2074	385	149	2248	434	5290	2074	385	149	2248	434	0	0	5290
252	EDC	1217.5	0.0	0.0	461.9	406	0	0	406	10443	2038	774	10269	2129	25653	10443	2038	774	10269	2129	0	0	25653
253	EDC	405.0	0.0	0.0	147.2	118	0	0	118	4006	908	488	4151	768	10321	4006	908	488	4151	768	0	0	10321
254	EDC	303.9	0.0	0.0	116.4	82	0	0	82	2707	573	233	2987	586	7086	2707	573	233	2987	586	0	0	7086
255	EDC	0.0	717.5	0.0	0.0	8637	7557	3477	19671	0	0	0	0	0	0	0	0	0	0	0	7557	3477	11034
256	EDC	174.6	1152.7	0.0	83.0	14876	13297	5137	33310	969	98	100	974	2089	4230	969	98	100	974	2089	13297	5137	22664
257	EDC	868.6	1222.1	0.0	332.6	14481	8061	1226	23768	5250	710	392	5763	2845	14960	5250	710	392	5763	2845	8061	1226	24247
258	EDC	62.6	2.0	0.0	22.8	24	1	0	25	612	159	122	687	90	1670	612	159	122	687	90	1	0	1671
259	EDC	85.3	0.0	0.0	32.4	11	0	0	11	829	223	110	906	136	2203	829	223	110	906	136	0	0	2203
260	EDC	10.1	167.6	0.0	3.5	2159	1822	727	4709	34	5	3	26	80	147	34	5	3	26	80	1822	727	2696
261	EDC	292.3	291.9	0.0	106.3	3798	3387	704	7889	1888	235	87	1825	1383	5418	1888	235	87	1825	1383	3387	704	9509
262	EDC	422.7	258.5	0.0	161.8	3287	2486	399	6171	2534	341	117	2532	1333	6857	2534	341	117	2532	1333	2486	399	9742
263	EDC	314.7	35.0	0.0	114.4	505	537	56	1097	2172	279	93	1979	634	5157	2172	279	93	1979	634	537	56	5749
264	EDC	202.5	45.0	0.0	73.6	638	828	120	1587	1391	176	61	1275	606	3508	1391	176	61	1275	606	828	120	4457
265	EDC	118.3	0.0	0.0	44.9	18	0	0	18	1000	228	98	1134	195	2655	1000	228	98	1134	195	0	0	2655
266	EDC	90.1	26.2	0.0	41.9	554	490	80	1124	678	176	55	731	401	2040	678	176	55	731	401	490	80	2610
267	EDC	375.2	0.0	0.0	142.3	102	0	0	102	2975	581	222	2982	485	7245	2975	581	222	2982	485	0	0	7245
268	EDC	182.9	6.0	0.0	69.4	101	16	1	118	1418	300	120	1447	280	3564	1418	300	120	1447	280	16	1	3581
269	EDC	528.7	1.0	0.0	205.5	196	0	0	196	4935	776	275	4042	987	11015	4935	776	275	4042	987	0	0	11015
270	EDC	113.1	0.0	0.0	45.2	22	0	0	22	1276	289	110	1075	199	2949	1276	289	110	1075	199	0	0	2949
271	EDC	392.5	5.0	0.0	152.6	169	15	2	185	4254	932	403	3828	805	10222	4254	932	403	3828	805	15	2	10239
272	EDC	372.1	23.0	0.0	132.7	304	157	10	471	3445	551	118	2873	570	7557	3445	551	118	2873	570	157	10	7724
273	EDC	390.2	12.0	0.0	134.5	233	59	4	296	4402	855	366	3656	678	9957	4402	855	366	3656	678	59	4	10020
274	EDC	713.5	98.9	645.0	254.4	1313	2641	233	4187	6479	1142	1150	5340	1655	15767	6479	1142	1150	5340	1655	2641	233	18641
275	EDC	840.5	13.0	0.0	328.0	450	135	11	596	7881	1172	380	6700	1598	17731	7881	1172	380	6700	1598	135	11	17877
276	EDC	1048.5	34.5	0.0	427.6	598	413	29	1041	8323	1449	539	7438	1619	19367	8323	1449	539	7438	1619	413	29	19810
277	EDC	414.1	0.0	0.0	170.7	68	0	0	68	3178	517	128	2672	541	7035	3178	517	128	2672	541	0	0	7035
278	EDC	244.1	0.0	0.0	92.1	48	0	0	48	2605	658	201	2573	471	6509	2605	658	201	2573	471	0	0	6509
279	EDC	122.4	0.0	0.0	46.2	18	0	0	18	1337	359	167	1245	204	3313	1337	359	167	1245	204	0	0	3313
280	EDC	103.7	0.0	0.0	37.0	11	0	0	11	940	133	25	820	128	2047	940	133	25	820	128	0	0	2047
281	EDC	174.1	40.0	359.0	62.1	572	1399	157	2128	1556	219	830	1378	615	4598	1556	219	830	1378	615	1399	157	6153
282	EDC	109.4	0.0	0.0	39.0	11	0	0	11	939	124	19	773	120	1974	939	124	19	773	120	0	0	1974
283	EDC	0.0	179.4	2054.0	0.0	2216	6685	1481	10382	0	0	3850	0	814	4664	0	0	3850	0	814	6685	1481	12830
284	EDC	73.8	25.0	0.0	30.4	264	159	12	435	475	65	10	403	105	1058	475	65	10	403	105	159	12	1229
285	EDC	49.3	66.0	400.0	17.0	861	1496	224	2582	295	45	910	288	312	1850	295	45	910	288	312	1496	224	3571
286	EDC	101.0	0.0	0.0	36.0	11	0	0	11	1010	207	77	875	145	2314	1010	207	77	875	145	0	0	2314
287	EDC	87.1	0.0	0.0	34.0	8	0	0	8	861	162	37	710	118	1888	861	162	37	710	118	0	0	1888
288	EDC	142.7	0.0	0.0	50.9	17	0	0	17	1375	251	85	1235	203	3150	1375	251	85	1235	203	0	0	3150

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
289	EDC	23.2	0.0	0.0	8.0	0	0	0	0	205	29	18	136	9	397	205	29	18	136	9	0	0	397
290	EDC	127.7	0.0	0.0	44.0	14	0	0	14	1349	235	107	1052	175	2918	1349	235	107	1052	175	0	0	2918
291	EDC	498.7	27.9	0.0	195.9	478	174	18	669	6144	1506	404	4846	1005	13904	6144	1506	404	4846	1005	174	18	14096
292	EDC	209.0	0.0	0.0	72.0	35	0	0	35	2484	625	418	2053	312	5891	2484	625	418	2053	312	0	0	5891
293	EDC	76.1	0.0	0.0	34.8	11	0	0	11	477	92	33	470	106	1178	477	92	33	470	106	0	0	1178
294	EDC	250.5	0.0	0.0	100.8	65	0	0	65	1858	301	85	1675	380	4300	1858	301	85	1675	380	0	0	4300
295	EDC	281.9	1491.0	0.0	110.0	31605	38747	17260	87612	2352	155	200	1622	5692	10021	2352	155	200	1622	5692	38747	17260	66028
296	EDC	330.8	56.0	438.0	125.5	838	1578	160	2575	2468	375	1126	2282	876	7126	2468	375	1126	2282	876	1578	160	8863
297	EDC	184.5	0.0	0.0	70.0	31	0	0	31	1224	224	74	1141	138	2801	1224	224	74	1141	138	0	0	2801
298	EDC	208.3	0.0	0.0	79.0	44	0	0	44	1532	245	111	1432	280	3601	1532	245	111	1432	280	0	0	3601
299	EDC	275.1	0.0	0.0	106.9	75	0	0	75	2685	413	192	2324	510	6124	2685	413	192	2324	510	0	0	6124
300	EDC	77.2	0.0	0.0	30.0	9	0	0	9	654	97	37	486	94	1368	654	97	37	486	94	0	0	1368
301	EDC	7.1	0.0	0.0	3.2	0	0	0	0	8	4	3	10	1	25	8	4	3	10	1	0	0	25
302	EDC	133.1	33.0	152.0	60.9	510	534	53	1097	782	154	513	753	309	2510	782	154	513	753	309	534	53	3097
303	EDC	227.8	0.0	0.0	106.0	56	0	0	56	1263	293	59	1406	330	3352	1263	293	59	1406	330	0	0	3352
304	EDC	26.1	275.4	0.0	12.0	3237	1983	561	5780	103	24	9	103	193	431	103	24	9	103	193	1983	561	2974
305	EDC	2.2	283.0	0.0	1.0	3430	1791	483	5705	0	0	0	0	0	0	0	0	0	0	0	1791	483	2275
306	EDC	21.5	55.0	0.0	10.0	635	238	16	889	117	29	3	100	39	289	117	29	3	100	39	238	16	543
307	EDC	36.7	2.0	0.0	16.0	17	7	1	25	164	39	9	157	39	408	164	39	9	157	39	7	1	416
308	EDC	25.3	1.0	0.0	11.0	4	1	0	5	106	24	7	92	18	247	106	24	7	92	18	1	0	248
309	EDC	30.6	4.0	0.0	14.0	31	19	2	52	118	28	7	108	31	291	118	28	7	108	31	19	2	312
310	EDC	59.6	122.0	0.0	26.0	1393	736	121	2251	261	63	13	256	202	795	261	63	13	256	202	736	121	1652
311	EDC	83.0	158.0	0.0	38.0	2430	1888	598	4916	421	73	22	372	550	1439	421	73	22	372	550	1888	598	3925
312	EDC	71.1	43.3	0.0	31.0	592	514	101	1208	322	69	13	290	251	945	322	69	13	290	251	514	101	1560
313	EDC	105.4	506.0	1583.0	42.0	7499	4783	723	13005	562	95	3046	378	738	4819	562	95	3046	378	738	4783	723	10325
314	EDC	201.3	8.0	0.0	81.0	127	18	2	147	1175	143	63	953	206	2539	1175	143	63	953	206	18	2	2559
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	28.4	0.0	0.0	13.0	1	0	0	1	91	24	8	107	19	249	91	24	8	107	19	0	0	249
317	EDC	17.5	0.0	0.0	8.0	0	0	0	0	61	11	3	47	7	130	61	11	3	47	7	0	0	130
318	EDC	334.2	2.0	0.0	134.5	120	1	0	120	1992	267	89	1668	382	4398	1992	267	89	1668	382	1	0	4399
319	EDC	95.4	6.0	0.0	38.0	69	8	1	77	463	66	16	334	65	944	463	66	16	334	65	8	1	952
320	EDC	46.1	39.0	351.0	18.1	562	1503	244	2309	457	96	1113	258	323	2246	457	96	1113	258	323	1503	244	3993
321	EDC	268.3	0.0	0.0	105.4	68	0	0	68	3191	683	120	2391	492	6877	3191	683	120	2391	492	0	0	6877
322	EDC	420.9	33.0	0.0	163.6	575	176	22	773	3846	723	224	3052	727	8572	3846	723	224	3052	727	176	22	8770
323	EDC	136.1	4.0	0.0	52.9	70	12	2	85	1487	369	106	1288	254	3504	1487	369	106	1288	254	12	2	3519
324	EDC	163.0	0.0	0.0	65.1	38	0	0	38	1916	448	161	1588	298	4410	1916	448	161	1588	298	0	0	4410
325	EDC	41.9	0.0	0.0	16.5	4	0	0	4	410	80	14	238	49	791	410	80	14	238	49	0	0	791
326	EDC	127.2	1.0	0.0	49.9	33	1	1	35	1372	269	66	884	166	2758	1372	269	66	884	166	1	1	2760
327	Placerville (not	113.4	0.0	0.0	45.3	18	0	0	18	1068	148	55	642	129	2043	1068	148	55	642	129	0	0	2043
328	EDC	47.5	0.0	0.0	19.0	4	0	0	4	422	76	23	249	52	822	422	76	23	249	52	0	0	822
329	Placerville (not	338.1	0.0	0.0	146.5	99	0	0	99	2630	423	110	1844	489	5498	2630	423	110	1844	489	0	0	5498
330	EDC	193.7	0.0	0.0	77.4	38	0	0	38	1596	200	67	939	213	3015	1596	200	67	939	213	0	0	3015
331	EDC	280.7	0.0	0.0	112.4	90	0	0	90	3219	652	181	2422	565	7039	3219	652	181	2422	565	0	0	7039
332	EDC	105.2	0.0	0.0	47.0	21	0	0	21	683	179	59	583	115	1619	683	179	59	583	115	0	0	1619
333	EDC	224.9	0.0	0.0	91.0	67	0	0	67	1952	674	213	2062	370	5271	1952	674	213	2062	370	0	0	5271
334	EDC	58.2	110.0	0.0	26.0	1496	498	42	2036	365	120	36	381	123	1026	365	120	36	381	123	498	42	1567
335	EDC	165.0	5.0	0.0	76.9	106	5	1	111	1175	224	195	954	191	2740	1175	224	195	954	191	5	1	2746
336	EDC	66.4	0.0	0.0	30.0	11	0	0	11	422	131	44	430	80	1107	422	131	44	430	80	0	0	1107
337	EDC	297.7	62.0	320.0	121.4	931	1264	96	2291	2621	951	973	2232	705	7481	2621	951	973	2232	705	1264	96	8842
338	EDC	836.5	14.0	0.0	325.3	380	174	10	564	7764	1768	960	5593	1107	17192	7764	1768	960	5593	1107	174	10	17375
339	EDC	435.6	0.0	0.0	192.3	121	0	0	121	5273	2956	182	3158	755	12325	5273	2956	182	3158	755	0	0	12325
340	EDC	198.7	14.0	0.0	93.2	269	280	62	612	2452	2042	326	1958	838	7615	2452	2042	326	1958	838	280	62	7957
341	EDC	68.8	8.0	0.0	31.4	91	19	2	112	575	454	5	330	86	1450	575	454	5	330	86	19	2	1470
342	EDC	123.4	0.0	0.0	48.0	27	0	0	27	1183	301	190	1035	174	2883	1183	301	190	1035	174	0	0	2883
343	EDC	126.8	0.0	0.0	56.0	42	0	0	42	1656	595	412	1332	297	4292	1656	595	412	1332	297	0	0	4292
344	EDC	134.5	0.0	0.0	59.4	45	0	0	45	1794	666	427	1404	310	4602	1794	666	427	1404	310	0	0	4602
345	EDC	67.0	0.0	0.0	29.6	17	0	0	17	778	223	105	645	132	1883	778	223	105	645	132	0	0	1883
346	EDC	49.2	0.0	0.0	22.1	10	0	0	10	454	167	49	441	83	1194	454	167	49	441	83	0	0	1194
347	EDC	108.0	0.0	0.0	42.0	23	0	0	23	1160	360	367	1061	174	3121	1160	360	367	1061	174	0	0	3121
348	EDC	108.7	0.0	0.0	48.9	31	0	0	31	986	323	114	1081	225	2730	986	323	114	1081	225	0	0	2730
349	EDC	173.4	18.0	0.0	84.3	290	177	40	506	2287	2044	193	1726	689	6939	2287	2044	193	1726	689	177	40	7156
350	EDC	49.3	0.0	0.0	21.8	16	0	0	16	573	460	15	353	109	1508	573	460	15	353	109	0	0	1508
351	EDC	54.3	0.0	0.0	23.9	11	0	0	11	641	424	176	381	67	1689	641	424	176	381	67	0	0	1689
352	EDC	68.1	0.0	0.0	30.1	15	0	0	15	986	588	330	532	94	2530	986	588	330	532	94	0	0	2530
353	EDC	387.2	1.0	0.0	170.9	93	3	0	96	4953	3146	1419	2521	453	12492	4953	3146	1419	2521	453	3	0	12495
354	EDC	124.1	77.0	590.0	54.8	838	2002	193	3034	1191	716	3105	472	571	6056	1191	716	3105	472	571	2002	193	8251
355	Placerville (in C	971.7	260.3	0.0	421.0	3631	1961	279	5871	5112	592	245	3903	1799	11652	5112	592	245	3903	1799	1961	279	13892
356	Placerville (in C	188.8	0.0	0.0	88.0	47	0	0	47	923	203	60	824	190	2200	923	203	60	824	190	0	0	2200
357	EDC	208.7	21.0	0.0	94.3	407	407	62	876	1274	349	117	1282	566	3586	1274	349	117	1282	566	407	62	4055
358	Placerville (not	191.8	352.1	0.0	86.7	5090	2299	508	7897	948	203	65	906	787	2908	948	203	65	906	787	2299	508	5715
359	EDC	247.3	0.0	0.0	105.0	66	0	0	66	1874	404	165	1637	359	4439	1874	404	165	1637	359	0	0	4439
360	EDC	230.5	10.0	0.0	97.9	229	110	9	348	2031	496	256	1998	488	5270	2031	496	256	1998	488	110	9	5389

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
361	Placerville (in C	971.1	392.1	0.0	466.0	4708	1534	164	6406	4192	824	131	3922	1249	10318	4192	824	131	3922	1249	1534	164	12016
362	Placerville (in C	701.7	913.2	0.0	298.0	13953	9267	2967	26186	2989	320	184	2285	3256	9033	2989	320	184	2285	3256	9267	2967	21267
363	EDC	34.7	0.0	0.0	13.7	1	0	0	1	132	27	15	102	20	296	132	27	15	102	20	0	0	296
364	Placerville (not	389.8	42.0	0.0	154.0	625	181	17	823	1736	228	159	1475	409	4007	1736	228	159	1475	409	181	17	4206
365	EDC	1013.8	125.0	0.0	478.0	2065	1329	171	3565	4366	939	221	4451	1696	11674	4366	939	221	4451	1696	1329	171	13174
366	EDC	32.3	4.0	0.0	15.0	22	10	1	33	65	22	5	75	20	186	65	22	5	75	20	10	1	197
367	EDC	0.0	197.0	0.0	0.0	2109	737	106	2951	0	0	0	0	0	0	0	0	0	0	0	737	106	843
368	EDC	156.8	0.0	0.0	68.0	24	0	0	24	658	152	17	619	107	1553	658	152	17	619	107	0	0	1553
369	EDC	1368.2	41.6	0.0	610.0	890	326	31	1247	6224	1094	281	5548	1552	14698	6224	1094	281	5548	1552	326	31	15055
370	EDC	0.0	303.0	0.0	0.0	3261	1134	222	4617	0	0	0	0	0	0	0	0	0	0	0	1134	222	1356
371	EDC	47.1	0.0	0.0	21.0	4	0	0	4	267	61	10	242	46	625	267	61	10	242	46	0	0	625
372	EDC	771.6	327.7	1178.0	344.0	3805	3859	444	8107	3776	771	2835	3535	1732	12649	3776	771	2835	3535	1732	3859	444	16951
373	EDC	59.7	0.0	0.0	26.0	3	0	0	3	223	41	11	198	34	506	223	41	11	198	34	0	0	506
374	EDC	30.0	2.0	0.0	13.0	11	6	0	17	103	27	4	93	20	248	103	27	4	93	20	6	0	254
375	EDC	32.1	0.0	0.0	14.0	2	0	0	2	156	31	8	114	21	330	156	31	8	114	21	0	0	330
376	EDC	78.0	3.0	0.0	34.0	34	2	0	36	357	65	18	311	64	815	357	65	18	311	64	2	0	817
377	EDC	29.8	14.0	120.0	13.0	143	253	25	421	98	22	298	82	62	561	98	22	298	82	62	253	25	839
378	EDC	62.2	0.0	0.0	27.0	3	0	0	3	243	59	8	207	39	556	243	59	8	207	39	0	0	556
379	EDC	110.6	0.0	0.0	48.0	13	0	0	13	410	97	14	379	79	980	410	97	14	379	79	0	0	980
380	EDC	27.6	0.0	0.0	12.0	1	0	0	1	71	19	4	70	10	174	71	19	4	70	10	0	0	174
381	EDC	16.1	0.0	0.0	7.0	0	0	0	0	38	10	2	42	5	96	38	10	2	42	5	0	0	96
382	EDC	25.4	0.0	0.0	11.0	1	0	0	1	77	18	5	62	13	175	77	18	5	62	13	0	0	175
383	EDC	112.5	0.0	0.0	50.1	18	0	0	18	733	162	43	598	124	1659	733	162	43	598	124	0	0	1659
384	EDC	269.2	0.0	0.0	120.0	61	0	0	61	1618	326	81	1306	314	3644	1618	326	81	1306	314	0	0	3644
385	EDC	1011.6	26.6	0.0	451.0	622	308	24	954	5661	1110	250	4721	1110	12852	5661	1110	250	4721	1110	308	24	13184
386	EDC	201.9	0.0	0.0	90.0	35	0	0	35	1169	247	59	923	209	2608	1169	247	59	923	209	0	0	2608
387	EDC	80.7	8.0	0.0	36.0	85	45	4	134	354	73	15	286	84	811	354	73	15	286	84	45	4	860
388	EDC	0.0	303.0	0.0	0.0	3308	1138	222	4668	0	0	0	0	0	0	0	0	0	0	0	1138	222	1359
389	EDC	4.7	264.0	0.0	2.0	2820	1128	296	4244	1	1	0	4	7	14	1	1	0	4	7	1128	296	1437
390	EDC	392.3	53.5	0.0	182.0	744	415	42	1201	1395	319	59	1534	465	3771	1395	319	59	1534	465	415	42	4228
391	EDC	23.7	69.5	0.0	11.0	776	565	190	1531	43	17	2	53	103	217	43	17	2	53	103	565	190	972
392	EDC	60.4	0.0	0.0	28.0	6	0	0	6	213	41	8	209	39	511	213	41	8	209	39	0	0	511
393	EDC	614.8	68.0	0.0	268.0	1095	633	68	1796	2549	359	125	2505	815	6353	2549	359	125	2505	815	633	68	7053
394	EDC	17.6	0.0	0.0	8.0	0	0	0	0	35	8	2	31	5	80	35	8	2	31	5	0	0	80
395	Placerville (in C	186.0	2323.7	0.0	88.0	29822	12122	4414	46358	658	90	36	612	1476	2871	658	90	36	612	1476	12122	4414	19407
396	EDC	0.0	456.7	0.0	0.0	7418	7195	3877	18490	0	0	0	0	0	0	0	0	0	0	0	7195	3877	11072
397	EDC	109.2	3.0	0.0	50.0	43	1	0	44	468	77	26	411	88	1071	468	77	26	411	88	1	0	1072
398	EDC	32.1	3.0	0.0	14.0	21	10	1	32	121	20	9	94	25	269	121	20	9	94	25	10	1	280
399	EDC	98.7	0.0	0.0	43.0	12	0	0	12	424	70	24	366	74	958	424	70	24	366	74	0	0	958
400	EDC	34.5	11.0	0.0	16.0	124	84	11	219	66	19	5	83	45	218	66	19	5	83	45	84	11	313
401	Placerville (not	86.2	213.0	0.0	40.8	2989	1799	635	5423	346	48	15	270	458	1137	346	48	15	270	458	1799	635	3570
402	EDC	128.0	117.1	0.0	51.0	1288	441	34	1763	524	58	29	405	133	1147	524	58	29	405	133	441	34	1623
403	EDC	267.3	654.0	724.0	124.0	8505	5256	1099	14861	912	162	1926	1038	1380	5418	912	162	1926	1038	1380	5256	1099	11773
404	EDC	43.8	49.0	0.0	19.0	459	143	8	610	127	27	6	115	32	307	127	27	6	115	32	143	8	458
405	EDC	20.8	0.0	0.0	9.0	0	0	0	0	63	10	3	50	9	135	63	10	3	50	9	0	0	135
406	EDC	55.3	286.0	0.0	24.0	4522	4589	2235	11345	174	27	9	155	523	888	174	27	9	155	523	4589	2235	7712
407	EDC	2.2	293.0	535.0	1.0	3433	2822	904	7160	0	0	1102	1	463	1565	0	0	1102	1	463	2822	904	5292
408	EDC	2.1	182.0	0.0	1.0	1865	785	167	2816	3	2	0	5	9	19	3	2	0	5	9	785	167	970
409	Placerville (not	328.8	460.2	0.0	129.9	6694	3625	900	11219	1562	185	110	1347	1358	4563	1562	185	110	1347	1358	3625	900	9088
410	EDC	1003.2	331.9	0.0	426.0	5018	3586	565	9169	5788	811	379	4776	2619	14373	5788	811	379	4776	2619	3586	565	18524
411	Placerville (in C	708.3	1289.3	0.0	299.0	15988	9475	3133	28596	2456	317	163	2076	3157	8169	2456	317	163	2076	3157	9475	3133	20777
412	EDC	211.6	0.0	0.0	89.3	55	0	0	55	1372	208	89	1039	253	2960	1372	208	89	1039	253	0	0	2960
413	Placerville (not	376.0	0.0	0.0	158.7	98	0	0	98	2014	298	124	1505	394	4335	2014	298	124	1505	394	0	0	4335
414	EDC	15.1	120.0	0.0	7.0	1216	446	56	1719	17	10	2	30	29	88	17	10	2	30	29	446	56	591
415	EDC	38.2	0.0	0.0	18.0	2	0	0	2	137	38	8	125	24	333	137	38	8	125	24	0	0	333
416	EDC	19.4	0.0	0.0	9.0	0	0	0	0	42	15	4	54	11	126	42	15	4	54	11	0	0	126
417	Placerville (in C	101.9	294.5	0.0	45.0	3497	1996	671	6164	351	59	19	270	461	1160	351	59	19	270	461	1996	671	3827
418	Placerville (in C	0.0	63.6	0.0	0.0	778	668	383	1829	0	0	0	0	0	0	0	0	0	0	0	668	383	1051
419	Placerville (in C	0.0	84.8	0.0	0.0	972	674	352	1999	0	0	0	0	0	0	0	0	0	0	0	674	352	1026
420	Placerville (in C	116.1	52.0	0.0	49.0	535	121	7	663	418	64	27	313	69	892	418	64	27	313	69	121	7	1020
421	Placerville (in C	170.6	5.0	0.0	72.0	77	2	0	80	648	100	40	483	112	1383	648	100	40	483	112	2	0	1385
422	Placerville (in C	661.7	2042.5	475.0	281.0	30227	7443	1327	38998	2146	348	1027	1864	1742	7127	2146	348	1027	1864	1742	7443	1327	15898
423	EDC	48.1	0.0	0.0	20.3	2	0	0	2	179	31	12	118	25	365	179	31	12	118	25	0	0	365
424	Placerville (not	399.3	249.1	0.0	173.0	3134	1765	256	5155	2214	295	57	1579	857	5001	2214	295	57	1579	857	1765	256	7022
425	Placerville (not	2817.0	600.6	2141.0	1266.7	7701	9446	1252	18399	14091	2049	5774	9965	5453	37332	14091	2049	5774	9965	5453	9446	1252	48030
426	Placerville (not	81.4	0.0	0.0	32.6	6	0	0	6	433	58	7	222	46	766	433	58	7	222	46	0	0	766
427	EDC	235.0	0.0	0.0	94.1	64	0	0	64	2140	315	63	1389	348	4255	2140	315	63	1389	348	0	0	4255
428	EDC	55.0	0.0	0.0	22.0	3	0	0	3	328	51	6	168	34	586	328	51	6	168	34	0	0	586
429	EDC	86.7	0.0	0.0	35.0	14	0	0	14	643	133	50	573	60	1459	643	133	50	573	60	0	0	1459
430	EDC	143.9	10.0	0.0	58.1	156	24	3	183	959	163	89	818	189	2218	959	163	89	818	189	24	3	2245
431	Placerville (in C	60.4	60.0	0.0	29.0	731	235	25	991	225	48	13	179	83	549	225	48	13	179	83	235	25	809
432	EDC	781.3	234.1	0.0	315.5	3144	1103	116	4364	4496	825	419	3751	1225	10716	4496	825	419	3751	1225	1103	116	11936

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
433	Placerville (in C	1016.7	68.3	0.0	493.0	1224	340	37	1601	3503	713	207	3515	1055	8992	3503	713	207	3515	1055	340	37	9369
434	Placerville (in C	77.2	0.0	0.0	36.0	8	0	0	8	198	46	14	181	46	485	198	46	14	181	46	0	0	485
435	Placerville (in C	77.2	48.6	0.0	36.0	552	194	30	776	195	46	13	181	105	540	195	46	13	181	105	194	30	764
436	EDC	63.4	0.0	0.0	25.8	7	0	0	7	415	110	32	341	65	962	415	110	32	341	65	0	0	962
437	EDC	303.9	12.0	0.0	120.5	245	113	11	368	2500	396	195	1793	486	5370	2500	396	195	1793	486	113	11	5494
438	EDC	267.7	11.0	0.0	126.2	233	228	23	484	1749	570	128	1761	545	4753	1749	570	128	1761	545	228	23	5004
439	EDC	334.2	3.0	0.0	157.5	153	2	0	156	2090	582	145	2214	457	5488	2090	582	145	2214	457	2	0	5491
440	EDC	60.2	15.0	0.0	28.4	166	57	4	227	316	107	23	330	82	857	316	107	23	330	82	57	4	918
441	Placerville (in C	31.3	0.0	0.0	13.2	1	0	0	1	161	30	8	103	22	324	161	30	8	103	22	0	0	324
442	Placerville (in C	769.1	69.0	143.0	305.0	1194	979	112	2285	4542	597	521	3159	1244	10063	4542	597	521	3159	1244	979	112	11154
443	EDC	85.9	0.0	0.0	40.5	19	0	0	19	509	164	36	540	120	1369	509	164	36	540	120	0	0	1369
444	EDC	18.9	0.0	0.0	8.0	0	0	0	0	65	16	6	50	10	147	65	16	6	50	10	0	0	147
445	Placerville (not	61.1	11.0	94.0	24.2	139	224	21	383	365	63	268	227	110	1033	365	63	268	227	110	224	21	1277
446	Placerville (in C	61.7	19.0	0.0	26.2	261	217	36	513	327	57	23	206	141	754	327	57	23	206	141	217	36	1006
447	EDC	187.9	0.0	0.0	76.6	48	0	0	48	1481	414	115	1384	269	3663	1481	414	115	1384	269	0	0	3663
448	Placerville (not	145.8	4.0	0.0	57.8	72	18	1	91	944	146	73	627	112	1903	944	146	73	627	112	18	1	1922
449	EDC	30.0	0.0	0.0	14.0	2	0	0	2	157	55	23	138	25	399	157	55	23	138	25	0	0	399
450	EDC	180.2	31.0	0.0	84.0	408	94	9	512	958	223	62	849	241	2334	958	223	62	849	241	94	9	2437
451	EDC	57.9	0.0	0.0	27.0	10	0	0	10	321	94	29	326	73	844	321	94	29	326	73	0	0	844
452	Placerville (not	286.8	33.0	428.0	133.7	539	940	101	1580	1249	235	1106	1105	515	4209	1249	235	1106	1105	515	940	101	5250
453	Placerville (in C	313.2	1.0	0.0	146.0	95	0	0	96	1116	224	57	1077	177	2651	1116	224	57	1077	177	0	0	2651
454	EDC	56.0	0.0	0.0	26.1	5	0	0	5	167	48	13	161	36	426	167	48	13	161	36	0	0	426
455	EDC	180.8	0.0	0.0	73.0	41	0	0	41	1238	248	126	980	220	2813	1238	248	126	980	220	0	0	2813
456	EDC	109.5	0.0	0.0	51.0	27	0	0	27	712	205	67	673	154	1810	712	205	67	673	154	0	0	1810
457	EDC	141.3	5.0	0.0	62.7	100	7	1	107	1225	310	129	952	194	2810	1225	310	129	952	194	7	1	2817
458	Placerville (not	152.1	69.0	0.0	68.8	1158	758	128	2043	826	180	63	778	450	2297	826	180	63	778	450	758	128	3182
459	Placerville (not	40.9	0.0	0.0	18.5	2	0	0	2	173	48	14	148	26	407	173	48	14	148	26	0	0	407
460	EDC	47.2	20.0	0.0	22.0	257	67	6	330	294	82	26	292	73	768	294	82	26	292	73	67	6	841
461	EDC	13.2	59.0	0.0	6.0	684	237	20	941	29	19	4	44	20	116	29	19	4	44	20	237	20	373
462	EDC	66.5	125.0	0.0	31.0	2031	746	145	2922	378	60	67	355	245	1106	378	60	67	355	245	746	145	1997
463	EDC	187.5	0.0	0.0	85.5	42	0	0	42	2004	2224	268	1315	208	6019	2004	2224	268	1315	208	0	0	6019
464	EDC	112.1	0.0	0.0	47.9	34	0	0	34	1334	543	182	981	192	3232	1334	543	182	981	192	0	0	3232
465	EDC	147.7	16.0	0.0	58.8	129	35	4	168	1666	1900	578	1099	203	5446	1666	1900	578	1099	203	35	4	5485
466	EDC	134.9	22.0	0.0	61.5	216	103	13	332	1308	1148	78	985	253	3772	1308	1148	78	985	253	103	13	3888
467	EDC	88.1	0.0	0.0	40.2	25	0	0	25	986	1302	303	706	140	3436	986	1302	303	706	140	0	0	3436
468	EDC	249.0	6.0	0.0	120.9	140	16	2	159	2987	2421	153	2105	608	8273	2987	2421	153	2105	608	16	2	8291
469	EDC	134.3	15.0	0.0	60.3	154	47	8	209	1746	1911	265	1055	285	5263	1746	1911	265	1055	285	47	8	5317
470	EDC	70.4	1.0	0.0	32.1	27	0	0	27	772	876	109	544	126	2426	772	876	109	544	126	0	0	2427
471	EDC	51.3	6.0	0.0	23.4	62	10	1	73	490	631	97	364	80	1662	490	631	97	364	80	10	1	1673
472	EDC	57.1	20.0	0.0	26.0	167	43	6	217	547	659	78	415	92	1790	547	659	78	415	92	43	6	1840
473	EDC	26.0	2.0	0.0	10.4	28	25	3	55	167	102	16	161	55	502	167	102	16	161	55	25	3	529
474	EDC	85.2	0.0	0.0	37.6	23	0	0	23	912	302	73	605	119	2012	912	302	73	605	119	0	0	2012
475	EDC	87.2	0.0	0.0	38.5	24	0	0	24	945	357	104	657	131	2195	945	357	104	657	131	0	0	2195
476	EDC	41.1	0.0	0.0	16.0	7	0	0	7	354	136	74	322	47	932	354	136	74	322	47	0	0	932
477	EDC	75.6	15.0	0.0	30.1	134	34	5	173	767	721	100	594	106	2289	767	721	100	594	106	34	5	2328
478	EDC	66.4	0.0	0.0	30.0	17	0	0	17	616	255	67	532	95	1565	616	255	67	532	95	0	0	1565
479	EDC	131.2	37.0	0.0	52.3	481	454	56	990	1198	366	200	982	399	3145	1198	366	200	982	399	454	56	3654
480	EDC	46.7	0.0	0.0	21.3	14	0	0	14	491	629	192	452	101	1866	491	629	192	452	101	0	0	1866
481	EDC	45.3	0.0	0.0	20.5	12	0	0	12	589	644	194	444	107	1978	589	644	194	444	107	0	0	1978
482	EDC	171.1	3.0	0.0	77.3	92	7	1	100	2294	2041	865	2032	414	7646	2294	2041	865	2032	414	7	1	7654
483	EDC	253.5	9.0	0.0	116.9	160	49	5	214	1993	738	151	1787	369	5038	1993	738	151	1787	369	49	5	5092
484	EDC	237.2	114.0	0.0	92.5	1054	472	30	1555	2183	764	266	1700	365	5279	2183	764	266	1700	365	472	30	5780
485	EDC	46.0	0.0	0.0	18.0	8	0	0	8	530	259	154	364	60	1367	530	259	154	364	60	0	0	1367
486	EDC	167.2	0.0	0.0	74.0	42	0	0	42	2254	986	521	1235	234	5231	2254	986	521	1235	234	0	0	5231
487	EDC	490.8	36.0	0.0	221.8	837	549	66	1453	3724	1008	366	3790	1198	10086	3724	1008	366	3790	1198	549	66	10702
488	EDC	246.6	0.0	0.0	109.1	74	0	0	74	3275	1045	368	1726	345	6759	3275	1045	368	1726	345	0	0	6759
489	EDC	307.1	58.0	0.0	135.8	710	281	22	1013	3176	757	145	2001	477	6555	3176	757	145	2001	477	281	22	6858
490	EDC	62.1	0.0	0.0	25.3	9	0	0	9	533	167	59	468	73	1300	533	167	59	468	73	0	0	1300
491	EDC	398.7	3.0	0.0	162.5	163	39	3	205	3528	900	397	2951	619	8395	3528	900	397	2951	619	39	3	8437
492	EDC	176.9	18.0	0.0	71.6	242	124	10	375	1634	639	201	1519	316	4309	1634	639	201	1519	316	124	10	4442
493	EDC	180.0	26.0	159.0	72.8	375	594	43	1011	1534	583	479	1406	399	4401	1534	583	479	1406	399	594	43	5038
494	EDC	167.7	10.0	0.0	68.4	140	32	2	174	1505	545	53	1326	233	3661	1505	545	53	1326	233	32	2	3695
495	EDC	39.6	0.0	0.0	16.1	3	0	0	3	292	84	32	223	35	665	292	84	32	223	35	0	0	665
496	EDC	204.0	67.0	69.0	82.5	945	1479	209	2633	1809	381	222	1386	801	4598	1809	381	222	1386	801	1479	209	6287
497	EDC	218.3	3.0	0.0	90.5	85	9	1	95	2392	662	201	1625	294	5175	2392	662	201	1625	294	9	1	5185
498	EDC	160.3	6.0	0.0	70.9	96	12	1	109	1952	518	147	1133	227	3977	1952	518	147	1133	227	12	1	3990
499	EDC	75.9	0.0	0.0	30.9	13	0	0	13	658	245	54	487	80	1524	658	245	54	487	80	0	0	1524
500	EDC	24.3	51.0	416.0	11.0	656	1234	207	2097	154	53	748	104	222	1281	154	53	748	104	222	1234	207	2723
501	EDC	49.2	83.0	0.0	22.0	852	319	20	1191	325	118	17	286	73	819	325	118	17	286	73	319	20	1158
502	EDC	286.5	18.0	0.0	120.5	358	278	25	661	2796	811	834	2316	549	7306	2796	811	834	2316	549	278	25	7609
503	EDC	2.2	76.0	0.0	1.0	1184	1120	637	2941	0	0	0	2	4	7	0	0	0	2	4	1120	637	1763
504	EDC	315.3	19.0	0.0	140.9	335	111	11	456	2513	686	199	2287	543	6228	2513	686	199	2287	543	111	11	6349

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	25	6	3	16	1	50	25	6	3	16	1	0	0	50
506	EDC	62.7	0.0	0.0	28.0	9	0	0	9	435	135	37	378	67	1052	435	135	37	378	67	0	0	1052
507	EDC	121.9	37.0	0.0	51.3	412	116	9	537	898	286	64	800	153	2201	898	286	64	800	153	116	9	2326
508	EDC	184.3	186.0	0.0	85.0	2098	693	50	2841	1258	473	74	1147	283	3235	1258	473	74	1147	283	693	50	3978
509	EDC	26.9	30.9	0.0	12.0	292	116	10	418	154	47	7	120	42	370	154	47	7	120	42	116	10	495
510	EDC	199.5	10.0	0.0	92.0	141	66	6	213	1325	453	51	1191	261	3281	1325	453	51	1191	261	66	6	3353
511	EDC	107.2	33.0	0.0	45.1	384	294	38	716	690	215	40	586	241	1772	690	215	40	586	241	294	38	2104
512	EDC	90.2	27.0	0.0	37.9	389	268	34	691	704	188	91	660	239	1882	704	188	91	660	239	268	34	2183
513	EDC	375.0	0.0	0.0	146.3	81	0	0	81	4009	1691	816	2783	423	9722	4009	1691	816	2783	423	0	0	9722
514	EDC	1622.8	0.0	0.0	633.0	333	0	0	333	17157	7778	4607	10771	1648	41960	17157	7778	4607	10771	1648	0	0	41960
515	EDC	169.1	8.0	0.0	70.1	100	14	1	115	1842	664	229	1235	205	4175	1842	664	229	1235	205	14	1	4190
516	EDC	348.4	0.0	0.0	144.4	80	0	0	80	4271	1902	851	2641	423	10088	4271	1902	851	2641	423	0	0	10088
517	EDC	887.3	122.9	0.0	400.0	1524	1471	109	3105	7970	1923	1362	5180	1336	17772	7970	1923	1362	5180	1336	1471	109	19352
518	EDC	673.0	25.3	0.0	293.2	408	176	13	597	5696	1878	703	4270	836	13382	5696	1878	703	4270	836	176	13	13571
519	EDC	331.3	24.3	0.0	144.3	322	270	17	609	2784	882	360	2038	393	6458	2784	882	360	2038	393	270	17	6745
520	EDC	618.5	15.3	0.0	269.5	312	137	9	457	5706	1672	846	4010	730	12964	5706	1672	846	4010	730	137	9	13110
521	EDC	648.3	115.9	0.0	292.3	1188	1222	86	2497	4994	1137	377	3195	806	10508	4994	1137	377	3195	806	1222	86	11817
522	EDC	212.4	0.0	0.0	86.3	48	0	0	48	2854	581	411	1367	250	5464	2854	581	411	1367	250	0	0	5464
523	EDC	572.5	206.1	6.0	247.4	2284	2968	491	5742	4826	500	527	2627	1204	9684	4826	500	527	2627	1204	2968	491	13143
524	EDC	476.7	103.0	519.0	206.1	1257	2312	209	3778	4529	1854	1698	2912	908	11902	4529	1854	1698	2912	908	2312	209	14423
525	EDC	207.6	0.0	0.0	86.4	46	0	0	46	2253	1602	932	1897	491	7174	2253	1602	932	1897	491	0	0	7174
526	EDC	28.4	0.0	0.0	11.0	5	0	0	5	275	80	81	282	78	796	275	80	81	282	78	0	0	796
527	EDC	395.9	38.0	0.0	164.8	382	284	54	720	3733	1495	294	2816	628	8965	3733	1495	294	2816	628	284	54	9303
528	EDC	2428.4	72.0	0.0	1008.2	944	748	158	1851	30829	15961	6558	24016	7487	84851	30829	15961	6558	24016	7487	748	158	85758
529	EDC	37.7	0.0	0.0	15.5	9	0	0	9	377	136	54	470	158	1195	377	136	54	470	158	0	0	1195
530	EDC	475.3	0.0	0.0	195.1	174	0	0	174	5780	2847	1594	5926	1558	17705	5780	2847	1594	5926	1558	0	0	17705
531	EDC	90.0	0.0	0.0	37.0	28	0	0	28	1162	609	357	1115	330	3573	1162	609	357	1115	330	0	0	3573
532	EDC	149.4	0.0	0.0	61.4	48	0	0	48	1759	720	384	1925	591	5379	1759	720	384	1925	591	0	0	5379
533	EDC	268.4	34.0	0.0	110.6	710	1019	403	2132	2689	790	696	3334	1165	8674	2689	790	696	3334	1165	1019	403	10096
534	EDC	133.8	0.0	0.0	54.9	45	0	0	45	1653	789	438	1803	555	5238	1653	789	438	1803	555	0	0	5238
535	EDC	235.9	0.0	0.0	91.5	66	0	0	66	2951	1097	470	3026	946	8490	2951	1097	470	3026	946	0	0	8490
536	EDC	218.8	0.0	0.0	84.8	58	0	0	58	2697	935	363	2698	856	7549	2697	935	363	2698	856	0	0	7549
537	EDC	439.0	0.0	0.0	170.2	109	0	0	109	5827	2349	975	5204	1658	16013	5827	2349	975	5204	1658	0	0	16013
538	EDC	139.2	36.9	0.0	57.8	565	887	408	1859	1386	319	115	1643	991	4455	1386	319	115	1643	991	887	408	5750
539	EDC	16.0	166.0	338.0	6.6	2478	4846	3057	10382	94	15	778	148	513	1549	94	15	778	148	513	4846	3057	9453
540	EDC	0.0	53.0	0.0	0.0	669	1043	798	2510	0	0	0	0	0	0	0	0	0	0	0	1043	798	1841
541	EDC	43.3	6.0	0.0	18.0	62	57	13	133	348	83	126	360	106	1022	348	83	126	360	106	57	13	1093
542	EDC	123.6	37.0	0.0	52.4	429	460	70	959	1229	457	48	915	249	2897	1229	457	48	915	249	460	70	3428
543	EDC	116.3	107.0	0.0	49.1	2072	3159	1014	6244	1017	119	92	877	837	2942	1017	119	92	877	837	3159	1014	7114
544	EDC	35.3	8.0	0.0	14.9	91	53	17	162	285	68	33	300	67	752	285	68	33	300	67	53	17	823
545	EDC	55.6	0.0	0.0	23.5	15	0	0	15	636	387	127	719	259	2129	636	387	127	719	259	0	0	2129
546	EDC	164.3	0.0	0.0	69.4	57	0	0	57	2142	1512	611	2489	782	7535	2142	1512	611	2489	782	0	0	7535
547	EDC	24.5	46.0	0.0	10.4	550	1888	832	3270	165	23	55	156	232	630	165	23	55	156	232	1888	832	3350
548	EDC	920.2	22.0	0.0	388.2	482	205	27	714	9644	4105	322	7191	1282	22544	9644	4105	322	7191	1282	205	27	22776
549	EDC	102.9	0.0	0.0	43.4	20	0	0	20	1007	346	92	1036	192	2673	1007	346	92	1036	192	0	0	2673
550	EDC	27.6	0.0	0.0	11.0	2	0	0	2	245	54	17	169	28	514	245	54	17	169	28	0	0	514
551	EDC	104.2	54.0	0.0	41.6	879	1292	314	2486	1048	163	68	742	489	2510	1048	163	68	742	489	1292	314	4116
552	EDC	19.8	32.0	0.0	8.4	533	676	225	1434	142	29	10	119	139	438	142	29	10	119	139	676	225	1340
553	EDC	76.6	0.0	0.0	32.4	15	0	0	15	827	291	43	683	130	1974	827	291	43	683	130	0	0	1974
554	EDC	225.4	4.0	0.0	95.2	89	51	10	150	2453	1032	177	1768	313	5743	2453	1032	177	1768	313	51	10	5804
555	EDC	81.7	0.0	0.0	34.6	21	0	0	21	815	391	81	678	179	2144	815	391	81	678	179	0	0	2144
556	EDC	196.2	0.0	0.0	82.8	56	0	0	56	2381	1450	505	2135	531	7002	2381	1450	505	2135	531	0	0	7002
557	EDC	82.6	1.0	0.0	34.9	29	9	2	40	778	191	197	658	202	2025	778	191	197	658	202	9	2	2037
558	EDC	87.6	19.0	0.0	36.5	181	191	39	411	869	647	391	862	228	2997	869	647	391	862	228	191	39	3227
559	EDC	60.9	0.0	0.0	25.4	16	0	0	16	579	270	153	567	173	1743	579	270	153	567	173	0	0	1743
560	EDC	64.2	10.0	0.0	27.1	97	111	27	235	625	252	62	510	151	1600	625	252	62	510	151	111	27	1737
561	EDC	52.2	0.0	0.0	22.1	13	0	0	13	544	252	52	446	111	1405	544	252	52	446	111	0	0	1405
562	EDC	152.0	0.0	0.0	63.3	39	0	0	39	1757	1407	717	1497	375	5754	1757	1407	717	1497	375	0	0	5754
563	EDC	74.2	0.0	0.0	32.9	16	0	0	16	1161	930	349	676	107	3224	1161	930	349	676	107	0	0	3224
564	EDC	35.9	0.0	0.0	15.5	4	0	0	4	290	138	7	259	42	735	290	138	7	259	42	0	0	735
565	EDC	119.1	0.0	0.0	57.5	31	0	0	31	1224	649	62	810	206	2951	1224	649	62	810	206	0	0	2951
566	EDC	224.9	1.0	0.0	95.2	61	24	5	90	2282	951	111	1568	344	5257	2282	951	111	1568	344	24	5	5285
567	EDC	40.0	2.0	0.0	19.3	21	10	2	33	272	93	7	199	51	622	272	93	7	199	51	10	2	634
568	EDC	61.3	0.0	0.0	26.0	11	0	0	11	544	138	13	324	71	1089	544	138	13	324	71	0	0	1089
569	EDC	147.0	31.0	0.0	62.3	312	709	145	1165	1315	300	30	789	333	2768	1315	300	30	789	333	709	145	3622
570	EDC	85.9	92.3	251.0	41.5	872	1412	216	2499	624	170	387	406	259	1845	624	170	387	406	259	1412	216	3473
571	EDC	69.6	0.0	0.0	33.6	17	0	0	17	600	255	16	430	110	1411	600	255	16	430	110	0	0	1411
572	EDC	61.6	34.0	0.0	26.6	269	198	29	496	540	157	12	331	84	1125	540	157	12	331	84	198	29	1352
573	EDC	210.7	2.0	0.0	93.5	91	13	1	105	2681	1445	1031	2437	555	8148	2681	1445	1031	2437	555	13	1	8162
574	EDC	168.9	0.0	0.0	73.0	29	0	0	29	2442	2278	709	1416	198	7043	2442	2278	709	1416	198	0	0	7043
575	EDC	69.3	0.0	0.0	29.9	15	0	0	15	1075	1125	419	1013	168	3800	1075	1125	419	1013	168	0	0	3800
576	EDC	42.8	1.0	0.0	19.0	12	23	3	38	592	333	145	302	55	1427	592	333	145	302	55	23	3	1453

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
577	EDC	29.6	0.0	0.0	13.1	3	0	0	3	402	175	83	190	30	880	402	175	83	190	30	0	0	880
578	EDC	855.7	0.0	0.0	379.7	103	0	0	103	12495	11765	4935	7829	1062	38087	12495	11765	4935	7829	1062	0	0	38087
579	EDC	89.9	12.0	0.0	38.4	100	41	5	145	1482	1374	458	1203	173	4691	1482	1374	458	1203	173	41	5	4737
580	EDC	84.0	5.0	19.0	35.8	59	75	7	141	1379	1234	138	803	143	3696	1379	1234	138	803	143	75	7	3778
581	EDC	101.2	32.0	0.0	45.7	314	78	16	408	1422	1596	698	1369	273	5359	1422	1596	698	1369	273	78	16	5452
582	EDC	32.6	0.0	0.0	13.2	11	0	0	11	510	274	202	388	76	1450	510	274	202	388	76	0	0	1450
583	EDC	803.7	10.0	28.0	363.2	236	167	19	422	12905	14394	4975	10264	1694	44232	12905	14394	4975	10264	1694	167	19	44418
584	EDC	39.4	3.0	19.0	18.5	65	131	35	231	460	608	158	614	249	2089	460	608	158	614	249	131	35	2255
585	EDC	280.6	0.0	0.0	126.8	76	0	0	76	4189	4152	1782	3422	610	14154	4189	4152	1782	3422	610	0	0	14154
586	EDC	96.7	92.0	0.0	51.6	1767	735	117	2620	1103	234	127	836	403	2703	1103	234	127	836	403	735	117	3555
587	EDC	96.7	0.0	0.0	40.1	11	0	0	11	1236	443	135	526	67	2407	1236	443	135	526	67	0	0	2407
588	EDC	835.6	0.0	0.0	326.0	122	0	0	122	10673	4798	2128	5360	680	23638	10673	4798	2128	5360	680	0	0	23638
589	EDC	7.2	0.0	0.0	3.6	1	0	0	1	3	49	0	41	5	97	3	49	0	41	5	0	0	97
590	EDC	44.4	120.0	0.0	18.6	1670	1567	443	3680	346	46	33	194	319	939	346	46	33	194	319	1567	443	2949
591	EDC	7.2	0.0	0.0	3.0	0	0	0	0	25	4	5	19	2	54	25	4	5	19	2	0	0	54
592	EDC	757.6	91.0	384.0	341.6	855	1270	79	2204	5302	962	491	3118	741	10614	5302	962	491	3118	741	1270	79	11963
593	EDC	361.4	28.0	0.0	151.5	276	92	6	374	3491	700	173	1799	308	6470	3491	700	173	1799	308	92	6	6568
594	EDC	745.6	5.0	0.0	312.5	183	9	1	193	8791	2737	419	4556	707	17210	8791	2737	419	4556	707	9	1	17219
595	EDC	62.1	31.0	265.0	27.5	281	845	70	1196	765	200	304	290	186	1746	765	200	304	290	186	845	70	2661
596	EDC	94.8	25.0	0.0	37.0	237	291	22	550	1058	349	66	523	174	2171	1058	349	66	523	174	291	22	2484
597	EDC	239.4	325.5	0.0	107.9	2727	2889	502	6118	1520	268	71	880	755	3494	1520	268	71	880	755	2889	502	6885
598	EDC	31.3	35.0	0.0	14.1	281	417	79	778	156	32	9	85	100	383	156	32	9	85	100	417	79	879
599	EDC	37.9	0.0	0.0	17.1	7	0	0	7	362	97	24	209	35	728	362	97	24	209	35	0	0	728
600	EDC	457.8	130.0	0.0	206.4	1458	791	53	2303	4092	998	408	2673	580	8751	4092	998	408	2673	580	791	53	9596
601	EDC	22.4	0.0	0.0	10.1	5	0	0	5	120	385	177	1034	188	1904	120	385	177	1034	188	0	0	1904
602	EDC	5.6	2.0	0.0	3.0	49	39	13	102	16	9	0	31	33	89	16	9	0	31	33	39	13	141
603	EDC	20.8	2.0	0.0	11.1	83	56	14	153	322	122	15	163	74	697	322	122	15	163	74	56	14	767
604	EDC	30.8	3.0	0.0	17.0	114	22	6	142	573	420	14	215	85	1306	573	420	14	215	85	22	6	1335
605	EDC	39.9	2.0	16.0	18.4	86	70	7	164	523	424	158	312	93	1510	523	424	158	312	93	70	7	1588
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	46.8	0.0	0.0	19.0	13	0	0	13	1454	930	510	1671	451	5015	1454	930	510	1671	451	0	0	5015
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	29	0	29	0	0	0	29	0	0	0	29
609	EDC	74.6	4.0	0.0	34.4	139	143	41	324	1275	768	552	1048	419	4063	1275	768	552	1048	419	143	41	4247
610	EDC	0.0	2315.2	932.0	0.0	22619	10223	3496	36338	0	0	1320	0	922	2242	0	0	1320	0	922	10223	3496	15961
611	EDC	1530.3	47.2	469.0	599.0	911	1123	121	2155	10280	1717	1127	11101	2984	27208	10280	1717	1127	11101	2984	1123	121	28453
612	EDC	2043.8	3488.0	393.0	800.0	32998	13978	2236	49212	11513	1952	1150	13701	5895	34211	11513	1952	1150	13701	5895	13978	2236	50426
613	EDC	5.8	0.0	0.0	2.2	0	0	0	0	15	4	1	18	0	38	15	4	1	18	0	0	0	38
614	EDC	2343.6	65.3	904.0	885.2	1125	2757	284	4167	17753	3599	2138	16913	4685	45088	17753	3599	2138	16913	4685	2757	284	48130
615	EDC	2677.5	0.0	0.0	1021.1	597	0	0	597	17603	3087	890	18539	3605	43722	17603	3087	890	18539	3605	0	0	43722
616	EDC	2668.0	365.3	1179.0	1024.1	3810	4250	457	8518	15512	2394	2426	17728	4816	42877	15512	2394	2426	17728	4816	4250	457	47584
617	EDC	552.6	131.5	2484.0	187.0	1282	7136	1125	9543	3623	738	3778	3854	2343	14336	3623	738	3778	3854	2343	7136	1125	22596
618	EDC	0.0	146.0	0.0	0.0	1141	723	98	1963	0	0	0	0	0	0	0	0	0	0	0	723	98	822
619	EDC	0.0	151.0	0.0	0.0	1225	882	198	2305	0	0	0	0	0	0	0	0	0	0	0	882	198	1080
620	EDC	0.0	196.5	3969.0	0.0	1808	11367	2847	16022	0	0	6241	0	1584	7825	0	0	6241	0	1584	11367	2847	22040
621	EDC	963.4	0.0	0.0	326.1	181	0	0	181	6966	1578	354	7578	1411	17889	6966	1578	354	7578	1411	0	0	17889
622	EDC	1093.5	150.1	607.0	370.0	1585	2483	246	4314	7574	1662	1268	8339	2210	21053	7574	1662	1268	8339	2210	2483	246	23782
623	EDC	0.0	16.0	0.0	0.0	136	75	6	217	0	0	0	0	0	0	0	0	0	0	0	75	6	81
624	EDC	917.5	102.6	920.0	308.9	1095	2732	289	4116	5941	1000	1538	6548	1936	16963	5941	1000	1538	6548	1936	2732	289	19985
625	EDC	0.0	40.0	0.0	0.0	297	128	32	457	0	0	0	0	0	0	0	0	0	0	0	128	32	161
626	EDC	385.6	98.0	0.0	164.0	980	522	46	1548	2350	555	159	2846	659	6569	2350	555	159	2846	659	522	46	7137
627	EDC	0.0	897.0	0.0	0.0	11227	15463	8398	35088	0	0	0	0	0	0	0	0	0	0	0	15463	8398	23861
628	EDC	1347.6	0.0	0.0	525.0	406	0	0	406	11521	1677	817	11024	2477	27516	11521	1677	817	11024	2477	0	0	27516
629	EDC	9613.7	1450.0	1393.0	3226.0	20694	17133	1520	39347	74281	19884	22598	112453	24917	254134	74281	19884	22598	112453	24917	17133	1520	272787
630	EDC	2376.7	0.0	0.0	800.0	725	0	0	725	20442	5534	6773	29902	5018	67669	20442	5534	6773	29902	5018	0	0	67669
631	EDC	706.1	339.4	0.0	304.0	5624	8906	3193	17722	5367	1168	415	8046	7133	22129	5367	1168	415	8046	7133	8906	3193	34228
632	Project Residen	157.8	0.0	0.0	56.0	16	0	0	16	1002	268	176	1609	187	3241	1002	268	176	1609	187	0	0	3241
633	Proj Retail	0.0	34.0	0.0	0.0	441	893	746	2081	0	0	0	0	0	0	0	0	0	0	0	893	746	1639
634	Proj Hotel	0.0	111.0	0.0	0.0	928	600	87	1615	0	0	0	0	0	0	0	0	0	0	0	600	87	687
635	Program Reside	1978.0	0.0	0.0	702.0	484	0	0	484	13051	3587	2325	21136	2982	43080	13051	3587	2325	21136	2982	0	0	43080
636	Program Retail	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2040 Supper Cumulative (No Program Retail)

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	550113	308172	74164	932449	436802	230501	114157	589224	415320	1786005	436802	230501	114157	589224	415320	308172	74164	2168341
651	gateway	0.0	0.0	0.0	0.0	4575	3243	641	8459	4743	3197	1646	5603	3840	19029	4743	3197	1646	5603	3840	3243	641	22912
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	59481	40646	7901	108028	56792	31067	13578	71789	50808	224034	56792	31067	13578	71789	50808	40646	7901	272582
654	gateway	0.0	0.0	0.0	0.0	2893	1902	399	5194	2730	1493	655	3524	2452	10854	2730	1493	655	3524	2452	1902	399	13155
655	gateway	0.0	0.0	0.0	0.0	36546	21913	5182	63642	29969	16953	8107	42091	29344	126465	29969	16953	8107	42091	29344	21913	5182	153560
656	gateway	0.0	0.0	0.0	0.0	7544	2569	624	10737	3487	2190	1407	5442	3743	16270	3487	2190	1407	5442	3743	2569	624	19463
657	gateway	0.0	0.0	0.0	0.0	3806	1507	352	5664	2085	1190	749	2946	2047	9017	2085	1190	749	2946	2047	1507	352	10875
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	1009	454	89	1552	652	395	173	834	555	2610	652	395	173	834	555	454	89	3153
660	gateway	0.0	0.0	0.0	0.0	36807	18747	4623	60177	25040	14088	7229	36642	25404	108403	25040	14088	7229	36642	25404	18747	4623	131773
661	gateway	0.0	0.0	0.0	0.0	26753	14316	3518	44587	19442	10923	5280	28023	19437	83106	19442	10923	5280	28023	19437	14316	3518	100940
662	gateway	0.0	0.0	0.0	0.0	133983	77474	18046	229503	107108	51063	29607	146182	101130	435089	107108	51063	29607	146182	101130	77474	18046	530609
663	gateway	0.0	0.0	0.0	0.0	86026	53422	12132	151580	74015	33710	18721	97951	68423	292820	74015	33710	18721	97951	68423	53422	12132	358374
664	gateway	0.0	0.0	0.0	0.0	67590	49394	9953	126937	72477	28482	17990	84938	57682	261568	72477	28482	17990	84938	57682	49394	9953	320916
665	gateway	0.0	0.0	0.0	0.0	37765	20768	4172	62705	29786	10152	6936	34143	22786	103803	29786	10152	6936	34143	22786	20768	4172	128743
666	gateway	0.0	0.0	0.0	0.0	18324	12035	2392	32750	17387	6319	3884	19707	13316	60612	17387	6319	3884	19707	13316	12035	2392	75039
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	90596	16545	107140	132887	63546	17899	149004	103967	467302	132887	63546	17899	149004	103967	90596	16545	574442
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	34036	24501	5359	63896	41436	21769	9441	42146	23686	138477	41436	21769	9441	42146	23686	24501	5359	168337
672	gateway	0.0	0.0	0.0	0.0	0	11574	2446	14019	11700	7206	1994	19119	12730	52749	11700	7206	1994	19119	12730	11574	2446	66769
673	gateway	0.0	0.0	0.0	0.0	0	4770	985	5755	5186	3390	908	7694	5509	22687	5186	3390	908	7694	5509	4770	985	28442
674	gateway	0.0	0.0	0.0	0.0	0	10585	2133	12718	11432	7053	1992	16476	11516	48468	11432	7053	1992	16476	11516	10585	2133	61186
EDC Total		176,951.9	40,816.4	34,065.0	70,061.5	509,961.0	449,150.0	125,931.0	1,085,048.0	1,415,319.0	398,465.0	218,283.0	1,335,999.0	357,988.0	3,726,039.0	1,415,319.0	398,465.0	218,283.0	1,335,999.0	357,988.0	449,150.0	125,931.0	4,301,129.0

2018 No Project El Dorado County VMT/Employee 26.3
85% Threshold 22.3

Project VMT/Employee 25.5
Adjusted Project VMT/Employee 18.2
Adjusted by removing 112/145*HBW VMT for employee housing
(Assumes 2 hotel employees per cottage)

2018 No Project El Dorado County VMT/Resident 22.1
85% Threshold 18.8

Project VMT/Resident 20.5
Adjusted Project VMT/Resident 14.2
(Adjusted by removing HBW VMT for Employee housing)

Program VMT/Resident 21.8

El Dorado County VMT/Service Population 19.8

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
1	EDC	97.1	16.0	0.0	46.1	419	909	256	1584	1181	505	613	1065	584	3948	1181	505	613	1065	584	909	256	5113
2	EDC	1204.8	34.0	214.0	533.0	495	668	35	1198	14797	2630	625	5845	1201	25098	14797	2630	625	5845	1201	668	35	25801
3	EDC	94.3	0.0	0.0	38.8	31	0	0	31	997	530	317	1616	396	3856	997	530	317	1616	396	0	0	3856
4	EDC	34.8	2.0	0.0	16.0	61	116	26	202	424	285	250	411	125	1495	424	285	250	411	125	116	26	1637
5	EDC	73.0	0.0	0.0	33.0	22	0	0	22	1090	1088	452	1147	253	4030	1090	1088	452	1147	253	0	0	4030
6	EDC	651.0	9.0	0.0	281.5	357	88	18	463	6477	1971	494	5641	1083	15665	6477	1971	494	5641	1083	88	18	15771
7	EDC	1130.1	71.0	0.0	521.9	1076	538	55	1669	12899	7590	1065	8801	1740	32096	12899	7590	1065	8801	1740	538	55	32689
8	EDC	35.4	60.1	0.0	14.1	831	637	123	1591	297	69	16	193	134	709	297	69	16	193	134	637	123	1469
9	EDC	1230.2	117.0	283.0	491.2	1906	1914	182	4002	14105	4605	673	10231	2174	31788	14105	4605	673	10231	2174	1914	182	33884
10	outside EDC	4030.5	55.6	476.0	1571.0	1713	1490	148	3351	25914	5160	2701	31333	7238	72345	25914	5160	2701	31333	7238	1490	148	73983
11	outside EDC	7196.5	607.8	1963.0	2805.0	8702	10417	1342	20461	39611	6274	5820	49767	14484	115957	39611	6274	5820	49767	14484	10417	1342	127716
12	outside EDC	4509.8	264.5	1790.0	1644.0	3724	5549	701	9975	24620	2481	3844	27587	8244	66776	24620	2481	3844	27587	8244	5549	701	73026
13	outside EDC	2683.6	0.0	0.0	989.0	635	0	0	635	18178	2343	1617	17495	4175	43808	18178	2343	1617	17495	4175	0	0	43808
14	outside EDC	4136.1	80.8	855.0	1517.0	1683	2388	265	4336	26549	4228	3580	26171	7365	67893	26549	4228	3580	26171	7365	2388	265	70547
15	outside EDC	28.6	0.0	0.0	10.0	1	0	0	1	212	32	24	250	34	552	212	32	24	250	34	0	0	552
16	outside EDC	1173.3	1089.3	0.0	479.0	13293	11847	4077	29217	5576	802	486	7644	6399	20907	5576	802	486	7644	6399	11847	4077	36831
17	outside EDC	1622.6	0.0	0.0	637.0	574	0	0	574	15960	5892	2606	17495	2760	44712	15960	5892	2606	17495	2760	0	0	44712
18	outside EDC	4528.9	27.9	238.0	1879.0	1815	959	114	2888	38799	14879	4756	40848	11471	110753	38799	14879	4756	40848	11471	959	114	111826
19	outside EDC	1111.2	86.1	739.0	491.0	1294	2508	417	4219	6743	2845	1401	9415	3423	23827	6743	2845	1401	9415	3423	2508	417	26752
20	outside EDC	3.5	5.0	0.0	1.0	64	20	2	85	7	5	9	30	5	55	7	5	9	30	5	20	2	77
21	outside EDC	2.0	111.9	0.0	1.0	1548	531	321	2399	9	4	0	11	17	41	9	4	0	11	17	531	321	893
22	outside EDC	2.0	22.7	0.0	2.0	353	219	231	803	21	4	0	12	44	82	21	4	0	12	44	219	231	532
23	outside EDC	277.4	375.3	2047.0	99.0	6385	6415	2607	15407	1159	527	9582	2635	6090	19993	1159	527	9582	2635	6090	6415	2607	29015
24	outside EDC	124.0	110.9	0.0	124.0	2106	1182	848	4136	1182	371	0	958	1826	4337	1182	371	0	958	1826	1182	848	6367
25	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	outside EDC	2004.7	86.0	0.0	885.0	2013	1350	224	3588	12969	6739	2371	21194	7149	50420	12969	6739	2371	21194	7149	1350	224	51995
27	outside EDC	5.0	21.9	0.0	2.0	293	132	54	478	23	10	0	39	33	105	23	10	0	39	33	132	54	291
28	outside EDC	322.4	6.0	0.0	124.0	213	26	4	242	2235	972	609	4168	1085	9068	2235	972	609	4168	1085	26	4	9097
29	outside EDC	205.7	5.0	0.0	72.0	134	23	3	160	1451	689	497	3002	712	6351	1451	689	497	3002	712	23	3	6377
30	outside EDC	0.0	133.0	0.0	0.0	1731	813	252	2796	0	0	0	0	0	0	0	0	0	0	0	813	252	1065
31	outside EDC	119.4	45.7	0.0	46.0	653	341	50	1045	1128	471	266	1735	533	4133	1128	471	266	1735	533	341	50	4525
32	outside EDC	2148.2	0.0	0.0	821.0	677	0	0	677	18664	6392	2218	20231	5449	52953	18664	6392	2218	20231	5449	0	0	52953
33	outside EDC	56.0	0.0	0.0	22.0	11	0	0	11	464	165	63	542	135	1368	464	165	63	542	135	0	0	1368
34	outside EDC	176.4	15.7	0.0	78.0	399	126	19	544	2063	1032	361	3236	977	7669	2063	1032	361	3236	977	126	19	7814
35	outside EDC	2429.2	183.2	0.0	943.0	3522	739	101	4361	11520	3597	2653	19299	5109	42178	11520	3597	2653	19299	5109	739	101	43017
36	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	outside EDC	0.0	178.0	0.0	0.0	2227	859	451	3537	0	0	0	0	0	0	0	0	0	0	0	859	451	1311
38	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	outside EDC	1560.6	259.2	0.0	680.0	3075	1044	112	4230	6300	1092	587	8596	1914	18490	6300	1092	587	8596	1914	1044	112	19646
40	outside EDC	2268.4	1871.7	0.0	979.0	17992	17179	6368	41540	9903	914	613	10018	9710	31158	9903	914	613	10018	9710	17179	6368	54706
41	outside EDC	1292.1	203.3	0.0	559.0	3065	897	148	4110	6564	1914	1058	11022	3542	24101	6564	1914	1058	11022	3542	897	148	25146
42	outside EDC	4511.7	691.3	447.0	1838.0	11244	10320	2456	24020	24040	7404	3396	35678	17054	87573	24040	7404	3396	35678	17054	10320	2456	100349
43	outside EDC	2109.0	58.2	497.0	825.0	1137	1548	216	2900	14743	4188	1525	15821	5014	41291	14743	4188	1525	15821	5014	1548	216	43054
44	outside EDC	6452.0	463.5	2387.0	2533.0	6451	10630	1867	18948	39754	11094	5491	44787	17858	118984	39754	11094	5491	44787	17858	10630	1867	131481
45	outside EDC	2600.1	1639.2	125.0	1136.0	18430	18398	7072	43900	11022	1016	1032	12449	11701	37220	11022	1016	1032	12449	11701	18398	7072	62689
46	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	outside EDC	0.0	3453.7	0.0	0.0	50474	16368	15586	82427	0	0	0	0	0	0	0	0	0	0	0	16368	15586	31954
48	outside EDC	3165.2	172.0	549.0	1248.0	3104	1824	328	5256	9666	4219	4341	23711	7797	49734	9666	4219	4341	23711	7797	1824	328	51886
49	outside EDC	357.5	4925.2	0.0	144.0	61698	17616	11942	91255	948	362	406	2753	3700	8169	948	362	406	2753	3700	17616	11942	37726
50	outside EDC	2608.3	1467.3	1537.0	1029.0	20150	6121	1412	27683	6964	3428	6300	18243	8467	43401	6964	3428	6300	18243	8467	6121	1412	50934
51	outside EDC	4421.3	1254.2	384.0	1837.0	17028	11510	4192	32730	13376	4087	2944	29666	19137	69211	13376	4087	2944	29666	19137	11510	4192	84912
52	outside EDC	674.0	279.6	3880.0	299.0	3524	8298	2293	14114	2509	910	10991	4811	5541	24761	2509	910	10991	4811	5541	8298	2293	35352
53	outside EDC	4029.1	1058.8	482.0	1563.0	15213	8884	2783	26880	13014	4626	4088	28490	16593	66811	13014	4626	4088	28490	16593	8884	2783	78478
54	outside EDC	1199.8	1874.4	0.0	486.0	26053	6125	1503	33681	3887	2351	1116	10916	4829	23099	3887	2351	1116	10916	4829	6125	1503	30727
55	outside EDC	1793.9	869.6	2114.0	779.0	13257	8818	2992	25067	6115	3543	8993	16186	12774	47610	6115	3543	8993	16186	12774	8818	2992	59420
56	outside EDC	3224.3	282.5	0.0	1203.0	5712	1907	375	7994	9305	5608	4607	29317	10032	58869	9305	5608	4607	29317	10032	1907	375	61151
57	outside EDC	595.3	8063.1	0.0	268.0	107709	23879	12584	144172	1248	1139	635	5451	5163	13637	1248	1139	635	5451	5163	23879	12584	50101
58	outside EDC	1574.4	424.7	0.0	608.0	6953	3386	1128	11467	4818	2724	2104	13943	8361	31950	4818	2724	2104	13943	8361	3386	1128	36464
59	outside EDC	5.0	9.4	0.0	2.0	97	30	8	135	13	3	9	40	19	84	13	3	9	40	19	30	8	122
60	outside EDC	508.0	4670.1	0.0	238.0	63777	15728	8913	88418	1530	916	341	4120	4389	11297	1530	916	341	4120	4389	15728	8913	35938
61	outside EDC	5414.5	1410.8	404.0	2304.0	22091	10115	3012	35218	18428	9246	6744	43455	24458	102332	18428	9246	6744	43455	24458	10115	3012	115458
62	outside EDC	13.3	1648.9	0.0	4.0	20936	5779	3780	30495	34	18	20	105	138	316	34	18	20	105	138	5779	3780	9875
63	outside EDC	877.8	3971.1	0.0	359.0	47654	15739	8525	71918	2861	1383	980	7247	7562	20034	2861	1383	980	7247	7562	15739	8525	44297
64	outside EDC	3935.6	648.5	0.0	1582.0	9199	3379	664	13241	15519	5822	3436	29694	11103	65575	15519	5822	3436	29694	11103	3379	664	69618
65	outside EDC	356.2	0.0	0.0	138.0	124	0	0	124	2153	683	392	3187	1008	7423	2153	683	392	3187	1008	0	0	7423
66	outside EDC	1998.1	192.2	346.0	837.0	3141	2208	545	5894	5879	2745	2246	13954	6382	31205	5879	2745	2246	13954	6382	2208	545	33959
67	outside EDC	2626.8	935.5	0.0	1210.0	16292	7644	2504	26440	8089	5349	2789	24264	14144	54635	8089	5349	2789	24264	14144	7644	2504	64783
68	outside EDC	1475.8	820.5	0.0	707.0	10082	3689	1122	14894	4171	2301	993	10633	5770	23867	4171	2301	993	10633	5770	3689	1122	28678
69	outside EDC	6315.2	7270.8	416.0	2381.0	107162	26185	10055	143402	17538	5875	7384	39817	28632	99246	17538	5875	7384	39817	28632	26185	10055	135486
70	outside EDC	0.0	7350.2	2505.0	0.0	95434	22362	14021	131817	0	0	2585	0	2063	4648	0	0	2585	0	2063	22362	14021	41032
71	outside EDC	7725.4	828.3	1399.0	2980.0	16110	12006	2286	30402	42898	16296	8745	75077	27561	170577	42898	16296	8745	75077	27561	12006	2286	184869
72	outside EDC	220.4	8975.0	0.0	85.0	133689	26824	21072	181585	498	269	210	1510	2340	4826	498	269	210	1510	2340	26824	21072	52723

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
73	outside EDC	0.0	5746.2	0.0	0.0	69563	13720	7759	91042	0	0	0	0	0	0	0	0	0	0	0	13720	7759	21479
74	outside EDC	1134.7	5779.3	0.0	464.0	77252	19282	13419	109953	2855	1027	1005	7636	9808	22332	2855	1027	1005	7636	9808	19282	13419	55032
75	outside EDC	4513.9	2939.3	0.0	1937.0	40854	7337	1261	49451	12057	5277	4261	30467	9177	61239	12057	5277	4261	30467	9177	7337	1261	69837
76	outside EDC	1388.8	297.3	0.0	518.0	4642	3186	1234	9062	3812	1254	1165	9413	6361	22005	3812	1254	1165	9413	6361	3186	1234	26426
77	outside EDC	2910.5	1701.1	993.0	1158.0	23253	8621	2510	34384	8498	3983	5056	22406	12234	52177	8498	3983	5056	22406	12234	8621	2510	63308
78	outside EDC	251.5	1804.6	73.0	107.0	25245	13679	16280	55204	791	215	204	1708	4075	6993	791	215	204	1708	4075	13679	16280	36953
79	outside EDC	0.0	20.4	0.0	0.0	228	136	155	519	0	0	0	0	0	0	0	0	0	0	0	136	155	290
80	outside EDC	0.0	1473.9	0.0	0.0	17560	5118	4875	27553	0	0	0	0	0	0	0	0	0	0	0	5118	4875	9993
81	outside EDC	0.0	6290.8	0.0	0.0	77957	20331	17412	115700	0	0	0	0	0	0	0	0	0	0	0	20331	17412	37743
82	outside EDC	0.0	1787.3	0.0	0.0	20743	6108	4145	30996	0	0	0	0	0	0	0	0	0	0	0	6108	4145	10253
83	outside EDC	1418.7	219.7	1881.0	545.0	3759	5164	1040	9963	8284	2618	6028	12992	6121	36043	8284	2618	6028	12992	6121	5164	1040	42247
84	outside EDC	2887.3	407.0	0.0	1236.0	5984	3537	887	10408	12388	2924	1892	19008	9453	45665	12388	2924	1892	19008	9453	3537	887	50089
85	outside EDC	3258.6	262.1	905.0	1303.0	4289	4461	980	9730	14762	3866	3505	22809	10235	55176	14762	3866	3505	22809	10235	4461	980	60618
86	outside EDC	4494.6	774.9	1521.0	1977.0	10906	10256	2930	24092	15963	4368	5023	29040	16144	70538	15963	4368	5023	29040	16144	10256	2930	83724
87	outside EDC	4961.4	901.4	313.0	2291.0	13195	6990	1936	22122	14883	4639	3869	33321	16165	72877	14883	4639	3869	33321	16165	6990	1936	81804
88	outside EDC	2813.1	761.9	0.0	1127.0	10704	7958	2526	21188	12747	3161	2270	20130	12989	51298	12747	3161	2270	20130	12989	7958	2526	61783
89	outside EDC	0.0	292.1	0.0	0.0	3958	1700	1441	7099	0	0	0	0	0	0	0	0	0	0	0	1700	1441	3141
90	outside EDC	210.2	1019.5	0.0	123.0	16624	8932	10360	35916	555	254	121	1538	3432	5899	555	254	121	1538	3432	8932	10360	25191
91	outside EDC	1739.8	4670.1	34.0	679.0	50309	19611	8453	78373	6744	1646	1531	11867	10500	32288	6744	1646	1531	11867	10500	19611	8453	60353
92	outside EDC	2784.2	141.5	836.0	1159.0	2621	2318	413	5352	13529	3884	4050	21461	7918	50842	13529	3884	4050	21461	7918	2318	413	53573
93	outside EDC	1029.6	249.9	0.0	409.0	4217	1932	342	6490	6966	1312	839	8511	3320	20948	6966	1312	839	8511	3320	1932	342	23221
94	outside EDC	12.0	0.0	0.0	6.0	0	0	0	0	162	25	0	67	29	282	162	25	0	67	29	0	0	282
95	outside EDC	0.0	27.2	0.0	0.0	346	157	75	578	0	0	0	0	0	0	0	0	0	0	0	157	75	232
96	outside EDC	2827.4	456.4	408.0	1151.0	8357	6860	1184	16401	20290	3194	1916	25079	9638	60116	20290	3194	1916	25079	9638	6860	1184	68160
97	outside EDC	3283.3	0.0	0.0	1289.0	1110	0	0	1110	29259	10335	4508	32472	7755	84329	29259	10335	4508	32472	7755	0	0	84329
98	outside EDC	913.1	2957.6	0.0	348.0	32594	15306	6310	54210	3946	534	643	5425	5508	16057	3946	534	643	5425	5508	15306	6310	37673
99	outside EDC	1939.1	1040.5	501.0	791.0	11568	4989	958	17515	9601	1213	1795	11176	4999	28784	9601	1213	1795	11176	4999	4989	958	34731
100	outside EDC	1218.2	157.4	0.0	486.0	2554	1448	215	4218	10552	3069	1510	13021	4208	32360	10552	3069	1510	13021	4208	1448	215	34024
101	outside EDC	3677.1	617.7	467.0	1418.0	7993	5593	900	14486	25573	7373	3052	30376	10844	77218	25573	7373	3052	30376	10844	5593	900	83711
102	outside EDC	195.6	53.0	0.0	76.0	627	274	39	941	1329	444	255	2067	586	4681	1329	444	255	2067	586	274	39	4994
103	outside EDC	5354.4	511.2	765.0	2275.0	7012	8513	1386	16911	35595	11180	2787	39961	14685	104208	35595	11180	2787	39961	14685	8513	1386	114107
104	outside EDC	267.0	0.0	0.0	109.0	93	0	0	93	2004	570	334	2756	693	6357	2004	570	334	2756	693	0	0	6357
105	outside EDC	3393.4	70.9	0.0	1365.0	1964	1251	165	3379	26841	8037	2558	28951	8573	74961	26841	8037	2558	28951	8573	1251	165	76376
106	outside EDC	0.0	70.3	0.0	0.0	759	416	104	1279	0	0	0	0	0	0	0	0	0	0	0	416	104	520
107	outside EDC	4863.6	3741.3	927.0	2202.0	47267	22360	5591	75218	19680	3864	4825	35880	17522	81771	19680	3864	4825	35880	17522	22360	5591	109722
108	outside EDC	1796.3	842.0	0.0	673.0	10660	3387	450	14498	10443	1068	2002	12774	3731	30017	10443	1068	2002	12774	3731	3387	450	33855
109	outside EDC	1569.7	701.7	0.0	639.0	10928	6776	2109	19814	8313	1636	1643	13098	8365	33054	8313	1636	1643	13098	8365	6776	2109	41940
110	outside EDC	620.8	1922.3	0.0	262.0	25775	10154	3672	39600	2707	754	676	5599	4100	13836	2707	754	676	5599	4100	10154	3672	27661
111	outside EDC	1186.8	1667.5	0.0	517.0	26429	22260	14838	63527	4999	710	973	8660	12223	27565	4999	710	973	8660	12223	22260	14838	64664
112	outside EDC	2018.4	2144.3	194.0	749.0	30560	22470	10958	63988	10233	1101	2194	13688	15392	42608	10233	1101	2194	13688	15392	22470	10958	76036
113	outside EDC	0.0	4221.5	0.0	0.0	44533	15938	7844	68315	0	0	0	0	0	0	0	0	0	0	0	15938	7844	23782
114	outside EDC	2119.4	711.2	0.0	801.0	7130	3093	392	10614	10968	1489	1160	12300	3627	29544	10968	1489	1160	12300	3627	3093	392	33028
115	outside EDC	5916.2	1339.3	1547.0	2306.0	21051	20435	4586	46072	34214	6103	6118	44908	22517	113859	34214	6103	6118	44908	22517	20435	4586	138880
116	outside EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	outside EDC	1646.6	1491.8	2300.0	585.0	15911	10336	1840	28087	8334	1358	4400	10937	5033	30062	8334	1358	4400	10937	5033	10336	1840	42238
118	outside EDC	6343.0	186.4	551.0	2399.0	3423	2897	395	6715	27933	4230	3661	36920	10576	83319	27933	4230	3661	36920	10576	2897	395	86611
119	outside EDC	1272.5	6545.1	0.0	509.0	58795	24227	7878	90899	6004	851	548	7323	6143	20869	6004	851	548	7323	6143	24227	7878	52974
120	outside EDC	289.9	5099.5	0.0	113.0	51626	37694	22553	111873	1196	138	103	1644	3843	6924	1196	138	103	1644	3843	37694	22553	67171
121	outside EDC	4220.4	1760.6	651.0	1645.0	20273	24477	7575	52325	18428	2077	2638	23197	17231	63570	18428	2077	2638	23197	17231	24477	7575	95622
122	outside EDC	1805.8	1224.4	3643.0	771.0	11791	11765	2203	25758	7228	1093	732	9860	4316	23228	7228	1093	732	9860	4316	11765	2203	37195
123	outside EDC	569.2	855.2	0.0	208.0	8847	9009	3901	21758	2709	274	301	3141	3728	10153	2709	274	301	3141	3728	9009	3901	23063
124	outside EDC	2653.4	461.3	401.0	1243.0	6878	8112	1880	16870	15213	2761	2464	18331	10175	48943	15213	2761	2464	18331	10175	8112	1880	58935
125	outside EDC	834.5	1004.3	0.0	423.0	11381	10034	5029	26444	3331	380	233	3959	4903	12806	3331	380	233	3959	4903	10034	5029	27869
126	outside EDC	406.0	279.1	0.0	185.0	3546	2983	1200	7728	2044	208	175	2067	2112	6606	2044	208	175	2067	2112	2983	1200	10788
127	outside EDC	1765.6	117.0	0.0	828.0	1844	1230	199	3273	11173	1531	951	10547	4182	28385	11173	1531	951	10547	4182	1230	199	29814
128	outside EDC	2039.9	767.4	0.0	990.0	10527	9552	2632	22711	12630	1815	1265	13539	9170	38420	12630	1815	1265	13539	9170	9552	2632	50604
129	outside EDC	2269.4	0.0	0.0	1030.0	723	0	0	723	13148	2813	1948	15819	4853	38580	13148	2813	1948	15819	4853	0	0	38580
130	outside EDC	924.4	478.2	578.0	402.0	4497	4827	1368	10691	3689	323	933	3920	2992	11857	3689	323	933	3920	2992	4827	1368	18051
131	outside EDC	1290.2	1327.4	1635.0	629.0	12492	10839	3225	26556	5298	590	2903	6005	5398	20194	5298	590	2903	6005	5398	10839	3225	34258
132	outside EDC	925.3	300.9	0.0	409.0	3917	3175	752	7845	5201	962	613	6526	3526	16828	5201	962	613	6526	3526	3175	752	20755
133	outside EDC	5279.7	1484.3	1837.0	2116.0	14758	16504	3711	34973	23241	1995	3221	23053	13391	64900	23241	1995	3221	23053	13391	16504	3711	85115
134	outside EDC	2660.9	1568.3	0.0	1151.0	17202	7818	1303	26324	10180	1770	929	14648	5278	32805	10180	1770	929	14648	5278	7818	1303	41926
135	outside EDC	0.0	2114.0	0.0	0.0	21397	7951	2000	31348	0	0	0	0	0	0	0	0	0	0	0	7951	2000	9951
136	outside EDC	1710.8	110.3	0.0	670.0	1836	1669	258	3763	11302	1447	1083	10879	4191	28901	11302	1447	1083	10879	4191	1669	258	30828
137	outside EDC	6779.1	673.0	610.0	2354.0	9203	12822	2268	24293	36825	4836	5149	40420	17346	104577	36825	4836	5149	40420	17346	12822	2268	119667
138	EDC	378.1	25.0	0.0	173.0	457	153	12	622	2141	374	129	2197	465	5305	2141	374	129	2197	465	153	12	5470
139	EDC	133.2	106.9	0.0	62.0	1428	1237	282	2948	605	141	14	584	551	1896	605	141	14	584	551	1237	282	3415
140	EDC	22.0	442.5	0.0	10.0	7013	6683	3462	17159	46	9	1	48	212	316	46	9	1	48	212	6683	3462	10461
141	EDC	49.2	2.0	0.0	21.0	57	49	5	111	653	180	126	750	218	1927	653	180	126	750	218	49	5	1981
142	EDC	348.9	0.0	0.0	156.9	142	0	0	142	3077	804	185	2959	736	7762	3077	804	185	2959	736	0	0	7762
143	EDC	210.8	4.0	0.0	94.8	107	5	0	112	1472	329	53	1332	318	3505	1472	329	53	1332	318	5	0	3510
144	EDC	186.9	19.0	0.0	74.7	283	83	11	376	1841	301	69	1239	296	3745	1841	301	69	1239	296	83	11	3839

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
145	EDC	69.3	0.0	0.0	30.0	8	0	0	8	355	47	16	223	48	689	355	47	16	223	48	0	0	689
146	EDC	146.8	58.7	25.0	64.0	795	634	100	1529	677	127	72	622	384	1882	677	127	72	622	384	634	100	2616
147	EDC	364.7	0.0	0.0	159.0	105	0	0	105	1837	321	86	1748	353	4345	1837	321	86	1748	353	0	0	4345
148	outside EDC	5292.4	137.7	0.0	2260.0	5794	1401	155	7350	62021	30782	16478	79622	21156	210058	62021	30782	16478	79622	21156	1401	155	211614
149	EDC	125.8	214.2	0.0	44.9	3054	3173	968	7194	883	96	25	710	968	2682	883	96	25	710	968	3173	968	6823
150	EDC	257.8	3.0	0.0	108.8	147	32	3	182	2918	679	292	3231	798	7918	2918	679	292	3231	798	32	3	7953
151	EDC	66.8	0.0	0.0	23.0	5	0	0	5	723	177	128	626	80	1734	723	177	128	626	80	0	0	1734
152	EDC	391.5	99.0	0.0	161.4	1470	1344	177	2991	2909	404	104	2859	1139	7415	2909	404	104	2859	1139	1344	177	8936
153	EDC	411.6	32.5	0.0	191.5	631	441	52	1124	2539	581	128	2810	950	7008	2539	581	128	2810	950	441	52	7501
154	EDC	245.5	16.0	0.0	104.4	188	54	4	247	1372	167	130	1600	305	3573	1372	167	130	1600	305	54	4	3632
155	EDC	285.3	0.0	0.0	108.2	62	0	0	62	2140	365	102	2185	377	5170	2140	365	102	2185	377	0	0	5170
156	EDC	68.0	0.0	0.0	27.0	22	0	0	22	825	287	220	1121	208	2662	825	287	220	1121	208	0	0	2662
157	EDC	790.4	0.0	0.0	273.1	123	0	0	123	4617	836	178	5553	966	12151	4617	836	178	5553	966	0	0	12151
158	EDC	1409.8	72.0	0.0	614.8	1006	338	26	1371	9645	1365	801	8974	2030	22816	9645	1365	801	8974	2030	338	26	23180
159	EDC	993.8	1.0	0.0	409.6	231	0	0	232	7142	1005	624	6343	1218	16332	7142	1005	624	6343	1218	0	0	16332
160	EDC	847.9	0.0	0.0	349.5	235	0	0	235	6426	965	181	5823	1160	14555	6426	965	181	5823	1160	0	0	14555
161	EDC	283.3	0.0	0.0	109.0	46	0	0	46	2374	495	209	2516	485	6079	2374	495	209	2516	485	0	0	6079
162	EDC	4465.2	0.0	0.0	1503.0	870	0	0	870	34630	7847	2352	35224	6172	86224	34630	7847	2352	35224	6172	0	0	86224
163	EDC	430.2	230.0	0.0	144.8	2582	3568	898	7048	2739	389	179	3145	2193	8645	2739	389	179	3145	2193	3568	898	13112
164	EDC	0.0	2237.6	0.0	0.0	21459	8382	3480	33322	0	0	0	0	0	0	0	0	0	0	0	8382	3480	11863
165	EDC	1313.9	0.0	0.0	528.8	340	0	0	340	8303	1382	655	10081	2159	22579	8303	1382	655	10081	2159	0	0	22579
166	EDC	1954.3	58.8	756.0	762.0	1061	2048	243	3352	11579	2004	2014	13400	3862	32860	11579	2004	2014	13400	3862	2048	243	35151
167	EDC	3477.7	55.2	256.0	1497.3	1588	738	73	2399	22684	4486	1369	24211	6045	58795	22684	4486	1369	24211	6045	738	73	59606
168	EDC	2628.9	9.0	0.0	1131.8	719	24	2	744	13609	1873	803	16217	2662	35165	13609	1873	803	16217	2662	24	2	35191
169	EDC	531.7	1939.0	0.0	214.0	20258	23678	12858	56794	2447	319	196	3247	6204	12413	2447	319	196	3247	6204	23678	12858	48949
170	EDC	1217.5	1590.4	0.0	490.0	14387	6278	859	21523	5876	855	481	7779	2592	17583	5876	855	481	7779	2592	6278	859	24720
171	EDC	1080.7	93.7	0.0	441.0	1210	412	41	1663	7056	1175	487	8037	1878	18634	7056	1175	487	8037	1878	412	41	19086
172	EDC	0.0	178.2	0.0	0.0	1747	2002	1446	5195	0	0	0	0	0	0	0	0	0	0	0	2002	1446	3448
173	EDC	0.0	547.0	0.0	0.0	5424	7035	4975	17433	0	0	0	0	0	0	0	0	0	0	0	7035	4975	12009
174	EDC	37.8	11.0	52.0	15.0	199	287	37	523	422	143	180	554	197	1496	422	143	180	554	197	287	37	1820
175	EDC	25.8	5.0	0.0	10.9	63	22	1	87	314	57	31	274	47	723	314	57	31	274	47	22	1	746
176	EDC	76.8	0.0	0.0	32.4	20	0	0	20	831	175	77	949	206	2237	831	175	77	949	206	0	0	2237
177	EDC	66.6	7.0	0.0	26.4	92	32	3	128	579	152	61	782	159	1733	579	152	61	782	159	32	3	1769
178	EDC	94.6	0.0	0.0	36.9	22	0	0	22	1027	207	100	1155	218	2708	1027	207	100	1155	218	0	0	2708
179	EDC	2.7	0.0	0.0	1.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	EDC	1173.1	0.0	0.0	457.0	297	0	0	297	10748	1998	830	9999	2184	25759	10748	1998	830	9999	2184	0	0	25759
181	EDC	274.3	81.0	453.0	104.6	787	1927	263	2977	1971	349	582	1964	904	5769	1971	349	582	1964	904	1927	263	7959
182	EDC	3251.4	0.0	0.0	1240.0	718	0	0	718	25432	4446	1655	22640	4547	58720	25432	4446	1655	22640	4547	0	0	58720
183	EDC	667.9	0.0	0.0	284.1	167	0	0	167	4426	1115	330	5567	1122	12560	4426	1115	330	5567	1122	0	0	12560
184	EDC	1039.1	461.2	1110.0	396.3	4875	8150	1184	14208	7553	1261	1483	7368	3604	21269	7553	1261	1483	7368	3604	8150	1184	30602
185	EDC	346.2	0.0	0.0	150.9	54	0	0	54	2391	449	136	2288	490	5753	2391	449	136	2288	490	0	0	5753
186	EDC	258.1	185.1	0.0	112.5	1984	2631	573	5188	1688	292	97	1660	1232	4970	1688	292	97	1660	1232	2631	573	8174
187	EDC	559.9	85.0	0.0	244.2	917	429	35	1381	3724	542	265	3732	861	9124	3724	542	265	3732	861	429	35	9588
188	EDC	468.1	69.0	0.0	204.1	715	351	22	1088	2866	363	219	2817	512	6778	2866	363	219	2817	512	351	22	7152
189	EDC	103.0	0.0	0.0	36.9	26	0	0	26	1082	327	183	1474	285	3351	1082	327	183	1474	285	0	0	3351
190	EDC	704.5	0.0	0.0	252.4	148	0	0	148	5823	1026	446	6136	1134	14565	5823	1026	446	6136	1134	0	0	14565
191	EDC	75.4	0.0	0.0	27.0	6	0	0	6	561	88	36	572	88	1346	561	88	36	572	88	0	0	1346
192	EDC	69.2	0.0	0.0	25.0	5	0	0	5	497	85	29	457	82	1150	497	85	29	457	82	0	0	1150
193	EDC	2977.0	93.0	0.0	1135.3	1482	556	49	2087	21850	4778	897	21698	4801	54024	21850	4778	897	21698	4801	556	49	54629
194	EDC	1297.4	0.0	0.0	439.0	229	0	0	229	8618	1872	181	9103	1643	21417	8618	1872	181	9103	1643	0	0	21417
195	EDC	26.5	46.6	0.0	10.0	540	804	404	1748	166	28	16	168	287	666	166	28	16	168	287	804	404	1874
196	outside EDC	3646.7	88.2	593.0	1309.0	1682	2186	212	4080	27564	5851	2666	28036	6912	71028	27564	5851	2666	28036	6912	2186	212	73427
197	EDC	225.1	0.0	0.0	85.1	35	0	0	35	1680	313	112	1659	355	4119	1680	313	112	1659	355	0	0	4119
198	EDC	2475.8	470.9	740.0	887.0	5028	10067	1485	16580	17636	2575	1771	17702	7157	46842	17636	2575	1771	17702	7157	10067	1485	58394
199	EDC	173.1	120.0	0.0	62.0	1395	2234	771	4400	1178	218	105	1281	1291	4073	1178	218	105	1281	1291	2234	771	7079
200	EDC	18.5	113.0	0.0	7.0	1218	1378	707	3303	107	21	7	115	236	486	107	21	7	115	236	1378	707	2570
201	EDC	443.3	301.0	0.0	150.0	2683	1779	189	4651	2898	596	193	3266	909	7861	2898	596	193	3266	909	1779	189	9829
202	EDC	2116.9	199.0	0.0	758.4	2482	3527	408	6417	15985	2460	1156	16525	4889	41015	15985	2460	1156	16525	4889	3527	408	44950
203	EDC	3669.5	139.0	0.0	1268.1	1838	800	55	2693	28780	6437	1865	28763	5380	71224	28780	6437	1865	28763	5380	800	55	72080
204	EDC	1048.1	40.9	815.0	362.0	533	2221	223	2978	6423	1306	1308	7231	1953	18220	6423	1306	1308	7231	1953	2221	223	20665
205	EDC	327.1	80.0	0.0	113.0	722	358	29	1109	1901	348	108	2375	437	5168	1901	348	108	2375	437	358	29	5555
206	EDC	147.7	0.0	0.0	51.1	14	0	0	14	887	182	21	1013	158	2261	887	182	21	1013	158	0	0	2261
207	EDC	876.4	0.0	0.0	302.8	186	0	0	186	7045	1527	546	7551	1513	18182	7045	1527	546	7551	1513	0	0	18182
208	EDC	26.0	0.0	0.0	9.0	0	0	0	0	165	40	14	181	22	422	165	40	14	181	22	0	0	422
209	EDC	242.6	14.0	0.0	83.8	155	61	5	221	1881	382	132	1973	378	4747	1881	382	132	1973	378	61	5	4813
210	EDC	465.6	0.0	0.0	157.5	79	0	0	79	3305	733	219	3650	680	8588	3305	733	219	3650	680	0	0	8588
211	EDC	11.3	0.0	0.0	4.0	0	0	0	0	72	8	6	65	3	154	72	8	6	65	3	0	0	154
212	EDC	107.5	0.0	0.0	37.1	13	0	0	13	931	214	77	985	168	2376	931	214	77	985	168	0	0	2376
213	EDC	346.5	0.0	0.0	125.2	73	0	0	73	3234	806	307	3554	693	8593	3234	806	307	3554	693	0	0	8593
214	EDC	26.1	0.0	0.0	10.7	8	0	0	8	354	234	121	301	74	1084	354	234	121	301	74	0	0	1084
215	EDC	401.4	0.0	0.0	143.8	89	0	0	89	3516	714	280	4021	741	9272	3516	714	280	4021	741	0	0	9272
216	EDC	17.4	0.0	0.0	7.1	6	0	0	6	213	165	96	204	72	750	213	165	96	204	72	0	0	750

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
217	EDC	30.7	0.0	0.0	11.0	2	0	0	2	291	71	37	364	49	811	291	71	37	364	49	0	0	811
218	EDC	78.1	0.0	0.0	28.0	12	0	0	12	672	171	78	886	154	1961	672	171	78	886	154	0	0	1961
219	EDC	91.2	77.0	0.0	33.0	979	572	74	1625	838	199	103	1082	325	2547	838	199	103	1082	325	572	74	3193
220	EDC	24.9	0.0	0.0	9.0	1	0	0	1	228	56	30	270	32	615	228	56	30	270	32	0	0	615
221	EDC	2445.6	0.0	0.0	941.0	544	0	0	544	21944	5269	1756	19853	4039	52861	21944	5269	1756	19853	4039	0	0	52861
222	EDC	71.5	26.0	0.0	26.9	224	619	121	964	593	113	32	443	353	1534	593	113	32	443	353	619	121	2274
223	EDC	295.7	0.0	0.0	111.5	28	0	0	28	2483	461	167	1927	337	5374	2483	461	167	1927	337	0	0	5374
224	EDC	267.5	29.0	0.0	100.9	313	158	11	482	2538	589	180	2363	479	6149	2538	589	180	2363	479	158	11	6318
225	EDC	369.9	88.1	944.0	127.8	1044	3628	475	5147	3202	808	1691	3354	1573	10628	3202	808	1691	3354	1573	3628	475	14732
226	EDC	1173.2	84.7	566.0	405.5	924	2225	154	3303	9852	2166	1098	8952	1972	24040	9852	2166	1098	8952	1972	2225	154	26419
227	EDC	456.2	2.0	0.0	186.0	84	3	0	87	3726	844	301	3355	569	8795	3726	844	301	3355	569	3	0	8799
228	EDC	1758.7	20.0	0.0	717.2	466	236	12	714	13388	2651	1152	11536	1848	30576	13388	2651	1152	11536	1848	236	12	30824
229	EDC	257.3	0.0	0.0	99.0	30	0	0	30	2112	473	148	1921	353	5007	2112	473	148	1921	353	0	0	5007
230	EDC	1446.9	0.0	0.0	487.0	272	0	0	272	11271	2446	1137	11896	2074	28824	11271	2446	1137	11896	2074	0	0	28824
231	EDC	59.2	28.0	0.0	20.5	176	167	10	353	444	101	40	410	81	1075	444	101	40	410	81	167	10	1252
232	EDC	109.2	0.0	0.0	39.5	14	0	0	14	1128	293	116	1238	201	2976	1128	293	116	1238	201	0	0	2976
233	EDC	248.0	101.0	0.0	108.1	758	1363	195	2316	1785	375	114	1521	777	4572	1785	375	114	1521	777	1363	195	6130
234	EDC	2423.7	716.1	0.0	1056.8	6000	7009	722	13730	17314	3236	1314	15371	5161	42395	17314	3236	1314	15371	5161	7009	722	50126
235	EDC	2596.9	0.0	0.0	959.0	472	0	0	472	20866	3977	2082	18230	3377	48533	20866	3977	2082	18230	3377	0	0	48533
236	EDC	1276.1	9.0	0.0	471.2	246	38	2	285	10019	2025	769	8634	1457	22904	10019	2025	769	8634	1457	38	2	22944
237	EDC	176.5	0.0	0.0	76.9	21	0	0	21	1342	259	79	1233	256	3169	1342	259	79	1233	256	0	0	3169
238	EDC	903.0	254.7	0.0	368.3	2649	2036	171	4857	7076	1288	657	6615	1748	17383	7076	1288	657	6615	1748	2036	171	19591
239	EDC	178.8	16.0	0.0	67.4	122	339	27	487	1482	254	108	1090	300	3234	1482	254	108	1090	300	339	27	3600
240	EDC	339.9	0.0	0.0	128.2	71	0	0	71	3604	876	447	3483	645	9054	3604	876	447	3483	645	0	0	9054
241	EDC	463.9	2.0	0.0	175.0	71	11	1	83	4135	767	320	3158	585	8965	4135	767	320	3158	585	11	1	8977
242	EDC	61.8	0.0	0.0	23.3	2	0	0	2	507	78	37	354	48	1024	507	78	37	354	48	0	0	1024
243	EDC	153.3	13.0	0.0	57.8	85	51	3	139	1350	245	99	1000	166	2859	1350	245	99	1000	166	51	3	2912
244	EDC	63.7	0.0	0.0	25.4	7	0	0	7	694	265	86	716	102	1863	694	265	86	716	102	0	0	1863
245	EDC	30.0	0.0	0.0	10.0	5	0	0	5	346	92	68	424	70	1001	346	92	68	424	70	0	0	1001
246	EDC	189.0	0.0	0.0	63.0	31	0	0	31	2281	541	405	2150	346	5722	2281	541	405	2150	346	0	0	5722
247	EDC	636.3	0.0	0.0	296.0	330	0	0	330	5767	2280	646	5794	1465	15953	5767	2280	646	5794	1465	0	0	15953
248	EDC	437.6	0.0	0.0	184.6	176	0	0	176	5656	1297	701	4372	1026	13052	5656	1297	701	4372	1026	0	0	13052
249	EDC	57.8	0.0	0.0	26.9	17	0	0	17	528	281	109	875	171	1964	528	281	109	875	171	0	0	1964
250	EDC	124.1	0.0	0.0	53.0	31	0	0	31	1575	369	206	1378	270	3798	1575	369	206	1378	270	0	0	3798
251	EDC	245.9	0.0	0.0	94.1	58	0	0	58	2072	385	149	2253	441	5301	2072	385	149	2253	441	0	0	5301
252	EDC	1217.5	0.0	0.0	461.9	405	0	0	405	10437	2035	775	10314	2139	25700	10437	2035	775	10314	2139	0	0	25700
253	EDC	405.0	0.0	0.0	147.2	117	0	0	117	4002	906	485	4167	772	10333	4002	906	485	4167	772	0	0	10333
254	EDC	303.9	0.0	0.0	116.4	82	0	0	82	2704	572	232	2999	590	7097	2704	572	232	2999	590	0	0	7097
255	EDC	0.0	717.5	0.0	0.0	8638	7602	3522	19763	0	0	0	0	0	0	0	0	0	0	0	7602	3522	11124
256	EDC	174.6	1152.7	0.0	83.0	14878	13365	5205	33449	966	98	100	981	2093	4238	966	98	100	981	2093	13365	5205	22809
257	EDC	868.6	1222.1	0.0	332.6	14477	8109	1243	23829	5244	709	393	5790	2866	15001	5244	709	393	5790	2866	8109	1243	24353
258	EDC	62.6	2.0	0.0	22.8	24	1	0	25	612	158	122	689	90	1671	612	158	122	689	90	1	0	1673
259	EDC	85.3	0.0	0.0	32.4	11	0	0	11	827	222	109	905	137	2201	827	222	109	905	137	0	0	2201
260	EDC	10.1	167.6	0.0	3.5	2159	1832	734	4725	33	5	3	27	80	147	33	5	3	27	80	1832	734	2714
261	EDC	292.3	291.9	0.0	106.3	3797	3406	715	7918	1885	234	87	1836	1393	5435	1885	234	87	1836	1393	3406	715	9556
262	EDC	422.7	258.5	0.0	161.8	3285	2496	402	6183	2528	340	117	2544	1342	6872	2528	340	117	2544	1342	2496	402	9770
263	EDC	314.7	35.0	0.0	114.4	505	538	56	1100	2171	278	93	1989	638	5170	2171	278	93	1989	638	538	56	5764
264	EDC	202.5	45.0	0.0	73.6	637	832	121	1590	1391	175	61	1283	609	3519	1391	175	61	1283	609	832	121	4472
265	EDC	118.3	0.0	0.0	44.9	18	0	0	18	998	228	98	1139	196	2660	998	228	98	1139	196	0	0	2660
266	EDC	90.1	26.2	0.0	41.9	553	490	80	1123	678	175	55	732	401	2041	678	175	55	732	401	490	80	2612
267	EDC	375.2	0.0	0.0	142.3	102	0	0	102	2975	581	222	2996	487	7261	2975	581	222	2996	487	0	0	7261
268	EDC	182.9	6.0	0.0	69.4	101	17	1	120	1417	299	120	1452	281	3570	1417	299	120	1452	281	17	1	3588
269	EDC	528.7	1.0	0.0	205.5	196	0	0	197	4930	777	275	4060	993	11035	4930	777	275	4060	993	0	0	11035
270	EDC	113.1	0.0	0.0	45.2	22	0	0	22	1274	290	110	1078	198	2951	1274	290	110	1078	198	0	0	2951
271	EDC	392.5	5.0	0.0	152.6	168	15	2	185	4246	932	403	3839	807	10228	4246	932	403	3839	807	15	2	10244
272	EDC	372.1	23.0	0.0	132.7	304	157	11	472	3433	549	118	2886	576	7562	3433	549	118	2886	576	157	11	7730
273	EDC	390.2	12.0	0.0	134.5	233	58	4	296	4394	851	365	3665	681	9956	4394	851	365	3665	681	58	4	10019
274	EDC	713.5	98.9	645.0	254.4	1313	2646	234	4193	6468	1137	1149	5353	1663	15769	6468	1137	1149	5353	1663	2646	234	18649
275	EDC	840.5	13.0	0.0	328.0	448	135	11	594	7865	1171	380	6725	1608	17749	7865	1171	380	6725	1608	135	11	17895
276	EDC	1048.5	34.5	0.0	427.6	600	412	30	1042	8307	1442	538	7456	1632	19375	8307	1442	538	7456	1632	412	30	19817
277	EDC	414.1	0.0	0.0	170.7	68	0	0	68	3174	516	128	2682	547	7047	3174	516	128	2682	547	0	0	7047
278	EDC	244.1	0.0	0.0	92.1	48	0	0	48	2592	654	200	2574	474	6494	2592	654	200	2574	474	0	0	6494
279	EDC	122.4	0.0	0.0	46.2	18	0	0	18	1332	359	167	1247	206	3313	1332	359	167	1247	206	0	0	3313
280	EDC	103.7	0.0	0.0	37.0	11	0	0	11	938	134	25	823	127	2047	938	134	25	823	127	0	0	2047
281	EDC	174.1	40.0	359.0	62.1	573	1404	160	2136	1554	218	831	1385	622	4611	1554	218	831	1385	622	1404	160	6174
282	EDC	109.4	0.0	0.0	39.0	10	0	0	10	938	124	19	779	121	1981	938	124	19	779	121	0	0	1981
283	EDC	0.0	179.4	2054.0	0.0	2216	6719	1506	10440	0	0	3854	0	812	4666	0	0	3854	0	812	6719	1506	12890
284	EDC	73.8	25.0	0.0	30.4	264	160	12	437	475	65	10	407	106	1062	475	65	10	407	106	160	12	1235
285	EDC	49.3	66.0	400.0	17.0	860	1505	227	2591	294	45	910	290	312	1851	294	45	910	290	312	1505	227	3582
286	EDC	101.0	0.0	0.0	36.0	11	0	0	11	1007	206	77	878	145	2313	1007	206	77	878	145	0	0	2313
287	EDC	87.1	0.0	0.0	34.0	8	0	0	8	860	162	37	713	118	1889	860	162	37	713	118	0	0	1889
288	EDC	142.7	0.0	0.0	50.9	17	0	0	17	1373	251	85	1240	205	3155	1373	251	85	1240	205	0	0	3155

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
289	EDC	23.2	0.0	0.0	8.0	0	0	0	0	204	29	18	135	9	395	204	29	18	135	9	0	0	395
290	EDC	127.7	0.0	0.0	44.0	14	0	0	14	1348	234	107	1061	177	2926	1348	234	107	1061	177	0	0	2926
291	EDC	498.7	27.9	0.0	195.9	477	174	18	669	6133	1507	402	4863	1010	13915	6133	1507	402	4863	1010	174	18	14107
292	EDC	209.0	0.0	0.0	72.0	35	0	0	35	2477	622	416	2053	314	5883	2477	622	416	2053	314	0	0	5883
293	EDC	76.1	0.0	0.0	34.8	11	0	0	11	478	92	33	473	106	1181	478	92	33	473	106	0	0	1181
294	EDC	250.5	0.0	0.0	100.8	65	0	0	65	1856	301	85	1684	383	4310	1856	301	85	1684	383	0	0	4310
295	EDC	281.9	1491.0	0.0	110.0	31589	38872	17418	87878	2353	155	201	1633	5699	10041	2353	155	201	1633	5699	38872	17418	66330
296	EDC	330.8	56.0	438.0	125.5	837	1586	161	2585	2469	375	1126	2289	881	7140	2469	375	1126	2289	881	1586	161	8887
297	EDC	184.5	0.0	0.0	70.0	30	0	0	30	1225	224	74	1148	138	2809	1225	224	74	1148	138	0	0	2809
298	EDC	208.3	0.0	0.0	79.0	43	0	0	43	1535	245	111	1447	284	3623	1535	245	111	1447	284	0	0	3623
299	EDC	275.1	0.0	0.0	106.9	75	0	0	75	2682	414	192	2336	512	6135	2682	414	192	2336	512	0	0	6135
300	EDC	77.2	0.0	0.0	30.0	9	0	0	9	655	97	37	488	95	1373	655	97	37	488	95	0	0	1373
301	EDC	7.1	0.0	0.0	3.2	0	0	0	0	8	4	3	10	1	26	8	4	3	10	1	0	0	26
302	EDC	133.1	33.0	152.0	60.9	510	535	54	1099	782	154	513	757	313	2518	782	154	513	757	313	535	54	3107
303	EDC	227.8	0.0	0.0	106.0	56	0	0	56	1265	294	59	1411	330	3360	1265	294	59	1411	330	0	0	3360
304	EDC	26.1	275.4	0.0	12.0	3233	1988	564	5785	103	24	9	103	193	431	103	24	9	103	193	1988	564	2982
305	EDC	2.2	283.0	0.0	1.0	3430	1798	488	5716	0	0	0	0	0	0	0	0	0	0	0	1798	488	2286
306	EDC	21.5	55.0	0.0	10.0	634	239	16	889	117	29	3	100	39	289	117	29	3	100	39	239	16	543
307	EDC	36.7	2.0	0.0	16.0	17	7	1	25	165	39	9	157	39	409	165	39	9	157	39	7	1	417
308	EDC	25.3	1.0	0.0	11.0	4	1	0	5	106	24	7	93	18	247	106	24	7	93	18	1	0	248
309	EDC	30.6	4.0	0.0	14.0	31	19	2	52	118	28	7	108	31	291	118	28	7	108	31	19	2	312
310	EDC	59.6	122.0	0.0	26.0	1392	739	122	2253	262	63	13	256	202	797	262	63	13	256	202	739	122	1658
311	EDC	83.0	158.0	0.0	38.0	2428	1896	602	4925	421	73	22	373	550	1440	421	73	22	373	550	1896	602	3937
312	EDC	71.1	43.3	0.0	31.0	592	513	103	1208	322	69	13	290	252	946	322	69	13	290	252	513	103	1563
313	EDC	105.4	506.0	1583.0	42.0	7497	4802	729	13028	563	95	3042	379	740	4818	563	95	3042	379	740	4802	729	10349
314	EDC	201.3	8.0	0.0	81.0	127	18	2	146	1175	143	63	958	207	2546	1175	143	63	958	207	18	2	2566
315	EDC					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
316	EDC	28.4	0.0	0.0	13.0	1	0	0	1	92	24	8	107	19	250	92	24	8	107	19	0	0	250
317	EDC	17.5	0.0	0.0	8.0	0	0	0	0	61	11	3	48	7	130	61	11	3	48	7	0	0	130
318	EDC	334.2	2.0	0.0	134.5	119	1	0	120	1992	267	89	1676	383	4409	1992	267	89	1676	383	1	0	4409
319	EDC	95.4	6.0	0.0	38.0	69	8	1	77	466	66	16	334	65	947	466	66	16	334	65	8	1	955
320	EDC	46.1	39.0	351.0	18.1	562	1504	244	2310	457	96	1113	259	324	2248	457	96	1113	259	324	1504	244	3997
321	EDC	268.3	0.0	0.0	105.4	68	0	0	68	3186	685	120	2398	492	6881	3186	685	120	2398	492	0	0	6881
322	EDC	420.9	33.0	0.0	163.6	574	174	22	770	3839	724	224	3064	727	8578	3839	724	224	3064	727	174	22	8774
323	EDC	136.1	4.0	0.0	52.9	70	12	2	85	1485	369	105	1291	254	3506	1485	369	105	1291	254	12	2	3520
324	EDC	163.0	0.0	0.0	65.1	38	0	0	38	1912	450	161	1592	299	4413	1912	450	161	1592	299	0	0	4413
325	EDC	41.9	0.0	0.0	16.5	4	0	0	4	410	80	14	238	49	791	410	80	14	238	49	0	0	791
326	EDC	127.2	1.0	0.0	49.9	33	1	1	35	1371	270	66	886	165	2758	1371	270	66	886	165	1	1	2760
327	Placerville (not	113.4	0.0	0.0	45.3	18	0	0	18	1068	148	55	644	129	2044	1068	148	55	644	129	0	0	2044
328	EDC	47.5	0.0	0.0	19.0	4	0	0	4	421	76	23	249	52	821	421	76	23	249	52	0	0	821
329	Placerville (not	338.1	0.0	0.0	146.5	100	0	0	100	2633	424	110	1852	489	5508	2633	424	110	1852	489	0	0	5508
330	EDC	193.7	0.0	0.0	77.4	38	0	0	38	1598	200	67	944	214	3023	1598	200	67	944	214	0	0	3023
331	EDC	280.7	0.0	0.0	112.4	89	0	0	89	3216	653	181	2430	565	7044	3216	653	181	2430	565	0	0	7044
332	EDC	105.2	0.0	0.0	47.0	21	0	0	21	683	179	59	584	115	1621	683	179	59	584	115	0	0	1621
333	EDC	224.9	0.0	0.0	91.0	67	0	0	67	1954	676	213	2071	370	5284	1954	676	213	2071	370	0	0	5284
334	EDC	58.2	110.0	0.0	26.0	1496	499	42	2037	366	120	36	380	123	1026	366	120	36	380	123	499	42	1567
335	EDC	165.0	5.0	0.0	76.9	106	5	1	111	1177	225	195	960	191	2747	1177	225	195	960	191	5	1	2752
336	EDC	66.4	0.0	0.0	30.0	10	0	0	10	421	132	44	430	80	1107	421	132	44	430	80	0	0	1107
337	EDC	297.7	62.0	320.0	121.4	930	1268	96	2294	2621	952	972	2238	703	7486	2621	952	972	2238	703	1268	96	8850
338	EDC	836.5	14.0	0.0	325.3	380	173	10	563	7775	1772	963	5617	1111	17239	7775	1772	963	5617	1111	173	10	17421
339	EDC	435.6	0.0	0.0	192.3	121	0	0	121	5275	2943	182	3163	754	12317	5275	2943	182	3163	754	0	0	12317
340	EDC	198.7	14.0	0.0	93.2	269	279	62	610	2455	2035	325	1955	837	7607	2455	2035	325	1955	837	279	62	7948
341	EDC	68.8	8.0	0.0	31.4	91	19	2	112	574	449	5	329	86	1443	574	449	5	329	86	19	2	1464
342	EDC	123.4	0.0	0.0	48.0	27	0	0	27	1184	301	190	1038	174	2887	1184	301	190	1038	174	0	0	2887
343	EDC	126.8	0.0	0.0	56.0	42	0	0	42	1655	592	411	1338	297	4294	1655	592	411	1338	297	0	0	4294
344	EDC	134.5	0.0	0.0	59.4	45	0	0	45	1794	664	426	1409	310	4602	1794	664	426	1409	310	0	0	4602
345	EDC	67.0	0.0	0.0	29.6	17	0	0	17	779	223	105	647	133	1887	779	223	105	647	133	0	0	1887
346	EDC	49.2	0.0	0.0	22.1	10	0	0	10	453	167	49	443	84	1195	453	167	49	443	84	0	0	1195
347	EDC	108.0	0.0	0.0	42.0	23	0	0	23	1162	357	366	1063	172	3121	1162	357	366	1063	172	0	0	3121
348	EDC	108.7	0.0	0.0	48.9	31	0	0	31	984	323	114	1085	226	2732	984	323	114	1085	226	0	0	2732
349	EDC	173.4	18.0	0.0	84.3	289	175	40	504	2290	2034	193	1723	685	6925	2290	2034	193	1723	685	175	40	7139
350	EDC	49.3	0.0	0.0	21.8	16	0	0	16	572	454	15	352	109	1500	572	454	15	352	109	0	0	1500
351	EDC	54.3	0.0	0.0	23.9	11	0	0	11	640	421	176	381	64	1683	640	421	176	381	64	0	0	1683
352	EDC	68.1	0.0	0.0	30.1	15	0	0	15	986	581	331	531	94	2523	986	581	331	531	94	0	0	2523
353	EDC	387.2	1.0	0.0	170.9	93	3	0	96	4954	3127	1417	2523	452	12472	4954	3127	1417	2523	452	3	0	12476
354	EDC	124.1	77.0	590.0	54.8	837	1997	193	3027	1191	711	3100	472	571	6044	1191	711	3100	472	571	1997	193	8234
355	Placerville (in C	971.7	260.3	0.0	421.0	3631	1971	281	5883	5113	594	245	3924	1807	11683	5113	594	245	3924	1807	1971	281	13935
356	Placerville (in C	188.8	0.0	0.0	88.0	47	0	0	47	925	203	60	827	190	2204	925	203	60	827	190	0	0	2204
357	EDC	208.7	21.0	0.0	94.3	406	406	62	874	1274	349	117	1286	568	3594	1274	349	117	1286	568	406	62	4062
358	Placerville (not	191.8	352.1	0.0	86.7	5088	2304	510	7903	948	203	65	910	790	2915	948	203	65	910	790	2304	510	5730
359	EDC	247.3	0.0	0.0	105.0	66	0	0	66	1873	404	165	1643	360	4444	1873	404	165	1643	360	0	0	4444
360	EDC	230.5	10.0	0.0	97.9	228	109	9	347	2029	496	257	2002	491	5275	2029	496	257	2002	491	109	9	5393

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
361	Placerville (in C	971.1	392.1	0.0	466.0	4706	1536	164	6406	4193	826	131	3941	1251	10341	4193	826	131	3941	1251	1536	164	12041
362	Placerville (in C	701.7	913.2	0.0	298.0	13937	9286	2981	26204	2992	320	184	2296	3268	9059	2992	320	184	2296	3268	9286	2981	21326
363	EDC	34.7	0.0	0.0	13.7	1	0	0	1	133	27	15	102	20	297	133	27	15	102	20	0	0	297
364	Placerville (not	389.8	42.0	0.0	154.0	624	183	17	824	1739	229	159	1482	411	4020	1739	229	159	1482	411	183	17	4220
365	EDC	1013.8	125.0	0.0	478.0	2062	1326	171	3558	4375	941	221	4468	1701	11705	4375	941	221	4468	1701	1326	171	13202
366	EDC	32.3	4.0	0.0	15.0	22	10	1	33	65	22	5	75	20	187	65	22	5	75	20	10	1	197
367	EDC	0.0	197.0	0.0	0.0	2108	738	106	2952	0	0	0	0	0	0	0	0	0	0	0	738	106	844
368	EDC	156.8	0.0	0.0	68.0	24	0	0	24	660	152	17	622	107	1558	660	152	17	622	107	0	0	1558
369	EDC	1368.2	41.6	0.0	610.0	890	328	31	1250	6233	1095	281	5571	1556	14736	6233	1095	281	5571	1556	328	31	15095
370	EDC	0.0	303.0	0.0	0.0	3259	1134	222	4615	0	0	0	0	0	0	0	0	0	0	0	1134	222	1355
371	EDC	47.1	0.0	0.0	21.0	4	0	0	4	267	61	10	242	46	626	267	61	10	242	46	0	0	626
372	EDC	771.6	327.7	1178.0	344.0	3802	3866	447	8115	3780	772	2834	3548	1740	12673	3780	772	2834	3548	1740	3866	447	16987
373	EDC	59.7	0.0	0.0	26.0	3	0	0	3	223	41	11	198	34	506	223	41	11	198	34	0	0	506
374	EDC	30.0	2.0	0.0	13.0	11	6	0	17	104	27	4	93	20	248	104	27	4	93	20	6	0	255
375	EDC	32.1	0.0	0.0	14.0	1	0	0	1	156	31	8	114	21	330	156	31	8	114	21	0	0	330
376	EDC	78.0	3.0	0.0	34.0	34	2	0	36	357	65	18	312	64	816	357	65	18	312	64	2	0	818
377	EDC	29.8	14.0	120.0	13.0	142	254	25	422	98	22	298	81	62	561	98	22	298	81	62	254	25	840
378	EDC	62.2	0.0	0.0	27.0	3	0	0	3	242	59	8	208	39	556	242	59	8	208	39	0	0	556
379	EDC	110.6	0.0	0.0	48.0	13	0	0	13	412	97	14	380	80	984	412	97	14	380	80	0	0	984
380	EDC	27.6	0.0	0.0	12.0	1	0	0	1	70	19	4	70	10	174	70	19	4	70	10	0	0	174
381	EDC	16.1	0.0	0.0	7.0	0	0	0	0	38	10	2	42	5	97	38	10	2	42	5	0	0	97
382	EDC	25.4	0.0	0.0	11.0	1	0	0	1	76	18	5	62	13	174	76	18	5	62	13	0	0	174
383	EDC	112.5	0.0	0.0	50.1	18	0	0	18	732	162	43	601	124	1662	732	162	43	601	124	0	0	1662
384	EDC	269.2	0.0	0.0	120.0	61	0	0	61	1619	327	81	1311	316	3653	1619	327	81	1311	316	0	0	3653
385	EDC	1011.6	26.6	0.0	451.0	621	309	24	954	5663	1113	250	4739	1115	12880	5663	1113	250	4739	1115	309	24	13212
386	EDC	201.9	0.0	0.0	90.0	36	0	0	36	1169	248	59	927	211	2614	1169	248	59	927	211	0	0	2614
387	EDC	80.7	8.0	0.0	36.0	85	46	4	135	354	73	15	287	84	812	354	73	15	287	84	46	4	862
388	EDC	0.0	303.0	0.0	0.0	3307	1137	221	4666	0	0	0	0	0	0	0	0	0	0	0	1137	221	1359
389	EDC	4.7	264.0	0.0	2.0	2819	1129	298	4246	1	1	0	4	7	14	1	1	0	4	7	1129	298	1441
390	EDC	392.3	53.5	0.0	182.0	744	415	42	1202	1400	319	59	1539	467	3784	1400	319	59	1539	467	415	42	4241
391	EDC	23.7	69.5	0.0	11.0	776	570	192	1539	43	17	2	53	103	218	43	17	2	53	103	570	192	981
392	EDC	60.4	0.0	0.0	28.0	6	0	0	6	214	41	8	210	39	512	214	41	8	210	39	0	0	512
393	EDC	614.8	68.0	0.0	268.0	1094	633	68	1796	2552	359	124	2513	819	6369	2552	359	124	2513	819	633	68	7070
394	EDC	17.6	0.0	0.0	8.0	0	0	0	0	36	8	2	31	5	81	36	8	2	31	5	0	0	81
395	Placerville (in C	186.0	2323.7	0.0	88.0	29840	12151	4432	46423	659	91	36	615	1476	2878	659	91	36	615	1476	12151	4432	19461
396	EDC	0.0	456.7	0.0	0.0	7400	7221	3904	18525	0	0	0	0	0	0	0	0	0	0	0	7221	3904	11124
397	EDC	109.2	3.0	0.0	50.0	43	1	0	44	469	77	26	413	90	1074	469	77	26	413	90	1	0	1075
398	EDC	32.1	3.0	0.0	14.0	21	10	1	32	121	20	9	94	25	268	121	20	9	94	25	10	1	279
399	EDC	98.7	0.0	0.0	43.0	12	0	0	12	424	70	24	367	73	958	424	70	24	367	73	0	0	958
400	EDC	34.5	11.0	0.0	16.0	124	83	11	218	66	19	5	82	46	218	66	19	5	82	46	83	11	312
401	Placerville (not	86.2	213.0	0.0	40.8	2988	1806	638	5431	346	49	15	270	458	1138	346	49	15	270	458	1806	638	3581
402	EDC	128.0	117.1	0.0	51.0	1286	444	35	1764	523	58	29	406	133	1149	523	58	29	406	133	444	35	1627
403	EDC	267.3	654.0	724.0	124.0	8493	5272	1108	14872	912	162	1925	1043	1383	5425	912	162	1925	1043	1383	5272	1108	11805
404	EDC	43.8	49.0	0.0	19.0	460	143	8	611	126	27	6	115	32	307	126	27	6	115	32	143	8	458
405	EDC	20.8	0.0	0.0	9.0	0	0	0	0	63	10	3	50	9	135	63	10	3	50	9	0	0	135
406	EDC	55.3	286.0	0.0	24.0	4513	4597	2251	11360	175	27	9	155	523	890	175	27	9	155	523	4597	2251	7737
407	EDC	2.2	293.0	535.0	1.0	3442	2834	910	7186	0	0	1101	1	463	1565	0	0	1101	1	463	2834	910	5308
408	EDC	2.1	182.0	0.0	1.0	1862	787	169	2817	3	2	0	5	9	19	3	2	0	5	9	787	169	974
409	Placerville (not	328.8	460.2	0.0	129.9	6688	3633	905	11226	1560	185	110	1351	1363	4570	1560	185	110	1351	1363	3633	905	9107
410	EDC	1003.2	331.9	0.0	426.0	5014	3599	568	9181	5798	815	385	4803	2634	14434	5798	815	385	4803	2634	3599	568	18601
411	Placerville (in C	708.3	1289.3	0.0	299.0	15971	9501	3147	28619	2460	318	163	2088	3166	8195	2460	318	163	2088	3166	9501	3147	20843
412	EDC	211.6	0.0	0.0	89.3	55	0	0	55	1374	208	89	1045	255	2971	1374	208	89	1045	255	0	0	2971
413	Placerville (not	376.0	0.0	0.0	158.7	97	0	0	97	2014	298	124	1511	396	4343	2014	298	124	1511	396	0	0	4343
414	EDC	15.1	120.0	0.0	7.0	1215	448	56	1719	17	10	2	30	29	88	17	10	2	30	29	448	56	592
415	EDC	38.2	0.0	0.0	18.0	2	0	0	2	137	38	8	125	24	332	137	38	8	125	24	0	0	332
416	EDC	19.4	0.0	0.0	9.0	0	0	0	0	42	15	4	54	11	126	42	15	4	54	11	0	0	126
417	Placerville (in C	101.9	294.5	0.0	45.0	3495	2000	673	6169	352	59	19	270	462	1162	352	59	19	270	462	2000	673	3836
418	Placerville (in C	0.0	63.6	0.0	0.0	778	668	384	1829	0	0	0	0	0	0	0	0	0	0	0	668	384	1051
419	Placerville (in C	0.0	84.8	0.0	0.0	971	676	354	2001	0	0	0	0	0	0	0	0	0	0	0	676	354	1030
420	Placerville (in C	116.1	52.0	0.0	49.0	535	120	7	662	419	64	27	315	69	894	419	64	27	315	69	120	7	1021
421	Placerville (in C	170.6	5.0	0.0	72.0	77	2	0	80	647	101	40	483	112	1384	647	101	40	483	112	2	0	1386
422	Placerville (in C	661.7	2042.5	475.0	281.0	30204	7457	1335	38996	2148	349	1027	1871	1746	7142	2148	349	1027	1871	1746	7457	1335	15934
423	EDC	48.1	0.0	0.0	20.3	2	0	0	2	180	32	12	119	25	367	180	32	12	119	25	0	0	367
424	Placerville (not	399.3	249.1	0.0	173.0	3129	1765	257	5152	2215	295	57	1584	861	5011	2215	295	57	1584	861	1765	257	7033
425	Placerville (not	2817.0	600.6	2141.0	1266.7	7695	9456	1256	18407	14071	2050	5763	9981	5464	37330	14071	2050	5763	9981	5464	9456	1256	48042
426	Placerville (not	81.4	0.0	0.0	32.6	6	0	0	6	434	58	7	223	46	768	434	58	7	223	46	0	0	768
427	EDC	235.0	0.0	0.0	94.1	64	0	0	64	2141	316	63	1395	348	4264	2141	316	63	1395	348	0	0	4264
428	EDC	55.0	0.0	0.0	22.0	3	0	0	3	328	51	6	168	34	586	328	51	6	168	34	0	0	586
429	EDC	86.7	0.0	0.0	35.0	14	0	0	14	643	133	50	574	60	1459	643	133	50	574	60	0	0	1459
430	EDC	143.9	10.0	0.0	58.1	156	24	3	183	960	163	89	821	190	2223	960	163	89	821	190	24	3	2250
431	Placerville (in C	60.4	60.0	0.0	29.0	729	236	24	989	225	48	13	179	83	549	225	48	13	179	83	236	24	809
432	EDC	781.3	234.1	0.0	315.5	3143	1106	117	4366	4494	827	419	3768	1229	10737	4494	827	419	3768	1229	1106	117	11960

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
433	Placerville (in C	1016.7	68.3	0.0	493.0	1222	341	37	1600	3507	714	207	3528	1058	9014	3507	714	207	3528	1058	341	37	9392
434	Placerville (in C	77.2	0.0	0.0	36.0	8	0	0	8	198	47	14	181	46	485	198	47	14	181	46	0	0	485
435	Placerville (in C	77.2	48.6	0.0	36.0	553	195	30	778	196	46	13	181	105	540	196	46	13	181	105	195	30	765
436	EDC	63.4	0.0	0.0	25.8	7	0	0	7	415	110	32	343	64	964	415	110	32	343	64	0	0	964
437	EDC	303.9	12.0	0.0	120.5	245	112	10	367	2500	397	195	1799	487	5379	2500	397	195	1799	487	112	10	5501
438	EDC	267.7	11.0	0.0	126.2	233	229	23	485	1751	571	129	1766	546	4763	1751	571	129	1766	546	229	23	5015
439	EDC	334.2	3.0	0.0	157.5	154	2	0	156	2093	582	145	2218	460	5498	2093	582	145	2218	460	2	0	5500
440	EDC	60.2	15.0	0.0	28.4	168	57	4	229	315	107	23	331	81	857	315	107	23	331	81	57	4	918
441	Placerville (in C	31.3	0.0	0.0	13.2	1	0	0	1	160	30	8	104	22	324	160	30	8	104	22	0	0	324
442	Placerville (in C	769.1	69.0	143.0	305.0	1193	980	113	2285	4536	598	522	3170	1250	10076	4536	598	522	3170	1250	980	113	11168
443	EDC	85.9	0.0	0.0	40.5	19	0	0	19	509	164	36	541	120	1370	509	164	36	541	120	0	0	1370
444	EDC	18.9	0.0	0.0	8.0	0	0	0	0	65	16	6	50	10	147	65	16	6	50	10	0	0	147
445	Placerville (not	61.1	11.0	94.0	24.2	139	223	20	383	365	63	268	227	109	1033	365	63	268	227	109	223	20	1276
446	Placerville (in C	61.7	19.0	0.0	26.2	260	217	35	513	328	57	23	207	141	756	328	57	23	207	141	217	35	1009
447	EDC	187.9	0.0	0.0	76.6	48	0	0	48	1483	414	115	1391	270	3673	1483	414	115	1391	270	0	0	3673
448	Placerville (not	145.8	4.0	0.0	57.8	72	18	1	91	945	147	73	628	112	1904	945	147	73	628	112	18	1	1923
449	EDC	30.0	0.0	0.0	14.0	2	0	0	2	158	55	23	139	25	400	158	55	23	139	25	0	0	400
450	EDC	180.2	31.0	0.0	84.0	408	94	9	511	960	223	63	854	243	2341	960	223	63	854	243	94	9	2445
451	EDC	57.9	0.0	0.0	27.0	10	0	0	10	320	94	29	327	73	844	320	94	29	327	73	0	0	844
452	Placerville (not	286.8	33.0	428.0	133.7	538	940	102	1580	1246	236	1105	1110	517	4212	1246	236	1105	1110	517	940	102	5254
453	Placerville (in C	313.2	1.0	0.0	146.0	95	0	0	96	1114	224	57	1080	179	2655	1114	224	57	1080	179	0	0	2656
454	EDC	56.0	0.0	0.0	26.1	5	0	0	5	167	48	13	161	36	425	167	48	13	161	36	0	0	425
455	EDC	180.8	0.0	0.0	73.0	40	0	0	40	1238	248	126	983	221	2817	1238	248	126	983	221	0	0	2817
456	EDC	109.5	0.0	0.0	51.0	27	0	0	27	713	205	66	677	155	1817	713	205	66	677	155	0	0	1817
457	EDC	141.3	5.0	0.0	62.7	100	7	1	107	1224	310	129	956	193	2812	1224	310	129	956	193	7	1	2820
458	Placerville (not	152.1	69.0	0.0	68.8	1156	759	128	2044	829	180	62	780	452	2304	829	180	62	780	452	759	128	3192
459	Placerville (not	40.9	0.0	0.0	18.5	2	0	0	2	173	47	14	148	26	407	173	47	14	148	26	0	0	407
460	EDC	47.2	20.0	0.0	22.0	257	67	6	330	294	82	26	293	73	769	294	82	26	293	73	67	6	842
461	EDC	13.2	59.0	0.0	6.0	684	236	20	941	29	19	4	43	20	115	29	19	4	43	20	236	20	372
462	EDC	66.5	125.0	0.0	31.0	2029	746	145	2921	379	61	67	355	245	1107	379	61	67	355	245	746	145	1999
463	EDC	187.5	0.0	0.0	85.5	42	0	0	42	2005	2210	267	1314	208	6005	2005	2210	267	1314	208	0	0	6005
464	EDC	112.1	0.0	0.0	47.9	34	0	0	34	1332	541	182	981	192	3228	1332	541	182	981	192	0	0	3228
465	EDC	147.7	16.0	0.0	58.8	129	35	4	168	1663	1885	576	1097	203	5425	1663	1885	576	1097	203	35	4	5464
466	EDC	134.9	22.0	0.0	61.5	216	103	13	331	1306	1149	77	984	251	3768	1306	1149	77	984	251	103	13	3884
467	EDC	88.1	0.0	0.0	40.2	25	0	0	25	986	1290	302	705	140	3423	986	1290	302	705	140	0	0	3423
468	EDC	249.0	6.0	0.0	120.9	140	16	2	158	2985	2406	153	2107	607	8258	2985	2406	153	2107	607	16	2	8276
469	EDC	134.3	15.0	0.0	60.3	154	46	8	208	1746	1900	265	1052	285	5249	1746	1900	265	1052	285	46	8	5302
470	EDC	70.4	1.0	0.0	32.1	27	0	0	27	770	870	109	541	126	2416	770	870	109	541	126	0	0	2416
471	EDC	51.3	6.0	0.0	23.4	62	9	1	73	490	627	97	361	80	1655	490	627	97	361	80	9	1	1666
472	EDC	57.1	20.0	0.0	26.0	167	43	6	216	548	656	77	412	92	1784	548	656	77	412	92	43	6	1833
473	EDC	26.0	2.0	0.0	10.4	28	24	2	54	168	101	16	161	56	502	168	101	16	161	56	24	2	528
474	EDC	85.2	0.0	0.0	37.6	23	0	0	23	911	301	73	604	119	2008	911	301	73	604	119	0	0	2008
475	EDC	87.2	0.0	0.0	38.5	24	0	0	24	947	358	104	657	131	2196	947	358	104	657	131	0	0	2196
476	EDC	41.1	0.0	0.0	16.0	7	0	0	7	353	135	73	325	47	933	353	135	73	325	47	0	0	933
477	EDC	75.6	15.0	0.0	30.1	134	34	5	173	767	718	100	593	106	2284	767	718	100	593	106	34	5	2323
478	EDC	66.4	0.0	0.0	30.0	17	0	0	17	619	253	67	533	95	1567	619	253	67	533	95	0	0	1567
479	EDC	131.2	37.0	0.0	52.3	480	451	56	987	1201	364	199	983	399	3146	1201	364	199	983	399	451	56	3652
480	EDC	46.7	0.0	0.0	21.3	14	0	0	14	491	624	192	450	101	1859	491	624	192	450	101	0	0	1859
481	EDC	45.3	0.0	0.0	20.5	12	0	0	12	590	640	193	441	105	1969	590	640	193	441	105	0	0	1969
482	EDC	171.1	3.0	0.0	77.3	92	6	1	99	2295	2029	863	2032	412	7630	2295	2029	863	2032	412	6	1	7638
483	EDC	253.5	9.0	0.0	116.9	160	49	5	213	1993	740	151	1791	369	5044	1993	740	151	1791	369	49	5	5098
484	EDC	237.2	114.0	0.0	92.5	1053	471	30	1554	2185	766	265	1707	366	5289	2185	766	265	1707	366	471	30	5790
485	EDC	46.0	0.0	0.0	18.0	8	0	0	8	530	256	154	366	60	1365	530	256	154	366	60	0	0	1365
486	EDC	167.2	0.0	0.0	74.0	42	0	0	42	2256	983	518	1235	234	5227	2256	983	518	1235	234	0	0	5227
487	EDC	490.8	36.0	0.0	221.8	837	548	66	1451	3720	1011	366	3803	1201	10101	3720	1011	366	3803	1201	548	66	10715
488	EDC	246.6	0.0	0.0	109.1	74	0	0	74	3275	1046	367	1730	345	6763	3275	1046	367	1730	345	0	0	6763
489	EDC	307.1	58.0	0.0	135.8	710	280	22	1013	3176	758	144	2011	478	6566	3176	758	144	2011	478	280	22	6868
490	EDC	62.1	0.0	0.0	25.3	9	0	0	9	532	168	59	469	73	1300	532	168	59	469	73	0	0	1300
491	EDC	398.7	3.0	0.0	162.5	163	39	3	205	3529	900	396	2964	619	8410	3529	900	396	2964	619	39	3	8451
492	EDC	176.9	18.0	0.0	71.6	242	124	10	375	1633	640	201	1522	316	4313	1633	640	201	1522	316	124	10	4447
493	EDC	180.0	26.0	159.0	72.8	375	594	43	1011	1536	584	479	1411	399	4408	1536	584	479	1411	399	594	43	5045
494	EDC	167.7	10.0	0.0	68.4	140	32	2	173	1506	545	53	1330	232	3665	1506	545	53	1330	232	32	2	3699
495	EDC	39.6	0.0	0.0	16.1	3	0	0	3	292	84	32	222	34	665	292	84	32	222	34	0	0	665
496	EDC	204.0	67.0	69.0	82.5	944	1477	209	2630	1809	380	221	1390	802	4602	1809	380	221	1390	802	1477	209	6289
497	EDC	218.3	3.0	0.0	90.5	85	9	1	95	2395	662	201	1631	294	5184	2395	662	201	1631	294	9	1	5194
498	EDC	160.3	6.0	0.0	70.9	96	12	1	109	1955	517	146	1137	227	3982	1955	517	146	1137	227	12	1	3995
499	EDC	75.9	0.0	0.0	30.9	13	0	0	13	657	245	54	489	80	1525	657	245	54	489	80	0	0	1525
500	EDC	24.3	51.0	416.0	11.0	655	1236	207	2099	153	53	748	104	221	1280	153	53	748	104	221	1236	207	2723
501	EDC	49.2	83.0	0.0	22.0	851	318	20	1190	326	118	17	286	73	820	326	118	17	286	73	318	20	1158
502	EDC	286.5	18.0	0.0	120.5	358	281	25	664	2794	813	831	2326	547	7311	2794	813	831	2326	547	281	25	7618
503	EDC	2.2	76.0	0.0	1.0	1183	1118	639	2939	0	0	0	2	4	7	0	0	0	2	4	1118	639	1763
504	EDC	315.3	19.0	0.0	140.9	334	110	11	455	2513	687	199	2295	545	6239	2513	687	199	2295	545	110	11	6360

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
505	EDC	6.7	0.0	0.0	3.0	0	0	0	0	25	6	3	16	1	51	25	6	3	16	1	0	0	51
506	EDC	62.7	0.0	0.0	28.0	9	0	0	9	433	135	37	378	67	1051	433	135	37	378	67	0	0	1051
507	EDC	121.9	37.0	0.0	51.3	412	116	9	536	897	286	64	804	153	2204	897	286	64	804	153	116	9	2328
508	EDC	184.3	186.0	0.0	85.0	2099	694	50	2843	1258	474	74	1150	283	3239	1258	474	74	1150	283	694	50	3984
509	EDC	26.9	30.9	0.0	12.0	292	116	10	418	154	47	7	120	41	369	154	47	7	120	41	116	10	495
510	EDC	199.5	10.0	0.0	92.0	141	65	6	213	1325	454	51	1197	262	3289	1325	454	51	1197	262	65	6	3360
511	EDC	107.2	33.0	0.0	45.1	385	294	38	717	691	216	40	589	242	1777	691	216	40	589	242	294	38	2110
512	EDC	90.2	27.0	0.0	37.9	390	267	33	690	703	188	91	661	239	1882	703	188	91	661	239	267	33	2182
513	EDC	375.0	0.0	0.0	146.3	81	0	0	81	4006	1688	815	2788	423	9721	4006	1688	815	2788	423	0	0	9721
514	EDC	1622.8	0.0	0.0	633.0	333	0	0	333	17161	7762	4594	10793	1643	41953	17161	7762	4594	10793	1643	0	0	41953
515	EDC	169.1	8.0	0.0	70.1	100	14	1	115	1843	661	229	1238	205	4176	1843	661	229	1238	205	14	1	4191
516	EDC	348.4	0.0	0.0	144.4	80	0	0	80	4272	1900	848	2643	423	10086	4272	1900	848	2643	423	0	0	10086
517	EDC	887.3	122.9	0.0	400.0	1524	1470	109	3103	7980	1933	1359	5204	1334	17811	7980	1933	1359	5204	1334	1470	109	19390
518	EDC	673.0	25.3	0.0	293.2	408	177	13	597	5696	1883	702	4288	835	13404	5696	1883	702	4288	835	177	13	13594
519	EDC	331.3	24.3	0.0	144.3	322	270	17	609	2781	885	359	2046	393	6465	2781	885	359	2046	393	270	17	6752
520	EDC	618.5	15.3	0.0	269.5	310	136	9	456	5709	1680	843	4026	730	12988	5709	1680	843	4026	730	136	9	13134
521	EDC	648.3	115.9	0.0	292.3	1187	1219	86	2493	4996	1142	377	3208	805	10529	4996	1142	377	3208	805	1219	86	11834
522	EDC	212.4	0.0	0.0	86.3	48	0	0	48	2852	582	410	1367	250	5462	2852	582	410	1367	250	0	0	5462
523	EDC	572.5	206.1	6.0	247.4	2284	2962	490	5736	4829	502	525	2633	1203	9692	4829	502	525	2633	1203	2962	490	13144
524	EDC	476.7	103.0	519.0	206.1	1256	2318	209	3782	4527	1855	1693	2926	909	11910	4527	1855	1693	2926	909	2318	209	14436
525	EDC	207.6	0.0	0.0	86.4	46	0	0	46	2251	1602	932	1897	489	7172	2251	1602	932	1897	489	0	0	7172
526	EDC	28.4	0.0	0.0	11.0	5	0	0	5	274	80	81	282	78	795	274	80	81	282	78	0	0	795
527	EDC	395.9	38.0	0.0	164.8	382	284	54	720	3733	1496	292	2822	627	8969	3733	1496	292	2822	627	284	54	9307
528	EDC	2428.4	72.0	0.0	1008.2	943	748	158	1849	30836	15922	6553	24041	7482	84834	30836	15922	6553	24041	7482	748	158	85739
529	EDC	37.7	0.0	0.0	15.5	9	0	0	9	377	136	54	470	158	1195	377	136	54	470	158	0	0	1195
530	EDC	475.3	0.0	0.0	195.1	174	0	0	174	5789	2839	1593	5934	1557	17713	5789	2839	1593	5934	1557	0	0	17713
531	EDC	90.0	0.0	0.0	37.0	28	0	0	28	1163	607	357	1115	330	3572	1163	607	357	1115	330	0	0	3572
532	EDC	149.4	0.0	0.0	61.4	48	0	0	48	1761	717	384	1927	590	5380	1761	717	384	1927	590	0	0	5380
533	EDC	268.4	34.0	0.0	110.6	708	1018	404	2130	2689	791	696	3334	1163	8673	2689	791	696	3334	1163	1018	404	10094
534	EDC	133.8	0.0	0.0	54.9	45	0	0	45	1656	787	438	1802	555	5238	1656	787	438	1802	555	0	0	5238
535	EDC	235.9	0.0	0.0	91.5	66	0	0	66	2954	1096	470	3028	946	8493	2954	1096	470	3028	946	0	0	8493
536	EDC	218.8	0.0	0.0	84.8	58	0	0	58	2698	935	362	2700	856	7551	2698	935	362	2700	856	0	0	7551
537	EDC	439.0	0.0	0.0	170.2	109	0	0	109	5830	2346	975	5206	1658	16013	5830	2346	975	5206	1658	0	0	16013
538	EDC	139.2	36.9	0.0	57.8	564	886	408	1858	1387	319	115	1643	991	4455	1387	319	115	1643	991	886	408	5749
539	EDC	16.0	166.0	338.0	6.6	2473	4842	3057	10372	94	15	777	149	513	1548	94	15	777	149	513	4842	3057	9447
540	EDC	0.0	53.0	0.0	0.0	668	1042	797	2507	0	0	0	0	0	0	0	0	0	0	0	1042	797	1839
541	EDC	43.3	6.0	0.0	18.0	62	57	13	133	348	83	126	359	106	1021	348	83	126	359	106	57	13	1092
542	EDC	123.6	37.0	0.0	52.4	429	459	70	958	1228	456	48	916	249	2898	1228	456	48	916	249	459	70	3427
543	EDC	116.3	107.0	0.0	49.1	2070	3157	1013	6241	1017	119	92	878	838	2945	1017	119	92	878	838	3157	1013	7115
544	EDC	35.3	8.0	0.0	14.9	92	53	17	162	286	68	33	299	67	752	286	68	33	299	67	53	17	822
545	EDC	55.6	0.0	0.0	23.5	15	0	0	15	636	386	127	720	259	2127	636	386	127	720	259	0	0	2127
546	EDC	164.3	0.0	0.0	69.4	57	0	0	57	2141	1509	611	2488	781	7530	2141	1509	611	2488	781	0	0	7530
547	EDC	24.5	46.0	0.0	10.4	549	1886	831	3267	164	23	55	156	232	631	164	23	55	156	232	1886	831	3348
548	EDC	920.2	22.0	0.0	388.2	482	204	27	713	9635	4105	322	7223	1283	22566	9635	4105	322	7223	1283	204	27	22797
549	EDC	102.9	0.0	0.0	43.4	20	0	0	20	1006	345	92	1038	191	2672	1006	345	92	1038	191	0	0	2672
550	EDC	27.6	0.0	0.0	11.0	2	0	0	2	246	54	17	168	28	513	246	54	17	168	28	0	0	513
551	EDC	104.2	54.0	0.0	41.6	879	1292	315	2485	1049	163	68	742	489	2511	1049	163	68	742	489	1292	315	4118
552	EDC	19.8	32.0	0.0	8.4	532	676	225	1433	141	30	10	119	139	438	141	30	10	119	139	676	225	1339
553	EDC	76.6	0.0	0.0	32.4	15	0	0	15	825	291	43	686	130	1975	825	291	43	686	130	0	0	1975
554	EDC	225.4	4.0	0.0	95.2	88	51	10	149	2452	1030	177	1776	313	5748	2452	1030	177	1776	313	51	10	5808
555	EDC	81.7	0.0	0.0	34.6	21	0	0	21	815	390	80	678	179	2143	815	390	80	678	179	0	0	2143
556	EDC	196.2	0.0	0.0	82.8	56	0	0	56	2379	1444	504	2136	531	6994	2379	1444	504	2136	531	0	0	6994
557	EDC	82.6	1.0	0.0	34.9	29	9	2	41	778	188	197	658	202	2024	778	188	197	658	202	9	2	2036
558	EDC	87.6	19.0	0.0	36.5	181	191	39	411	869	647	392	861	229	2997	869	647	392	861	229	191	39	3227
559	EDC	60.9	0.0	0.0	25.4	16	0	0	16	578	270	153	568	173	1742	578	270	153	568	173	0	0	1742
560	EDC	64.2	10.0	0.0	27.1	97	111	27	235	625	252	62	510	151	1600	625	252	62	510	151	111	27	1737
561	EDC	52.2	0.0	0.0	22.1	13	0	0	13	546	252	52	447	111	1408	546	252	52	447	111	0	0	1408
562	EDC	152.0	0.0	0.0	63.3	39	0	0	39	1752	1402	716	1498	375	5743	1752	1402	716	1498	375	0	0	5743
563	EDC	74.2	0.0	0.0	32.9	16	0	0	16	1161	923	350	674	107	3216	1161	923	350	674	107	0	0	3216
564	EDC	35.9	0.0	0.0	15.5	4	0	0	4	290	138	7	258	41	735	290	138	7	258	41	0	0	735
565	EDC	119.1	0.0	0.0	57.5	31	0	0	31	1223	648	61	811	205	2949	1223	648	61	811	205	0	0	2949
566	EDC	224.9	1.0	0.0	95.2	61	24	5	90	2281	951	111	1568	345	5256	2281	951	111	1568	345	24	5	5285
567	EDC	40.0	2.0	0.0	19.3	21	10	2	33	272	93	7	199	51	623	272	93	7	199	51	10	2	635
568	EDC	61.3	0.0	0.0	26.0	11	0	0	11	542	140	13	325	71	1089	542	140	13	325	71	0	0	1089
569	EDC	147.0	31.0	0.0	62.3	311	708	145	1164	1317	303	30	789	333	2772	1317	303	30	789	333	708	145	3624
570	EDC	85.9	92.3	251.0	41.5	871	1408	215	2494	624	170	387	406	259	1846	624	170	387	406	259	1408	215	3469
571	EDC	69.6	0.0	0.0	33.6	17	0	0	17	599	256	16	430	109	1410	599	256	16	430	109	0	0	1410
572	EDC	61.6	34.0	0.0	26.6	269	197	29	495	539	157	12	331	84	1123	539	157	12	331	84	197	29	1349
573	EDC	210.7	2.0	0.0	93.5	91	13	1	105	2685	1436	1027	2442	554	8143	2685	1436	1027	2442	554	13	1	8158
574	EDC	168.9	0.0	0.0	73.0	29	0	0	29	2439	2267	709	1416	198	7029	2439	2267	709	1416	198	0	0	7029
575	EDC	69.3	0.0	0.0	29.9	15	0	0	15	1073	1122	419	1010	168	3792	1073	1122	419	1010	168	0	0	3792
576	EDC	42.8	1.0	0.0	19.0	12	23	3	38	592	335	145	303	55	1429	592	335	145	303	55	23	3	1455

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
577	EDC	29.6	0.0	0.0	13.1	3	0	0	3	403	175	83	190	30	880	403	175	83	190	30	0	0	880
578	EDC	855.7	0.0	0.0	379.7	103	0	0	103	12488	11695	4928	7825	1062	37998	12488	11695	4928	7825	1062	0	0	37998
579	EDC	89.9	12.0	0.0	38.4	100	41	5	146	1483	1365	457	1198	174	4676	1483	1365	457	1198	174	41	5	4722
580	EDC	84.0	5.0	19.0	35.8	59	75	7	141	1377	1225	137	802	143	3684	1377	1225	137	802	143	75	7	3766
581	EDC	101.2	32.0	0.0	45.7	314	77	16	407	1423	1588	697	1367	269	5344	1423	1588	697	1367	269	77	16	5437
582	EDC	32.6	0.0	0.0	13.2	11	0	0	11	508	272	202	388	75	1446	508	272	202	388	75	0	0	1446
583	EDC	803.7	10.0	28.0	363.2	235	167	19	421	12897	14325	4970	10255	1686	44134	12897	14325	4970	10255	1686	167	19	44319
584	EDC	39.4	3.0	19.0	18.5	65	130	35	229	460	605	158	611	245	2078	460	605	158	611	245	130	35	2243
585	EDC	280.6	0.0	0.0	126.8	76	0	0	76	4189	4124	1780	3417	608	14118	4189	4124	1780	3417	608	0	0	14118
586	EDC	96.7	92.0	0.0	51.6	1766	733	117	2615	1103	234	126	838	403	2703	1103	234	126	838	403	733	117	3553
587	EDC	96.7	0.0	0.0	40.1	11	0	0	11	1234	444	135	526	67	2405	1234	444	135	526	67	0	0	2405
588	EDC	835.6	0.0	0.0	326.0	122	0	0	122	10678	4794	2122	5372	679	23645	10678	4794	2122	5372	679	0	0	23645
589	EDC	7.2	0.0	0.0	3.6	1	0	0	1	3	49	0	41	5	97	3	49	0	41	5	0	0	97
590	EDC	44.4	120.0	0.0	18.6	1669	1563	444	3676	346	47	33	194	319	940	346	47	33	194	319	1563	444	2947
591	EDC	7.2	0.0	0.0	3.0	0	0	0	0	25	4	5	19	2	54	25	4	5	19	2	0	0	54
592	EDC	757.6	91.0	384.0	341.6	855	1267	79	2201	5306	966	491	3131	738	10632	5306	966	491	3131	738	1267	79	11978
593	EDC	361.4	28.0	0.0	151.5	276	93	6	375	3490	702	172	1804	307	6476	3490	702	172	1804	307	93	6	6574
594	EDC	745.6	5.0	0.0	312.5	183	9	1	192	8797	2748	418	4568	707	17237	8797	2748	418	4568	707	9	1	17247
595	EDC	62.1	31.0	265.0	27.5	281	847	70	1198	766	201	304	290	185	1746	766	201	304	290	185	847	70	2663
596	EDC	94.8	25.0	0.0	37.0	236	290	22	548	1057	350	66	523	174	2170	1057	350	66	523	174	290	22	2483
597	EDC	239.4	325.5	0.0	107.9	2727	2884	502	6114	1520	270	71	882	756	3499	1520	270	71	882	756	2884	502	6885
598	EDC	31.3	35.0	0.0	14.1	281	416	79	777	156	32	9	85	100	383	156	32	9	85	100	416	79	878
599	EDC	37.9	0.0	0.0	17.1	7	0	0	7	361	98	24	210	35	727	361	98	24	210	35	0	0	727
600	EDC	457.8	130.0	0.0	206.4	1458	792	53	2304	4093	1002	408	2688	581	8771	4093	1002	408	2688	581	792	53	9616
601	EDC	22.4	0.0	0.0	10.1	5	0	0	5	119	386	176	1027	184	1892	119	386	176	1027	184	0	0	1892
602	EDC	5.6	2.0	0.0	3.0	49	38	13	100	16	9	0	31	33	90	16	9	0	31	33	38	13	141
603	EDC	20.8	2.0	0.0	11.1	83	54	14	151	322	121	15	164	74	696	322	121	15	164	74	54	14	764
604	EDC	30.8	3.0	0.0	17.0	114	22	6	142	572	414	14	215	84	1300	572	414	14	215	84	22	6	1329
605	EDC	39.9	2.0	16.0	18.4	86	70	7	164	524	426	158	313	93	1513	524	426	158	313	93	70	7	1591
606	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
607	EDC	46.8	0.0	0.0	19.0	13	0	0	13	1455	928	509	1664	445	5002	1455	928	509	1664	445	0	0	5002
608	EDC	2.1	0.0	0.0	1.0	0	0	0	0	0	0	0	29	0	29	0	0	0	29	0	0	0	29
609	EDC	74.6	4.0	0.0	34.4	139	143	40	322	1276	768	553	1043	410	4050	1276	768	553	1043	410	143	40	4234
610	EDC	0.0	2315.2	932.0	0.0	22577	10290	3542	36409	0	0	1322	0	919	2241	0	0	1322	0	919	10290	3542	16073
611	EDC	1530.3	47.2	469.0	599.0	910	1127	123	2160	10263	1712	1130	11124	3006	27235	10263	1712	1130	11124	3006	1127	123	28485
612	EDC	2043.8	3488.0	393.0	800.0	32939	14133	2268	49341	11594	1960	1157	13767	5940	34419	11594	1960	1157	13767	5940	14133	2268	50820
613	EDC	5.8	0.0	0.0	2.2	0	0	0	0	15	4	1	18	0	38	15	4	1	18	0	0	0	38
614	EDC	2343.6	65.3	904.0	885.2	1122	2759	285	4166	17744	3589	2140	16914	4698	45085	17744	3589	2140	16914	4698	2759	285	48128
615	EDC	2677.5	0.0	0.0	1021.1	594	0	0	594	17539	3091	895	18615	3629	43769	17539	3091	895	18615	3629	0	0	43769
616	EDC	2668.0	365.3	1179.0	1024.1	3805	4276	463	8544	15470	2397	2436	17797	4855	42954	15470	2397	2436	17797	4855	4276	463	47693
617	EDC	552.6	131.5	2484.0	187.0	1279	7168	1140	9586	3612	736	3785	3868	2357	14357	3612	736	3785	3868	2357	7168	1140	22664
618	EDC	0.0	146.0	0.0	0.0	1136	727	101	1964	0	0	0	0	0	0	0	0	0	0	0	727	101	828
619	EDC	0.0	151.0	0.0	0.0	1223	885	201	2309	0	0	0	0	0	0	0	0	0	0	0	885	201	1086
620	EDC	0.0	196.5	3969.0	0.0	1806	11414	2885	16104	0	0	6252	0	1581	7833	0	0	6252	0	1581	11414	2885	22131
621	EDC	963.4	0.0	0.0	326.1	180	0	0	180	6940	1571	355	7601	1421	17888	6940	1571	355	7601	1421	0	0	17888
622	EDC	1093.5	150.1	607.0	370.0	1581	2492	248	4321	7554	1661	1271	8368	2229	21083	7554	1661	1271	8368	2229	2492	248	23823
623	EDC	0.0	16.0	0.0	0.0	137	75	6	218	0	0	0	0	0	0	0	0	0	0	0	75	6	81
624	EDC	917.5	102.6	920.0	308.9	1093	2743	293	4129	5921	997	1542	6569	1950	16980	5921	997	1542	6569	1950	2743	293	20016
625	EDC	0.0	40.0	0.0	0.0	297	130	33	460	0	0	0	0	0	0	0	0	0	0	0	130	33	163
626	EDC	385.6	98.0	0.0	164.0	977	524	46	1548	2341	550	160	2851	664	6566	2341	550	160	2851	664	524	46	7137
627	EDC	0.0	897.0	0.0	0.0	11238	15552	8502	35293	0	0	0	0	0	0	0	0	0	0	0	15552	8502	24054
628	EDC	1347.6	0.0	0.0	525.0	405	0	0	405	11476	1678	820	11058	2495	27527	11476	1678	820	11058	2495	0	0	27527
629	EDC	9613.7	1450.0	1393.0	3226.0	20687	17182	1528	39397	73811	19201	22538	112246	24913	252709	73811	19201	22538	112246	24913	17182	1528	271420
630	EDC	2376.7	0.0	0.0	800.0	724	0	0	724	20367	5411	6747	29888	5028	67441	20367	5411	6747	29888	5028	0	0	67441
631	EDC	706.1	339.4	0.0	304.0	5616	8929	3206	17751	5345	1154	415	8063	7134	22111	5345	1154	415	8063	7134	8929	3206	34246
632	Project Residen	157.8	0.0	0.0	56.0	16	0	0	16	984	248	172	1586	190	3179	984	248	172	1586	190	0	0	3179
633	Proj Retail	0.0	34.0	0.0	0.0	440	893	736	2069	0	0	0	0	0	0	0	0	0	0	0	893	736	1629
634	Proj Hotel	0.0	111.0	0.0	0.0	923	601	87	1611	0	0	0	0	0	0	0	0	0	0	0	601	87	688
635	Program Reside	1978.0	0.0	0.0	702.0	480	0	0	480	12856	3288	2323	21011	2947	42425	12856	3288	2323	21011	2947	0	0	42425
636	Program Retail	0.0	180.0	0.0	0.0	2635	4886	4152	11673	0	0	0	0	0	0	0	0	0	0	0	4886	4152	9038
637	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
638	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
639	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
641	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
642	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
643	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
644	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
645	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
646	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
647	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
648	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2040 Supper Cumulative

Zone and Description		Population and Employment				Office				Residential						Retail							
Z	Description	2040 POP	2040 Emp	2040 Students	2040 HH	HBW (A)	WO (P)	OO work portion (P)	Office Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	Residential Total	HBW (P)	HBS (P)	HBSC (P)	HBO (P)	OO Home Portion (P)	WO (P)	OO work portion (P)	Retail Total
649	EDC	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
650	gateway	0.0	0.0	0.0	0.0	551612	308270	74219	934100	437297	231376	114142	591194	416611	1790619	437297	231376	114142	591194	416611	308270	74219	2173108
651	gateway	0.0	0.0	0.0	0.0	4573	3240	642	8455	4742	3193	1645	5609	3836	19025	4742	3193	1645	5609	3836	3240	642	22908
652	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
653	gateway	0.0	0.0	0.0	0.0	59459	40603	7897	107959	56788	31119	13583	71827	50810	224129	56788	31119	13583	71827	50810	40603	7897	272629
654	gateway	0.0	0.0	0.0	0.0	2891	1899	399	5189	2730	1494	655	3526	2451	10856	2730	1494	655	3526	2451	1899	399	13155
655	gateway	0.0	0.0	0.0	0.0	36409	21923	5180	63512	30031	17036	8112	42225	29416	126820	30031	17036	8112	42225	29416	21923	5180	153923
656	gateway	0.0	0.0	0.0	0.0	7501	2576	625	10702	3504	2210	1408	5483	3769	16374	3504	2210	1408	5483	3769	2576	625	19575
657	gateway	0.0	0.0	0.0	0.0	3788	1510	352	5649	2090	1198	750	2956	2053	9048	2090	1198	750	2956	2053	1510	352	10909
658	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
659	gateway	0.0	0.0	0.0	0.0	1009	453	89	1551	652	397	173	835	555	2612	652	397	173	835	555	453	89	3154
660	gateway	0.0	0.0	0.0	0.0	36600	18760	4623	59984	25106	14150	7239	36799	25496	108791	25106	14150	7239	36799	25496	18760	4623	132174
661	gateway	0.0	0.0	0.0	0.0	26617	14314	3518	44450	19449	10958	5281	28099	19490	83276	19449	10958	5281	28099	19490	14314	3518	101108
662	gateway	0.0	0.0	0.0	0.0	132700	77273	17993	227966	106902	50954	29540	146333	101041	434770	106902	50954	29540	146333	101041	77273	17993	530036
663	gateway	0.0	0.0	0.0	0.0	84625	53100	11981	149706	73773	33359	18709	97477	67685	291004	73773	33359	18709	97477	67685	53100	11981	356085
664	gateway	0.0	0.0	0.0	0.0	67451	48924	9935	126309	71425	28457	17951	84655	57606	260094	71425	28457	17951	84655	57606	48924	9935	318953
665	gateway	0.0	0.0	0.0	0.0	37722	20519	4172	62413	29121	10164	6904	34039	22789	103018	29121	10164	6904	34039	22789	20519	4172	127708
666	gateway	0.0	0.0	0.0	0.0	18282	11917	2392	32591	17079	6323	3870	19661	13314	60247	17079	6323	3870	19661	13314	11917	2392	74556
667	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
668	gateway	0.0	0.0	0.0	0.0	0	90440	16585	107025	132924	63406	17900	148990	103945	467164	132924	63406	17900	148990	103945	90440	16585	574189
669	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
670	gateway	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
671	gateway	0.0	0.0	0.0	0.0	34003	24471	5369	63844	41431	21759	9446	42184	23682	138502	41431	21759	9446	42184	23682	24471	5369	168343
672	gateway	0.0	0.0	0.0	0.0	0	11546	2444	13990	11711	7201	1995	19106	12727	52740	11711	7201	1995	19106	12727	11546	2444	66731
673	gateway	0.0	0.0	0.0	0.0	0	4763	988	5750	5185	3395	907	7700	5515	22701	5185	3395	907	7700	5515	4763	988	28452
674	gateway	0.0	0.0	0.0	0.0	0	10566	2134	12700	11433	7036	1993	16473	11522	48457	11433	7036	1993	16473	11522	10566	2134	61157
EDC Total		176,951.9	40,996.4	34,065.0	70,061.5	512,103.0	455,587.0	131,200.0	1,098,900.0	1,412,314.0	395,747.0	218,204.0	1,338,207.0	359,020.0	3,723,500.0	1,412,314.0	395,747.0	218,204.0	1,338,207.0	359,020.0	455,587.0	131,200.0	4,310,288.0

2018 No Project El Dorado County VMT/Employee 26.3
85% Threshold 22.3

Project VMT/Employee 25.4
Adjusted Project VMT/Employee 18.1
Adjusted by removing 112/145*HBW VMT for employee housing
(Assumes 2 hotel employees per cottage)

2018 No Project El Dorado County VMT/Resident 22.1
85% Threshold 18.8

Project VMT/Resident 20.1
Adjusted Project VMT/Resident 13.9
(Adjusted by removing HBW VMT for Employee housing)

Program VMT/Resident 21.4

El Dorado County VMT/Service Population 19.8

Appendix B: NCHRP 684 Calculations

Six-Use Internal Capture Input

Project Information

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	AM Peak Hour
Analyst	TKTPM

Analysis Input

Analysis Period	AM Peak

Land Use	Land Use Type	Land Use Code	Description (optional)	Size	Trips		Wa
					Enter	Exit	To Retail
A	Office						
B	Retail		Commercial	90 ksf	332	309	
C	Restaurant						
D	Cinema						
E	Residential		Housing	758 DU	87	235	
F	Hotel		Hotel	356 rooms	71	47	
I	Other						
	Total				490	591	

	Mode Split and Vehicle Occupancy Estimates						
	Land Use	Entering Trips			Exiting Trips		
		Veh. Occ.	% Transit	%Bike/Walk	Veh. Occ.	% Transit	%Bike/Walk
A	Office	1.00			1.00		
B	Retail	1.00			1.00		
C	Restaurant	1.00			1.00		
D	Cinema	1.00			1.00		
E	Residential	1.00			1.00		
F	Hotel	1.00			1.00		
I	Other	1.00			1.00		

☑ Set Walking Distance Based on Site Size

Project Size (Acres) 60.50

	Average Land Use Interchange Distances (Feet Walking Distance)						
	Origin (From)	Destination (To)					
		Office	Retail	Restaurant	Cinema	Residential	Hotel
A	Office		598	598		598	
B	Retail					598	
C	Restaurant					598	
D	Cinema					598	
E	Residential		598	598			
F	Hotel					598	
I	Other						

Six-Use Internal Capture Output

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	AM Peak Hour
Analyst	TKTPM

Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips	Veh. Occ.	Vehicle-Trips	Person-Trips
Office	1.00	0	0	1.00	0	0
Retail	1.00	332	332	1.00	309	309
Restaurant	1.00	0	0	1.00	0	0
Cinema	1.00	0	0	1.00	0	0
Residential	1.00	87	87	1.00	235	235
Hotel	1.00	71	71	1.00	47	47
Others	1.00	0	0	1.00	0	0

Entering Trips_Internal and External Trips Summary

Destination Land Use	ITE Veh Trips	Person-Trip Estimates			External Trips by Mode		
		Internal	External	Total	Vehicles	Transit	Walk/Bike
Office	0	0	0	0	0	0	0
Retail	332	9	323	332	323	0	0
Restaurant	0	0	0	0	0	0	0
Cinema	0	0	0	0	0	0	0
Residential	87	2	85	87	85	0	0
Hotel	71	0	71	71	71	0	0
Others	0	0	0	0	0	0	0

Exiting Trips_Internal and External Trips Summary

Origin Land Use	ITE Veh Trips	Person-Trip Estimates			External Trips by Mode		
		Internal	External	Total	Vehicles	Transit	Walk/Bike
Office	0	0	0	0	0	0	0
Retail	309	2	307	309	307	0	0
Restaurant	0	0	0	0	0	0	0
Cinema	0	0	0	0	0	0	0
Residential	235	2	233	235	233	0	0
Hotel	47	7	40	47	40	0	0
Others	0	0	0	0	0	0	0

	ITE Veh Trips	Person-Trip Estimates			External Trips by Mode		
		Internal	External	Total	Vehicles	Transit	Walk/Bike
Total	1081	22	1059	1081	1059	0	0

Person Trip internalization by Land Use

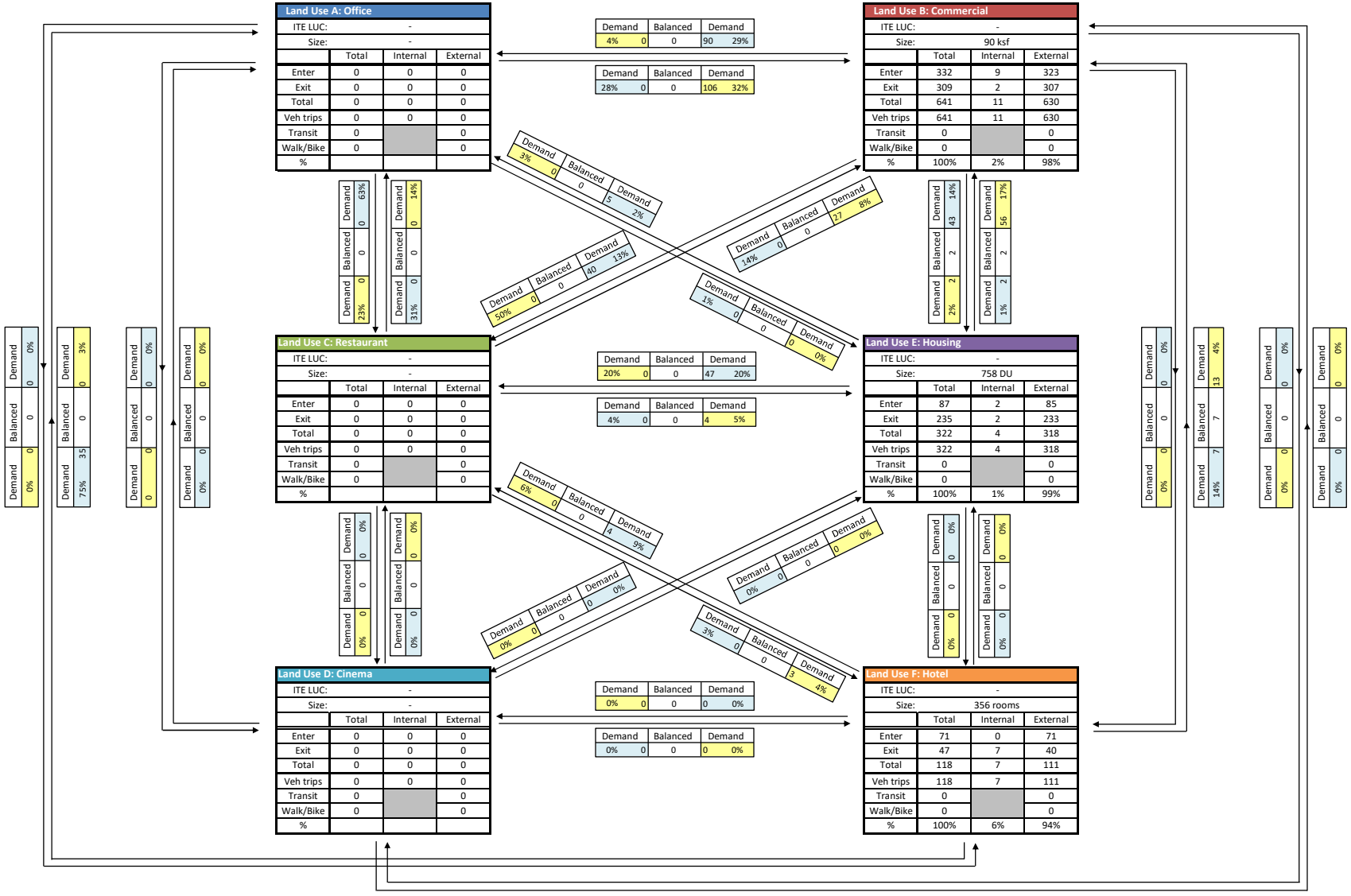
Origin Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	3%	1%
Restaurant	0%	0%
Cinema	0%	0%
Residential	2%	1%
Hotel	0%	15%
Others	0%	0%
Total	2.0%	

Veh Trip Internalization & Diversion by Land Use

Origin Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	3%	1%
Restaurant	0%	0%
Cinema	0%	0%
Residential	2%	1%
Hotel	0%	15%
Others	0%	0%
Total	2.0%	

Multi-Use Internal Capture

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	AM Peak Hour
Analyst	TKTPM



Land Use A: Office	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Veh trips	0	0	0
Transit	0		0
Walk/Bike	0		0
%			

Land Use B: Commercial	Total	Internal	External
Enter	332	9	323
Exit	309	2	307
Total	641	11	630
Veh trips	641	11	630
Transit	0		0
Walk/Bike	0		0
%	100%	2%	98%

Land Use C: Restaurant	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Veh trips	0	0	0
Transit	0		0
Walk/Bike	0		0
%			

Land Use E: Housing	Total	Internal	External
Enter	87	2	85
Exit	235	2	233
Total	322	4	318
Veh trips	322	4	318
Transit	0		0
Walk/Bike	0		0
%	100%	1%	99%

Land Use D: Cinema	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
Veh trips	0	0	0
Transit	0		0
Walk/Bike	0		0
%			

Land Use F: Hotel	Total	Internal	External
Enter	71	0	71
Exit	47	7	40
Total	118	7	111
Veh trips	118	7	111
Transit	0		0
Walk/Bike	0		0
%	100%	6%	94%

Internal and External Trip Summary

Origin Land Use		Total		Internal		External	
		Enter	Exit	Enter	Exit	Enter	Exit
A	Office	0	0	0	0	0	0
B	Commercial	332	309	9	2	323	307
C	Restaurant	0	0	0	0	0	0
D	Cinema	0	0	0	0	0	0
E	Housing	87	235	2	2	85	233
F	Hotel	71	47	0	7	71	40

Internal Capture	2.04%

Six-Use Internal Capture Input

Project Information

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	PM Peak Hour
Analyst	TKTPM

Analysis Input

Analysis Period	PM Peak

Land Use	Land Use Type	Land Use Code	Description (optional)	Size	Trips		Wa
					Enter	Exit	To Retail
A	Office						
B	Retail		Commercial	90 ksf	452	458	
C	Restaurant						
D	Cinema						
E	Residential		Housing	758 DU	237	156	
F	Hotel		Hotel	356 rooms	83	69	
I	Other						
	Total				772	683	

	Mode Split and Vehicle Occupancy Estimates						
	Land Use	Entering Trips			Exiting Trips		
		Veh. Occ.	% Transit	%Bike/Walk	Veh. Occ.	% Transit	%Bike/Walk
A	Office	1.00			1.00		
B	Retail	1.00			1.00		
C	Restaurant	1.00			1.00		
D	Cinema	1.00			1.00		
E	Residential	1.00			1.00		
F	Hotel	1.00			1.00		
I	Other	1.00			1.00		

☑ Set Walking Distance Based on Site Size

Project Size (Acres) 60.50

	Average Land Use Interchange Distances (Feet Walking Distance)						
	Origin (From)	Destination (To)					
		Office	Retail	Restaurant	Cinema	Residential	Hotel
A	Office		598	598		598	
B	Retail					598	
C	Restaurant					598	
D	Cinema					598	
E	Residential		598	598			
F	Hotel					598	
I	Other						

Six-Use Internal Capture Output

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	PM Peak Hour
Analyst	TKTPM

Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips	Veh. Occ.	Vehicle-Trips	Person-Trips
Office	1.00	0	0	1.00	0	0
Retail	1.00	452	452	1.00	458	458
Restaurant	1.00	0	0	1.00	0	0
Cinema	1.00	0	0	1.00	0	0
Residential	1.00	237	237	1.00	156	156
Hotel	1.00	83	83	1.00	69	69
Others	1.00	0	0	1.00	0	0

Entering Trips_Internal and External Trips Summary							
Destination Land Use	ITE Veh Trips	Person-Trip Estimates			External Trips by Mode		
		Internal	External	Total	Vehicles	Transit	Walk/Bike
Office	0	0	0	0	0	0	0
Retail	452	49	403	452	403	0	0
Restaurant	0	0	0	0	0	0	0
Cinema	0	0	0	0	0	0	0
Residential	237	109	128	237	128	0	0
Hotel	83	19	64	83	64	0	0
Others	0	0	0	0	0	0	0

Exiting Trips_Internal and External Trips Summary							
Origin Land Use	ITE Veh Trips	Person-Trip Estimates			External Trips by Mode		
		Internal	External	Total	Vehicles	Transit	Walk/Bike
Office	0	0	0	0	0	0	0
Retail	458	123	335	458	335	0	0
Restaurant	0	0	0	0	0	0	0
Cinema	0	0	0	0	0	0	0
Residential	156	45	111	156	111	0	0
Hotel	69	9	60	69	60	0	0
Others	0	0	0	0	0	0	0

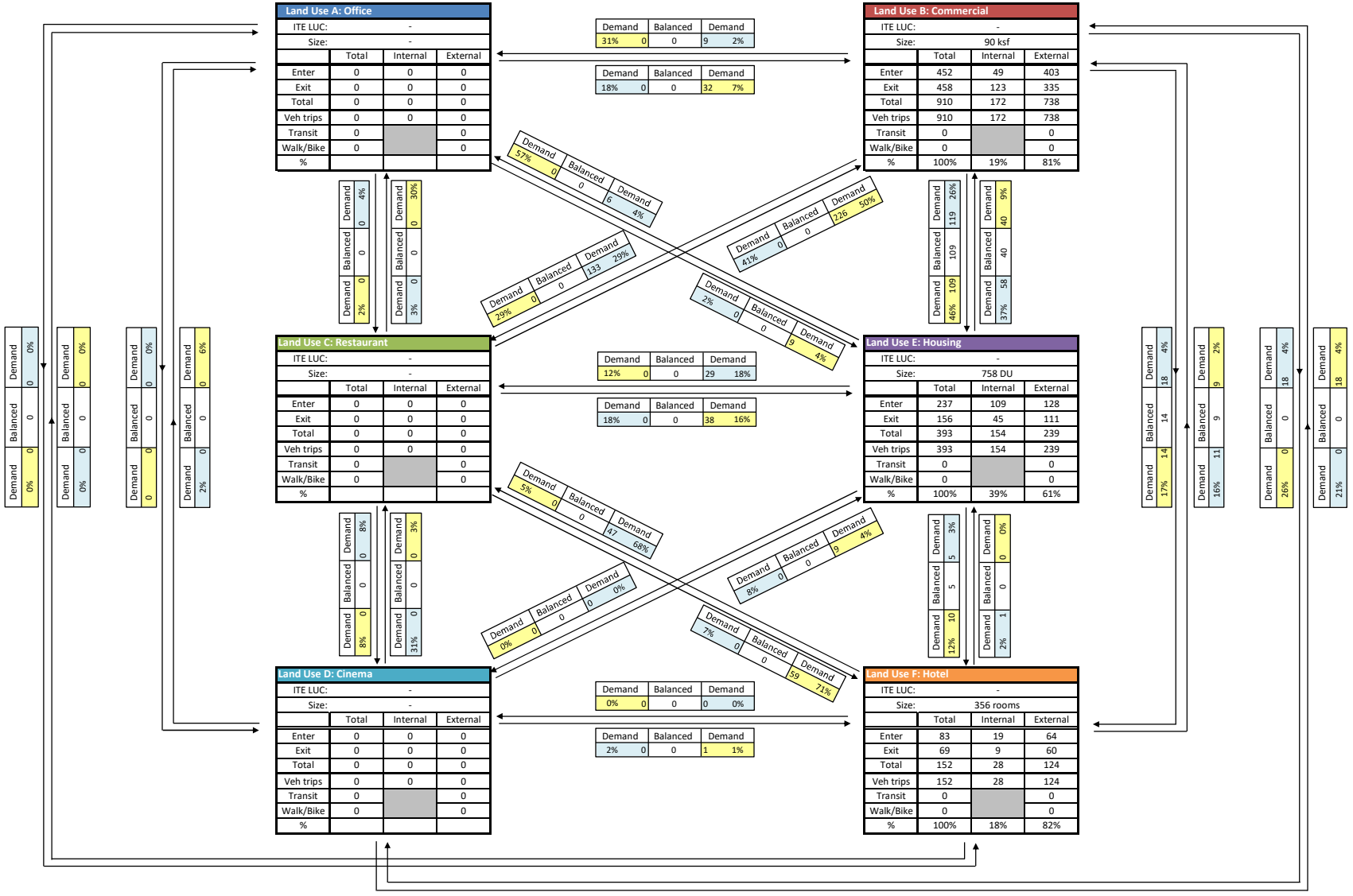
		Person-Trip Estimates			External Trips by Mode		
	ITE Veh Trips	Internal	External	Total	Vehicles	Transit	Walk/Bike
Total	1455	354	1101	1455	1101	0	0

Person Trip internalization by Land Use		
Origin Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	11%	27%
Restaurant	0%	0%
Cinema	0%	0%
Residential	46%	29%
Hotel	23%	13%
Others	0%	0%
Total	24.3%	

Veh Trip Internalization & Diversion by Land Use		
Origin Land Use	Entering Trips	Exiting Trips
Office	0%	0%
Retail	11%	27%
Restaurant	0%	0%
Cinema	0%	0%
Residential	46%	29%
Hotel	23%	13%
Others	0%	0%
Total	24.3%	

Multi-Use Internal Capture

Project Number	P22150
Project Name	T&C Village Project + Program
Scenario	PM Peak Hour
Analyst	TKTPM



Internal and External Trip Summary

Origin Land Use		Total		Internal		External	
		Enter	Exit	Enter	Exit	Enter	Exit
A	Office	0	0	0	0	0	0
B	Commercial	452	458	49	123	403	335
C	Restaurant	0	0	0	0	0	0
D	Cinema	0	0	0	0	0	0
E	Housing	237	156	109	45	128	111
F	Hotel	83	69	19	9	64	60

Internal Capture	24.33%

APPENDIX Q



SB 610
Water Supply Assessment
for
Town & Country Village El Dorado

Prepared for
El Dorado Irrigation District

Adopted Oct 10, 2023

Prepared by

ZANJERO
ADVISE • MANAGE • SOLVE

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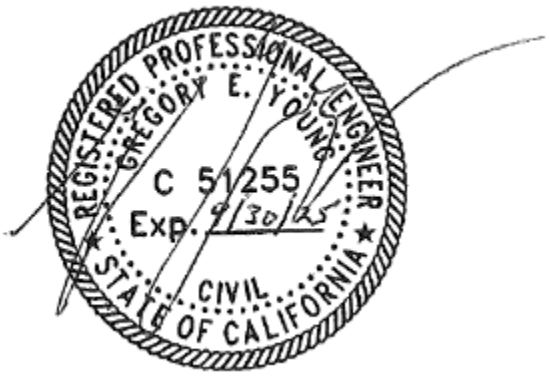
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This Water Supply Assessment was prepared under the direction of a California licensed civil engineer.



Section 1 – Project Introduction

As the lead agency under the California Environmental Quality Act ("CEQA"), the County of El Dorado ("County") is assessing the potential environmental effects associated with the proposed Town & Country Village (referred to as the "Proposed Project"). The Proposed Project is located within the El Dorado Irrigation District (EID) sphere of influence (annexation into EID's service area required), and the County has identified EID as the water supplier that would serve the Proposed Project, should it be approved. To inform the CEQA analysis, Zanjero has prepared this Water Supply Assessment ("WSA") to evaluate EID's water supply sufficiency to meet the new demands expected to be generated by the Proposed Project. This analysis relies upon information from EID, including but not limited to, the El Dorado Irrigation District 2020 Urban Water Management Plan ("EID UWMP"), adopted June 2021.[1]

Analytical method and legal requirements

This WSA estimates the Proposed Project's water demand through build-out, presents and discusses the availability of water sources identified to meet that demand, and assesses whether expected water supplies will be sufficient to meet the projected water demand of EID with the Proposed Project along with current customers and other planned uses during normal, single dry, and multiple dry year conditions.

The above-referenced analytical method is derived from the Water Supply Assessment Law ("WSA Law") codified at Water Code section 10910 et seq. The WSA Law, sometimes referred to as "SB 610," outlines the information and analysis that must be included in a CEQA document prepared for certain projects of a specified size and composed of certain land-uses. Triggers requiring the preparation of a WSA include residential developments of more than 500 dwelling units, shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space, commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space, and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. The Proposed Project is a 60-acre mixed-use development with more than 500 dwelling units in total, and therefore a WSA is required.

WSA Law requires an assessment of whether projected water supplies identified to serve a proposed project will be sufficient to meet existing and planned water demands over a 20-year horizon. The WSA Law expressly anticipates events like the most recent drought by requiring assessment of water supply sufficiency in single dry years and multiple dry years – not just under normal, or average, hydrologic conditions.

The WSA will be incorporated into the CEQA documents — an Environmental Impact Report (EIR) — being prepared for the Proposed Project (the Project EIR).

[1] A copy of the EID 2020 UWMP is available at https://www.eid.org/home/showpublisheddocument/5666/637619651261230000

Document preparation and approval

The WSA Law requires that the lead agency – in this case, the County of El Dorado – identify a "public water system" and further requires the lead agency to request that each identified public water system prepare a WSA for the project. The El Dorado Irrigation District operates a public water system in western El Dorado County and the Proposed Project lies within EID's service area (subject to annexation); it is anticipated that EID would serve the Proposed Project. Therefore, EID is required to determine, based on the entire record, whether its projected water supplies will be sufficient to satisfy the demands for the Proposed Project, in addition to existing customers and all planned future uses.

This WSA provides the necessary information for EID to make its determinations and to comply with the statutory assessment of water supply sufficiency as required by WSA Law. The governing body of EID is required to approve this WSA.

Document organization

The WSA is organized according to the following sections:

- **Section 1: Proposed Project Introduction**. This section provides an overview of the WSA's purpose and organization, along with a detailed description of the Proposed Project, including the land use elements that will create water demand.
- **Section 2: Proposed Project Estimated Water Demands**. This section describes the methodology used to estimate water demands of the Proposed Project and details the estimated water demands from initiation through build-out.
- **Section 3: Representation in 2020 UWMP**. This section presents relevant water demand and supply information from the 2020 EID Urban Water Management Plan and relationship to the Proposed Project for purposes of Water Code Section 10910(c)(2).
- **Section 4: Sufficiency Conclusion**. This section provides the concluding statement of water supply availability for purposes of Water Code Section 10910.

Proposed Project Description

The Proposed Project (Town & Country Village El Dorado, TCVED) is a mixed-use hotel-resort, event center, and residential development situated on approximately 60.5 acres adjacent to Bass Lake Road and U.S. Highway 50. The total Proposed Project development is split into two development areas: the *Proposed Project Development Area* of the Proposed Project will be evaluated at a project level and includes two hotels, retail services, two restaurants, a museum, an event center, parking, and 112 residential cottages totaling 30.3 acres. The *Program Study Area* will be evaluated at a program level and includes uses that are not yet specifically defined but may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes and cottages, and other uses allowed by the zoning district, totaling 30.2 acres.

This WSA evaluates the total expected water demand from both the *Proposed Project Development Area* and *Program Study Area* at full buildout.

Project Development Area

Figure 1 provides a map of (a) the Proposed Project location and (b) the location of the *Project Development Area* and the *Program Study Area*.

Figure 1a & 1b – Proposed Project location and areas

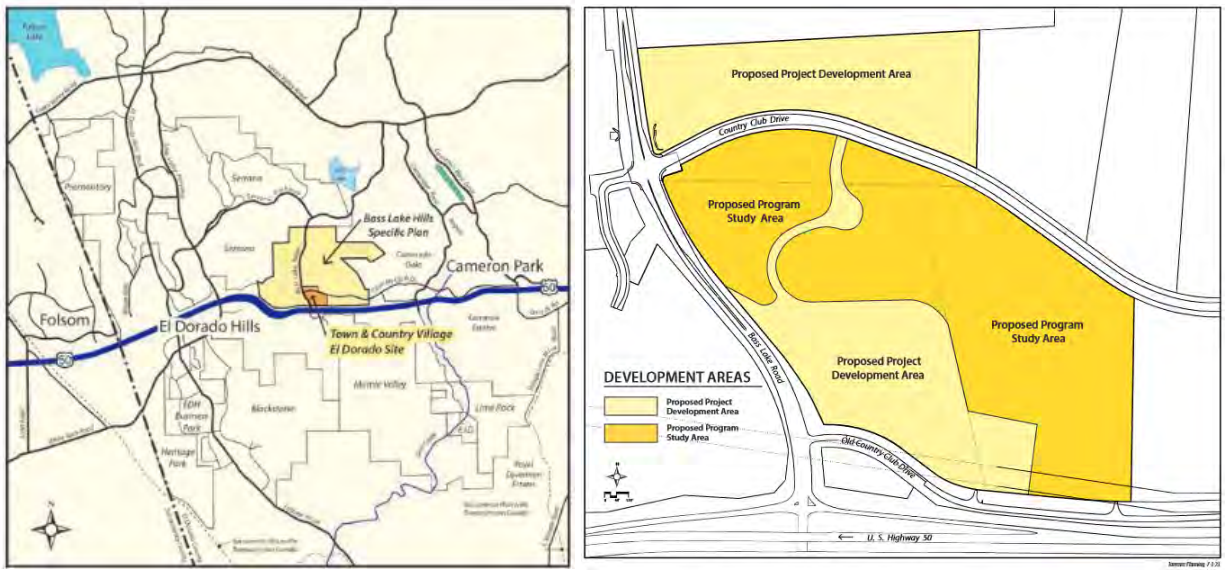


Figure 1a (left) presents the location of the Proposed Project within western El Dorado County, California. Figure 1b (right) presents the "Project Development Area", shaded tan, and "Program Study Area", shaded orange, within the overall Proposed Project.

The centerpiece of the *Project Development Area* is a pair of two 5 story 150-room masonry and timber hotels (300 rooms total) inspired by the historic Ahwahnee Hotel in Yosemite National Park. Adjacent to the hotels is a 3-story event center building, consisting of: two restaurants on the ground floor; an event center capable of hosting weddings, conferences, and other events on the second floor; and a museum focused on El Dorado County's Gold Rush history on the third floor.

In addition to the hotel/event center, the *Project Development Area* includes 112 residential cottages, with 56 intended for hotel employee housing and the other cottages that may be rented on a daily or extended stay basis. A detailed site plan of the *Project Development Area* is presented in Figure 2.

Figure 2 – Overall site plan

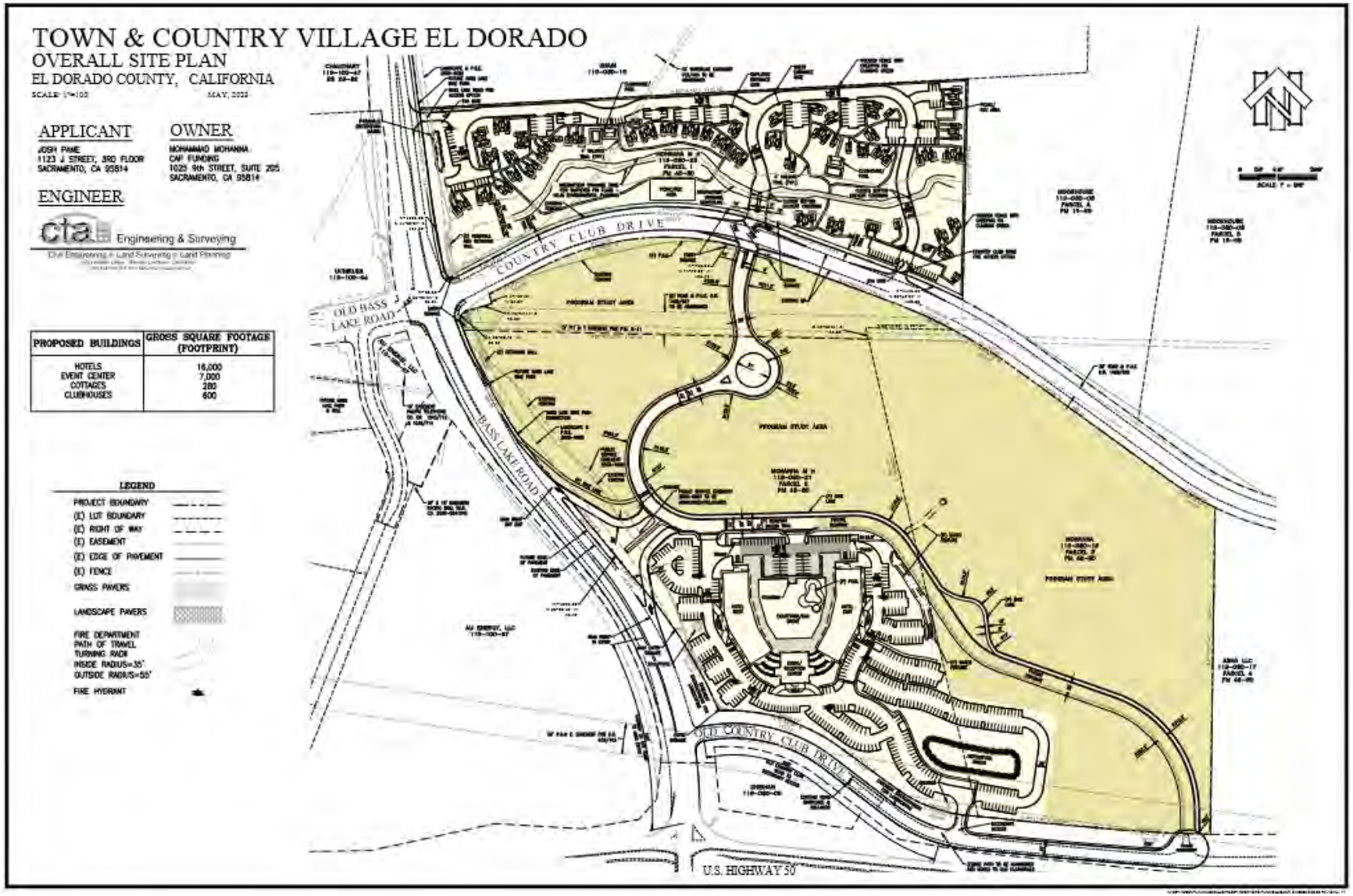


Figure 2 presents the overall site plan layout for the Project Development Area. Note that the Program Study Area (shaded darker tan) does not yet have a site plan specified, but may be developed in the future as part of the overall Proposed Project.

Program Study Area

As noted above, the exact uses of the 30.2 acres in the *Program Study Area* have not yet been specified, but will likely include a mix of commercial and residential uses allowed by County zoning. The timing of the *Program Study Area*'s construction is unknown at this time, but is anticipated to occur sometime after the construction of the *Project Development Area*. While a range of possible configurations are ultimately possible for this portion of the overall T&CV development, the project description proposes the following uses for the *Program Study Area*:

- 15.1 acres of multifamily residential land containing 352 dwelling units
- 5.0 acres of commercial land use reserved for a mixed-use senior housing development of 150 units and 10,000 SqFt of commercial development
- 6.9 acres of commercial land use reserved for a mixed-use development project consisting of 80,000 SqFt of commercial use and 200 apartment/condominium residential dwelling units
- 3.2 acres of open space

Although the specific development details of the *Program Study Area* are not yet finalized, it is necessary to include these potential water demands in the analysis of supply sufficiency in this WSA. Therefore, conservative assumptions about the range of possible water demands are used, as described in more detail in Section 2.

Section 2 – Proposed Project Estimated Water Demands

This section describes the methodology, provides the supporting evidence, and presents the estimated annual water demands for the Town & Country Village El Dorado (Proposed Project) development at build-out.

As described in Section 1, the Proposed Project features a hotel-resort, conferencing and event center, and multi-family residential components, as well as 30.2 acres of additional mixed-use development in the *Program Study Area*. To understand the water needs of this multifaceted project, unique water demand factors were calculated that correspond with the various commercial and residential features of Proposed Project. The water demand factors presented below are then multiplied by the quantities from the project description (number of hotel rooms, square feet of commercial, dwelling units, mixed-use acres, etc) to arrive at water demand estimates for each component of the proposed development. All water demands that would be served by EID, both indoor and outdoor, are considered.

The Proposed Project is divided into two distinct areas: the *Project Development Area* and the *Program Study Area*, as detailed in Section 1. The new land uses in the *Project Development Area* are described in detail, and water demand estimates presented in this WSA will be similarly specific. In the *Program Study Area*, a range of possible uses are proposed, and this WSA makes a conservative estimate of the water demand possible based on potential allowable uses. This WSA evaluates water supply sufficiency based on the total water demand expected from the entire Proposed Project.

Current and Future Mandates Affecting Water Use

There are several factors that affect the development of unit water demand use, ranging from state-imposed and EID or County imposed landscape ordinances and other water-use mandates, to changes in the types of housing products being offered. These factors are incorporated into unit water demand factor determination and discussed in this section. Characteristics of the factors relevant to this WSA are described below.

Water Conservation Orders

In 2009, Governor Arnold Schwarzenegger signed Senate Bill No. 7 (SBX7-7), which established a statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020 for urban retail water suppliers.[2] Since the Proposed Project is not yet built, this legislation only indirectly applies.

However, the efforts undertaken throughout the State by urban retail suppliers to comply with this statute, though not directly, would affect the Proposed Project's use of appliances, fixtures, landscapes, and other water using features, through changes or additions to EID and County ordinances and/or through a continuing "conservation ethic" developed in communities in and around the Proposed Project as a result of the most recent statewide drought conditions.

[2] California Water Code § 10608.20.

In response to the 2013 through 2015 multi-year drought conditions, Governor Brown issued Executive Order B-37-16 in May 2016 entitled "Making Water Conservation a California Way of Life." In May 2018, Governor Brown signed into law SB 606 and AB 1668, which imposed additional statutory requirements above and beyond the 20 percent by 2020 target reflected in the 2009 legislation. This is expected to result in continued efforts to increase water use efficiency and ultimately to reduce water demands of existing water users and continue to influence the expected demands of future water user.

Indoor Infrastructure Requirements

Beginning in January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (hereafter the "CAL Green Code") requiring the installation of water-efficient indoor and outdoor infrastructure for all new projects after January 1, 2011. The CAL Green Code was incorporated as Part 11 into Title 24 of the California Code of Regulations, and was revised in 2013 and in 2016 to address changes to the State's Model Water Efficient Landscape Ordinance ("MWELO") adopted during the drought.[3] Revisions to the CAL Green Code in 2019 modified sections to direct users to MWELO regulations contained in other regulatory sections.[4]

The CAL Green Code applies to the planning, design, operation, construction, use and occupancy of every newly constructed or remodeled building or structure. All new residential and non-residential customers must meet the water use requirements of the CAL Green Code as well as the outdoor requirements described by MWELO.

The CAL Green Code's indoor requirements generally manifest through: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20 percent reduction in water use from the building "water use baseline."[5] The Proposed Project will satisfy these indoor requirements through the use of appliances and fixtures such as high-efficiency toilets, faucet aerators, on-demand water heaters, or other fixtures, as well as Energy Star and California Energy Commission-approved appliances. Outdoor requirements are discussed in the following subsection.

[3] The 2016 Triennial Code Adoption Cycle consisted primarily of the MWELO updates adopted in response to the drought. Indoor infrastructure changes were limited to some minor non-residential fixture changes and changes to the voluntary Tier 1 and Tier 2 requirements. Additionally, the Code was updated to match the new Title 20 Appliance Efficiency Regulations.

[4] The 2019 updated sections to direct CAL Green code users to Title 23 of the California Code of Regulations to allow Title 23 to be the sole location of MWELO requirements.

[5] See CAL Green Code. For Residential construction, Section 4.303.1 provides the residential water conservation standard and Table 4.303.2 identifies the infrastructure requirements to meet this standard. Table 4.303.1 and Worksheets WS-1 and WS-2 are to be used in calculating the baseline and the reduced water use if Option 2 is selected. For non-residential construction, Section 5.303.2.3 provides the water conservation standard as well as the baseline and reduced flow rate infrastructure standards. Note that Worksheets WS-1 and WS-2 incorporate both residential and non-residential fixtures, yet the water use is still to be analyzed by "building or structure" as specified in Chapter 1, Section 101.3.

Model Water Efficient Landscape Ordinance (MWELO)

The Water Conservation in Landscaping Act was enacted in 2006, requiring the Department of Water Resources ("DWR") to update the Model Water Efficient Landscape Ordinance.[6] In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or to enact its own provisions equal to or more restrictive than the MWELO provisions.[7,]

In response to the Governor's executive order dated April 1, 2015, (EO B-29-15), DWR updated the MWELO and the California Water Commission approved the adoption and incorporation of the updated State standards for MWELO on July 15, 2015, effective after December 1, 2015.[8]

The changes included a reduction to 55 percent for the maximum amount of water that may be applied to a landscape for residential projects, which effectively reduces the landscape area that can be planted with high water use plants, such a turf. For residential projects, the coverage of high water use plants is reduced to 25% of the landscaped area (down from 33%). The newly updated MWELO also now applies to new construction with a landscape area greater than 500 square feet (the prior MWELO applies to landscapes greater than 2,500 square feet).[9] The El Dorado County Planning and Building Department reviews all new development for conformance with these standards.

The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency. Finally, the MWELO requires the landscape design plan to delineate hydrozones (based upon plant factors) and then to assign a unique water use value for each hydrozone (low, medium, high).[10]

Metering, Volumetric Pricing

California Water Code Section 525 requires water purveyors to install meters on all new service connections after January 1, 1992. California Water Code section 527 requires water purveyors to charge for water based upon the actual volume of water delivered if a meter has been installed. Though EID would be billing customers on a volumetric basis, this action alone is not expected to substantially reduce water use. However, it is anticipated that the retail billing system would encourage and help maintain reasonable use (e.g., through implementation of a tiered rate structure and/or water budgets), so that the Proposed Project's water demands at build-out are not expected to increase as the Proposed Project ages.

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[6] Gov. Code §§ 65591-65599.

[7] California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 492.4. The MWELO provides the local agency discretion to calculate the landscape water budget assuming a portion of landscape demand is met by precipitation, which would further reduce the outdoor water budget. For purposes of a conservative analysis, precipitation is not assumed to satisfy a portion of the outdoor landscape requirement because the determination of an appropriate effective precipitation factor is highly uncertain given the various landscape slopes, terrain composition, concurrent watering schedules, etc.

[8] These updated changes have been incorporated into California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 490-495.

[9] CCR Tit. 23, Div. 2, Ch. 27, Sec. 490.1.

[10] CCR Tit. 23, Div. 2, Ch. 27, Secs. 492.3(a)(2)(A) and 492.7(a)(2).

Urban Water Use Objectives

In 2018 CA State Legislature passed SB 606 and AB 1668 (Water Conservation and Drought Planning) which included provisions for urban water use efficiency standards and performance measures. This legislation "establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective (UWUO)." [11] Beginning in 2024, Urban Water Suppliers are required to calculate their own UWUO and compare it to the supplier's actual water use. Until 2025, indoor residential water use standard is 55 gallons per capita daily (gpcd), but this standard is tightened to 47 gpcd from 2025-2030, and is further reduced to 42 gpcd beyond 2030. The UWUO also includes additional efficiency requirements for commercial, industrial, and institutional (CII) landscapes.

EID will be required to comply with the UWUO requirements by the time the Proposed Project would begin construction. Therefore, it can be assumed that EID will implement demand management measures for its new and existing customers in order to comply with the UWUO requirements throughout the lifetime of the Proposed Project.

Project Development Area Demand Factors

Within the larger Proposed Project, the *Project Development Area* consists of 30.3 acres and includes: two hotels, retail services, two restaurants, a museum, an event center, parking, and 112 residential cottages (half for hotel employee housing and half that may be rented on a daily or extended stay basis). Because the components within the *Project Development Area* are described in detail, it is possible to develop unique indoor and outdoor water demand factors for each portion of the project that reflect the various mandates previously discussed.

Indoor water use

Hotels

The two planned hotels in the Proposed Project Development Area each consist of 150 rooms, for a total of 300 hotel rooms. Typical hotel indoor water usage, as documented in a sample of recent adopted WSAs from across California,[12,13,14] ranges from 80 to 150 gallons per day per occupied hotel room. This range includes all customer water use within rooms, as well as

[11] California Water Code § 10609-10609.38

[12] ICF (2022). Willow Village Master Plan Project Environmental Impact Report Appendix 3.15 Water Supply Assessment. *City of Menlo Park*. Retrieved from: https://beta.menlopark.org/files/sharedassets/public/community-development/documents/projects/under-review/willow-village/draft-eir/appendix_3.15_water-supply-assessment.pdf

[13] Marina Coast Water District (2018). Updated Water Supply Assessment for the Campus Town Specific Plan. Retrieved from: https://www.ci.seaside.ca.us/DocumentCenter/View/9774/Appendix-M-Campus-Town-Water-Supply-Assessment

[14] Golden State Water Company – Southwest (2019). Water Supply Assessment for Inglewood Basketball and Entertainment Center. Retrieved from: https://www.cityofinglewood.org/DocumentCenter/View/13921/M-Water-Supply-Assessment

laundry facilities and housekeeping. The central value of 115 gallons per day per occupied hotel room was selected as representative of hotel water use.

However, hotels are not always at full occupancy, so the per-room demand factor was adjusted to incorporate the developer's occupancy assumptions. As a conservative assumption, an annual occupancy factor of 80 percent was applied to this demand factor. As presented in Table 1, the occupancy adjusted annual indoor water demand of the 300 hotel rooms is 31 acre-feet per year.

Table 1 – Hotel Indoor Water Use

Rooms	Use Factor (gal/day/room)	Occupancy Factor	Total gal/year	AF/year
300	115	80%	10,074,000	31

Ground Floor Retail & Personal Services

On the ground floor of each hotel building, a combined total of 25,600 sq ft of retail space is proposed. The retail shops will include boutique shops and personal services such as beauty salons and spas, and will operate 7 days a week from 8 in the morning until 8 at night with a proposed capacity of 50 customers.

The water use factor of the proposed retail space is assumed to be 12 gallons per square foot annually, consistent with typical water use intensities for retail commercial space.[15] Multiplied by the total retail area proposed, this results in a total indoor water demand of approximately 307,200 gallons per year (conservatively rounded up to 1 acre-feet per year) for the ground floor retail portion of the Proposed Project.

Table 2 – Ground Floor Retail Indoor Water Use

Retail Area (SqFt)	Use Factor (gal/year/SqFt)	Total gal/year	AF/year
25,600	12	307,200	1

Restaurants, Event Venue, and Museum

The Restaurant/Event Venue/Museum is a stand-alone 3-story structure of 21,000 square feet (7,000 sq ft on each floor) and is intended for dining, weddings, receptions, local conferences, and community and family gatherings.

The ground floor of the event center building will contain two restaurants, each with a capacity of 120 patrons. Restaurant water use is conservatively estimated at 27.6 gallons per square foot of floor space per year.[16] This WSA has rounded this demand factor up to 30 gal/year/SqFt as a

[15] U.S. Energy Information Administration (EIA) (2017). 2012 Commercial Buildings Energy Consumption Survey: Water Consumption in Large Buildings Summary (Table W1).
[16] U.S. Energy Information Administration (2017)

conservative assumption. Across the 7,000 sq ft of total restaurant space, this equates to approximately 0.6 acre-feet per year of indoor water use.

On the second floor, an event venue capable of hosting weddings and conferences will operate one to two days per week from 8 in the morning until midnight with a variable capacity of between 50 and 300 persons. Water use of event venues is estimated as 26 gallons per square foot annually when occupied daily.[17] The wedding/conference center is expected to be occupied only 2 days per week at most, so an occupancy factor of 2/7 (29%) was applied. The resulting estimate of indoor water use for the 7,000 sq ft wedding/conference center is 0.2 acre-feet per year.

The third floor of the event center will feature a museum focusing on the Gold Rush era of California, with an emphasis on the culture and history of the early settlers. The museum will be open for visitors one to two days per week from 10 in the morning until 5 in the afternoon, with 50 to 100 visitors per day anticipated. For the purposes of this WSA, it is assumed that the museum's indoor water demands will be similar to that of a retail store of equal size, with all indoor water use attributable to the bathroom use of visitors and staff. Therefore, the retail water demand factor of 12 gallons per sq ft per year was used for this 7,000 sq ft space. Because the museum will only be open 2 days per week, occupancy factor of 2/7 (29%) was also applied. The resulting estimate of indoor water use for the 7,000 sq ft museum is 0.1 acre-feet per year.

The indoor water use of the Restaurant/Event Venue/Museum is summarized in Table 3. In total, the 3-story building is expected to demand 0.9 acre-feet/year of water for indoor use, which is conservatively rounded up to 1 acre-foot/year for the purposes of this WSA.

Table 3 – Restaurant, Event Center & Museum Indoor Water Use

Item	Floor Area (SqFt)	Use Factor (gal/year/SqFt)	Occupancy Assumption	Total gal/year	AF/year
Restaurant	7,000	30	100%	210,000	0.6
Event Venue	7,000	26	29%	52,000	0.2
Museum	7,000	12	29%	24,000	0.1
			Total	**286,000**	**1**

Residential Cottages

The Project Development Area will include a total of 112 residential cottage units, half of which will be used for hotel employee housing[18] and half may be rented on a daily or extended stay basis. Each cottage is designed as an individual two-story unit measuring 560 square feet and contains a bedroom, bathroom, full kitchen, and an outdoor deck.

[17] EIA (2017).

[18] Deed restrictions will ensure that 56 cottages are used exclusively for hotel employee housing.

The 56 hotel employee housing cottages indoor water demands are estimated using the per capita indoor water use standards required by the UWUO. This equates to a maximum of 55 gallons-per-person per day, multiplied by the assumed occupancy rate of 2 persons per cottage. Given that each cottage contains one-bedroom, average occupancy rates higher than 2 persons per cottage are not unlikely. The per-person water use multiplied by the assumed occupancy results in an estimated indoor water demand of 110 gallons per dwelling unit per day, or 6.9 acre-feet per year in total for the employee housing cottages. This estimate has been conservatively rounded up to 7 acre-feet per year for the purposes of this WSA.

The 56 rental cottages function essentially as detached hotel rooms. Therefore, the hotel room water demand factor used for the Proposed Project's hotels was applied to the rental cottages, which equates to 115 gallons per day per occupied hotel. After adjusting by the assumed hotel room occupancy factor of 80 percent, this results in an estimated annual water use of 92 gallons per day or 5.8 acre-feet per year in total for the rental cottages. This estimate has been rounded up to 6 acre-feet per year for the purposes of this WSA.

The indoor water use of the two categories of cottages (employee housing and rental) is summarized in Table 4. Total indoor water use for all 112 cottages is conservatively estimated to be 13 acre-feet per year.

Table 4 – Cottage Indoor Water Use

Item	Quantity	Use Factor (gal/day/unit)	Occupancy Factor	Total Water Use (gal/year)	Total Water Use (acre-feet/year)	Unit Demand (acre-feet/ connection/year)
Employee Cottages	56	110	100%	2,248,400	7	0.13
Rental Cottages	56	115	80%	1,880,480	6	0.11
Total	**112**				**13**	**0.12**

Summary of Project Development Area Indoor Water Demands

As described above, the *Project Development Area* includes two 150-room hotels; 25,600 SqFt of retail space; two restaurants, an event venue, and a museum; and 112 cottages. The indoor water demands associated with these facilities are summarized in Table 5. In total, 46 acre-feet per year of indoor water demand is expected from the *Project Development Area*.

Table 5 – Summary of Hotel/Civic Center Indoor Water Demands

Item	Quantity	AF/year
Hotel	300 rooms	31
Retail	25,600 SqFt	1
Restaurant, Event Venue & Museum	21,000 SqFt	1
Cottages	112 units	13
	Total	**46**

Outdoor Water Use

The amenities that generate demand for outdoor water use associated with the *Project Development Area* include landscape irrigation, as well as swimming pools and water features.

Landscape Irrigation

Outdoor water use for landscape irrigation is primarily a function of plant types and the extent of landscaped area. In the Project Development Area, an estimated 574,464 SqFt of area is proposed to be landscaped,[19] which includes the landscaping of both the Hotel/Event Center and the Cottages. Outdoor water demands for this portion of the Proposed Project are calculated based on the regulations and calculation methodologies contained in MWELO. The MWELO determines the Maximum Applied Water Allowance ("MAWA") where the maximum allowable water use is determined as 55 percent of the reference evapotranspiration for the area, resulting in the following equation:

> *MAWA = (ETo) (0.62) (0.55 x LA), where ETo is the reference evapotranspiration in inches per year; LA is the landscape area in square feet; and 0.62 is a conversion factor from inches to gallons. The resulting value is in "gallons per year"*

A primary factor in this calculation is evapotranspiration ("ET"). The methodology directs the use of ET from a reference crop, such as maintained grass – a value referred to as ETo. For the Proposed Project, the average ETo is 51.1 inches per year (or approx. 4.3 feet per year) and the landscape area is 574,464 SqFt.[20] This results in a MAWA value of 8,188,473 gallons/year, or 25.1 AFY.

The MWELO requires that estimated total water use (ETWU) for the project's irrigated landscaping be less than the MAWA value. The Proposed Project description provides specific landscaping plans that go beyond the efficiency standards set by the MAWA equation above. This WSA uses individual calculations for ETWU organized by hydrozone, with each hydrozone composed of plants clustered together with similar water, sun, and soil requirements. The hydrozones in the proposed project are: shrubs (low water use), trees (medium water use), and turf (high water use).

[19] Fuhrman Leamy Land Group (2023) *Maximum Allowed Water Allowance & Estimated Total Water Use*

[20] ETo is consistent with California Irrigation Management Information System (CIMIS) data available for the region. ETo was recorded at the Fair Oaks station (#113).

Table 6 – Landscaping Plant Factors

Hydrozone	Plant Factor
Shrubs - Low	0.3
Trees - Medium	0.5
Bio - Medium	0.5
Turf - High	0.8

The Estimated Total Water Use (ETWU) of the development was calculated using the following formula:

ETWU = (ETo - P_{eff}) (PF/IE) (0.62) (LA) / (325,851)
Where: ETo is the reference evapotranspiration of 51.1 inches per year; P_{eff} is effective precipitation, conservatively assumed to be 0 inches per year; 0.62 is a conversion factor from inches to gallons; PF is Plant Factor as a fraction of ETo; IE is irrigation efficiency as a fraction of water applied; LA is the landscape area in square feet; and 325,851 is a conversion factor from gallons to acre-feet. The resulting value is in "acre-feet per year"

Using the specific values provided in the Proposed Project applicant's landscaping plans,[21] the ETWU of the project study area's landscaping was calculated. These values are presented in Table 7.

Table 7 – Calculation of Estimated Total Water Use for Project Development Area Landscaping

Hydrozone	Landscape Area (SqFt)			Plant Factor	Irrigation Efficiency (IE)	ETWU	
	Hotel/Civic	Cottages	Total			(gal/yr)	(AF/yr)
Shrubs - Low	275,315	180,712	456,027	0.3	0.81	5,350,007	16.4
Shrubs - Medium	30,590	60,238	90,828	0.5	0.81	1,775,957	5.5
Bio - Medium	22,429	2,189	24,618	0.5	0.75	519,863	1.6
Turf - High	-	2,991	2,991	0.8	0.75	101,058	0.3
Total	**328,334**	**246,130**	**574,464**			**7,746,886**	**23.8**

As demonstrated in Table 7, the ETWU for the *Project Development Area* is 23.8 acre-feet per year, which is less than the MAWA value of 25.1 acre-feet per year. Therefore, the proposed landscaping plan complies with MWELO regulations.

[21] Detailed landscaping plans were provided by the project applicant.

Swimming Pools and Water Features

The *Project Development Area* includes three swimming pools: one in the courtyard of the hotel/civic center, and two more swimming pools in the cottages area. In addition to these pools, the *Project Development Area* also includes six water features:

- Recirculating Stream
- Project Monument Sign with Water
- Cottage Pond Water Feature
- Themed Miner Trough & Stock Pond
- Cottage Upper Pond and Waterfall
- Hotel Cascading Step Fountains

Because the exact sizes of these various water features are not yet specified by the project applicant, conservatively high assumptions are made for the size of each water feature. To estimate the evaporative water use of each of these water features, the reference evapotranspiration (ETo) of 51.1 inches per year was applied. The resulting calculations of water use are presented in Table 8, below. In total, the nine water features (three pools, six decorative water features) are expected to consume 1.6 acre-feet per year. Because of the uncertainty about the exact size of these water features, this WSA conservatively rounds up this total water use to 2 acre-feet per year.

Table 8 – Swimming Pool and Water Feature Water Use

Item	Estimated Size (SqFt)	ET (gal/yr)	ET (AF/yr)
Hotel Pool	1,000	31,682	0.1
Cottage Pool 1	1,000	31,682	0.1
Cottage Pool 2	1,000	31,682	0.1
Recirculating Stream	1,000	31,682	0.1
Project Monument Sign with Water	100	3,168	< 0.1
Cottage Pond Water feature	10,000	316,820	1.0
Themed Miner Trough & Stock Pond	1,000	31,682	0.1
Cottage Upper Pond and Waterfall	200	6,336	< 0.1
Hotel Cascading Step Water Features	1,000	31,682	0.1
Total	**16,300**	**516,417**	**1.6**
		Conservatively Rounded Total	**2**

Other Outdoor Amenities Not Expected to Generate Outdoor Water Demand

The *Project Development Area* includes additional outdoor amenities composed either of natural vegetation or hardscape which are not expected to generate water demand.

Adjacent to the cottages, there is a 4.4-acre open space preserve centered on an intermittent drainage, protected by 25-foot-wide conservation easements. There will be no irrigated landscaping within this area.

Throughout the *Project Development Area*, there are various hardscape features including roads, parking lots, bike paths, patios, and terraces. None of these paved features will generate water demand.

Summary of Project Development Area Water Demands

Using the methodology described above, the total water use of the *Project Development Area* is conservatively estimated as 72 acre-feet per year. These values are summarized in Table 9, below.

Table 9 – Summary of Project Development Area Water Demands

Item	Quantity	AF/year
Indoor		
Hotel	300 rooms	31
Retail	25,600 SqFt	1
Restaurant, Event Venue & Museum	21,000 SqFt	1
Cottages	112 units	13
Outdoor		
Landscaping	574,464 SqFt	24
Water Features	16,300 SqFt	2
	Total	**72**

Program Study Area Demand Factors

The Proposed Project's second major component is the 30.2-acre *Program Study Area*, which may include a mix of uses such as hotels, senior housing units, medical facilities, townhomes and cottages, and other uses allowed by County zoning. While a range of possible configurations are ultimately possible for this portion of the overall Proposed Project, the project applicant has provided the land uses presented in Table 10 for the purposes of environmental impact analysis.

Table 10 – Summary of Program Study Area Land Uses

Land Use		Gross Area (acres)	Commercial Bldg. Area (SqFt)	Residential Dwelling Units (DUs)	Density Range (DUs/acre)
Multi-Family Residential		15.1		352	12-24
Commercial	Mixed-Use Senior Housing	5.0	10,000	150	22-30
	Mixed-Use Commercial & Condos	6.9	80,000	200	22-30
Open Space		3.2			
Total		**30.2**	**90,000**	**702**	

Similar to the analytical approach used for the *Project Development Area*, the indoor and outdoor water demands of the *Program Study Area* were conservatively estimated.

Indoor water use

The indoor water use of the *Program Study Area* reflects demands from both the residential and non-residential components of the mixed-use developments.

The residential elements of the *Program Study Area* would be built in accordance with all applicable building codes and efficiency regulations including the Cal Green Code and UWUO, discussed previously. Indoor demands are therefore estimated using an assumed value of 55 gallons-per person per day, multiplied by the assumed occupancy rates of the various housing types.

For the 352 multi-family residential units, the average occupancy rate for the El Dorado Hills region used in the 2020 UWMP was used,[22, 23] which equates to 2.95 persons per dwelling unit.

The Mixed-Use Commercial portion of the *Program Study Area* includes both senior housing and conventional apartments/condos. For the 150 proposed senior housing units, a lower occupancy rate of 2 persons per dwelling unit was assumed, because larger families are typically restricted from living together in senior housing facilities. The 2020 UWMP occupancy rate for the EDH region of 2.95 persons per dwelling unit[24] was used for the 200 apartments/condos within the mixed-use commercial area.

[22] El Dorado Irrigation District (2021). 2020 Urban Water Management Plan.
[23] The most recent census data indicates that EDH has an occupancy rate of 2.88 persons per household. For consistency with the EID 2020 UWMP and as a conservative assumption, the higher rate of 2.95 persons per household was used. Census data available at: https://www.census.gov/quickfacts/eldoradohillscdpcalifornia
[24] El Dorado Irrigation District (2021).

Table 11 – Residential Indoor Water Use

Land Use	Number of Dwelling Units	Occupancy Rate	Water Use per Unit (acre-feet)	Total Water Use (acre-feet/year)
Multi-Family Residential	352	2.95	0.18	64
Mixed-Use Senior Housing	150	2.00	0.12	18
Mixed-Use Condos	200	2.95	0.18	36
Total	**702**			**119**

The non-residential indoor water demand of the *Program Study Area* will be from the proposed 90,000 SqFt of commercial building area, spread across 11.9 acres.

While the specific commercial activities are unknown at this time, potential uses include medical services, restaurants, retail, and offices. The non-residential unit water demands for these commercial land uses are highly dependent on the actual businesses and activities on each parcel. For example, inpatient health care water usage can be as high as 50 gallons per SqFt annually, while warehouse and storage water use is as low as 3 gallons per SqFt annually.[25] As a conservative assumption, a water use factor of 35 gallons per SqFt annually is assumed to reflect this spectrum of possible commercial activities on an average basis across the entire *Program Study Area*. This results in an estimated indoor water demand of 10 acre-feet per year, as presented in Table 12.

Table 12 – Non-residential Indoor Water Use

Commercial Building Area (SqFt)	Demand Factor (gal/yr/SqFt)	Demand (gal/year)	Demand (AF/yr)
90,000	35	3,150,000	10

Outdoor Water Use

Outdoor water use in the *Program Study Area* will be required to comply with MWELO, with the maximum legally permissible water use defined by the MAWA equation as described above. Therefore, outdoor water use can be estimated based on the extent of irrigated landscape area in each land use category.

For the proposed 15.1 acres of Multi-Family Residential, it is assumed that the 352 dwelling units will include a variety of attached multi-family apartment buildings, with parking and drive aisles. This dwelling unit type is typically associated with community controlled outdoor spaces so the average outdoor demands are quite low per unit. It is assumed that 15 percent of the gross area in this land use category will be landscaped common area, with the remainder consisting of building footprint, street, walkways, and other hardscaped areas. This WSA therefore estimates 2.3 acres of irrigated area for the Multi-Family Residential category. Using

[25] EIA (2017).

the MAWA equation, an annual outdoor water demand of 4.5 acre-feet/year is estimated for this category.

For the proposed 11.9 acres of Mixed-Use Commercial development (5.0 acres of Mixed-Use Senior Housing and 6.9 acres of Mixed-Use Commercial with apartments and condos), it is assumed that the majority of the gross area in these land use categories will be taken up by buildings, parking, and other hardscape. Therefore, this WSA estimates that 10 percent of the gross area will be irrigated landscaping for the 11.9 acres of Mixed-Use Commercial development. This results in an estimated 0.5 acres of irrigated landscaping for the Mixed-Use Senior Housing and 0.7 acres for the Mixed-Use Commercial with apartments and condos. Using the MAWA equation, an annual outdoor water demand of 1.0 acre-feet per year and 1.3 acre-feet per year is estimated for these two Mixed-Use developments, respectively.

The *Program Study Area* includes 3.2 acres of Open Space that will not be irrigated and therefore is not expected to generate water demand.

The calculations of outdoor water use in the *Program Study Area* are summarized in Table 13. In total, 6.6 acre-feet of outdoor water demand is expected from this portion of the Proposed Project, which has been conservatively rounded up to 7 acre-feet/year.

Table 13 – Program Study Area Outdoor Water Use

Land Use Category		Total Area (acres)	% of Total Area Irrigated	Total Irrigated Area (acres)	Total Demand (AF/yr)
Multi-Family Residential		15.1	15%	2.3	4.3
Commercial	Mixed-Use Senior Housing	5.0	10%	0.5	1
	Mixed-Use Commercial & Condos	6.9	10%	0.7	1.3
Open Space		3.2	0%	0	0
Total		**30.2**		**3.5**	**7**

Summary of Program Study Area Water Demands

Using the methodology described above, the total water use of the *Program Study Area* is conservatively estimated as 135 acre-feet per year. These values are summarized in Table 14, below.

Table 14 – Summary of Program Study Area Water Demands

Land Use Category		Total Area (acres)	Indoor Residential Demand (AF/yr)	Indoor Non-Residential Demand (AF/yr)	Outdoor Demand (AF/yr)	Total Demand (AF/yr)
Multi-Family Residential		15.1	64	0	4.3	68
Commercial	Mixed-Use Senior Housing	5.0	18	1	1	21
	Mixed-Use Commercial & Condos	6.9	36	9	1.3	46
Open Space		3.2	0	0	0	0
Total		**30.2**	**119**	**10**	**7**	**135**

Summary of Proposed Project Water Demands

This WSA is required to consider the potential water demands from the entire Proposed Project, which includes both the *Project Development Area* (composed of hotels, an event center, and cottages) and the *Program Study Area* (composed of various multi-family and mixed-use commercial land uses). Across the entire 60.5 acres of development, the Proposed Project is expected to require 207 acre-feet per year of water demand, as summarized in Table 15.

Table 15 – Summary of Proposed Project Water Demands

Planning Area	Total Water Demand (AF/yr)
Project Development Area	72
Program Study Area	135
Total	**207**

Section 3 – Representation in 2020 UWMP

This section evaluates whether the Proposed Project was likely represented in the 2020 UWMP[26] as part of EID's forecasted growth, and thus whether this WSA can use the water system reliability assessment included in the 2020 UWMP to determine sufficiency under Water Code Section 10910 et seq. Specifically, Water Code Section 10910 provides that a previously adopted UWMP can be used to support key elements of a WSA:

> *If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment… [§10910(c)(2)]*

Comparison to Predicted Growth in the 2020 UWMP

The first step is to evaluate if growth in the 2020 UWMP included the Proposed Project, directly or indirectly.

As detailed in Chapter 2 of the 2020 UWMP, EID identified several categories of growth that would result in increased demand on their water supplies: (1) Facility Improvement Letters (FILs) reflecting development projects known to EID, and (2) additional "Future Beyond FILs" growth beyond the current FILs on existing vacant parcels that are greater than 10 acres. The Proposed Project is located within the area covered by the Bass Lake Hills Specific Plan[27], which is portrayed by the 2020 UWMP as a "known FIL", but the Town & Country Village project was not listed as its own specific FIL. Based on this information, the 2020 UWMP has clearly identified the Proposed Project site as developable, but the UWMP has not considered the specific details of the Proposed Project in its growth projection. Therefore, the Proposed Project must be compared to the additional "Future Beyond FILs" growth contemplated by the UWMP.

The Proposed Project is located in the El Dorado Hills (EDH) Region,[28] which the 2020 UWMP estimates could add at ultimate buildout over 25,000 Equivalent Dwelling Units (EDU), defined as the number of residential "dwelling units" that each project would reflect regardless of whether the project includes residential or non-residential land uses. Approximately 45 percent of 25,000 EDUs at buildout are represented by existing FILs, and the remaining EDUs are accounted for by vacant parcels over 10 acres in size for which EID does not currently have a FIL.

However, the 2020 UWMP does not plan for all EDUs possible at buildout to be built by 2045. Rather, slower growth is assumed: based on the annual growth rate of slightly over 1 percent,

[26] El Dorado Irrigation District (2021).

[27] County of El Dorado (1995). Bass Lake Hills Specific Plan & Ammendments. Retrieved from: https://edhapac.org/documents/bass-lake-hills-specific-plan/

[28] EID divides its service area into three geographic regions based on water use characteristics and infrastructure. The El Dorado Hills Region is defined as including the District's Service Zones 1, 2 and 4 which represent the communities of Bass Lake, El Dorado Hills and Cameron Park. Please note that this definition of the El Dorado Hills Region is different than that used by the El Dorado County General Plan.

the 2020 UWMP conservatively estimates 7,054 new residential units will be built from 2020 through 2045 in the EDH region, with 86 percent of these expected to be Single-Family Homes and the remainder multifamily. Based on the existing ratio of residential to non-residential connections, an additional 375 non-residential connections were assumed to be added in the EDH region by 2045.

The Proposed Project is a mixed-use development which includes 814 multi-family dwelling units, or approximately 11.5 percent of the total new homes EID forecasts to be constructed by 2045. The Proposed Project also includes 2 hotels, 2 restaurants, an event venue, a museum, and 90,000 SqFt of additional commercial space, which can be easily accommodated within the 375 new non-residential connections expected by 2045. Therefore, the Proposed Project is within the predicted growth considered by the 2020 UWMP.

Per the 2020 UWMP, the growth expected in the EDH is summarized in the tables below.

Table 16 - Expected New Residential Connections in EDH Region per BAE Study (2020 UWMP Table 2-3)

		2025	2030	2035	2040	2045
New Residential Units		1,285	2,683	4,068	5,506	7,054
% Single-family	86%	1,103	2,303	3,492	4,727	6,056
% Multi-family	14%	182	380	576	779	998

Table 17 - Expected Total Connections in EDH Region (2020 UWMP Table 2-4)

Customer Class	2025	2030	2035	2040	2045
Single Family Residential	17,786	20,089	21,278	22,513	23,842
Single Family Residential - Dual	5,244	5,244	5,244	5,244	5,244
Multi-Family Residential	292	324	340	357	375
Commercial / Industrial	575	675	725	775	825
Commercial Landscape	277	291	298	305	312
Recreational Turf Services	59	65	68	71	74
Small Farm Irrigation	45	45	45	45	45
Agricultural Metered Irrigation	3	3	3	3	3
Total Connections	24,281	26,736	28,002	29,313	30,720

Comparison to Predicted Demand in the 2020 UWMP

Second, to allow the 2020 UWMP's water system reliability analysis to support this WSA, the demand for future development evaluated in the 2020 UWMP would need to be consistent with the detailed demand analysis presented in Section 2 of this WSA.

As presented in the 2020 UWMP, by 2045 growth in the EDH region is expected to add a total of 3,170 acre-feet of new water demand to EID's system across all new connections, regardless of connection type. Most of this new demand was projected to come from Single-Family homes. The proposed Project is a mixed-use development primarily composed of commercial

and multi-family residential land uses, which will provide more dwelling units with lower water demand than would have occurred if the 814 dwelling units proposed had been built instead as single-family homes. For example, the UWMP projects a demand of 0.44 acre-feet per connection per year for new Single-Family homes in the EDH region[29], whereas the multi-family residential units in the Proposed Project have a projected demand ranging from 0.11 - 0.18 acre-feet per connection per year.[30]

Overall, the Proposed Project will result in about 11.5 percent of the new dwelling units anticipated to be added in the EDH region by 2045 in the 2020 UWMP, generating approximately 207 acre-feet per year of demand, or approximately 6.4 percent of the forecasted future demand from new connections in the EDH region. Therefore, the Proposed Project provides a portion of the residential and non-residential growth projected by the 2020 UWMP while generating lower water demand than was forecasted by the 2020 UWMP.

Thus, the Proposed Project's forecast water demand would not increase the total demand forecast in the 2020 UWMP to assess reliability, and, consistent with Water Code §10910(c)(2), the "projected water demand associated with the proposed project was accounted for" in EID's 2020 UWMP and the conclusions of water system reliability from the 2020 UWMP can be used to represent water supply sufficiency for the purposes of this WSA.

The 2020 UWMP estimated total water service area demand to be approximately 43,320 acre-feet annually by 2045, as shown in Table 18.

[29] UWMP Table 4-10

[30] See Table 4 & Table 11 of this WSA

Table 18 - Forecast Future EID Water Use (2020 UWMP Table 4-11; values in acre-feet per year)

Land-class		2025	2030	2035	2040	2045
Existing Potable Uses	Single Family	14,400	14,400	14,400	14,400	14,400
	Single Fam. (dual potable)	840	840	840	840	840
	Multi-family	1,520	1,520	1,520	1,520	1,520
	Commercial (all)	2,320	2,320	2,320	2,320	2,320
	Recreational Turf	990	990	990	990	990
	City of Placerville	1,150	1,150	1,150	1,150	1,150
	Subtotal	21,220	21,220	21,220	21,220	21,220
New Customers	EDH Region	580	1,210	1,830	2,480	3,170
	Western Region	100	180	260	340	420
	Eastern Region	200	360	530	700	870
	City of Placerville	10	40	70	140	140
	Subtotal	890	1,790	2,690	3,660	4,600
Total Municipal		22,110	23,010	23,910	24,880	25,820
Other	Other Authorized Uses	3,300	3,300	3,300	3,300	3,300
	Agriculture (potable)	5,210	5,360	5,510	5,660	5,810
	Distribution System Loss	4,120	3,860	3,960	4,050	4,150
Total Potable Demand		34,740	35,530	36,680	37,890	39,080
Recycled	Single Family - Dual (landscape)	2,450	2,450	2,450	2,450	2,450
	Commercial	990	990	990	990	990
	Recreational Turf	490	490	490	490	490
	Distribution System Loss	310	310	310	310	310
	Total Recycled Demand	4,240	4,240	4,240	4,240	4,240
Total District Demand		38,980	39,770	40,920	42,130	43,320

EID Water Supplies and Availability

The 2020 UWMP completed a very detailed analysis of EID's treated water supplies, which are derived from a number of rights and entitlements. Table 19 is the result of that analysis and the basis from the 2020 UWMP's Assessment of water system reliability.

Table 19 – EID Water Supply Summary 2020 – 2045 (2020 UWMP Table 3-5; values in acre-feet)

Water Right or Entitlement	Maximum Water Assets Available	Normal Year	Single Dry Year	Multiple Dry Years				
				Year 1	Year 2	Year 3	Year4	Year 5
Existing Supplies								
Ditches / Weber Reservoir Rights (License 2184 and Pre-1914 Water Rights)	4,560	4,560	3,000	3,000	3,000	3,000	3,000	3,000
Sly Park Reservoir (Licenses 11835 and 11836)	33,400	23,000	20,920	20,920	17,000	15,500	15,500	15,500
CVP Contract (Contract 14-06-200-1375A-LTR1-P)	7,550	7,550	3,775	3,775	3,775	1,235	1,235	1,235
Project 184 (Pre-1914 at Forebay)	15,080	15,080	15,080	15,080	15,080	15,080	15,080	15,080
Permit 21112 (Project 184 Warren Act Contract)	17,000	17,000	17,000	17,000	17,000	17,000	17,000	17,000
Outingdale/ Middle Fork Consumnes (Permit 4071)	104	104	104	104	13	13	13	13
Recycled Water (non-potable)	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Subtotal Existing	81,194	70,794	63,379	63,379	59,368	55,328	55,328	55,328
Planned Supplies								
CVP Fazio Water entitlement	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Subtotal Planned	7,500	7,500	3,750	3,750	3,750	1,235	1,235	1,235
Total	88,694	78,294	67,129	67,129	63,118	56,563	56,563	56,563

EID Water System Reliability

As detailed in Chapter 5 of the 2020 UWMP, EID compared the supply availability to the forecast future demand through 2045 for normal, single dry, and multiple dry years. Because this analysis extended to 2045, it provides the analysis that incorporates the planning horizon required for this WSA, allowing the 2020 UWMP's water system reliability to be used to assess water supply availability for purposes of the Proposed Project.

Table 20 and Table 21 present the results of the 2020 UWMP's normal, single-dry, and multiple dry year reliability analysis. As represented under all conditions, the 2020 UWMP indicates EID will have sufficient water supplies to adequately meet all of the forecast water demand through 2045.

Table 20 – Normal and Single Dry Year Water Supply and Demand through 2045 (2020 UWMP Table 5-2; values in acre-feet)

Normal Year	2025	2030	2035	2040	2045
Supply	70,800	70,800	78,300	78,300	78,300
Demand	38,980	39,770	40,920	42,130	43,320
Difference	31,820	31,030	37,380	36,170	34,980

Single Dry Year	2025	2030	2035	2040	2045
Supply	63,400	63,400	67,100	67,100	67,100
Demand	40,930	41,760	42,970	44,240	45,490
Difference	22,470	21,640	24,130	22,860	21,610

Table 21 – Five Consecutive Dry Years Water Supply and Demand through 2045 (2020 UWMP Table 5-3; values in acre-feet)

		2025	2030	2035	2040	2045
Year 1	Supply	63,400	63,400	63,400	63,400	63,400
	Demand	40,930	41,760	42,970	44,240	45,490
	Difference	22,470	21,640	20,430	19,160	17,910
Year 2	Supply	59,400	59,400	63,100	63,100	63,100
	Demand	41,100	42,000	43,220	44,490	45,490
	Difference	18,300	17,400	19,880	18,610	17,610
Year 3	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,270	42,240	43,470	44,740	45,490
	Difference	14,030	13,060	13,130	11,860	11,110
Year 4	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,440	42,480	43,720	44,990	45,490
	Difference	13,860	12,820	12,880	11,610	11,110
Year 5	Supply	55,300	55,300	56,600	56,600	56,600
	Demand	41,610	42,720	43,970	45,240	45,490
	Difference	13,690	12,580	12,630	11,360	11,110

While EID has historically had reliable water supplies to meet its customer demands during droughts and the District forecasts continued system reliability through 2045, it should be noted that EID has implemented its Drought Action Plan to reduce customer demand a number times in recent years. These drought restrictions have occurred for three reasons.

First, the Governor has declared statewide drought emergencies, most recently in 2021, ordering the SWRCB to adopt emergency regulations requiring urban water suppliers (such as EID) to implement water shortage response actions. EID has complied with state orders, despite having water supplies that were sufficient to meet its customers' demands throughout recent droughts. Second, EID implemented temporary restrictions in the immediate aftermath of the 2021 Caldor Fire, which damaged the El Dorado Canal and impacted source water quality. The damage to the El Dorado Canal was repaired less than a year after the Caldor Fire occurred, and

the temporary restrictions were lifted. Lastly, EID has experienced shortages in the Outingdale Service Area, which is a small satellite system not connected to the main EID distribution system. The history of supply shortages in the Outingdale Service Area during droughts reflect less reliable water supplies for this satellite system specifically, but do not indicate unreliable water supplies for EID as a whole.

Therefore, none of the events in which EID implemented its Drought Action Plan in recent years were caused by a water supply shortage for EID's main system, and therefore do not conflict with the reliability conclusions presented above.

Section 4 – Sufficiency Conclusion

As detailed in the 2020 UWMP, EID has sufficient water supplies to meet future demands in all conditions. Specifically, EID concludes sufficient supplies through 2045 for all existing and planned uses as detailed in Chapter 5 of the 2020 UWMP.

Therefore, pursuant to Water Code Section 10910 et seq, EID will have sufficient water supply to meet the Proposed Project's estimated build-out water demand of 207 acre-feet per year.

Sensitivity Analysis

This WSA has provided evidence in Section 3 to demonstrate that the Proposed Project is included within the future growth and future water demand anticipated by EID's 2020 UWMP.

A sensitivity analysis was conducted to evaluate the availability of water supplies in the event that the Proposed Project's 207 acre-feet per year of water demand (see Section 2) was in addition to EID's projected future water demands presented in Section 3. As shown in Tables 20 and 21, EID projects that its water supplies will exceed its water demands by over 11,000 acre-feet per year in all scenarios considered by the 2020 UWMP. Therefore, EID is projected to maintain a supply which exceeds its projected demands by greater than 11,000 acre-feet in normal water years, single dry water years, and multi-year droughts from 2025 – 2045. Based on this evidence, even if the Proposed Project's 207 acre-feet per year of water demand was not included in EID's future demand growth anticipated by the 2020 UWMP, EID would still have sufficient water supplies to serve the Proposed Project.

APPENDIX R

TOWN & COUNTRY VILLAGE – EL DORADO
WATER & SEWER SYSTEMS

MARCH, 2024

INTRODUCTION

Town & Country Village – El Dorado (Project Development Area or Project) is located north of US 50 along Bass Lake Road in El Dorado County and includes both commercial and residential components. The commercial parcels consist of two hotels with restaurants, retail services, a museum, and an events center. The residential parcels include 112 cottages which will serve the hotels including employee housing and guest lodging. Future development is presumed to include additional commercial and residential land uses possibly consisting of hotels, medical facilities, senior housing, townhomes, cottages, or other applications (Program Study Area). The existing three parcels are proposed to be divided per the areas shown on the tentative map and are used in the following report to calculate the total demands for the Project Development Area and Program Study Areas.

OFFSITE WATER IMPROVEMENTS

Per the Facility Improvement Letter (FIL) prepared by the El Dorado Irrigation District (EID) dated February 24, 2023; the Project Development Area and Program Study Area will require 632.5 Equivalent Dwelling Units (EDUs) of water supply. As a more conservative approach, calculations for water demands are provided to account for the proposed 60.5 acres of development based on land use.

The nearest existing water facilities are a 24” line and a 30” line at the intersection of Bass Lake Road and Hollow Oak Drive, approximately 2,000 feet north of the site. The 30” line connects to a 36” line which ultimately connects to the Bass Lake water tanks. A water line is proposed to connect to this existing system and follow Bass Lake Road past the project site and continue south to serve the Diablo Trail water service area. There is an existing 12” line located in Tierra De Dios Drive approximately 2,200 feet east of the site which will also be proposed to connect to in order to loop the system. There is approximately 3,950 linear feet of water line from the existing system to the Caltrans Highway 50 right of way along Bass Lake Road. An additional 4,020 linear feet of water line will be needed to loop the system from the intersection of Bass Lake Road and Country Club Drive to Tierra De Dios Drive. Water demands for the Overall Study Areas are shown in Exhibit 1: Mean Annual Water Demands. The exhibit includes water demands for the proposed land uses per the EID *Water, Sewer, and Recycled Water – Design and Construction Standards.* The Project demands are specific to the proposed multi-family cottage units and the Program Study Area demands are assumed for the multi-family units per the Project Description. The Study Areas for both commercial land uses are calculated per acreages on the tentative map. The Project Development Area and Program Study Area equate to an overall unit consumption of 274.66 acre feet or 165.40 gallons per minute (gpm). Peaking factors were applied to the average day demand for maximum day demand of 1.5 and 2.0 for multi-family and commercial land uses respectively, which results in a demand of 257.55 gpm. Peaking factors were applied to the average day demand for peak hour flows of 2.5 for both multi-family and commercial uses as well. This equates to a peak hour demand of 413.51 gpm.

The FIL states that the existing system can deliver the required fire flow of 1,000 to 2,000 gpm. However, the parcels are not within the EID boundary and will require annexation into the district.

OFFSITE SEWER IMPROVEMENTS

Per the FIL, the Project Development Area and Program Study Area will require 632.5 EDUs of sewer service. As a more conservative approach, calculations for sewer demands are provided to account for the proposed 60.5 acres of development based on land use. Due to the potential use of onsite septic facilities, the Project Development Area may result in fewer EDUs. The septic facilities have been analyzed in a separate report “Preliminary Sanitary Sewer Feasibility Study for Town and Country El Dorado Hills, CA” by CWE, dated March 18, 2024.

There are currently no existing sewer facilities in the immediate vicinity of the proposed development. Proposed offsite sewer improvements for the site would include a system that runs south from the intersection of Bass Lake Road and Country Club Drive to the Highway 50 right of way. Then the alignment runs west along the southern edge of the AU Energy, LLC parcel (APN: 119-100-67), connects in Old Bass Lake Road, follows the shoulder of Old Highway 50, and proceeds through the Serrano open space to the existing 18” South Uplands Trunk Sewer-Gravity Main (SUTS) in Russi Ranch Road about 1.2 miles away. There are approximately a total of 10,200 linear feet of pipe proposed for this alignment from the site to the existing 18” line. There is also an alternative alignment for the proposed offsite system that would instead involve a total of 7,960 linear feet of pipe that runs west from the intersection of Bass Lake Road and Country Club Drive along the future Country Club Drive road layout according to the Bass Lake Hills Specific Plan (BLHSP) until meeting up with the first alignment in Old Highway 50. Sewer demands for the Overall Study Areas are shown in Exhibit 2: Mean Annual Sewer Demands. The exhibit includes sewer demands for the proposed land uses per the CWE Feasibility Study and the EID *Water, Sewer, and Recycled Water – Design and Construction Standards* for the future commercial acreage. The Project Development Area demands are specific to the known cottage units and proposed commercial uses. Since the Program Study Area land uses are unknown, the multi-family demand is assumed per the Project Description and the commercial demand is found by tentative map acreage. The Project and Program Study Areas equate to an average dry weather flow (ADWF) of 114,530 gallons per day (gpd). A peaking factor of 4.0 is applied to the ADWF demands and results in a peak wet weather flow (PWWF) of 458,120 gpd.

The FIL states that the existing SUTS-Gravity Main sewer line has adequate capacity at this time to serve the Project Development Area and the system is being evaluated for potential upsizing downstream. However, the parcels are not within the EID boundary and will require annexation into the district.

Mean Annual Water Demands

Land Use	Unit Consumption	Unit Consumption (acre feet)	Average Day [3/] (gpm)	Maximum Day [4/] (gpm)	Peak Hour [5/] (gpm)
Multi Family Residential *112 Units*	0.30 acre feet/dwelling unit [1/]	33.60	20.16	30.24	50.40
Commercial *10.23 Acres per TM*	2.4 acre feet/acre [2/]	24.55	15.22	30.44	38.06
PROJECT DEVELOPMENT AREA TOTALS		58.15	35.38	60.68	88.46
Multi Family Residential *352 Townhomes per Proj. Description*	0.30 acre feet/dwelling unit [1/]	105.60	63.36	95.04	158.40
Multi Family Residential** *200 Apartments & 150 Senior Units per Proj. Description*	0.30 acre feet/dwelling unit [1/]	105.00	63.00	94.50	157.50
Commercial** *2.46 Acres*	2.4 acre feet/acre [2/]	5.90	3.66	7.32	9.15
PROGRAM STUDY AREA TOTALS		216.50	130.02	196.86	325.05
OVERALL TOTALS		**274.66**	**165.40**	**257.55**	**413.51**

Per EID *Water, Sewer and Recycled Water - Design & Construction Standards: Water Design Standards*

[1/] Table 3-1: Multiple Family Demand

[2/] Table 3-1: Commercial/Industrial Demand

[3/] Table 3-1: Multi Family - 0.18 gpm/dwelling unit; conversion for Commerical - 1 acre feet/year = 0.62 gpm

[4/] Table 3-2: Maximum Day Factors: Multi Family - 1.5, Commercial/Industrial - 2.0

[5/] Table 3-2: Peak Hour Factors: Multi Family - 2.5, Commercial/Industrial - 2.5

** Mixed Use = 14.13 acres per TM - 350 Residential Units proposed at 30 units/acre, 2.46 acre balance for Commercial use

Mean Annual Sewer Demands

Land Use	Average Dry Weather Flow Rates By Land Uses	Average Dry Weather Flow (gpd)	Peak Wet Weather Flow [2/] (gpd)
Multi Family Residential *112 Units*	100 gal/day/unit [1/]	11,200	44,800
Hotels (2) *150 Rooms Each, 1.25 Beds per Room*	60 gal/day/bed [1/]	22,500	90,000
Restaurants (2)	4,200 gal/day/restaurant [1/]	8,400	33,600
Small Businesses *Retail, Events Center, Museum*	1000 gal/day total [1/]	1,000	4,000
PROJECT DEVELOPMENT AREA TOTALS		43,100	172,400
Multi Family Residential *352 Units per Proj. Description*	100 gal/day/unit [1/]	35,200	140,800
Multi Family Residential** *200 Apartments & 150 Senior Units per Proj. Description*	100 gal/day/unit [1/]	35,000	140,000
Commercial** *2.46 Acres*	500 gal/day/acre [3/]	1,230	4,920
PROGRAM DEVELOPMENT AREA TOTALS		71,430	285,720
OVERALL TOTALS		**114,530**	**458,120**

[1/] Per Preliminary Sanitary Sewer Flows Report by CWE-RFE

[2/] Peak Flow Factor of 4 applied to ADWF

[3/] Table 3-3: Undeveloped Commercial Acreage Flow Rate

Per EID *Water, Sewer and Recycled Water - Design & Construction Standards: Sewer Design Standards*

** Mixed Use = 14.13 acres per TM - 350 Residential Units proposed at 30 units/acre, 2.46 acre balance for Commercial use

APPENDIX S

P21150

Wildfire Evacuation Assessment

Town and Country Village – El Dorado
Bass Lake Hills, California

Prepared for:
County of El Dorado, California,
Raney Planning and Management, and
Mohanna Development Co.

Prepared By



T. KEAR
TRANSPORTATION PLANNING
& MANAGEMENT, INC.
2838 Zamora Lane
Davis, CA 95616
www.tkearinc.com

Contact: Tom Kear, tkear@tkearinc.com, (916) 340-4811

May 31, 2024
Revised July 18, 2024

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REVISION HISTORY

Description	Date	Notes
Draft	May 31, 2024	Draft Fire Evacuation Assessment.
Draft	June 7, 2024	Updated figures and added existing conditions check
Revision	July 18, 2024	Updated section 3.4 to clarify that the recommendation for manual traffic control is a related to existing deficiencies.

1.0 DISCLAIMER – LIMITATIONS OF EMERGENCY EVACUATION ASSESSMENT

Emergency evacuations can occur due to a variety of events. Any emergency movement involves some uncertainty because individual behavior depends on personal risk assessment for the specific type of emergency event and associated evacuation instructions that will be specific to the context of that event. As such, this assessment is intended to provide a broad understanding of the travel time expectations during an evacuation scenario and what effect the Town and Country Village – El Dorado project may have on those times. The analysis does not provide a guarantee that evacuations will follow modeling that is used for analysis purposes, nor does it guarantee that the findings are applicable to any or all situations. The analysis will isolate the general effect of the project on evacuation travel times.

Moreover, as emergency evacuation assessment is an emerging field, there is no established standard methodology. Existing methodologies in transportation planning have been applied that are, in T. Kear Transportation Planning and Management's (TKTPM's) experience, the most appropriate for this evaluation. Nevertheless, such methodologies are necessarily also limited by the tools and data available, and by current knowledge and state of the practice. Additionally, every fire event is unique, and findings presented herein are specific to the fire event analyzed. The fire event used in this assessment was developed for the Marble Valley and Lime Rock projects and provided to TKTPM by El Dorado County. No attempt has been made by TKTPM to verify the applicability of that data to this Project beyond verbal acknowledgement of its reasonableness by Cal Fire and the El Dorado Hills Fire Department[1].

This assessment is intended to help the County better understand the Project's effect on evacuation travel time. As such, the results are based on a set of scenarios and modeling. TKTPM cannot and does not guarantee the efficacy of the analysis beyond a general assessment of the Project's effect on evacuation travel time. Any other use of the information would be beyond our professional duty and capability given the uncertainty of evacuation

[1] Personal communication (2024) on March 7, 2024, via teleconference between Cal Fire, El Dorado Hills Fire Department, El Dorado County Planning, Raney Planning and Management, Inc., and TKTPM.

events and analysis limitations noted above. The data presented herein are not intended to serve in any way as an evacuation guide for the public.

2.0 INTRODUCTION

This Wildfire Evacuation Assessment presents the results of a wildfire evacuation time analysis, conducted for the Town and Country Village – El Dorado project to comply with the requirements of the California Environmental Quality Act (CEQA) as established in the CEQA statue, guidelines, and applicable/published court decisions.

This analysis leverages fire modeling and evacuation assessments done for the proposed Marble Valley and Lime Rock Projects[2,3]. Specifically, in coordination with Cal Fire and the El Dorado Hills Fire Department, fire scenario 7E and 7H from the Marble Valley and Lime Rock fire evacuation assessment were selected as the fire scenarios for evaluation of the Town and Country Village – El Dorado project. Evacuation time estimates for the Marble Valley and Lime Rock projects are hereby incorporated by reference. Those studies assumed that traffic from the projects south of US-50 that evacuate to the north would be safe once reaching US 50. This analysis allows for the possibility that a portion of that south of US-50 traffic may continue north of Bass Lake Rd, and accounts for that in the evacuation times for the Town and Country Village – El Dorado (which is located north of US-50 and adjacent to Bass Lake Rd).

2.1 Purpose

The purpose of this Wildfire Evacuation Assessment is to address CEQA guidance released by the Attorney General in response to recent CEQA court decisions whereby Environmental Impact Reports (EIRs) were deemed to be inadequate due to lack of a sufficient analysis around the projects' effect on the ability of the local community to evacuate due to a wildfire or similar disaster, and compliance with the California Department of Forestry and Fire Protection (Cal Fire) regulations related to wildfire evacuation and emergency access.

Both cumulative and "super-cumulative" scenarios (with and without the Project) are addressed. With the cumulative scenario reflecting all approved projects and anticipated General Plan buildout, and super-cumulative adding additional growth to account for proposed General Plan changes for the EDH-52 Project[4], Marble Valley and Lime Rock projects[5].

Note that this report focuses on estimating the travel time required for evacuation once the order and/or decision to evacuate is made and the affected population is ready to leave. This

[2] Firesafe Planning Solution's (2023) *Wildland Fire Evacuation Risk Report, Fire Behavior, the Village of Marble Valley Project*, provided by El Dorado County.
[3] Fehr & Peers (2023) *Village of Marble Valley Specific Plan Fire Evacuation Assessment-Draft*, provided by El Dorado County.
[4] EDH-52 consists of the proposed Costco anchored retail center and apartments just north of the Silva Valley Parkway interchange.
[5] Marble Valley and Lime Rock are two proposed specific plans that would add 4340 homes, 635,700 sqft of commercial space and two schools for almost 1400 students. These projects are both located south of US 50 between the Bass Lake Rd and Cambridge Rd interchanges.

report does not consider the time required for evacuees to pack essential belongings or the time required to reach a decision regarding the need/urgency to evacuate.

2.2 Project Overview

The Town & Country Village – El Dorado project consists of two development areas: the **Project-Development** area and the **Program-Study** area. The Project-Development area consists of 30.3-acres and includes two hotels, retail services, restaurants, a museum, an event center, parking, residential cottages for hotel employee housing and residential cottages that will be rented on a daily or extended-stay basis by the hotels. The Program-Study area consists of an additional 30.2-acres to be developed in the future and may include a mix of uses such as additional hotels, medical facilities, senior housing, townhomes, cottages, and other uses allowed with proposed rezoning.

The Project-Development area is evaluated based on specific Project-Development area land uses. Project-level entitlements being sought for the Project-Development area include General Plan and Specific Plan amendments, rezoning, a Development Agreement, a Planned Development permit, and a tentative map. The Program-Study area is evaluated at a programmatic-level based on more generalized housing and commercial uses that would be allowed with the proposed rezoning. Programmatic-level entitlements being sought for the Program-Study area include General Plan and Specific Plan amendments, and rezoning.

The Project-Development and Program-Study areas are located proximate to the intersection of Bass Lake Road and Country Club Drive, within the Bass Lake Hills Specific Plan (BLHSP) in western El Dorado County. **Figure 1** below shows the relative size and location of the two areas. Three parcels are involved: APN 119-080-012, 119-080-021, and 119-080-023. These parcels currently have a General Plan land use designation under the BLHSP of L.2-PD and L.7-PD which allow for 0.2 dwelling units per acre south of Country Club Drive and 0.7 dwelling units per acre north of Country Club Drive. Current zoning for all three parcels is Residential Estate 10-Acre (RE-10) which allows for a minimum lot size of 10 acres. The El Dorado Hills Community Region boundary currently runs along Country Club Drive, with the area to the south of Country Club Drive considered as a Rural Region. The Project-Development and Program-Study areas will require amendments to the BLHSP, General Plan, and moving the Community Region boundary.

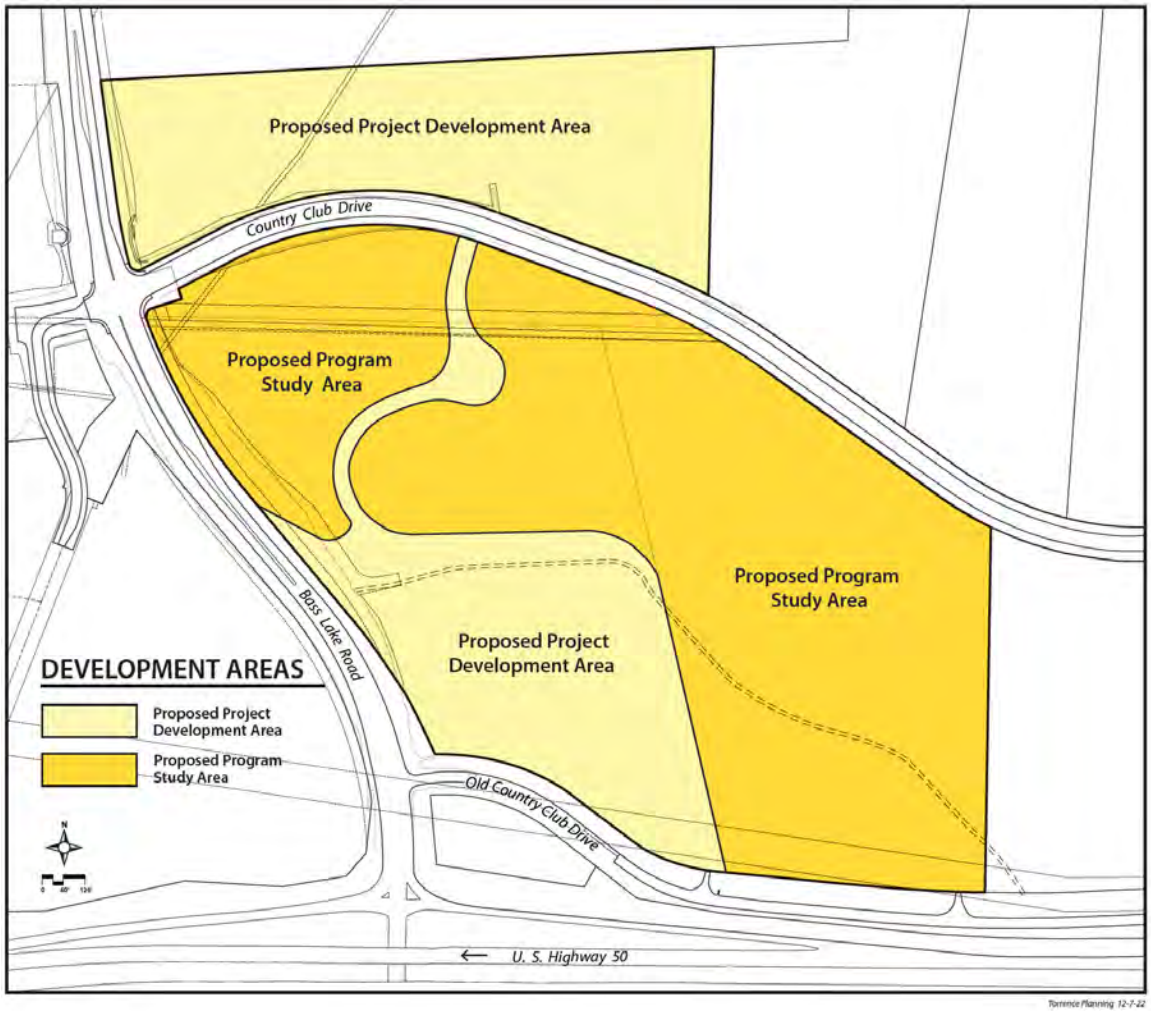


Figure 1. Project and Program-Study areas

Project-Development Area Land Uses

A preliminary site plan for the Project-Development area is provided as **Figure 2**. Key components of the Project-Development area development include two 150-room hotels, boutique retail shops, restaurants, an event center, a historic museum, recreational amenities and parking (all of which are considered as incidental uses with the proposed resort-hotel). Additional components include 56 residential cottages for employee housing and 56 residential cottages that may be rented on a daily or extended stay basis, and a class 1 bicycle path located on the historic Clarksville Toll Road.

The hotel component of the Project-Development area consists of two 5-story structures totaling 160,000 square feet. Both hotels share centralized facilities in the event center including two restaurants. The ground floor of each hotel will feature retail boutique shops focusing on local arts and crafts that promote the El Dorado County agricultural-tourism and Gold Country history. Boutique personal services such as beauty salons and spas will also be located on the first floor. The wedding venue/event center/museum are accommodated in a separate 3-story structure of 21,000 square feet shared between the two hotels.

112 cottages are to be located north of Country Club Drive. 56 of the cottage units will be reserved for hotel employee-housing and 56 remaining cottage units may be rented on a daily or an extended stay basis. The cottages are designed as individual two-story units measuring 560 square feet and contain a separate bedroom as well as a bathroom, full kitchen facilities and an outdoor deck. Duet or triplex building configuration may also be included in this area with the same features as previously described. On-site amenities will include a clubhouse, swimming pools, recreation areas, and meandering hiking trails. Deed restrictions will ensure that 56 cottages are used exclusively for hotel employee housing.

Program-Study Area Land Uses

The Program-Study area consists of 30.2-acres and may include a mix of uses such as hotels, senior housing units, medical facilities, townhomes, and cottages. These uses are anticipated to include 90,000 square feet of commercial land use and 702 dwelling units as follows:

- 5 acres of commercial land reserved for mixed use senior housing with 150 age restricted dwelling units and 10,000 square feet of commercial space.
- 6.9 acres of commercial land reserved for 200 apartments/condominiums and 80,000 square feet of commercial units.
- 15.1 acres of multi-family residential land reserved for 352 dwelling units.
- Open space.

There is not a specific development application for the Program-Study area at this time.

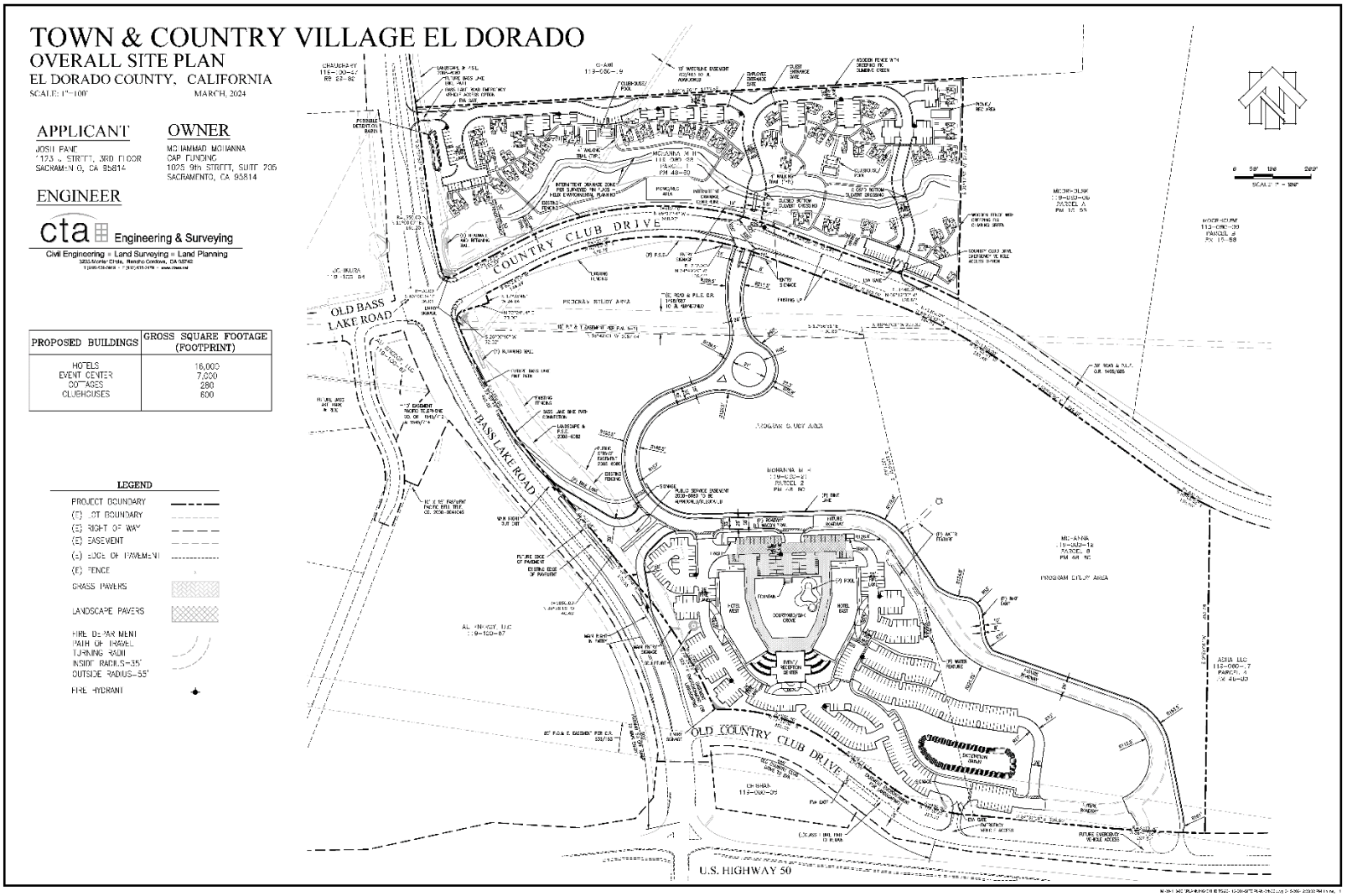


Figure 2. Preliminary Project-Development area site plan

Parking and Access

Proposed parking for the Project-Development area consists of 577 spaces for the 2 traditional hotels, 56 employee housing units, 56 guest cottages and the convention facilities. Additional parking may be accommodated off-site via reciprocal parking agreements and shuttle buses. (Note that the County and State encourage parking be minimized in order to discourage single occupancy vehicle use.) Future development of the Program-Study area will require additional, Program-Study area specific analysis when development applications are filed for those areas; with parking and internal circulation being part of that additional analysis.

Primary access to the hotel and event center will be via a right-in/right-out driveway to Bass Lake Road and a full access driveway to Country Club Drive. Primary access to the 112 cottages will be via a full access driveway to Country Club Drive (aligned with the hotel access). Additional access to the Program-Study area will be provided via an additional full access driveway to Country Club Drive near the eastern edge of the Project-Study area.

The applicant is interested in two driveways accessing "Old Country Club Drive" along the southern edge of the Project-Development and Program-Study areas. These are currently limited to emergency access (EA) only (and thus not analyzed) because Old Country Club Drive was converted to a class 1 bike path when Country Club Drive was realigned to its present location to improve safety at the Bass Lake Rd interchange. The potential impact of the two proposed driveways accessing Old Country Club Drive is considered in an appendix to this local transportation analysis. County staff anticipate that they will recommend against allowing driveways accessing Old Country Club Drive, with the decision ultimately falling on the Board of Supervisors if the applicant pursues that design element further.

Additional emergency access (EA) only gates will be provided to Bass Lake Road and Country Club Drive from the northwest and southeast corner of the cottages.

2.3 Wildland Fire Risk Report

El Dorado County provided Firesafe Planning Solutions' *Village of Marble Valley Specific Plan, Wildland Fire Risk report - The Village of Marble Valley Project*, dated September 19, 2023, as a reference in assessing wildfires approaching the Project area. That report covered several areas related to the Marble Valley and Lime Rock projects:

- Current Environmental Conditions – Identifies the location of the project site, adjacent wildland, and the agencies responsible for fire protection.
- Wildfire Hazard and Risk Analysis – Analyzes the likelihood and intensity of wildfire hazards and the risk/vulnerability of the project to wildfire hazards.
- Project Impacts Related to Wildland Fires – Analyzes the project design relative to wildfire events and incorporates the fire history of the project area, weather (i.e., temperature, relative humidity, wind), fuel (i.e., wildland and built environment), geography (i.e., slope, aspect, elevation), and historical fire activity.

- Water Supply and Infrastructure – Describes the existing and proposed water supply and infrastructure.
- Fire Protection Resources – Identifies the existing and proposed fire resources.
- Risk Reduction Measures – Outlines risk reduction measures required by code, ordinance, and standards, as well as additional benefits that the project provides to existing communities.

The analysis considered existing/future vegetative interface fuels, topography, fire, and weather conditions during extreme fire conditions. The report provides results of computer modeling that measured the fire intensity, flame lengths, rate of spread, and fire travel distance (arrival times) from worst-case scenario wildfires in both the extreme (diablo wind) and the predominant (onshore wind) wind conditions.

This wildfire evacuation assessment for Town and Country Village – El Dorado uses two scenarios from the Firesafe Planning Solutions' report. The first scenario, 7-E, is modeled without the Village of Marble Valley project, and the second scenario, 7-H, is modeled with the build-out of the Village of Marble Valley project and Lime Rock Project (and the EDH-52 "Costco" project). Both scenarios reflect a fire that starts on Bullard Drive, west of Amber Fields Dr, and assumes south-south-east winds at 65 mph and an evacuation start of 7AM.

2.4 Attorney General Guidance

Attorney General Rob Bonta developed guidance for analyzing wildland fire impacts under CEQA[6] (hereafter the AG Guidance).

The AG Guidance is designed to help lead agencies comply with CEQA when considering whether to approve projects in wildfire-prone areas. The guidance provides "suggestions for how best to comply with CEQA when analyzing and mitigating a proposed project's impacts on wildfire ignition risk, emergency access, and evacuation."

The AG Guidance describes CEQA's requirements in the following two analysis categories.

- Analyzing impact on wildfire risk (addressed indirectly through the Marble Valley and Lime Rock Wildland Fire Evacuation Risk report).
- Analyzing impact on evacuation & emergency access (addressed by this technical report).

Section IV.B of the AG guidance outlines variables that should be considered in the analysis of impact on wildfire risk related to the following project characteristics.

- Project density (accounted for in estimates of impacted population).

[6] Office of Attorney General (2022) Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act, published October 10, 2022, available online at: https://oag.ca.gov/system/files/attachments/press-docs/2022.10.10%20-%20Wildfire%20Guidance.pdf.

- Project location in the landscape (accounted for in fire modeling for Marble Valley and Lime Rock).
- Water supply and infrastructure (addressed in other sections of the Town and Country Village – El Dorado CEQA document and not part of this evacuation time assessment).

Section IV.C of the AG guidance contains the following recommendations regarding evacuation and emergency access. Evacuation modeling and analysis should include the following:

- Evaluation of the capacity of roadways to accommodate project and community evacuation and simultaneous emergency access.
- Assessment of the timing for evacuation.
- Identification of alternative plans for evacuation depending upon the location and dynamics of the emergency.
- Evaluation of the project's impact on existing evacuation plans. (Done through an evaluation of Town and Country Village – El Dorado traffic effects evacuation of areas near the Town and Country Village – El Dorado project).
- Consideration of the adequacy of emergency access, including the project's proximity to existing fire services and the capacity of existing services. (Addressed in other sections of the Town and Country Village – El Dorado CEQA document.)
- Traffic modeling to quantify evacuation time estimates under likely scenarios.

The analysis contained in this report addresses the above recommendations in the AG guidance.

2.5 Local Agency Consultation

The following emergency service providers and agency staff were consulted during the preparation of this wildfire evacuation assessment:

- El Dorado Hills Fire Department – Ms. Chrishana Fields.
- Cal Fire – Mr. Jeff Hoag.
- El Dorado County Department of Transportation – Mr. Zach Oates.
- El Dorado County Long Range Planning – Bret Sampson.

On February 22, 2024, and March 7, 2024, coordination meetings were held to review the Project and discuss the need for new fire modeling vs reuse of specific scenarios from the Marble Valley and Lime Rock wildfire evacuation analysis, and to define the evacuation area.

2.6 Report Organization

The following sections are included in this technical report to meet the County requirements for evaluating impacts of the Town and Country Village – El Dorado project:

- **Chapter 1 – Disclaimer**, which discusses the limitations of this wildfire evacuation assessment.

- **Chapter 2 – Introduction**, which includes the purpose of this document, Project description, overview of guidance/requirements, local agency consultation, and report organization.
- **Chapter 3 – Evacuation Scenarios**, which includes the scenarios assessed.
- **Chapter 4 – Methodology**, which describes the evacuation time methodology, including evacuation area, evacuation routes, and adaptation of the El Dorado County travel demand model for evacuation evaluation.
- **Chapter 5 – Findings**, including the estimated evacuation time requirements.

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3.0 EVACUATION SCENARIOS

This section discusses the land use scenarios assessed, evacuation area, evacuation routes, and the effected population.

3.1 Land Use Scenarios

Four land use scenarios were assessed:

- ***Cumulative No Project*** – which reflects market rate build-out of the Adopted General Plan
- ***Cumulative Plus Project*** – Which adds Town and Country Village – El Dorado evacuation traffic to the *Cumulative No Project* scenario.
- ***Super–Cumulative No Project*** – which reflects market rate build-out of the Adopted General Plan, plus build-out of the proposed Marble Valley, Lime Rock, and EDH-52 Specific Plans.
- ***Super-Cumulative Plus Project*** – Which adds Town and Country Village – El Dorado evacuation traffic to the *Super-Cumulative No Project* scenario.

3.2 Evacuation Area

The evacuation area includes a "north of US-50 evacuation zone" that stretches east from Silva Valley Parkway to Cambridge Rd, and north from US-50, to a line defined by Serrano Parkway, Bass Lake Rd, and Clemson Dr/Hillcrest Dr. Additionally, a "south of US-50 evacuation zone" was assumed based on the Village of Marble Valley Specific Plan Fire Evacuation Assessment.

The "north of US-50 evacuation zone" is shown in **Figure 3**, and the "south of US-50 evacuation zone", adapted from the Marble Valley fire evacuation assessment, is shown in **Figure 4**.

3.3 North of US-50 Evacuation Routes

As shown in **Figure 3**, evacuation routes have been identified for the Town and Country Village – El Dorado project site, for the broader off-site evacuation zone, and for the evacuation corridors. Generally, evacuees would take local roads (represented as the evacuation routes in the travel demand model) to evacuation corridors along the periphery of the evacuation zone. Evacuation corridor gateways (labeled as A through F in **Figure 3**) represent the point at which evacuees are considered to be safe.

Evacuation routes include the following:

- Local connecting roads from Entrada Dr to Villaggio Dr (within Serrano);
- Bass Lake Road from US 50 to Serrano Pkwy;
- Country Club Dr from Bass Lake Road to Cambridge Rd;
- Country Club Dr from Silva Valley Pkwy to Cambridge Rd;

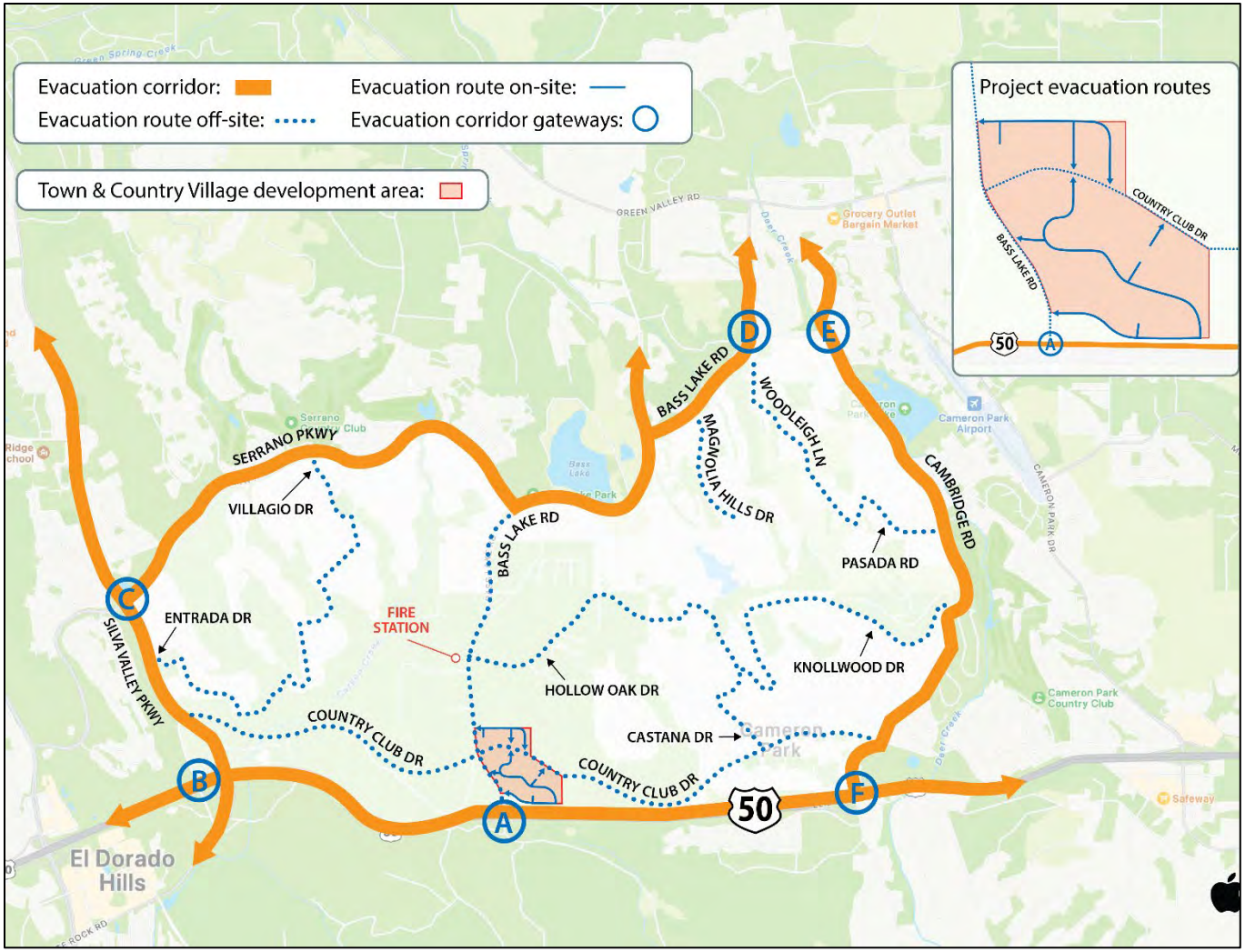


Figure 3. North of US-50 Evacuation Zone

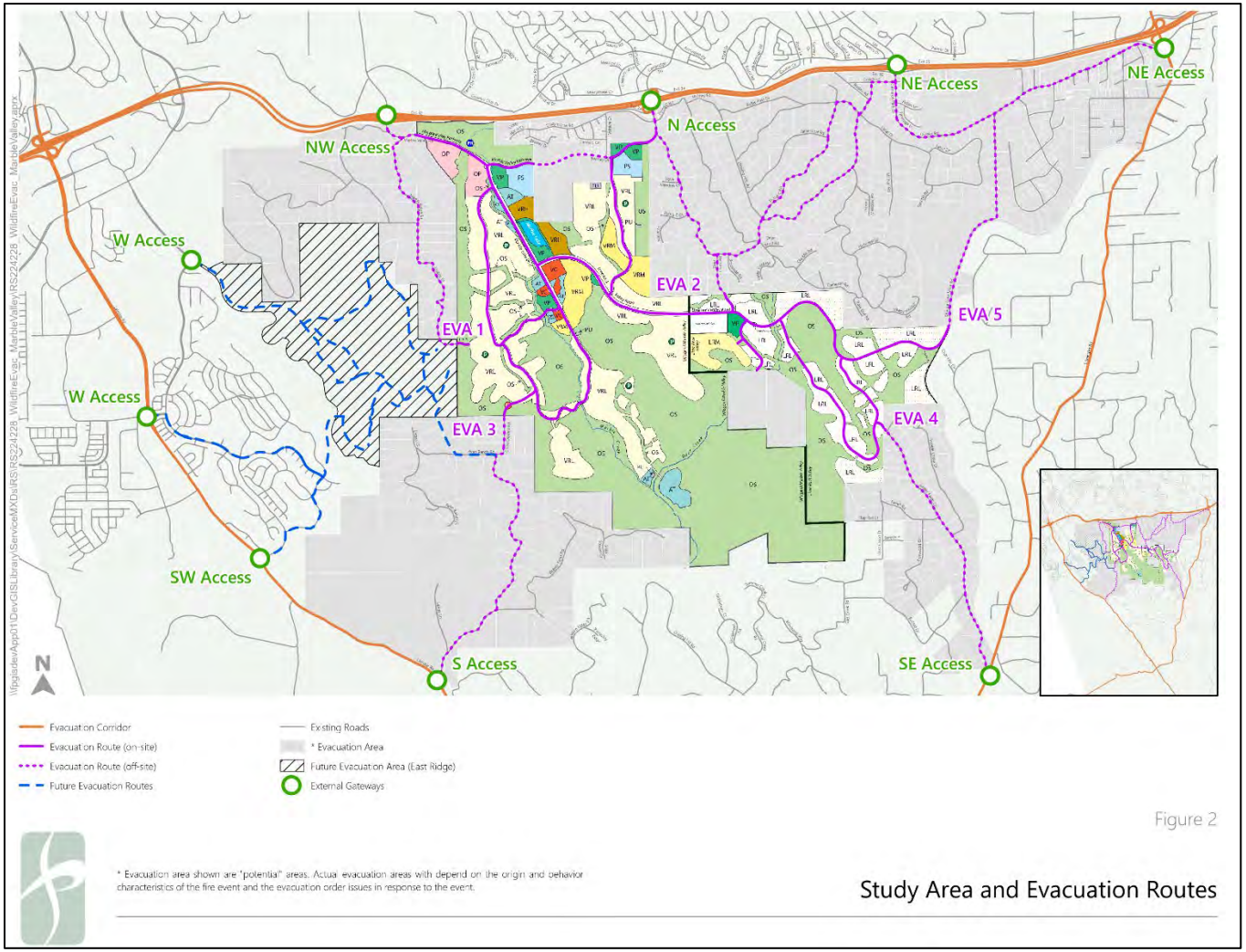


Figure 4. South of US-50 Evacuation Zone from the Village of Marble Valley Specific Plan Fire Evacuation Assessment

- Hollow Oak Dr/Castana Dr/Knollwood Dr;
- Magnolia Dr; and
- Woodleigh Ln to Pasada Rd.

The evacuation corridors, which are arterial roadways surrounding the north of the US-50 evacuation zone, include:

- US-50,
- Silva Valley Pkwy,
- Serrano Pkwy from Silva Valley Pkwy to Bass Lake Rd,
- Bass Lake Rd from Silva Valley Pkwy to north of Woodleigh Ln, and
- Cambridge Rd from US-50 to north of Hillcrest Dr.

The evacuation routes lead to evacuation corridor gateways which were selected conservatively to represent points at which evacuees would be considered safe.

3.4 Intersection Traffic Control

Travel demand models build the delay at nodes (intersections) into the travel time on adjacent roadway links. To ensure that changes in the directionality and magnitude of traffic during any potential evacuation do not degrade intersection traffic operations, it is recommended that emergency personnel can be available for traffic control at key signalized intersections in and around the evacuation zone, or that remote signal management systems for those traffic signals be implemented. (Note that this recomendation exists with or without the Project and because it is an existing deficiency there is not a project-level CEQA impact.)

El Dorado County staff has a long-term plan to implement remote signal management systems that could eliminate the need for manual traffic direction at these intersections during evacuation. However, at this time the County does not have the technology necessary for those signal upgrades. Once El Dorado County adds a remote signal management system to the Capital Improvement Program, every project will contribute financially to the system through payment of Traffic Impact Fees (TIF) when building permits are issued. Note that this need is a pre-existing condition and under both CEQA and AB1600 the Project is only responsible for paying a fair share toward the (cumulative) cost of the future signal management system.

3.5 Emergency Vehicle Access

No road closures are assumed, and emergency vehicles would have full access to the north of US-50 evacuation zone.

3.6 Wildfire Scenario

In consultation with El Dorado County Planning, the El Dorado Hills Fire Department, and Cal Fire, the wildfire scenario for purposes of this evaluation was selected from previously published scenarios from the Village of Marble Valley Specific Plan Fire Evacuation Assessment. Specific scenarios 7E (**Figure 5**) and 7H (**Figure 6**) are utilized. **Figure 5** and **Figure 6** show fire progression using colored isopleths representing 30-minute,

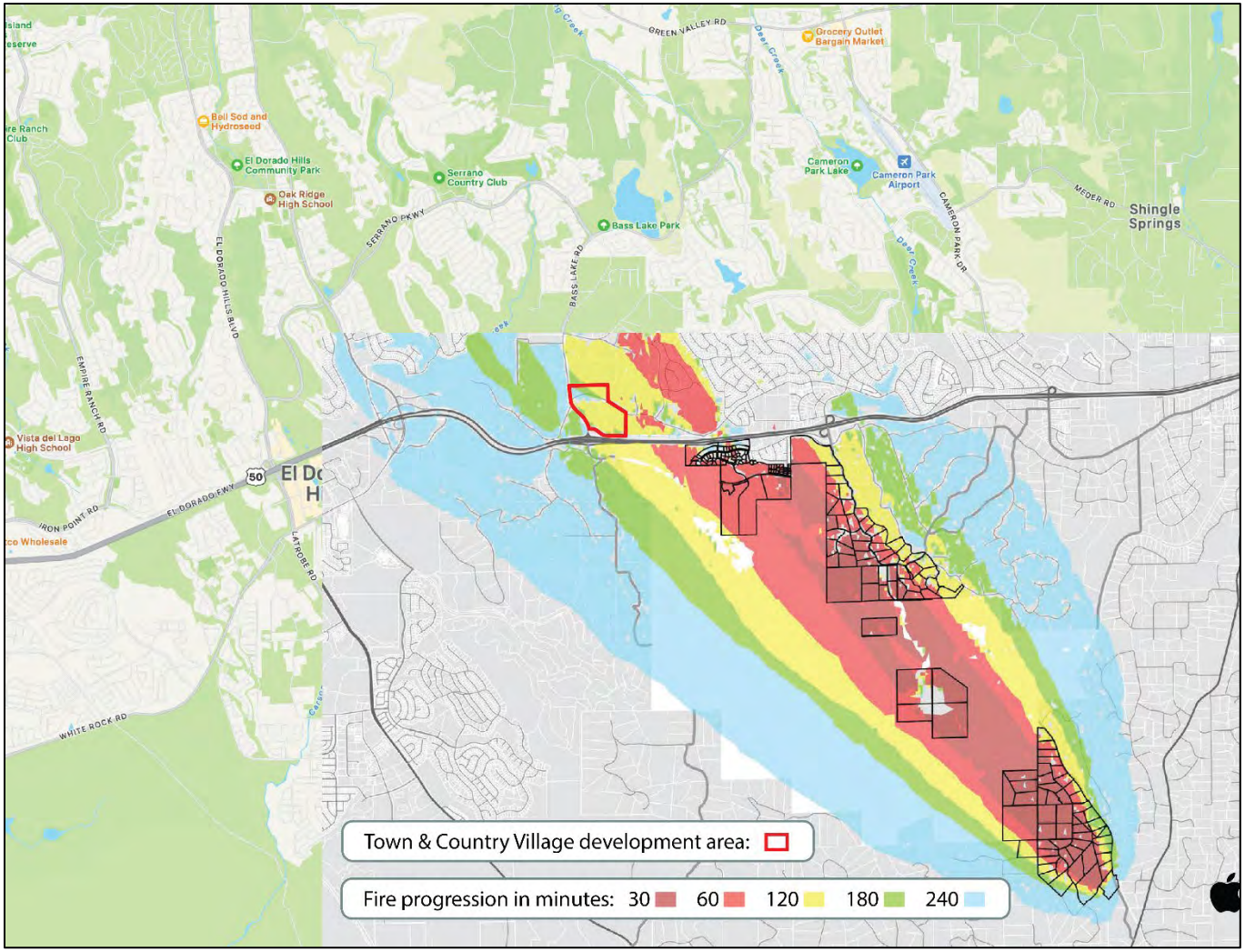


Figure 5. Wildfire scenario 7E fire progression map (*without* the proposed Marble Valley and Lime Rock developments)

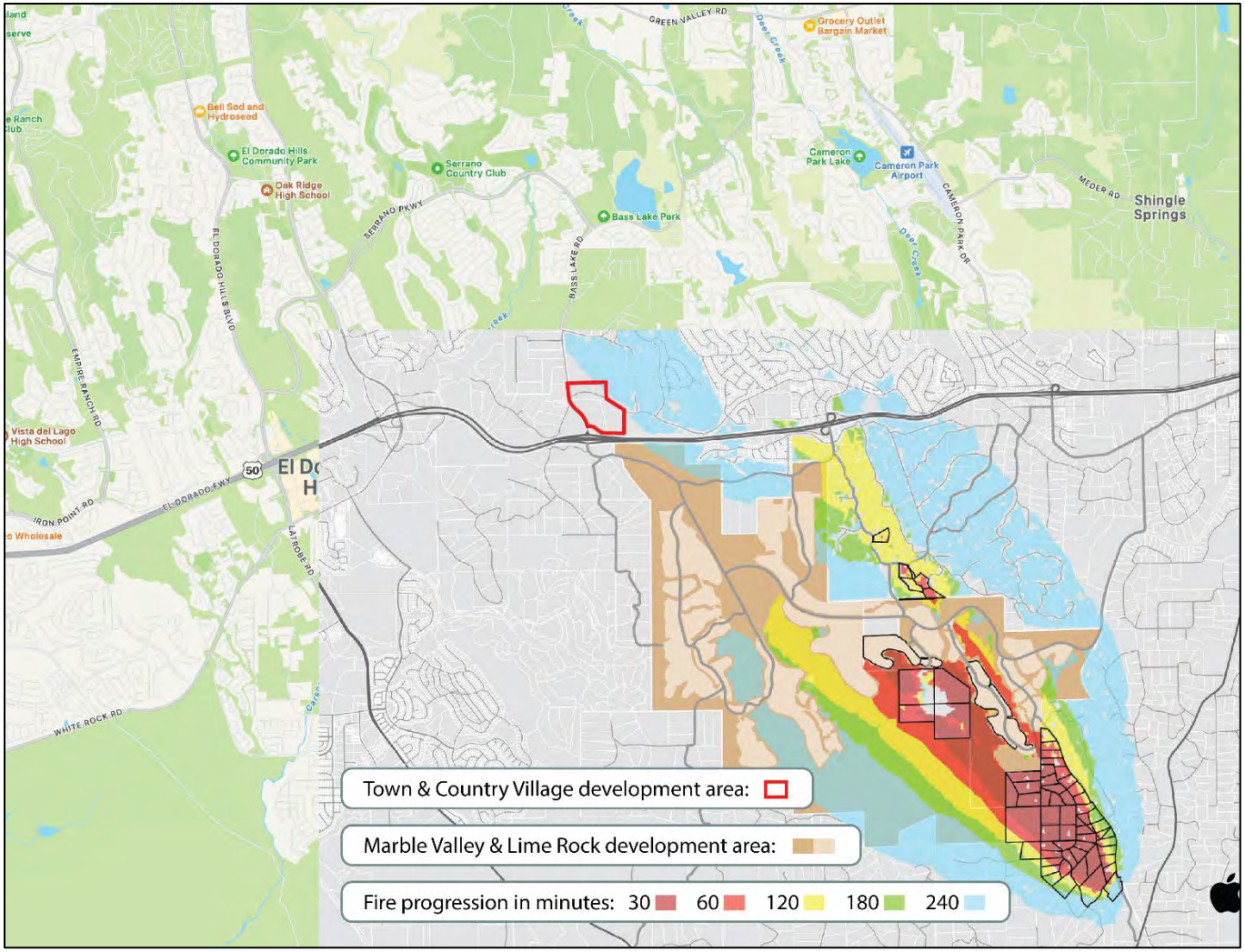


Figure 6. Wildfire scenario 7H fire progression map (*with* the proposed Marble Valley and Lime Rock developments)

60-minute, 120-minute, 180-minute, and 240-minute fire spread. Parcels shown with a black outline south of US-50 represent developed south of US-50 areas that the fire is anticipated to reach within 60 minutes. The red outlined parcels north of US-50 represent the Town and Country Village – El Dorado project site.

Wildfire scenarios 7E and 7H assume a fire start near Bullard Dr, west of Amber Fields Dr with 65 mph south-south-east winds and an evacuation starting at 7AM. Scenario 7H reflects super-cumulative conditions as it assumes that the proposed Marble Valley and Lime Rock developments are constructed. Scenario 7E does not include the proposed Marble Valley and Lime Rock developments.

Scenario 7E anticipates that the fire would reach the Town and Country Village – El Dorado project site within 120 minutes. Portions of the Bell Ranch neighborhood (north of the Holy Trinity Catholic Parish) are anticipated to be reached by the fire in 60 minutes. Under scenario 7H, the Marble Valley and Lime Rock projects are anticipated to slow fire progression, such that the fire would not cross US-50 until 240 minutes.

3.7 Evacuation Window

The evacuation time window is the time between when the order is received to evacuate for ordered evacuations, or the decision to evacuate is made for self-evacuation, and the time when evacuees reach safety. Self-evacuation occurs when a fire is likely to reach an area in under 60 minutes and fire authorities are not yet able to assist with evacuation. For this assessment, the entirety of the evacuation area is assumed to be ordered and/or is self-evacuating concurrently. That evacuation starts at 7AM per the fire scenario.

A 3-hour evacuation window is assumed based on guidance from the El Dorado Hills Fire Department and the related work done for the Marble Valley Fire Evacuation Assessment. As discussed later, modeling assumed a one-hour peak-period assignment, consistent with the assumption that under cumulative conditions the fire could reach north of US-50 within 60 minutes.

3.8 Effected Population and Trip Demand

The effected population and resulting travel demand were estimated based on household, population, and employment data from the travel demand model. The applicable data is listed in **Table 1**, with the *north of US-50* and *south of US-50* regions broken out. Evacuation time estimates from the *south of US-50* zone were provided by the Village of Marble Valley Specific Plan Fire Evacuation Assessment. However, some of the evacuation traffic south of US-50 could utilize evacuation routes and corridors north of US-50, therefore the *south of US-50 evacuation zone* evacuation demand is modeled for this analysis as well, to capture its effect on the *north of US-50 evacuation zone*. **Table 1** references the travel demand model Transportation Analysis Zones (TAZs) that represent the evacuation areas. TAZs are neighborhood size regions for which land use is tabulated and trip productions and attractions can be computed. All model trips begin and end at a TAZ.

Table 1. Evacuation zone population data

Scenario	2040 Population	2040 Employment	2040 Students	2040 Households
North of US-50 Evacuation Zone (TAZ 161-163, 179, 180, 182, 184, 221, 229, 230, 235, 624, 631-636)				
Cumulative no Project	17,410	875	2,483	6,294
Cumulative with Project	19,546	1,200	2,483	7,052
Super-Cumulative no Project	18,117	1,214	2,483	6,598
Super-Cumulative with Project	20,252	1,539	2,483	7,356
South of US-50 Evacuation Zone (TAZ 154, 180, 183 626, 629, 630)				
Cumulative no Project	2,472	114	0	1,010
Cumulative with Project	2,472	114	0	1,010
Super-Cumulative no Project	14,462	1,564	1,393	5,036
Super-Cumulative with Project	14,462	1,564	1,393	5,036
Combined Evacuation Zone				
Cumulative no Project	19,883	989	2,483	7,303
Cumulative with Project	22,018	1,314	2,483	8,061
Super-Cumulative no Project	32,579	2,778	3,876	11,633
Super- cumulative with Project	34,715	3,103	3,876	12,391

These data were converted to evacuation demand estimates based on US census and household travel survey data indicating an average of two vehicles per household throughout both evacuation zones. With an estimated evacuation start time of 7 AM, it is assumed that all residents are still at home and require evacuation, generating two outbound vehicle trips per household. Two vehicles were estimated for each household. Additionally, it was assumed that all employees working within the evacuation zone would already be on the job at 7 AM and would generate one outbound vehicle trip per employee. Inbound trip demand to the evacuation zones (for non-emergency vehicles) was assumed to be zero. Outbound commercial vehicle trips were taken from the El Dorado County travel demand model.

The resulting travel demand is shown in **Table 2**. For comparison, the regular travel demand from the affected areas in the El Dorado Travel Demand Model for the 60-minute AM peak-period is shown in **Table 3**.

Table 2. Evacuation zone 1-hour AM peak-period vehicle trips under evacuation conditions

Scenario	Outbound Passenger Vehicle Trips	Inbound Passenger Vehicle Trips	Outbound Commercial Vehicle Trips	Inbound Commercial Vehicle Trips
North of US-50 Evacuation Zone (TAZ 161-163, 179, 180, 182, 184, 221, 229, 230, 235, 624, 631-636)				
Cumulative no Project	12,546	0	175	0
Cumulative with Project	14,148	0	203	0
Super-Cumulative no Project	12,051	0	199	0
Super-Cumulative with Project	13,609	0	227	0
South of US-50 Evacuation Zone (TAZ 154, 180, 183 626, 629, 630)				
Cumulative no Project	1,988	0	24	0
Cumulative with Project	1,972	0	24	0
Super-Cumulative no Project	10,458	0	175	0
Super-Cumulative with Project	10,385	0	175	0
Combined Evacuation Zone				
Cumulative no Project	14,534	0	199	0
Cumulative with Project	16,120	0	227	0
Super-Cumulative no Project	22,509	0	374	0
Super-Cumulative with Project	23,994	0	402	0

Table 3. Evacuation zone 1-hour AM peak-period vehicle trips under normal conditions

Scenario	Outbound Passenger Vehicle Trips	Inbound Passenger Vehicle Trips	Outbound Commercial Vehicle Trips	Inbound Commercial Vehicle Trips
North of US-50 Evacuation Zone (TAZ 161-163, 179, 180, 182, 184, 221, 229, 230, 235, 624, 631-636)				
Cumulative no Project	3,590	2,152	179	179
Cumulative with Project	4,029	2,469	208	208
Super-Cumulative no Project	3,852	2,448	204	204
Super-Cumulative with Project	4,294	2,768	234	234
South of US-50 Evacuation Zone (TAZ 154, 180, 183 626, 629, 630)				
Cumulative no Project	461	242	25	25
Cumulative with Project	461	242	25	25
Super-Cumulative no Project	2,934	1,858	179	179
Super-Cumulative with Project	2,931	1,854	179	179
Combined Evacuation Zone				
Cumulative no Project	4,050	2,394	204	204
Cumulative with Project	4,490	2,711	234	234
Super-Cumulative no Project	6,786	4,306	384	384
Super-Cumulative with Project	7,225	4,622	413	413

4.0 METHODOLOGY

Evacuation modeling was carried out in the El Dorado County Travel Demand Model, with the AM peak-hour origin and destination matrices adjusted using a "FRATAR" process to account for the evacuation demand from effected TAZs (summarized in **Table 2** above). No road closure to through traffic was assumed (i.e., some non-evacuation traffic passes through the evacuation zone, increasing congestion and travel times). Though eliminating non-emergency inbound traffic to the evacuation zones greatly reduces inbound traffic on key roadways such as Bass Lake Rd and Country Club Dr. Travel through the evacuation zones is therefore allowed. For example, traffic evacuating the south of US-50 evacuation zone is able to pass through the north of US-50 evacuation zone. Travel times were then estimated from "skims" of the loaded network that report travel time between all TAZs.

While evacuation periods of up to 180 minutes can be accepted (depending upon how quickly the fire progresses) a one hour AM assignment was used as evacuation times under one hour will ensure that the affected population can evacuate prior to the wildfire crossing US-50.

4.1 Travel Demand Model Network Enhancements

The El Dorado County travel demand model network was enhanced to incorporate roadways and zones reflecting the super-cumulative projects (Marble Valley, Lime Rock and EDH-52), the Town and Country Village – El Dorado project, and to reflect key evacuation routes.

The adaptions made to reflect the additional land uses are detailed in the local transportation analysis (LTA) report.[7] Roadways representing evacuation routes that were already coded in the model were left as-is where applicable. New two-lane local roadways were added to the model to reflect internal connections within Serrano (Intrada Dr to Villaggio Dr), and Internal connections between Bass Lake Hills (specifically the "Bell Woods" neighborhood) and the "Bar J Ranch" neighborhood.

Additionally, several new TAZ's were added to the model reflecting the evacuation corridor gateways. Those new zones contain no land use but facilitate the use of network "skims" to capture the travel time between TAZ in the north of US-50 evacuation zone and the evacuation corridor gateways.

4.2 Evacuation Origin-Destination Data for Assignment

As previously stated, a FRATAR step was employed to adjust the travel demand models one-hour AM trip table to reflect evacuation demand as shown in **Table 2**. This represents evacuation of all households and employees in the evacuation zone.

[7] TKTPM (2024) Local Transportation Analysis: Town and Country Village – El Dorado — Bass Lake Hills California, April 15, 2024

4.3 Evacuation Corridor Gateway and Travel Time Skims

The Evacuation corridor gateways were added to the travel demand model as TAZs, and then travel time “skims” performed to estimate the evacuation times. Time skims create a matrix listing the travel time between each TAZ in the network, allowing for the evacuation time between each affected TAZ and the evacuation corridor gateways to be determined.

5.0 EVACUATION TIME RESULTS AND FINDINGS

5.1 Results

The resulting evacuation travel time estimates (in minutes) are summarized in **Figure 7** below, which shows the anticipated maximum travel time under evacuation conditions between any point within the *north of US-50* evacuation zone, and any of the evacuation corridor gateways. Both the maximum outbound travel times for evacuees and maximum inbound travel times for emergency vehicles are shown. The results show that all vehicles can evacuate within 30.2 minutes, faster than the wildfire is anticipated to reach the *north of US-50* evacuation zone.

Additional detail is presented in **Table 4** and **Table 5**. These tables present the minimum and maximum travel times (in minutes) between each evacuation corridor gateway, and any point within the *north of US-50* evacuation zone. Access to/from evacuation corridor gateways located adjacent to an evacuating neighborhood is anticipated to be as little as 1-2 minutes. While access to/from the furthest spaced evacuation corridor gateways and neighborhoods is anticipated to be about 24-30 minutes.

Cumulative analysis is reported here as the travel demand model does not include an existing scenario that could generate background traffic. To ensure that existing conditions could adequately be evacuated, the Cumulative evacuation traffic without Marble Valley and Lime Rock was assigned to the existing roadway network. Travel times to the closest evacuation corridor gateway were in the 31 minute to 36 minute range.

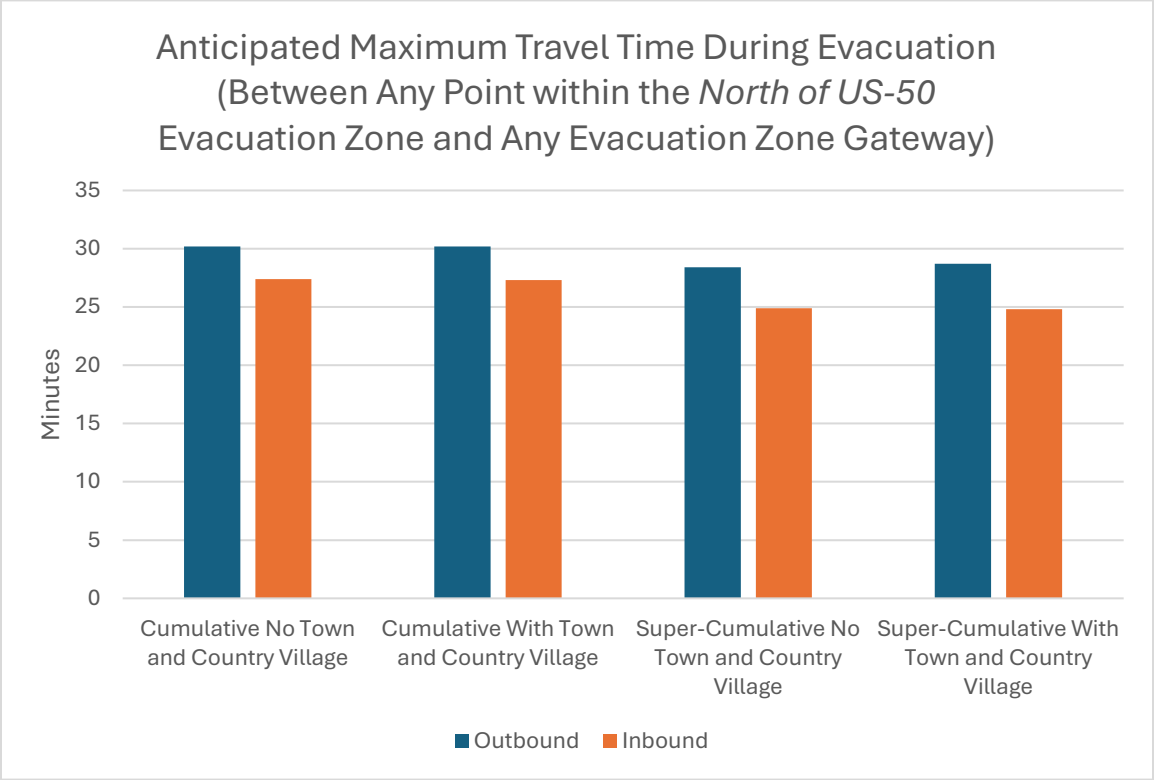


Figure 7. Evacuation time summary

Table 4. Outbound evacuation travel times

Evacuation Corridor Gateway	Cumulative No Town and Country Village (Minutes)		Cumulative With Town and Country Village (Minutes)		Super-Cumulative No Town and Country Village (Minutes)		Super-Cumulative With Town and Country Village (Minutes)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
A (Bass Lake Rd/US-50 westbound)	5.3	22.0	6.4	20.8	3.2	17.8	3.8	18.4
B (Silva Valley Pkwy/US-50 westbound)	2.7	30.2	2.7	30.0	2.7	28.4	2.7	28.7
C (Silva Valley Pkwy/Serrano Pkwy)	1.7	28.9	1.7	30.2	1.7	28.0	1.7	27.9
D (Bass Lake Rd north of Woodleigh Ln)	2.6	15.1	2.6	15.0	2.6	15.2	2.6	15.4
E (Cambridge RD north of Hillcrest Dr)	5.9	19.6	5.9	19.5	5.4	18.8	5.4	18.9
F (Cambridge Rd/US-50 westbound)	1.3	25.4	1.3	24.2	1.3	21.6	1.3	22.3

Table 5. Inbound travel time for emergency vehicles

Evacuation Corridor Gateway	Cumulative No Town and Country Village (Minutes)		Cumulative With Town and Country Village (Minutes)		Super-Cumulative No Town and Country Village (Minutes)		Super-Cumulative With Town and Country Village (Minutes)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
A (Bass Lake Rd/US-50 westbound)	1.5	14.8	1.6	15.5	2.1	17.6	2.0	17.4
B (Silva Valley Pkwy/US-50 westbound)	1.2	10.5	1.2	10.5	1.2	10.8	1.2	10.8
C (Silva Valley Pkwy/Serrano Pkwy)	1.8	13.2	1.8	13.4	1.8	11.7	1.8	12.2
D (Bass Lake Rd north of Woodleigh Ln)	2.6	27.4	2.6	27.3	2.6	24.9	2.6	24.8
E (Cambridge RD north of Hillcrest Dr)	4.9	23.5	4.9	23.7	4.9	21.3	4.9	21.1
F (Cambridge Rd/US-50 westbound)	1.3	13.8	1.3	14.3	1.3	20.1	1.3	19.8

5.2 Findings and Recommendations

- The Proposed Town and Country Village – El Dorado project is not anticipated to result in a significant impact that impedes the evacuation of the Town and Country Village – El Dorado development site, or the surrounding evacuation zone as assessed under the parameters defined in this assessment. Both the Town and Country Village – El dorado project and the surrounding evacuation zone are anticipated to be able to evacuate to a safe location in well under an hour under existing, cumulative, and super-cumulative analysis scenarios.
- Potential evacuation traffic congestion bottlenecks downstream and within the evacuation zone stem from capacity limitations at the traffic signals. El Dorado County could better facilitate evacuation and manage queuing during a fire event through investment in a central traffic signal management system and communications infrastructure to remotely adjust signal timing parameters. Alternatively, the County could accomplish this level of control with manual traffic control at key intersections.
- Public Safety Power Shutoffs (PSPSs) can be a strategy used by the utility provider to reduce wildfire risks under extreme weather conditions. These outages can impact traffic signals that have no battery backup system or limited duration systems, resulting in impacts to evacuation operations. Installing traffic signal battery backup systems with sufficient capacity to operate during multi-hour power outages is recommended for traffic signals along evacuation routes.