I. Introduction

This set of protocols and procedures has been developed by El Dorado County's Community Development Agency (CDA) to assist applicants in the preparation of a transportation impact study (TIS), also known as a traffic impact study or traffic impact analysis, for proposed projects within unincorporated areas of El Dorado County. These guidelines are intended to ensure that the traffic impacts of proposed development projects are addressed in a manner that is consistent with the policies set forth in the Transportation and Circulation Element of the ***2004 El Dorado County General Plan; A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief*** (General Plan) and any applicable Specific Plan**.** The guidelines enable the County to conduct transportation and circulation impacts review of development proposals pursuant to the requirements of the California Environmental Quality Act (CEQA).

The County expects these guidelines to result in studies that provide comprehensive and accurate analysis of potential transportation impacts to County facilities and services. A TIS is a stand-alone document that could be replicated by a peer consultant or County staff based on information provided in the document. It is not a persuasive document; it is a factual document utilizing state of the practice and industry technical analyses.

This guide is intended to be used for proposed development projects which are consistent with the El Dorado County General Plan land use designations and zoning densities applicable at the time an application for County review of the project is submitted. Any application for a project that seeks to amend existing land use designations or zoning densities or that may result in concentrated residential development that will require a General Plan Amendment will be reviewed by the CDA's Long Range Planning (LRP), Development Services Division, and Transportation Division and the transportation impact study requirements for such projects may vary from those presented herein.

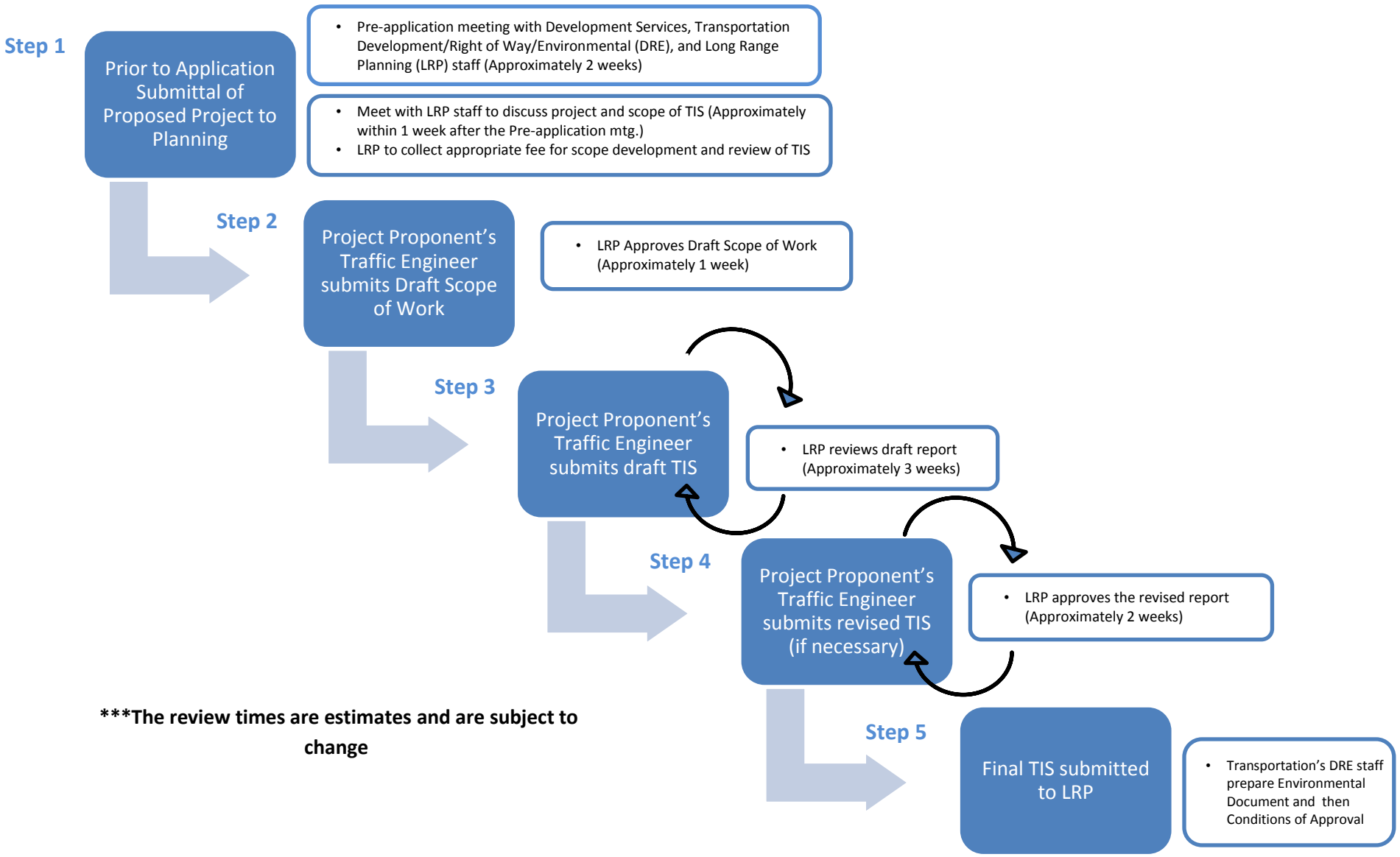
What is a Transportation Impact Study?

A Transportation Impact Study (TIS) evaluates the potential effects of proposed projects on surrounding and supporting transportation infrastructure and services.

A TIS determines if the project's effects constitute significant impacts, and if so, how the significant impacts can be mitigated.

The El Dorado County's updated Travel Demand Model (TDM) is housed in LRP and is maintained by LRP's Traffic Engineer and Transportation Planner. A dynamic TDM is essential to provide consistent baseline and forecast information for the County's transportation system.

Figure 1. Transportation Impact Study (TIS) Process



*****The review times are estimates and are subject to change**

Project Considerations

The following types of projects, which involve development activity in El Dorado County and affect the County's transportation system, may require a TIS:

- Transportation infrastructure modification or expansion, including capital improvement projects (CIP) on county roads and state highways
- Land use entitlements requiring discretionary approval by El Dorado County, which includes annexations, general plan amendments, specific plans, zoning changes, conditional use permits, commercial parcel maps, and tentative maps
- Land use activity advanced by agencies other than El Dorado County that is subject to jurisdictional review under state and federal law or that will require a General Plan Amendment

Section II identifies specific project parameters or "triggers" that may necessitate a TIS.

Intent of Study Guidelines

These guidelines address key elements required for preparing and reviewing transportation impact studies in El Dorado County. This document is intended to be a resource applied in concert with professional judgment. The following major issues are addressed in this document:

- Situations and thresholds that commonly trigger the need for a TIS
- Scope and extent of the required study
- Transportation impact analysis methods
- Criteria to determine if the transportation-related impacts of the proposed project are significant under the California Environmental Quality Act (CEQA)
- Mitigation measure requirements
- Guidelines for documentation of the findings, conclusions, and recommendations
- Review of site specific circulation plan

El Dorado County will primarily review transportation impact studies and reports based on the guidelines presented in this document. However, each project is unique, and TIS guidelines are not intended to be prescriptive beyond practical. Not all criteria and analyses in this document will apply to every project. Early and consistent communication with the CDA's LRP, Development Services and Transportation Divisions are encouraged to confirm the type and level of analysis required on a case-by-case basis. The County reserves the right to modify the procedures and requirements defined in this document to more accurately and consistently identify the impacts of a given project.

General Plan Context

The Transportation and Circulation Element of the ***2004 El Dorado County General Plan, A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief*** (General Plan)***,*** identifies the need to plan for and provide a countywide road and highway system that ensures the safe, orderly and efficient movement of people and goods. The concurrency of transportation improvements are codified in Goal TC- X and Policies TC-Xa – TC-Xi. The applicable General Plan Goals and Policies are listed in Appendix A.

II. Triggers Requiring an Impact Study

Does my project require a transportation impact study?

Unless explicitly waived by the County, a TIS is required when any one of the following conditions is met, per General Plan Policies TC-Xa and TC-Xe:

- The project has the potential to increase traffic during the weekday a.m. peak hour or weekday p.m. peak hour, or daily period by two (2) percent or more
- The project has the potential to add 100 or more daily trips
- The project has the potential to add 10 or more trips during the weekday a.m. or weekday p.m. peak hour
- The project has the potential to create a significant environmental impact under CEQA
- The project is a General Plan Amendment which proposes changes to the land use designation

In general, a previously performed TIS is applicable as long as the traffic volumes in the vicinity of the project have not changed significantly. After two or more years of inactivity, new counts should be collected to determine if the TIS should be updated, as determined by LRP staff.

In some instances, a master TIS may be prepared for a larger development. If the master TIS fully address development phasing and a subsequent phase or project is consistent with the larger development plan, specific phases will generally not require supplemental transportation impact studies.

At a minimum, an On-Site Transportation Review is required for every project. The following information shall be evaluated and the findings stamped by a registered Traffic Engineer or Civil Engineer, and shall be included with the project submittal:

1. Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal
2. Proximity of proposed site driveway(s) to other driveways or intersections
3. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements
4. Adequacy of the project site design to fully satisfy truck loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day
5. Adequacy of the project site design to provide at least a 25' minimum required throat depth (MRTD) at project driveways. Include calculation of the MRTD
6. Adequacy of the project site design to convey all vehicle types
7. Adequacy of sight distance on-site
8. Queuing analysis of "drive-through" facilities

If a TIS is required, the On-Site Transportation Review shall be included under the Other Transportation Related Impacts and Mitigation Considerations Section.

An accurate project description will help determine if a TIS is required based on potential significant environmental impacts or trip generation. The TIS must address the final proposed project. **It is important to note that if the proposed project is modified in any way following the initiation of the TIS and/or the County's review of the project, the scope of the work and the study area may be changed.**

III. SCOPE OF THE STUDY

The contents and extent of a TIS depend on the location and size of the proposed development (Project), the prevailing conditions in the surrounding area, and the technical questions being asked by decision makers and the public.

The applicant's traffic engineer shall prepare a draft "scoping" memorandum to define the scope and content of the project-specific traffic analysis. CDA's LRP staff shall review and approve the scoping memorandum prior to the commencement of work on the TIS. The applicant's engineer will then prepare a draft "assumptions" memo to identify all relevant land use and operational assumptions including traffic study modeling inputs and requirements. CDA's LRP staff will review and modify the proposed assumptions, as necessary.

Transportation Impact Study (TIS) Required Elements

CDA's LRP staff is responsible for working with the applicant's traffic engineer to create a scope of work. After the scope of work has been approved by CDA's LRP staff, a draft copy of the TIS for the Project shall be submitted. The report shall include appropriate text, tables, maps, and drawings to fully document the required elements of the traffic analysis and results. Copies of all traffic counts and level of service (LOS) calculations shall be provided in an appendix accompanying the main report. Electronic copies of the LOS calculations and any simulation program files shall be included with the submittal. CDA's LRP staff will review the report and prepare written comments to the applicant team indicating any necessary revisions to the report. During its review, CDA's LRP staff may request a meeting with the applicant team to discuss any comments, questions, or apparent deficiencies in the report. The applicant will then make the necessary changes to the report and if necessary the supporting analysis and will provide the final version of the TIS Report to CDA's LRP staff. The final TIS shall be signed and stamped by a registered Civil Engineer or Traffic Engineer, licensed and in good standing with the State of California Board of Professional Engineers, Land Surveyors, and Geologists.

A TIS in El Dorado County shall consist of the following elements:

1. Executive Summary
2. Project Description
3. Study Area (Zone of Impact Identification)
4. Analysis Methodology Description
5. Impact Significance Criteria Definition
6. General Plan Consistency Considerations for Cumulative Impact Analysis
7. Traffic Impact Analyses Scenarios
    a. Existing Conditions
    b. Existing Plus Project Conditions
    c. Near-term (+ 10 years) Conditions
    d. Near-term Plus Project Conditions
    e. Cumulative Conditions (when required)
    f. Cumulative Plus Project Conditions (when required)
8. Transportation Impact Mitigation Identification
9. Other Transportation-Related Impacts and Mitigation Considerations
10. Technical Appendices

See Appendix B for the TIS Report Format Outline.

IV. ELEMENTS

1. Executive Summary

The transportation analysis shall include an executive summary that includes the findings of the TIS.

2. Project Description

The applicant shall provide a project description that, at a minimum, includes the following:

- A discussion of the specific land uses intended for the site
- Identification of the current land use designation(s) as defined by the El Dorado County General Plan of the project area
- A statement confirming the project's consistency with the current land use designation(s),
- Traffic Analysis Zone(s) (TAZ) where the project is located
- Site access alternatives
- Project location map which shows the proposed project location in relation to surrounding communities, roadways/highways, major water courses, and delineation of the TAZ's in which the project will be located
- Project boundary map which shows the site location, off-site roadways and other transportation features, including any proposed transit, bicycle and pedestrian facilities, within the surrounding area
- Site plan showing the proposed layout of the internal site traffic circulation system, parking configuration, and any transit, bicycle and/or pedestrian facilities. The site plan shall also include the location and configuration of access and egress connections to the local street network
- A tabular listing of the types of development and/or land use included in the proposed project and the quantity or amount of units, floor area gross square footage, acreage, number of employees, or other appropriate measure of the size of the project
- Description of the proposed construction and operational activities forecasted for the proposed project, including a schedule for completion and development phasing, if applicable
- Documentation to inform the county whether the project will affect off-site transportation facilities or services including transit, roadways, bikeways, and sidewalks
- Size or intensity of the proposed development (e.g., square footage, acreage, dwelling units, etc.)
- Assessor Parcel Number (APN)
- Initial estimate of the weekday average daily traffic (ADT), AM and PM peak hour traffic generation. Include documentation to inform the County whether the project generated 100 or more vehicle trips per day. Refer to Appendix C for typical project trip generation categories

3. Study Area (Zone of Impact Identification)

How is the study area determined?

Defining a study area needs to be done through a process that results in substantial evidence (facts, analysis, etc.) that supports the study area delineation. The boundary should extend as far as any potential transportation impact might occur. CDA's LRP staff must approve study locations before traffic data collection and analysis commences. Careful consideration of all modes and facilities (i.e., transit, pedestrian, bicycle, vehicle, etc.) is required when selecting the study area boundary. The extent of the study area should be determined according to the following guidelines:

- All intersections and road segments contiguous to the project site,
- All intersections and road segments where the project would potentially "worsen" traffic conditions, per General Plan Policy TC-Xe, beyond the acceptable level of service "E" in Community Regions, or level of service "D" in Rural Centers and Rural Regions,
- All intersections and road segments which are currently level of service "F", as defined by General Plan Policy TC-Xd, and which would be impacted by project traffic,
- All State Highway intersections and interchange ramps in the area impacted by the project.

The applicant shall also consult with the State of California Department of Transportation (Caltrans) to determine the CEQA levels of significance with regard to traffic impacts on Caltrans freeway facilities. The consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts shall be considered when scoping and determining impacts on Caltrans' controlled facilities. This analysis must follow the most current *Caltrans Guide for the Preparation of Traffic Impact Studies,* which can be obtained from *http://www.dot.ca.gov.* The initial consult meeting shall be coordinated with CDA's LRP staff. Any correspondence with Caltrans shall be provided to the CDA's LRP staff.

4. Analysis Methodology

What time periods need to be analyzed?

Analysis Time Periods

Traffic impacts shall be analyzed using standard or state-of-the-practice professional procedures. General Plan Policy TC-Xd states in part that, "…Level of Service will be defined in the latest edition of the *Highway Capacity Manual* (Transportation Research Board, National Research Council) and calculated using the methodologies contained in that manual. Analysis periods shall be based on the professional judgment of CDA's LRP staff which shall consider periods including, but not limited to, Weekday Average Daily Traffic (ADT), AM Peak Hour and PM Peak Hour traffic volumes."

Based on the land use of the proposed project and upon consultation with the CDA staff, the study shall analyze traffic operations during the peak hour of the following time periods:

- Weekday morning peak (6:00 – 9:00 AM)
- Weekday evening peak (4:00 – 7:00 PM)

For some projects, the County may substitute or require additional peak hour analysis for the following time periods:

- Weekday afternoon peak (2:00 – 4:00 PM)
- Weekday midday peak (11:00 AM – 1:00 PM)

The determination of study time periods should be made separately for each proposed project based upon the peaking characteristics of project-generated traffic and peaking characteristics of the adjacent street system and land uses. The time period(s) that should be analyzed are those that exhibit the maximum combined level of project-generated traffic and adjacent street traffic.

Analysis parameters (e.g., signal phasing, conflicting pedestrian volumes, lane configurations, etc.) for Existing and Existing Plus Project conditions shall be based on field measurements taken during traffic count collection or field observation. This typically applies to Existing Plus Approved Projects and Existing Plus Approved Projects Plus Project analysis.

Trip Generation

All applicants are required to submit a trip generation analysis that identifies the number of new daily and peak hour vehicle-trips added by the proposed project. The trip generation estimation for all new or proposed development projects shall include the summation of primary trips, internal trips, diverted link trips, and pass-by trips. See Appendix C for examples.

The estimation of new trips generated by the proposed development project may include credit for trips associated with existing uses on the site. Existing uses are those actively present on the project site at the time data is gathered for the traffic impact study or at the time of the Notice of Preparation (NOP) is released for CEQA studies.

The final estimate of new daily and peak-hour trips associated with a proposed development project should represent the net contribution of the proposed project. The County will review the trip generation analysis and determine if additional analysis is required.

Trip generation for the project shall be estimated for each specified time period using the most recent version of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. If multiple trip generation rate sources exist, the study shall provide a comparison and use the rates that best reflect local conditions and applicable regulatory constraints. Potential reductions (i.e. pass-by, internal trips) in project trip generation may be considered, when approved by CDA's LRP staff in advance. Reductions to trip generation should be based on the guidance outlined in the latest edition of ITE's *Trip Generation Manual's User's Guide and Handbook.*

If the *Trip Generation Manual* does not provide a rate for the particular land use type or the applicant desires to base the analysis on other trip generation data, the applicant shall provide CDA's LRP staff with a justification for the use of the data. The project trip generation rate cannot be based solely on one nearby or similar land use facility. The sample used for non-standard trip generation rates shall include at least three similar facilities in El Dorado County or neighboring jurisdictions with similar characteristics.

If the study involves comparable sites located in other communities, the applicant must demonstrate to the satisfaction of CDA's LRP staff that the sites and uses to be studied are reasonably equivalent to the site and use proposed within the County.

A tabular summary of the final trip generation rate calculation shall be provided. Appendix D provides sample trip generation calculations.

Trip Distribution

The trip distribution of the proposed project trips shall be developed using at a minimum the following sources:

- Existing travel patterns based on existing traffic counts
- Traffic assignment using the El Dorado County Travel Demand Model (TDM)
- Project access and internal circulation

The applicant team shall document all assumptions regarding the distribution of project related trips on the street network, indicating how the trips would be distributed and providing a rationale for the distribution assumptions. The trip distribution will be reviewed and approved by CDA's LRP staff. The assigned trips from the project shall be added to the observed traffic count data to create an existing plus project scenario.

Trip distribution assumptions may vary by analysis scenario (i.e. Existing Plus Project may be different than Cumulative Plus Project). If so, the trip distribution for each analysis scenario shall be identified.

Analysis Tools

1. Forecasts

The El Dorado County TDM forecasts for the year 2035 shall be the basis of all traffic impact studies. The County TDM will be used to develop the background growth forecasts to be used in the development of the Near-term Scenarios and Cumulative Scenarios.

The scenarios shall be analyzed using the El Dorado County TDM forecasts for the year 2035 for the 2004 General Plan "with improvements" alternative as provided by CDA's LRP staff.

To ensure consistency among traffic impact studies, CDA's LRP staff will either 1) provide the forecasted peak hour volumes for the key road segments near the proposed project via loaded highway network files in electronic CUBE 6 format with the post-processor spreadsheet or 2) provide the latest updated CUBE catalog with the post-processor spreadsheet for AM and PM peak hours to those consultants requesting them. Consultants and project proponents must sign a disclaimer and model users form in order to receive any TDM files. The following scenarios can be provided:

1. Existing 2010
2. Near-term, 10 years after project submittal
3. Cumulative 2035

For intersections where the current road configuration is unchanged between the current year and 2035, the TDM forecasted growth between the current year and the forecast year shall be applied to current year turning movement counts to arrive at future year turning movement counts. A Furness factoring process or other procedure approved by CDA's LRP staff shall be used to balance the forecasted inbound and outbound traffic for each intersection.

For intersections where the road configuration is expected to change between the current year and 2035 (for example, when a freeway interchange is reconstructed in a new configuration), then the model forecasted 2035 turning movements shall be used (after adjustment for any validation error between the model's year 2010 estimated volume and year 2010 traffic counts, if available). The engineer may submit an alternative method for approval by CDA's LRP staff.

The engineer conducting the traffic modeling should review the forecasted turning movements for reasonableness and make any necessary adjustments. A description of and justification for any manual adjustments to the forecasts must be included in the traffic report. Any negative increments shall be justified and explained in the traffic report.

2. *Level of Service*

Traffic operations analysis shall be conducted using tools and methods approved by El Dorado County. General Plan Policy TC-Xd defines the LOS threshold policy for El Dorado County and dictates the use of the latest version of the *Highway Capacity Manual* for LOS computations. As delineated in the *Highway Capacity Manual*, the LOS for signalized intersections and all-way stop control intersections are based on the average control delay for the entire intersection. For intersections with side-street stop-control, the LOS is evaluated separately for each individual movement. The LOS for road segments is defined below in Table 1.

Applicants are required to verify LOS thresholds for study area intersections and roadway segments. The General Plan states that LOS exceptions may be allowed for segments listed in Table TC-2 of the General Plan. Further, individual Specific Plans may have specific LOS thresholds. Applicants with a project within one of these plan areas should confirm applicable LOS thresholds with CDA's LRP staff.

El Dorado County Vehicle LOS Threshold Policy

General Plan Policy TC-Xd: Level of Service (LOS) for County maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2.

Table 1: El Dorado County Peak Hour Roadway Segment LOS Criterion

		HCM 2010 Planning Level Volumes[1]				
Code	**Functional Class Codes (Updated to HCM 2010)**	**A**	**B**	**C**	**D**	**E**
2A	Two-Lane Arterial	-	-	850	1,540	1,650
4AU	Four-Lane Arterial, Undivided	-	-	1,760	3,070	3,130
4AD	Four-Lane Arterial, Divided	-	-	1,850	3,220	3,290
6AD	Six-Lane Arterial, Divided	-	-	2,760	4,680	4,710
4M	Four-Lane Multi-Highway (Two Dir.)	-	2,240	3,230	4,250	4,970
2F	Two Freeway Lanes (One Dir.)	-	2,070	2,880	3,590	4,150
2FA	Two Freeway Lanes + Auxiliary Lane (One Dir.)	-	2,610	3,630	4,520	5,230
3F	Three Freeway Lanes (One Dir.)	-	3,100	4,320	5,380	6,230
3FA	Three Freeway Lanes + Auxiliary Lane (One Dir.)	-	3,640	5,070	6,320	7,310
4F	Four Freeway Lanes (One Dir.)	-	4,140	5,760	7,180	8,310

[1] *Freeway LOS based on HCM 2010, Exhibit 10-8, Urban Area, Rolling Terrain, K-factor of 0.09, and D-factor of 0.60*

2-lane highway (and arterial 2-lane) LOS based on HCM 2010, Exhibit 15-30, Class II Rolling, .09 K-factor, and D-factor of 0.6

Arterial LOS based on HCM 2010, Exhibit 16-14, K-factor of 0.09, posted speed 45 mi/h

Volumes are for both directions unless noted

The traffic analysis methodologies for the facility types indicated below will be accepted without prior consultation:

- Signalized Intersections – Latest version of the *Highway Capacity Manual* (HCM) using Highway Capacity Software (HCS), Synchro, TRAFFIX, or other software approved by the CDA's LRP staff
- Unsignalized Intersections – Latest version of the HCM using HCS, SimTraffic, TRAFFIX, or other software approved by the CDA 's LRP staff
- Signal Warrants – Latest version of the *Manual of Uniform Traffic Control Devices (MUTCD California Version)*
- Road Segments – Latest version of the HCM using HCS, Table 1 above

The LOS analysis must consider the existing and potential impacts of peak hour factors (PHF), heavy vehicles, upstream/downstream queuing at nearby intersections, queue overflow interference with intersection operations (such as left turn pocket overflows), minimum pedestrian crossing times (if appropriate), uneven lane utilization in the vicinity of freeway ramps, and unusual platoon dispersion or compression between intersections. Should any of these factors impact intersection operations, the computed LOS should be corrected accordingly. A description of each of these factors and associated adjustments to the computation must be included in the TIS. Micro-simulation of the study area, using software such as SimTraffic, may be necessary as determined by the CDA's LRP staff. See Appendix D, Recommended Procedures for Synchro and SimTraffic Analysis.

State facilities shall be analyzed in accordance with Caltrans standards and the requirements of El Dorado County's General Plan.

3. Capital Improvement Projects

The transportation analysis shall identify the capital improvement project (CIP) list and/or improvement projects that are being assumed. In addition, the TIS shall address if the funding has been identified and provide reference documentation with applicable pages from the document included in an appendix as well as approximate time frame of construction of the assumed improvements. A listing of El Dorado County's CIP projects can be found on the CDA Transportation website at *http://www.edcgov.us/Government/DOT/CIP.aspx.*

5. Impact Significance Criteria

Level of Service (LOS) Significance

LOS impacts of a proposed project shall be determined based on the methods described above and shall be identified within the TIS as either "significant" or "less-than-significant".

General Plan Circulation Policy TC-Xd provides Level of Service standards for County roads as follows:

> Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table-TC-2 as applicable shall not exceed the ratio specified in that table.

If a project causes the peak hour LOS or volume/capacity ratio on a county road or state highway that would otherwise meet the County standards (without the project) to exceed the values listed in the above tables and text, then the impact shall be considered significant.

If any county road or state highway fails to meet the above listed county standards for peak hour LOS or volume/capacity ratios without the proposed project, and the project will worsen conditions on the road or highway, then the impact shall be considered significant. The term, worsen is defined for the purpose of this paragraph according to General Plan Policy TC-Xe as follows:

A. A two (2) percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily, or
B. The addition of 100 or more daily trips, or
C. The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour

When a project identifies an impact on the County's roadway network for a scenario with or without the project, a separate analysis must be done to identify what improvements are needed for mitigation and when the improvements must be in place. The timing of the proposed mitigation must be in compliance with General Plan Policy TC-Xf:

> At the time of approval of the tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A} or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project

submittal; or (2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year CIP.

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A} or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards as detailed in this Transportation and Circulation Element; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP.

Projects that have impacts to Caltrans facilities shall use Caltrans LOS standards and significance thresholds in conjunction with the requirements of El Dorado County General Plan Circulation Policy TC-Xd.

Queuing Analysis Significance

The level of service analysis must consider the existing and potential impacts of upstream/downstream queuing at nearby intersections, and queue overflow interference with intersection operations (such as left turn pocket overflows). If the proposed project causes a queue overflow interference with intersection operations, the impact may be considered significant.

Senate Bill (SB) 743 and SB 375

If applicable, all TIS's prepared for CEQA documents shall address the requirements of SB 743 and SB 375 (amended California Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587 and 65588). The TIS shall contain an analysis of where SB 743 or SB 375 applies within the study area. If either SB 743 or SB 375 does apply to the study area, the TIS shall contain the appropriate analysis and impact statements. The applicant team shall coordinate with CDA's LRP staff to determine appropriate significance thresholds and mitigation measures, if needed.

6. General Plan Consistency Considerations for Cumulative Impact Analysis

Cumulative impact analysis must comply with CEQA. Land use development and infrastructure projects that are consistent with the General Plan, are expected to rely on the General Plan cumulative traffic analysis and EIR and Supplemental EIR conclusions. Projects that are part of a Specific Plan may require updated cumulative traffic analysis consistent with the following definitions:

- The cumulative scenario is required per CEQA Guidelines Section 15130
- The general definition of cumulative as a scenario is that it represents past, present, and reasonably foreseeable actions regarding land use development and the transportation network (see CEQA Guidelines Section 15355)

The General Plan Environmental Impact Report (EIR) and the *Traffic Impact Mitigation Fee Program Supplement to the El Dorado County General Plan Environmental Impact Report*, March 2006, analyzed residential and employment growth, and the traffic impacts associated with that growth using theoretical achievable development of the General Plan at the conclusion of the "planning horizon" used in the General Plan for 2025. The General Plan Policy TC-Xb and Implementation Measures TC-A and

TC-B require major five year updates to the CIP and traffic fee programs. These updates have established a new "planning horizon" of 2035. In addition, the Targeted General Plan Amendment Draft Environmental Impact Report has also pushed the "planning horizon" to 2035. The updated analysis will generally cover the cumulative traffic effects of consistent development projects. However, over time, it is likely that general plan amendments or regional growth will influence background traffic volumes. If this occurs, individual projects may be required to conduct a project-specific cumulative analysis based on the determination of CDA's LRP staff.

7. Traffic Impact Analyses Scenarios

The potential traffic impact analysis scenarios are listed below. Most isolated or small projects consistent with the General Plan will be required only to complete the Existing Conditions analysis as determined by CDA's LRP staff. Larger projects and projects near other potential development projects may be required to analyze both Existing and Near-Term Project Conditions.

How many traffic analysis scenarios are required?

The following scenarios shall be evaluated for each location.

Existing Conditions

- **Existing Conditions** represented by transportation conditions in the study area based on recent field observations. Peak period (3 hours or more) turning movement counts shall be conducted at each study location for the specified time periods. Weekday counts shall be performed during typical traffic conditions on a Tuesday, Wednesday, or Thursday with clear weather, when school is in session, if possible. With CDA's LRP staff authorization, traffic counts which have been conducted by others may be utilized if they are less than two years old and have been increased at a growth rate of 1.03% per year.

- **Existing Plus Project Conditions** represented by project changes to existing transportation conditions for all travel modes in the study area. Traffic volume forecasts for roadway analysis should reflect existing conditions plus traffic generated by the proposed project. For re-use or conversion projects, this will involve accounting for any existing use of the site that remains or will be discontinued.

  The peak hour traffic generation of the project shall be estimated for each of the specified time periods using the trip generation rates from the latest edition of the ITE *Trip Generation Manual*. If the Manual does not provide a rate for the particular land use type or the applicant desires to base the analysis on other trip generation data, the applicant shall provide CDA's LRP staff with a justification for the use of the data.

  The applicant team shall document all assumptions regarding the distribution of project related trips on the street network, indicating how the trips would be distributed and providing a rationale for the distribution assumptions. The assigned trips from the project shall be added to the observed traffic count data to create an existing plus project scenario.

Near-Term Conditions With and Without Project

- The study shall analyze conditions with and without the proposed project ten years from the current year calculated using a straight line interpolation from existing traffic levels to the County's TDM 2035 traffic projections. The traffic network to be evaluated in this scenario will include all applicable projects in the County's Ten Year CIP.

Future Conditions

- **Cumulative No Project Conditions** represented by transportation conditions in the study area reflecting all approved projects plus pending projects or expected development of other areas of the County designated for growth. In most cases, the project site will likely be vacant under this scenario. In some cases though, this scenario may need to account for any existing uses on the site that could continue and potential increases in development allowed by ministerial approvals only. The transportation network to be evaluated in this scenario will include projects in the County's current 20-year CIP.

- **Cumulative Plus Project Conditions** represented by Cumulative Conditions plus changes to these conditions caused by the proposed project. The EDC TDM shall be used to determine project trip distribution for the cumulative plus project scenario. This scenario needs to account for whether the project is changing any existing or planned land uses on the site.

Additional analysis scenarios may be required in the TIS dependent on project conditions and setting. For example, other scenarios may be needed to test phasing or other interim conditions, at the discretion of the County.

The study will involve review of the year 2035 traffic analyses from the Targeted General Plan Amendment traffic study to determine if the proposed project would worsen traffic conditions in the year 2035. Projects which are found to be consistent with the General Plan land use designations and zoning densities and the traffic evaluation assumptions used for the General Plan traffic study typically will not be required to conduct a separate 2035 analysis and may be allowed to tier from the General Plan EIR Cumulative Traffic Analysis. Documentation of this consistency review shall be included within the TIS and confirmation by CDA's LRP staff shall be obtained to confirm that a separate cumulative evaluation will not be required for the project. In the event it is determined that a separate cumulative impact analyses is required, the land use and transportation improvement assumptions to be used in this analysis shall be developed in coordination with CDA's LRP staff. See General Plan Consistency Considerations for Cumulative Impact Analysis for additional discussion of cumulative impact considerations.

8. Traffic Impact Mitigation Identification

Mitigation measures must be developed for all significant impacts identified according to the criteria in the previous section for the following scenarios: the "Existing Plus Project" scenario, the "Near Term Plus Proposed Project" scenario, and the "Future Cumulative With Proposed Project (2035)" scenario.

The mitigation measures must comply with General Plan Policy TC-Xf, TC-Xg, and TC-Xh.

In any case where the project results in a significant impact the applicant team must identify appropriate project design changes and traffic improvements beyond those already included in CDA's approved CIP to fully mitigate the impacts to a less than significant level. Specific improvements proposed to mitigate direct impacts must be identified in the traffic impact study.

Potential mitigation measures may include project re-design, traffic signal improvements, physical road improvements, street re-striping, parking prohibitions, fair share contributions toward identified and scheduled projects, and transportation demand management programs. All traffic impact mitigation proposals must be supported by analysis of the mitigated project to illustrate the effectiveness of the proposed mitigation at reducing impacts to levels of less-than-significant. The applicant team shall consult with CDA's LRP staff to determine if proposed mitigation is acceptable. If mitigation is proven effective and approved by CDA's LRP staff, the mitigation shall be incorporated as an element of the proposed project. All CEQA review necessary for implementation of the mitigation required to be implemented by the applicant shall be included within the CEQA review of the proposed project.

9. Other Transportation-Related Impacts and Mitigation Considerations

The TIS shall also include documentation as to how the project will impact and mitigate its impacts related to the following issues and General Plan goals:

- Emergency Vehicle Access
- Deliveries of Goods and Services
- Access to Public Transit Services consistent with General Plan Circulation Element Goal TC-2: "To promote a safe and efficient transit system that provides service to all residents, including senior citizens, youths, the disabled, and those without access to automobiles that also helps to reduce congestion, and improves the environment."
- Transportation System Management consistent with General Plan Circulation Element 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."
- Non-Motorized Transportation consistent with General Plan Circulation 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."
- On-Site Transportation Review, see section II for details
- Complete street implementation shall be considered wherever possible

10. Technical Appendices

The technical appendices shall include all traffic count data, Synchro printouts, SimTraffic printouts, or any other documentation to support the findings in the TIS. The appendices shall be in the same order as the analysis scenarios.

APPENDIX A

EL DORADO COUNTY GENERAL PLAN APPLICABLE GOALS AND POLICIES

TRANSPORTATION AND CIRCULATION ELEMENT

GOAL TC-1: To plan for and provide a unified, coordinated, and cost-efficient countywide road and highway system that ensures the safe, orderly, and efficient movement of people and goods.

Policy TC-1a: The County shall plan and construct County-maintained roads as set forth in Table TC-1. Road design standards for County-maintained roads shall be based on the American Association of State Highway and Transportation Officials (AASHTO) standards, and supplemented by California Department of Transportation (Caltrans) design standards and by County Department of Transportation standards. County standards include typical cross sections by road classification, consistent with right-of-way widths summarized in Table TC-1.

TABLE TC-1
GENERAL ROADWAY STANDARDS FOR NEW DEVELOPMENT BY FUNCTIONAL CLASS

Functional Class	ACCESS CONTROL		CROSS SECTION	
	Public Roads *Intersections (Or interchanges)*	**Abutting Property** *Driveways and Private Roads*	**ROW**	**Roadway Width**
Six-Lane Divided Road	½ mile minimum spacing	Restricted	130′	108′
Four-Lane Divided Road	½ mile minimum spacing	Limited	100′	84′
Four-Lane Undivided Road				
Community Region	½ mile minimum spacing	Limited	80′	64′
Rural Centers and Rural Regions	½ mile minimum spacing	Limited	80′	64′
Major Two-Lane Road				
Community Region	¼ mile minimum spacing	Limited	60′	40′
Rural Centers and Rural Regions	¼ mile minimum spacing	Permitted	60′	40′
Local Road	¼ mile minimum spacing	Permitted	60′	Varies

Notes:

1. Access control and cross sections are desired standards. Details and waiver provisions shall be incorporated to the Design and Improvement Standards Manual (El Dorado County, 1990).
2. Notwithstanding these highway specifications, additional right-of-way may be required for any classification when a road coincides with an adopted route for an additional public facility (e.g., transit facilities, bikeways, or riding and hiking trails), or a scenic highway.
3. The County may deviate from the adopted standards in circumstances where conditions warrant special treatment of the road. Typical circumstances where exceptions may be warranted include:
   a. Extraordinary construction costs due to terrain, roadside development, or unusual right-of-way needs; or
   b. Environmental constraints that may otherwise entirely preclude road improvement to the adopted standards, as long as environmental impacts are mitigated to the extent feasible.
4. Travel ways for all highways should be 12 feet wide. Turning lanes should be 12 feet wide, but may be reduced to 10 feet based on topographical or right-of-way constraints. All travel ways on roads should be paved.

Policy TC-1b: In order to provide safe, efficient roads, all roads should incorporate the cross sectional road features set forth in Table TC-1.

Policy TC-1p: The County shall encourage street designs for interior streets within new subdivisions that minimize the intrusion of through traffic on pedestrian and residential uses while providing efficient connections between neighborhoods and communities.

Policy TC-1t: The County shall identify locations of needed future road rights-of-way, consistent with Figure TC-1, through analysis and adoption of road alignment plan lines where appropriate. Circumstances where road alignment plan line analysis and adoption are acceptable shall include the following:

A. Where major roads or corridors are expected to require additional through lanes within a 20-year planning horizon;
B. Where the future alignment is expected to deviate from the existing alignment, or to be developed asymmetrically about the existing section or centerline;
C. Where the adjacent properties are substantially undeveloped, so that property owners may benefit from prior knowledge of the location of rights-of-way of planned roads before constructing improvements or developing property in a way that may ultimately conflict with identified transportation needs; and
D. Future facilities as identified in Figure TC-1.

Policy TC-1u: The County shall amend the circulation diagram to include a new arterial roadway from the west side of the El Dorado Hills Business Park to U.S. 50.

Policy TC-1v: The County shall consider modification of the circulation diagram to include a frequent transit service operating on exclusive right-of-way to the El Dorado Hills Business Park from residential communities in El Dorado County and from the City of Folsom.

Policy TC-1w: New streets and improvements to existing rural roads necessitated by new development shall be designed to minimize visual impacts, preserve rural character, and ensure neighborhood quality to the maximum extent possible consistent with the needs of emergency access, on street parking, and vehicular and pedestrian safety.

Policy TC-1y: Development through 2025, within Traffic Analysis Zones 148 and 344, shall be conditioned so that a cap of 10,045 full-time employees is not exceeded, unless it can be demonstrated that a higher number of employees would not violate established level of service standards.

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: The following policies shall remain in effect until December 31, 2018:

1. Traffic from single-family residential subdivision development projects of five or more 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 roads, to the County's list of roads that are allowed to operate at Level of Service F without first getting the voters' approval or by a 4/5ths vote of the Board of Supervisors.
3. Developer-paid traffic impact fees combined with any other available funds shall fully pay for building all necessary road capacity improvements to fully offset and mitigate all direct and cumulative traffic impacts from new development upon any highways, arterial roads and their intersections during weekday, peak-hour periods in unincorporated areas of the county.

TABLE TC-2

EL DORADO COUNTY ROADS ALLOWED TO OPERATE AT LEVEL OF SERVICE F[1]
(Through December 31, 2018)

Road Segment(s)		Max. V/C[2]
Cambridge Road	Country Club Drive to Oxford Road	1.07
Cameron Park Drive	Robin Lane to Coach Lane	1.11
Missouri Flat Road	U.S. Highway 50 to Mother Lode Drive	1.12
	Mother Lode Drive to China Garden Road	1.20
Pleasant Valley Road	El Dorado Road to State Route 49	1.28
U.S. Highway 50	Canal Street to junction of State Route 49 (Spring Street)	1.25
	Junction of State Route 49 (Spring Street) to Coloma Street	1.59
	Coloma Street to Bedford Avenue	1.61
	Bedford Avenue to beginning of freeway	1.73
	Beginning of freeway to Washington overhead	1.16
	Ice House Road to Echo Lake	1.16
State Route 49	Pacific/Sacramento Street to new four-lane section	1.31
	U.S. Highway 50 to State Route 193	1.32
	State Route 193 to county line	1.51

Notes:

[1] Roads improved to their maximum width given right-of-way and physical limitations.

[2] Volume to Capacity ratio.

Policy TC-Xb: To ensure that potential development in the County does not exceed available roadway capacity, the County shall:

A. Every year prepare an annual Capital Improvement Program (CIP) specifying expenditure for roadway improvements within the next 10 years. At least every five years prepare a CIP specifying expenditures for roadway improvements within the next 20 years. Each plan shall contain identification of funding sources sufficient to develop the improvements identified;
B. At least every five years, prepare a Traffic Impact Mitigation (TIM) Fee Program specifying roadway improvement to be completed within the next 20 years to ensure compliance with all applicable level of service and other standards in this plan; and
C. Annually monitor traffic volumes on the county's major roadway system depicted in the Circulation Diagram.

Policy TC-Xd: Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified

in that table. Level of Service will be as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council) and calculated using the methodologies contained in that manual. Analysis periods shall be based on the professional judgment of the Department of Transportation which shall consider periods including, but not limited to, Weekday Average Daily Traffic (ADT), AM Peak Hour, and PM Peak hour traffic volumes.

Policy TC-Xe: For the purposes of this Transportation and Circulation Element, "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

A. A 2 percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily, or
B. The addition of 100 or more daily trips, or
C. The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.

Policy TC-Xf: At the time of approval of a tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe[A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal; or (2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year CIP.

For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall do one of the following: (1) condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP.

Policy TC-Xg: Each development project shall dedicate right-of-way and construct or fund improvements necessary to mitigate the effects of traffic from the project. The County shall require an analysis of impacts of traffic from the development project, including impacts from truck traffic, and require dedication of needed right-of-way and construction of road facilities as a condition of the development. For road improvements that provide significant benefit to other development, the County may allow a project to fund its fair share of improvement costs through traffic impact fees or receive reimbursement from impact fees for construction of improvements beyond the project's fair share. The amount and timing of reimbursements shall be determined by the County.

Policy TC-Xh: All subdivisions shall be conditioned to pay the traffic impact fees in effect at the time a building permit is issued for any parcel created by the subdivision.

Policy TC-Xi: The planning for the widening of U.S. Highway 50, consistent with the policies of this General Plan, shall be a priority of the County. The County shall coordinate with other affected agencies, such as the City of Folsom, the County of Sacramento, and Sacramento Area Council of Governments (SACOG) to ensure the U.S. Highway 50 capacity enhancing projects are coordinated with these agencies with the goal of delivering these projects on a schedule to meet the requirements of the policies of this General Plan.

GOAL TC-2: To promote a safe and efficient transit system that provides service to all residents, including senior citizens, youths, the disabled, and those without access to automobiles that also helps to reduce congestion, and improves the environment.

Policy TC-2b: The County shall promote transit services where population and employment densities are sufficient to support those transit services, particularly within the western portion of the county and along existing transit corridors in the rural areas.

Policy TC-2d: The County shall encourage the development of facilities for convenient transfers between different transportation systems (e.g., rail-to-bus, bus-to-bus).

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-3a: The County shall support all standards and regulations adopted by the El Dorado County Air Quality Management District governing transportation control measures and applicable state and federal standards.

Policy TC-3b: The County shall consider Transportation Systems Management measures to increase the capacity of the existing road network prior to constructing new traffic lanes. Such measures may include traffic signal synchronization and additional turning lanes.

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.

Policy TC-3d: Signalized intersections shall be synchronized where possible as a means to reduce congestion, conserve energy, and improve air quality.

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-4a: The County shall implement a system of recreational, commuter, and inter-community bicycle routes in accordance with the County's *Bikeway Master Plan*. The plan should designate bikeways connecting residential areas to retail, entertainment, and employment centers and near major traffic generators such as recreational areas, parks of regional significance, schools, and other major facilities, and along recreational routes.

Policy TC-4b: The County shall construct and maintain bikeways in a manner that minimizes conflicts between bicyclists and motorists.

Policy TC-4c: The County shall give priority to bikeways that will serve population centers and destinations of greatest demand and to bikeways that close gaps in the existing bikeway system.

Policy TC-4e: The County shall require that rights-of-way or easements be provided for bikeways or tails designated in adopted master plans, as a condition of land development when necessary to mitigate project impacts.

Policy TC-4g: The County shall support development of facilities that help link bicycling with other modes of transportation.

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-ways, 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 TC-5: To provide safe, continuous, and accessible sidewalks and pedestrian facilities as a viable alternative transportation mode.

Policy TC-5a: Sidewalks and curbs shall be required throughout residential subdivisions, including land divisions created through the parcel map process, where any residential lot or parcel size is 10,000 square feet or less.

Policy TC-5b: In commercial and research and development subdivisions, curbs and sidewalks shall be required on all roads. Sidewalks in industrial subdivisions may be required as appropriate.

Policy TC-5c: Roads adjacent to schools or parks shall have curbs and sidewalks.

The El Dorado County Bicycle and Pedestrian Plan can be accessed on the El Dorado County Transportation Commission's website: http://www.edctc.org/3/CountyBikePlan2010.html

APPENDIX B

TRAFFIC IMPACT STUDY FORMAT OUTLINE

I. Introduction

A. Title Page – signed and sealed by a registered California Civil or Traffic Engineer

B. Table of Contents, List of Figures, and List of Tables

C. Executive Summary

II. Background

A. Project Description

B. Type and size of development

C. Site plan (include proposed driveways, roadways, traffic control, parking facilities, emergency vehicle access, and internal circulation)

D. Location map (include major streets and study intersections)

III. Existing Conditions

A. Existing roadway system within project site and surrounding area

B. Figure of study intersections with peak hour turning movement counts, lane geometries, and traffic control

C. Map of study area showing ADT of study roadways

D. Table of Existing intersection peak hour average vehicle delays and LOS

IV. Existing Plus Project Conditions

A. Table of trip generation for project (See Appendix D)

B. Figure/map of trip distribution (in percent)

C. Maps of study area with applicable peak hour turning movements (Project Only and Existing Plus Project)

D. Table of Existing and Existing Plus Project intersection peak hour average vehicle delay and LOS

E. Table of Existing and Existing Plus Project intersection queue analysis

F. Table of Existing and Existing Plus Project road segment volumes and LOS

G. Traffic signal and other warrants

H. Finding of project impacts

V. Near-Term Conditions

A. Identify Approved Projects included in the analysis

B. Map of study area with applicable peak hour turning movements (Existing Plus of Approved)

C. Table of intersection peak hour average vehicle delay and LOS

D. Table of intersection peak hour queue analysis

E. Table of road segment volumes and LOS

F. Traffic signal and other warrants

VI. Near-Term Plus Project Conditions

Similar content to Existing Plus Project Conditions

VII. Cumulative and Cumulative Plus Project Conditions

A. Figure/map of trip distribution (in percent)

B. Map of study area with Cumulative No Project peak hour turning movements

C. Map of study area with Cumulative Plus Project peak hour turning movements

D. Table of Cumulative and Cumulative Plus Project intersection peak hour average vehicle delay and LOS

E. Table of Cumulative and Cumulative Plus Project intersection queue analysis

F. Traffic signal and other warrants

G. Findings of project impacts

VIII. Findings of Impacts and Mitigation Measures

A. Summary of the Findings of Impacts and Mitigations Measures

B. Mitigation measures for project impacts

C. Implementation responsibility of mitigation measures

D. Impacts of mitigation measures, if any

E. El Dorado County Initial Study Environmental (CEQA) Checklist and discussion for Transportation/Traffic

IX. Appendices

APPENDIX C

SAMPLE TRIP GENERATION ESTIMATES AND CALCULATIONS

How do I determine how many vehicle trips my project will generate?

Table 1: Typical Daily Trip Generation Estimates

(*Trip Generation Manual*, 9th Edition, Institute of Transportation Engineers, 2012)

Proposed Development Type	ITE Land Use Number	ITE Daily Trip Generation[1]
Single Family Detached Housing	210	9.52 per DU
General Office Building	710	11.03 per KSF Gross Floor Area
Specialty Retail Center	814	64.03 per KSF Gross Floor Area
General Light Industrial	110	6.97 per KSF Gross Floor Area
Fast-Food with Drive-Through Window	934	496.12 per KSF Gross Floor Area

[1] Value does not consider pass-by trips.
KSF = 1,000 square feet
DU = Dwelling Unit

The following figure describes the trip types relevant to trip generation and the difference between the total trips generated by the project versus new trips added by the project. Information in the figure is based on data from the *ITE Trip Generation Manual, 9th Edition*, volume 1.

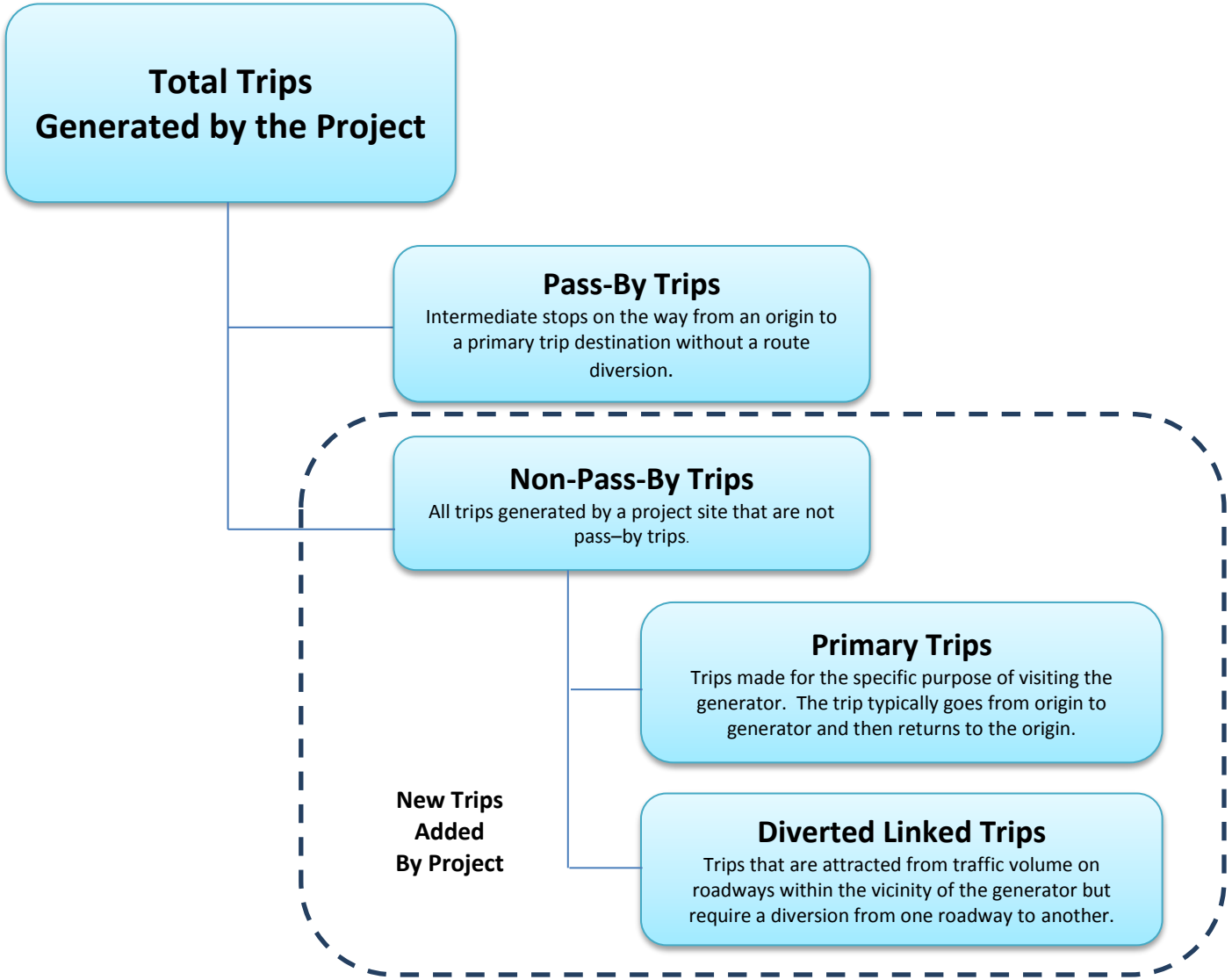


Table 2: SAMPLE ESTIMATED PROJECT TRIP GENERATION																
Land Use	Size	Unit	Daily		Trip Rates						Trips					
			Rate	Trips	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Residential																
Single Family[1]	500	DU	9.26	4,629	0.18	0.54	0.72	0.56	0.33	0.89	90	270	360	281	165	446
Apartments[2]	100	DU	7.3	730	0.11	0.42	0.53	0.47	0.26	0.73	11	42	53	47	26	73
Commercial																
Commercial[3]	100	ksf	67.9	6,789	0.97	0.59	1.56	2.89	3.13	6.02	97	59	156	289	313	602

[1] Trip generation based on Institute of Transportation Engineers (ITE), *Trip Generation Manual, (9th Edition)* regression equations for Single-Family Detached Housing (Land Use Code 210)
Daily: Ln(T) = 0.92 Ln(X) + 2.72 (50% Inbound, 50% Outbound)
AM Peak Hour: T = 0.70(X) + 9.74 (25% Inbound, 75% Outbound)
PM Peak Hour: Ln(T) = 0.91 Ln(X) + 0.51 (63% Inbound, 37% Outbound)
Where: T = trips generated, X = dwelling units, Ln = natural log

[2] Trip generation based on Institute of Transportation Engineers (ITE), *Trip Generation Manual, (9th Edition)* regression equations for Apartments (Land Use Code 220)
Daily: T = 6.06(X) + 123.56 (50% Inbound, 50% Outbound)
AM Peak Hour: T = 0.49(X) + 3.73 (20% Inbound, 80% Outbound)
PM Peak Hour: T = 0.55(X) + 17.65 (65% Inbound, 35% Outbound)
Where: T = trips generated, X = dwelling units, Ln = natural log

[3] Trip generation based on Institute of Transportation Engineers (ITE), *Trip Generation Manual, (9th Edition)* regression equations for Shopping Center (Land Use Code 820)
Daily: Ln(T) = 0.65 Ln(X) + 5.83 (50% Inbound, 50% Outbound)
AM Peak Hour: Ln(T) = 0.61 Ln(X) + 2.24 (62% Inbound, 38% Outbound)
PM Peak Hour: Ln(T) = 0.67 Ln(X) + 3.31 (48% Inbound, 52% Outbound)
Where: T = trips generated, X = dwelling units, Ln = natural log

Notes:
DU = dwelling units; ksf = 1,000 square-feet
Survey data or the most recent version of ITE *Trip Generation Manual* should be used to calculate trip generation.
Pass-by reductions should be considered for commercial uses where applicable.
Mixed use developments, internalization should be considered. Internalization can be calculated using ITE's *Trip Generation Handbook* or EPA's MXD methodology.

APPENDIX D

Recommended Procedures for Synchro and SimTraffic Analysis

This section contains the recommended procedures for Synchro and SimTraffic. Since each project is different, these procedures should be used as a guideline. Deviation from the recommended procedures below should be based on field observations and data collected. Please contact CDA's LRP staff with any questions.

Synchro vs. SimTraffic

Both Synchro and SimTraffic use HCM methodology to analyze intersection operations. SimTraffic should be used to analyze traffic operations when the following conditions exist (or could exist in the future):

- Closely spaced intersections
- Over-capacity conditions (queues spill out of storage pockets)
- Uneven lane utilization
- Unusual lane configurations or alignment
- Unusual platoon dispersion or compression

For example, SimTraffic should be used at interchanges, such as Missouri Flat Road and El Dorado Hills Boulevard. If upstream or downstream intersections affect the traffic operations of a study intersection, SimTraffic should be used for analysis. Synchro should be used to analyze isolated intersections without unusual lane configurations or constraints.

Please consult with CDA's LRP staff to confirm the appropriate methodology for the study area. All electronic Synchro and SimTraffic files should be submitted to the County with the draft traffic impact study.

Recommended Synchro Procedures

The following is a guideline of inputs for building a Synchro network. Since each project is different, these procedures should be used as a guideline. Deviation from the recommended procedures below should be based on field observations and data collected.

- Peak hour counts, peak hour factors, and heavy vehicle percentages should be entered from recent count data (i.e. less than two years old)
- A minimum of 2% heavy vehicles should be used for most locations
- Volumes should be balanced between intersections, where appropriate
- Pedestrian and bicycle counts should be entered per count data, where appropriate. A minimum of 2 pedestrian calls per hour should be used for most signalized locations
- Signal timings should be obtained from the County and Caltrans and entered into Synchro

- Signal timings should include the appropriate signal phasing, phase timings, pedestrian crossing times, right-turn treatments, recall modes, etc. If signal timings are not available, field observations should be conducted to gather signal timing information
- The posted speed limit should be entered for all links
- Lane configurations and lane utilization should be verified by field observations
- When adding lanes to an intersection (for future roadway improvements or mitigation testing), the pedestrian clearance times should be increased appropriately
- For cumulative conditions, the above discussed parameters shall be maintained, as appropriate. Traffic signal timings may be optimized appropriately.

Recommended SimTraffic Procedures

The recommended Synchro procedures above apply to SimTraffic. In addition, the following SimTraffic procedures should be applied:

- SimTraffic results should be based on the 10 "most average" runs of 20 simulation runs
- For planning-level studies, use one 15-minute recording period with the PHF Adjust set to "Yes"
- For operations-level studies, use four 15 minute recording intervals with the PHF Adjust set to "Yes" for the second recording interval and "No" for the other three recording intervals
- The seeding period should be set to the approximate time it takes to drive through the study area
- Mandatory and Positioning distances should be adjusted if uneven lane utilization is observed
- At interchanges, Link Origin-Destination Volumes should be edited
- For existing conditions models, queue lengths should match field observations

Models should be calibrated to account for the appropriate vehicle and driver parameters.

APPENDIX E

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) INFORMATION

The following information can be accessed in its entirety at:

http://resources.ca.gov/ceqa/docs/2014_CEQA_Statutes_and_Guidelines.pdf

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Frequently Asked Questions About CEQA

What is CEQA?

CEQA, or the California Environmental Quality Act, is a statute that requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

When and why was it enacted?

The impetus for CEQA can be traced to the passage of the first federal environmental protection statute in 1969, the National Environmental Policy Act (NEPA). In response to this federal law, the California State Assembly created the Assembly Select Committee on Environmental Quality to study the possibility of supplementing NEPA through state law. This legislative committee, in 1970, issued a report entitled *The Environmental Bill of Rights*, which called for a California counterpart to NEPA. Later that same year, acting on the recommendations of the select committee, the legislature passed, and Governor Reagan signed, the CEQA statute.

Who must comply with CEQA?

CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project." A project is an activity undertaken by a public agency or a private activity which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

Most proposals for physical development in California are subject to the provisions of CEQA, as are many governmental decisions which do not immediately result in physical development (such as adoption of a general or community plan). Every development project which requires a discretionary

governmental approval will require at least some environmental review pursuant to CEQA, unless an exemption applies.

If it applies, what are the basic requirements of environmental review under CEQA?

The environmental review required imposes both procedural and substantive requirements. At a minimum, an initial review of the project and its environmental effects must be conducted. Depending on the potential effects, a further, and more substantial, review may be conducted in the form of an environmental impact report (EIR). A project may not be approved as submitted if feasible alternatives or mitigation measures are able to substantially lessen the significant environmental effects of the project.

What are the CEQA Guidelines?

The Guidelines are the regulations that explain and interpret the law for both the public agencies required to administer CEQA and for the public generally. They are found in the California Code of Regulations, in Chapter 3 of Title 14. The Guidelines provide objectives, criteria and procedures for the orderly evaluation of projects and the preparation of environmental impact reports, negative declarations, and mitigated negative declarations by public agencies. The fundamental purpose of the Guidelines is to make the CEQA process comprehensible to those who administer it, to those subject to it, and to those for whose benefit it exists. To that end, the Guidelines are more than mere regulations which implement CEQA as they incorporate and interpret both the statutory mandates of CEQA and the principles advanced by judicial decisions.

How are the Guidelines crafted?

The Governor's Office of Planning and Research prepares and develops proposed amendments to the Guidelines and transmits them to the Secretary for Resources. The Secretary for Resources is responsible for certification and adoption of the Guidelines and amendments thereto. Prior to final certification and adoption, and pursuant to the procedures in the Administrative Procedure Act, the Secretary for Resources makes the proposed language available to members of the public, provides for at least a 45 day written comment period, and provides public hearings in which to receive oral testimony on the proposals. All public comments, whether received in writing or orally at a public hearing, are considered by the Secretary in determining whether to adopt the proposed amendments prepared by the Office of Planning and Research. Once edited and enriched by the practical experience and wisdom of individual public comments, amendments are adopted and sent to the Office of Administrative Law (OAL) for review and final approval. Guidelines approved by OAL are deposited with the Secretary of State and go into immediate effect.

How often are the Guidelines amended?

Revision of the CEQA Guidelines is an on-going process. By statute, the Secretary of Resources is required to review and consider amendments to the Guidelines every two years. Annual changes to CEQA and evolving case law make revision to the Guidelines necessary on a continual basis. By the time one revision is completed, another one begins. Because the subject is so large and complex, a definitive, one-time revision is not possible. The actual process of amending the Guidelines is governed by the Administrative Procedure Act and is the same as that described above in "How are the Guidelines crafted?"

Who enforces CEQA? What role does the Resources Agency have in enforcement of CEQA?

CEQA is a self-executing statute. Public agencies are entrusted with compliance with CEQA and its provisions are enforced, as necessary, by the public through litigation and the threat thereof. While the Resources Agency is charged with the adoption of CEQA Guidelines, and may often assist public agencies in the interpretation of CEQA, it is each public agency's duty to determine what is and is not subject to CEQA. As such, the Resources Agency does not review the facts and exercise of discretion by public agencies in individual situations. In sum, the Agency does not enforce CEQA, nor does it review for compliance with CEQA the many state and local agency actions which are subject to CEQA.

What aspects of CEQA compliance is the Secretary for Resources responsible?

In addition to adopting the CEQA Guidelines and amendments thereto, the Secretary for Resources possesses the following responsibilities:

1) Makes findings that a class of projects given categorical exemptions will not have a significant effect on the environment;
2) Certifies state environmental regulatory programs which meet specified standards as being exempt from certain provisions of CEQA;
3) Receives and files notices of completion, determination, and exemption; and
4) Provides assistance in interpreting the provisions of CEQA and the CEQA Guidelines.

California Environmental Quality Act

The following are excerpts from the California Environmental Quality Act, California Public Resources Code, Division 13, Environmental Quality Statute, as amended in 2013, and is not intended to represent the CEQA requirements in its entirety.

[The**15130. DISCUSSION OF CUMULATIVE IMPACTS**

An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR. (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant. (3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable. (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute

to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts: (1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency. (2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic. (3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used. (4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and (5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects. (c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by project basis. (d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan. (e) If action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j).a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section15183(j)..

(a) **Note:** Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Sections 21003(d), 21083(b), 21093, 21094 and 21100, Public Resources Code; *Whitman v. Board of Supervisors,* (1979) 88 Cal. App. 3d 397; *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal.App.3d 61; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692; *Laurel Heights Homeowners Association v. Regents of the University of California* (1988) 47 Cal.3d 376; *Sierra Club v. Gilroy* (1990) 220 Cal.App.3d 30; *Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421; *Concerned Citizens of South Cent. Los Angeles v. Los Angeles Unified Sch. Dist.* (1994) 24 Cal.App.4th 826; *Las Virgenes Homeowners Fed'n v. County of Los Angeles* (1986) 177 Cal.App.3d 300; *San Joaquin Raptor/Wildlife Rescue Ctr v. County of Stanislaus* (1994) 27 Cal.App.4th 713; *Fort Mojave Indian Tribe v. Cal. Dept. Of Health Services* (1995) 38 Cal.App.4th 1574; *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal.App.4th 786; *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98; and *Ass'n of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383.

15355. CUMULATIVE IMPACTS

"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. (a) The individual effects may be changes resulting from a single project or a number of separate projects. (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely

related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.
Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21083(b), Public Resources Code; *Whitman v. Board of Supervisors*, 88 Cal. App. 3d 397, *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal. App. 3d 61, Formerly Section 15023.5.

Association of Environmental Professionals 2014 CEQA Guidelines Appendix G Excerpt

Appendix G of the CEQA Guidelines provides a sample checklist form that may be tailored to satisfy individual agencies needs and project circumstances. The sample questions are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

The sample questions posed for Transportation/Traffic in Appendix G are included in the El Dorado County Initial Study Environmental Checklist. The Transportation/Traffic portion of the El Dorado County Environmental Checklist and the instructions is inserted below. The checklist and discussion questions should be addressed in the "Findings of Impacts and Mitigation Measures" chapter of the TIS.

El Dorado County Initial Study Environmental Checklist

(Transportation/Traffic Section)

COUNTY OF EL DORADO PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST FORM

Project Title:	
Lead Agency Name and Address: County of El Dorado, 2850 Fairlane Court, Placerville, CA 95667	
Contact Person:	**Phone Number:** (530) 621-5355
Property Owner's Name and Address:	
Project Applicant's Name and Address:	
Project Agent's Name and Address:	
Project Engineer's / Architect's Name and Address:	
Project Location:	
Assessor's Parcel Number(s):	
Zoning:	
Section: **T:** **R:**	
General Plan Designation:	
Description of Project:	

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use (e.g., Single Family Residences, Grazing, Park, School)
Site:			
North:			
East:			
South:			
West:			

Briefly Describe the environmental setting:

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture Resources		Air Quality
	Biological Resources		Cultural Resources		Geology / Soils
	Hazards & Hazardous Materials		Hydrology / Water Quality		Land Use / Planning
	Mineral Resources		Noise		Population / Housing
	Public Services		Recreation		Transportation/Traffic
	Utilities / Service Systems		Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by mitigation measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: _____

Printed Name: _____ For: El Dorado County

Signature: _____ Date: _____

Printed Name: _____ For: El Dorado County

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and
    b. the mitigation measure identified, if any, to reduce the impact to less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC. *Would the project:*				
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
e. Result in inadequate emergency access?				
f. Result in inadequate parking capacity?				
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

Discussion:

A substantial adverse effect on Traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or
- Result in, or worsen, Level of Service "F" traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.