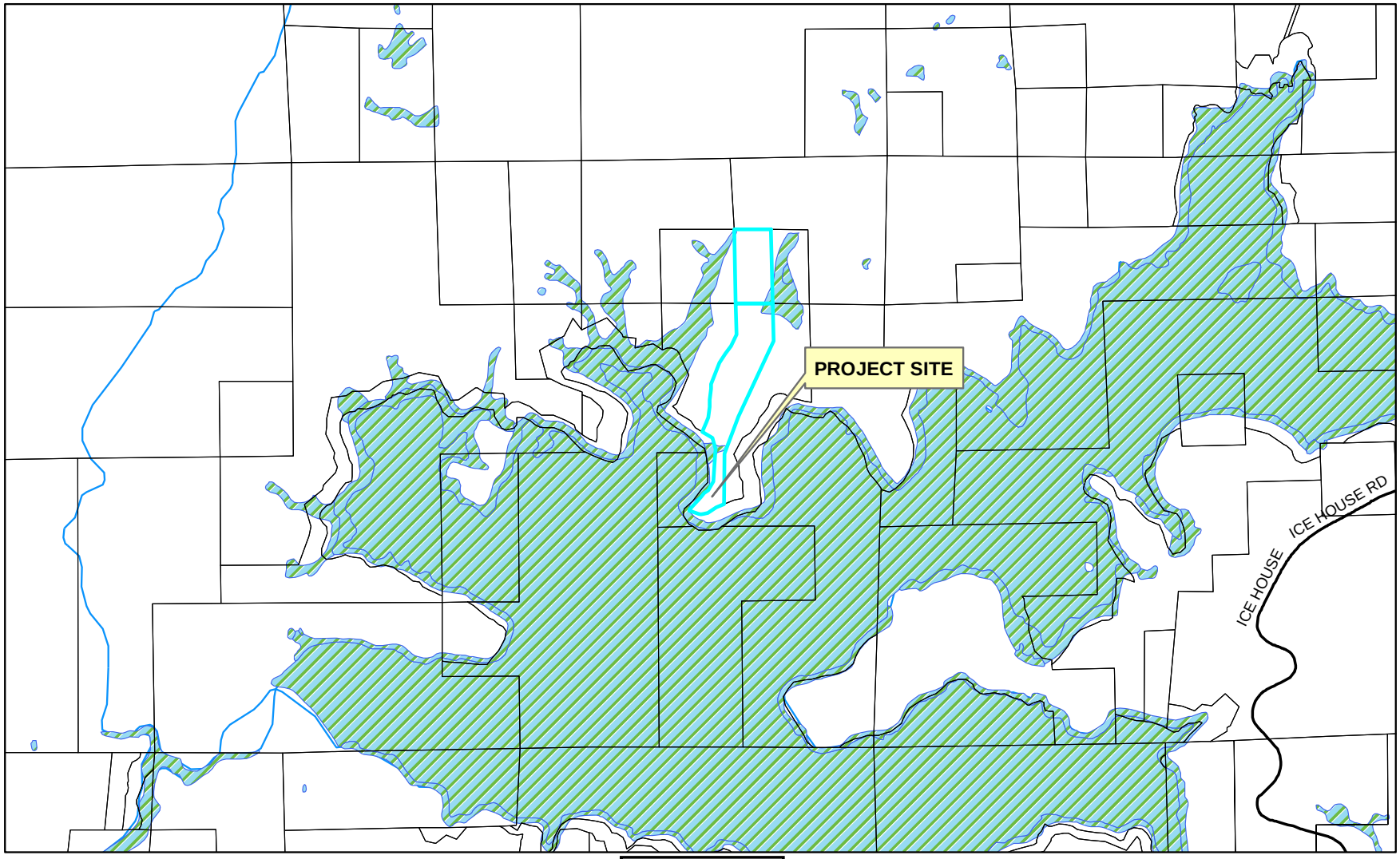
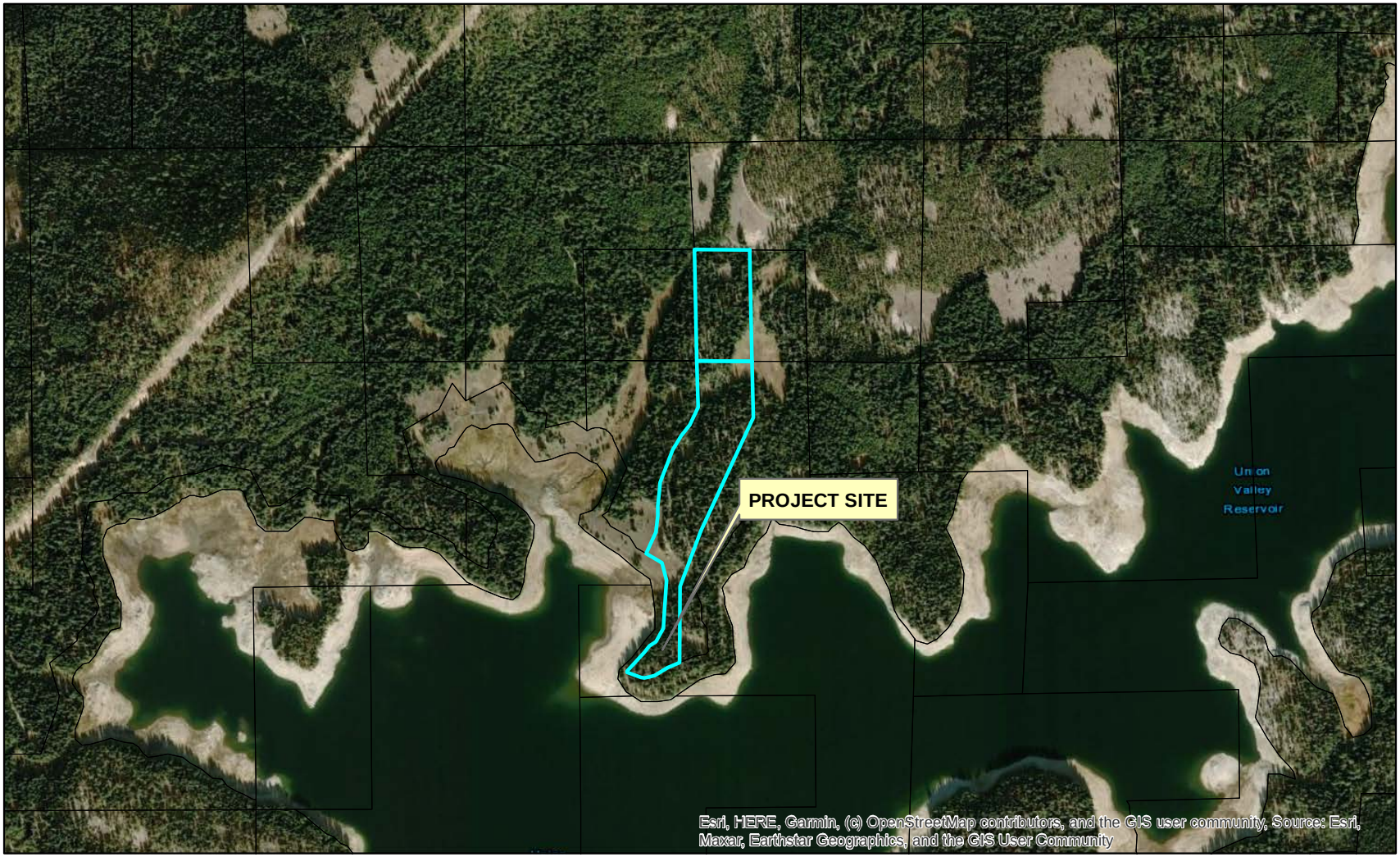
CUP24-0011 KUHL
EXHIBIT A - LOCATION MAP



CUP24-0011 KUHL
EXHIBIT B - AERIAL MAP



0 1,000 2,000 4,000 Feet

Legend

Parcels

Roads

N

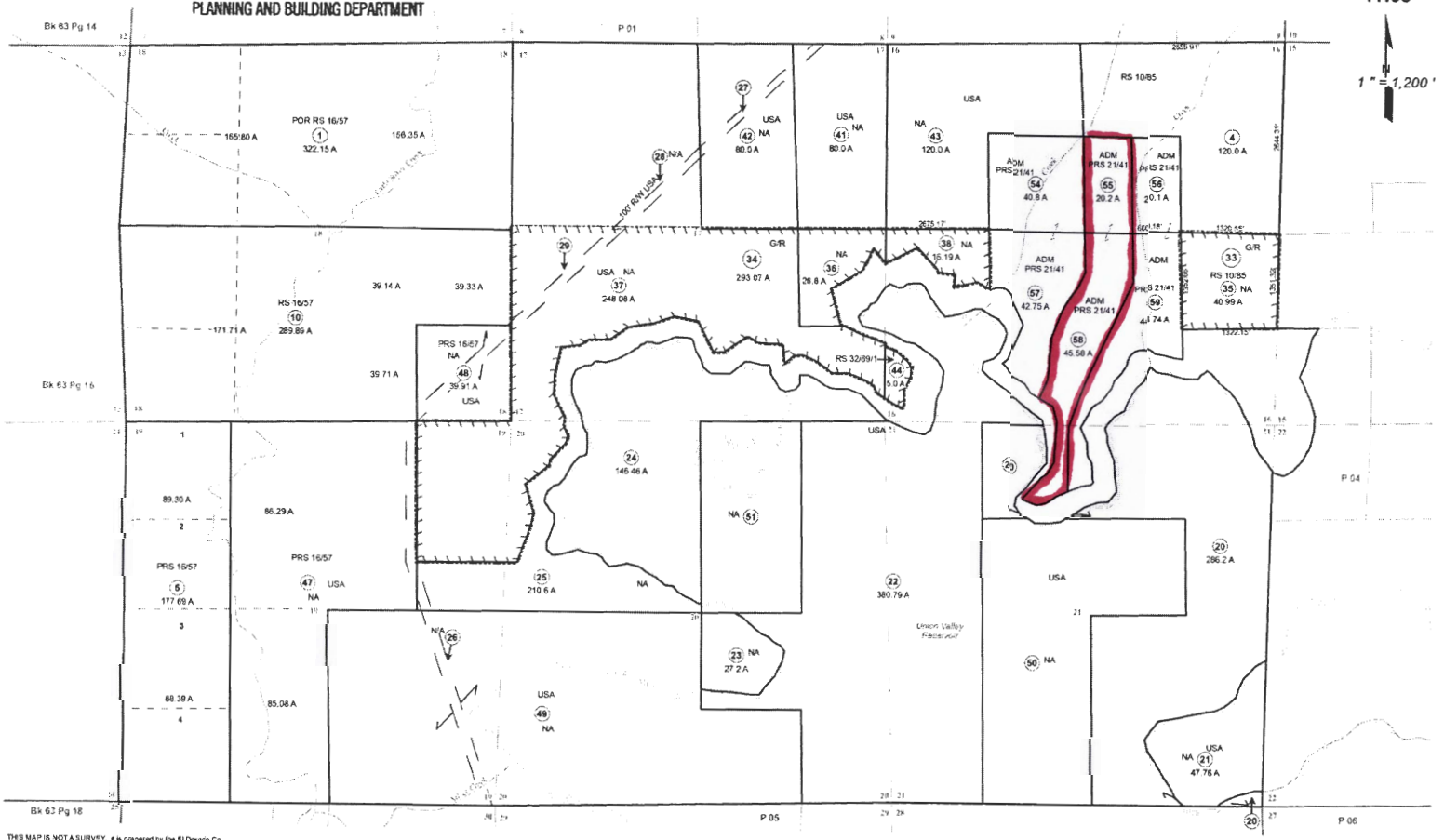
CUP24-0011 KUHL
EXHIBIT C - ASSESSOR'S PARCEL MAP

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SEP - 9 2024
EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

SECS. 16 THRU 21, T.12N, R.14E, M.D.M.

11:03

1 " = 1,200 '



Acreages Are Estimates

Adjacent Map Pages Shown in Grey Text
Assessor's Book Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

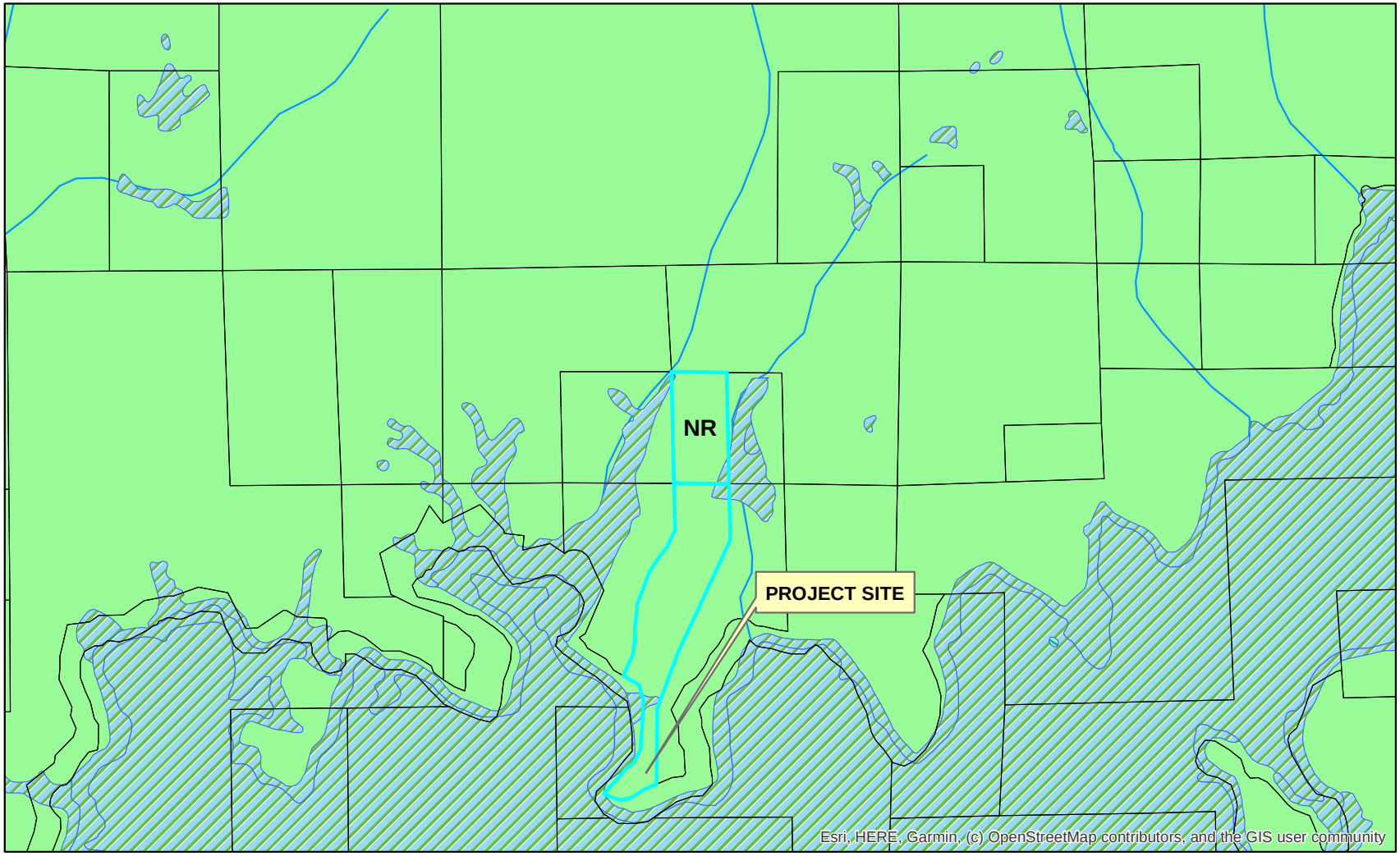
REV. SEP 4, 2015

Assessor's Map Bk. 011, Pg. 03
County of El Dorado, CA

THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

CUP24-0011

CUP24-0011 KUHL
EXHIBIT D - GENERAL PLAN LAND USE MAP



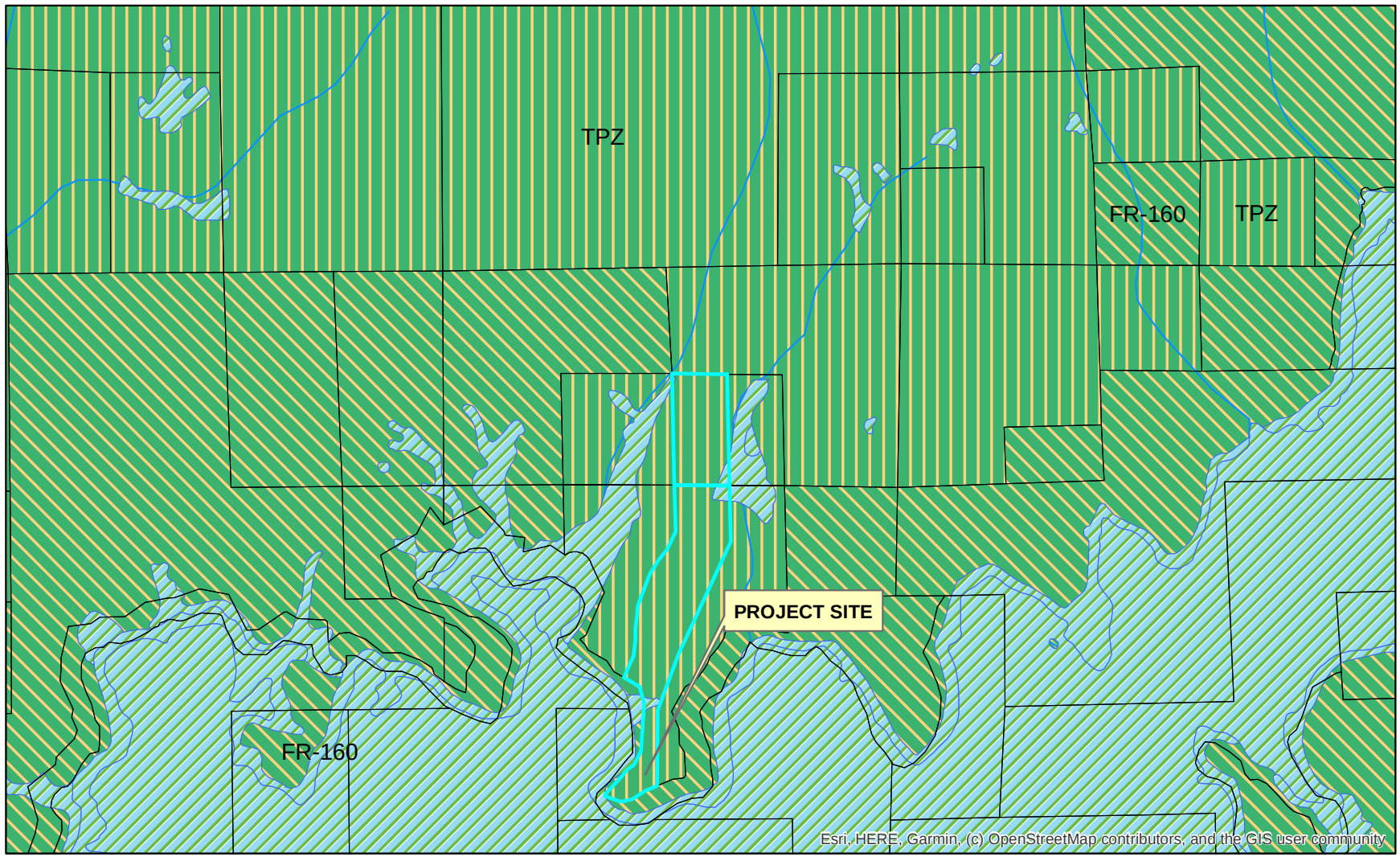
0 1,000 2,000 4,000 Feet

Legend

- Natural Resources
- Parcels
- Roads

N

CUP24-0011 KUHL
EXHIBIT E - ZONING MAP



0 410 820 1,640 2,460 3,280
Feet

N

FR-160 = Forest Resource 160 Acres
TPZ = Timber Preserve

Site Plan

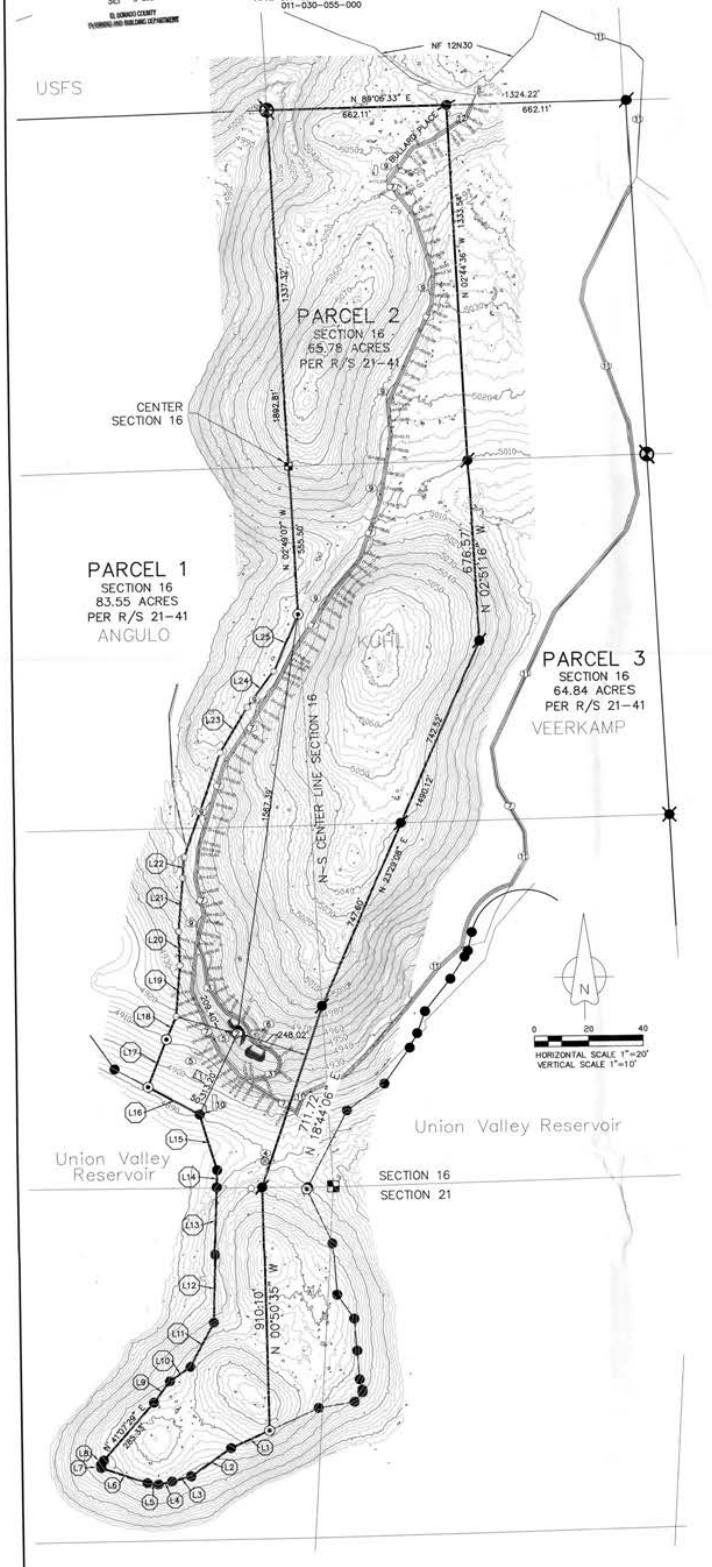
BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41
COUNTY of EL DORADO STATE of CALIFORNIA
FEBRUARY 2024 1"=200'
SHEET 1 of 4

1 inch = 200 ft.

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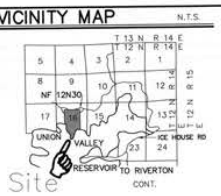
SITE LOCATION
NF 12N/NF 12N30/30
1 BULLARD PLACE
POLLOCK PINES, CA
APN: 011-030-058-000 & 011-030-055-000

OWNER/APPLICANT
MICHAEL KUHL
155 RIDGEWOOD DR.
SAN RAFAEL, CA 94901-11361



VICINITY MAP

N.T.S.



SURVEYOR'S STATEMENT

THIS SURVEY WAS BASED UPON THE RECORD OF SURVEY FILED IN BOOK 9 AT PAGE 48. THE ONLY EASEMENTS SHOWN ARE THOSE THAT ARE REFERENCED ON SAID RECORD OF SURVEY. THERE WAS NO TITLE REPORT SUPPLIED BY CLIENT; THEREFORE, OTHER EASEMENTS OF RECORD MAY EXIST.

JAMES C. WILLSON L.S. 4663 DATE 10-11-2023

LICENSED LAND SURVEYOR JAMES C. WILLSON NO. 4663 Exp 9/30/2024 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES C. WILLSON No. 39017 Exp. 3/31/2025 CIVIL STATE OF CALIFORNIA

BASIS OF BEARINGS

THE MERIDIAN OF THIS SURVEY IS THE SAME AS RECORD OF SURVEY FILED IN BOOK 21 OF RECORD OF SURVEYS AT PAGE 41, BASED UPON FOUND MONUMENTS.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE AT THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCH MARK

THE ELEVATION FOR THIS SURVEY IS NGVD 88, UTILIZING GPS READINGS USING THE CALIFORNIA SURVEYING AND DRAFTING SUPPLY, INC., VIRTUAL SURVEY NETWORK

SITE NOTES

① EXISTING SHED
② PROPOSED HOUSE SEE SHEET 2 FOR DETAIL
③ EXISTING DRIVEWAY
④ EXISTING WELL
⑤ PROPOSED SEPTIC AREA
⑥ PROPOSED FIRE HYDRANT AND EXISTING WATER TANK
⑦ EXISTING ROADS AND 50' WIDE EMERGENCY ACCESS FOR VEERKAMP PARCEL
⑧ EXISTING ENCROACHMENT
⑨ PROPOSED TURNOUTS AT A MINIMUM OF 400' INTERVAL
⑩ PROPOSED SOLAR ARRAY LOCATION
⑪ EXISTING ROADS AND 50' WIDE EMERGENCY ACCESS FOR KUHL PARCEL
⑫ EXISTING ROAD EASEMENT FOR ACCESS ACROSS VEERKAMP PARCEL

1. APPROXIMATELY 800 YARDS WILL BE EXCAVATED AND PLACED ON SITE.
APPROXIMATELY 10,000 SQUARE FEET AREA WILL BE DISTURBED.

LEGEND

- CENTER OF SECTION PER R/S 21-41
- 3/4" CAPPED IRON PIPE (C.I.P.) OR 1" ALUMINUM PISTON
- MONUMENT W/ 1 1/4" CAP STAMPED "L.S. 3648" PER R/S 21-41
- 2" MONUMENT OR 1" MONUMENT WITH 3 1/4" CAP PER R/S 21-41
- 2" MONUMENT IN ROCK MOUND STAMPED "L.S. 4598" PER R/S 21-41
- U.S.F.S. 2" MONUMENT WITH 3 1/4" CAP PER R/S 21-41
- 1" IRON PIPE WITH 1 1/2" CAP STAMPED "L.S. 3848" PER R/S 21-41
- EXISTING DIRT ROADS (APPROXIMATE LOCATION)

NOTES

1) THE BOUNDARY SHOWN IS RECORD DATA FOUND ON R.S. 21-41. A FIELD SURVEY WAS COMPLETED TO LOCATE THE PROPOSED HOUSE ON THE SITE.

2) ROADS AND CREEKS SHOWN ARE BASED ON EXHIBIT B FOUND IN THE "FINAL JUDGMENT AFTER TRIAL" CASE #46916 FILED SEPTEMBER 3, 1993.

3) ROADS SHOWN VARY IN WIDTH FROM 20-25 FEET FOR THOSE ACCESSING THE SITE AND 15-20 FEET FOR THOSE ON THE SITE. THE ROAD IS PAVED AS FAR AS THE ENTRANCE TO THE PROPERTY

CUP24-0011

Site Plan

BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41

COUNTY of EL DORADO
FEBRUARY 2024
SHEET 2 of 4
STATE of CALIFORNIA
1"=20'

SITE LOCATION
NF 12N30
1 BULLARD PLACE
POLLOCK PINES, CA
APN: 011-030-058-000 &
011-030-055-000

OWNER/APPLICANT
MICHAEL KUHL
155 RIDGEWOOD DR.
SAN RAFAEL, CA 94901-11361

1 inch = 20 ft.
Horizontal

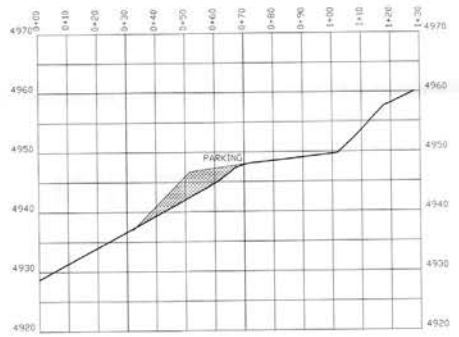
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EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

LEGEND

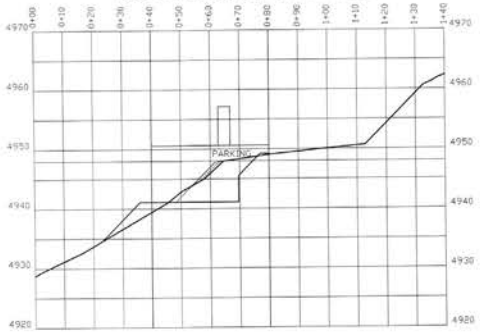
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- 1" IRON PIPE WITH 1 1/2" CAP STAMPED "L.S. 3848" PER R/S 21-41
- EXISTING DIRT ROADS (APPROXIMATE LOCATION)
- OA OVERALL DISTANCE
- NON-ENGINEERED FILL TO BE REMOVED
- PROPOSED FILL AREA

Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.

CROSS SECTION OF NORTHWEST LIMITS OF PARKING

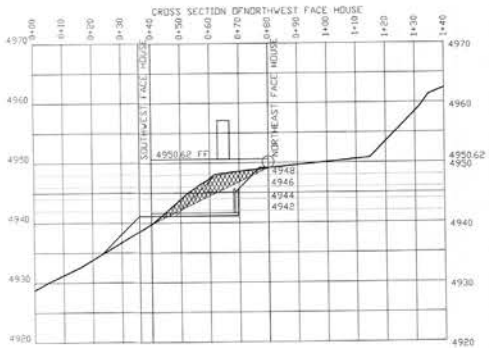


CROSS SECTION OF SOUTHEAST LIMITS OF PARKING



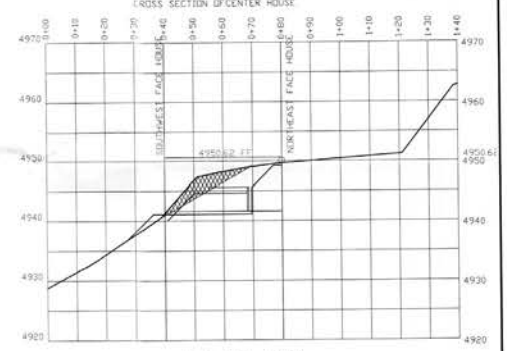
Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.

CROSS SECTION OF NORTHWEST FACE HOUSE



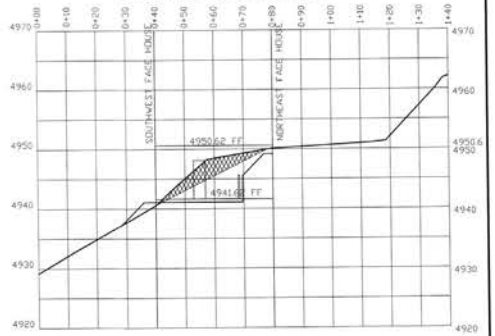
Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.

CROSS SECTION OF CENTER HOUSE



Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.

CROSS SECTION OF SOUTHEAST FACE HOUSE



Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.

CUP24-0011

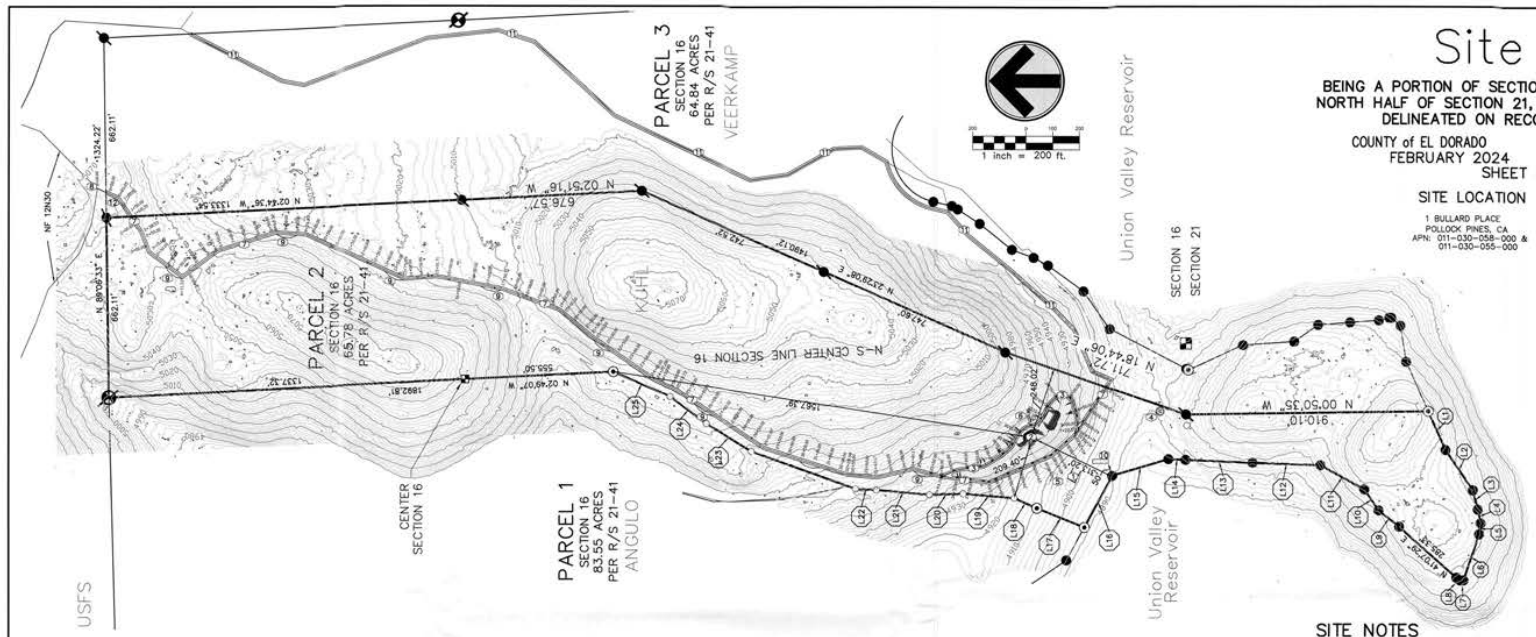
Site Plan

BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41

COUNTY of EL DORADO
FEBRUARY 2024
STATE of CALIFORNIA
1"=200'
SHEET 3 of 4

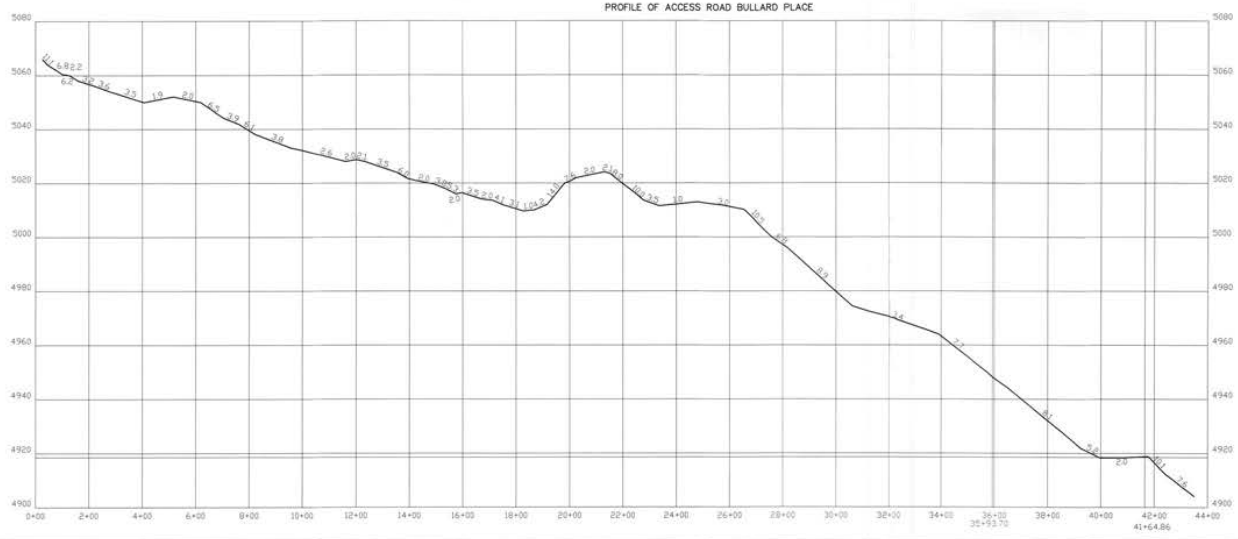
SITE LOCATION
1 BULLARD PLACE
POLLOCK PINES, CA
APN: 011-030-058-000 &
011-030-055-000

OWNER/APPLICANT
MICHAEL KUHL
155 RIDGEWOOD DR.
SAN RAFAEL, CA 94901-11361



LINE	BEARING	DISTANCE
L1	S 65°36'10" W	156.47'
L2	S 55°10'18" W	180.81'
L3	S 75°18'20" W	73.21'
L4	N 78°50'22" E	51.67'
L5	S 82°07'47" E	40.57'
L6	N 71°03'27" W	179.27'
L7	S 04°21'00" E	12.10'
L8	N 34°41'02" E	18.71'
L9	S 36°57'22" W	98.17'
L10	S 55°08'44" W	93.07'
L11	N 28°25'55" E	186.89'
L12	N 01°54'08" E	254.81'
L13	S 00°22'00" W	250.79'
L14	S 02°19'49" W	64.56'
L15	N 16°53'03" W	218.97'
L16	N 61°24'00" W	215.57'
L17	N 21°23'52" E	191.46'
L18	N 23°47'47" E	92.50'
L19	N 04°46'15" E	192.43'
L20	S 01°56'17" E	125.91'
L21	N 09°07'37" E	201.08'
L22	S 09°46'55" W	78.52'
L23	S 30°46'28" W	196.17'
L24	N 36°01'00" E	168.56'
L25	N 23°12'29" E	232.22'

PROFILE OF ACCESS ROAD BULLARD PLACE



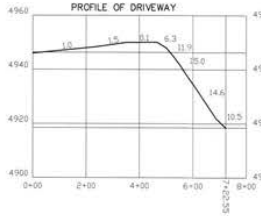
SITE NOTES

1. EXISTING SHED
2. PROPOSED HOUSE SEE SHEET 2 FOR DETAIL
3. EXISTING DRIVEWAY
4. EXISTING WELL
5. PROPOSED SEPTIC AREA
6. PROPOSED FIRE HYDRANT AND EXISTING WATER TANK
7. EXISTING ROADS AND 50' WIDE EMERGENCY ACCESS FOR VEERKAMP PARCEL
8. EXISTING ENCROACHMENT
9. PROPOSED TURNOUTS AT A MINIMUM OF 400' INTERVAL
10. PROPOSED SOLAR ARRAY LOCATION
11. EXISTING ROADS AND 50' WIDE EMERGENCY ACCESS FOR KUHL PARCEL
12. EXISTING ROAD EASEMENT FOR ACCESS ACROSS VEERKAMP PARCEL

LEGEND

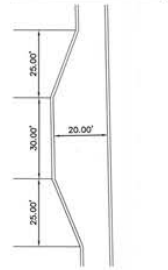
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- 1" IRON PIPE WITH 1 1/2" CAP STAMPED "L.S. 3848" PER R/S 21-41
- = = = = EXISTING DIRT ROADS (APPROXIMATE LOCATION)
- OA OVERALL DISTANCE

PROFILE OF DRIVEWAY



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TURNOUT DETAIL



CUP24-0011

1. MINIMUM CONSTRUCTION SITE STORM WATER MANAGEMENT PRACTICES

THE STORM WATER MANAGEMENT PRACTICES DESCRIBED BELOW ARE THE MINIMUM, REQUIRED WATER QUALITY PROTECTION MEASURES APPLICABLE TO ALL CONSTRUCTION SITES WITHIN WESTERN EL DORADO COUNTY. THIS LISTING DOES NOT INCLUDE THE VARIOUS INSPECTION, RECORD KEEPING, TRAINING AND REPORTING REQUIREMENTS. ADDITIONALLY, THERE WILL BE INSTANCES WHERE PROJECT AND SITE CONDITIONS REQUIRE SUPPLEMENTING OR DEVIATING FROM THESE MINIMUM PROTECTION REQUIREMENTS. THE CONTRACTOR IS EXPECTED TO DEPLOY MEASURES SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE COUNTY'S GRADING ORDINANCE; AND, AS APPLICABLE (PROJECTS WHICH INVOLVE ONE ACRE OR MORE OF DISTURBED SOIL OR ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT ENCOMPASSES ONE ACRE OR MORE OF DISTURBED SOIL), WITH THE STATE WATER RESOURCES CONTROL BOARD'S (SWRCB) NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

A. SCHEDULING

CONSTRUCTION SHALL BE SCHEDULED TO MINIMIZE CONSTRUCTION ACTIVITIES IN "HIGH-RISK AREAS" AND THE AMOUNT OF ACTIVE DISTURBED SOIL AREAS, DURING THE RAINY SEASON (OCT. 15th TO MAY 1st). "HIGH-RISK AREAS" INCLUDE THOSE AREAS WITHIN 50 FEET OF USGS WATERCOURSES, 100-YEAR FLOOD PLAINS, REGULATED WETLANDS, AND WHERE SLOPES EXCEED 16%.

UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY'S ON-SITE REPRESENTATIVE, DURING THE RAINY SEASON THE CONTRACTOR SHALL NOT SCHEDULE CONSTRUCTION ACTIVITIES IN "HIGH RISK AREAS" OR SCHEDULE TO HAVE MORE THAN 5 ACRES OF ACTIVE DISTURBED SOIL AREA. WHERE PERMANENT STORM WATER TREATMENT DEVICES ARE TO BE CONSTRUCTED, THESE DEVICES SHOULD, WHENEVER FEASIBLE, BE CONSTRUCTED AS AN EARLY WORK ITEM.

B. PRESERVATION OF NATURAL FEATURES

PRIOR TO THE COMMENCEMENT OF SOIL-DISTURBING ACTIVITIES, AREAS OF EXISTING VEGETATION THAT ARE TO REMAIN AND ENVIRONMENTALLY SENSITIVE AREAS (I.E. WETLANDS, PROTECTED HABITATS, ETC) SHALL BE FENCED FOR PROTECTION. IN GENERAL, SITE DESIGNS SHALL PRESERVE EXISTING VEGETATION TO THE MAXIMUM EXTENT POSSIBLE; AND DURING CONSTRUCTION, EXISTING VEGETATION SHALL BE PRESERVED (AND PROTECTED BY FENCING) FOR AS LONG AS POSSIBLE TO MINIMIZE EROSION.

C. STORM WATER RUN-ON AND CONCENTRATED FLOWS

EXISTING WATERCOURSES SHALL BE PROTECTED; AND IF DIVERTED, HANDLED IN A NON-ERODING FASHION. THE CONTRACTOR SHALL NOT SCHEDULE CONSTRUCTION ACTIVITIES IN "HIGH RISK AREAS" FROM DISTURBED TO THE EXTENT FEASIBLE, ALL CONCENTRATED WATER FLOWS SHALL BE CHANNELED AWAY FROM DISTURBED SOIL AREAS / STOCKPILES. CONCENTRATED WATER FLOWS SHALL BE CONVEYED IN A NON-ERODING FASHION.

D. STOCKPILE MANAGEMENT

STOCKPILES SHALL BE MANAGED AS FOLLOWS:

1. SOIL STOCKPILES
   RAINY SEASON:
   – COVERED, OR PROTECTED WITH SOIL STABILIZATION MEASURES & PERIMETER SEDIMENT BARRIERS.
   NON-RAINY SEASON:
   – COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS.
2. CONCRETE / ASPHALT RUBBLE, ROCK AND AGGREGATE BASE / SUB-BASE
   – COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS.
3. "COLD MIX" ASPHALT
   – COVERED

E. SEDIMENT TRACKING CONTROL

APPROPRIATE MEASURES SHALL BE DEPLOYED TO MINIMIZE THE TRACKING OF SEDIMENT OFF-SITE BY VEHICLES AND/OR EQUIPMENT. THESE MEASURES INCLUDE STABILIZED CONSTRUCTION ENTRANCES/EXITS & ROADWAYS, AND TIRE WASHING. WHERE TRACKING OCCURS, STREETS SHALL BE SWEPT USING A PICKUP SWEEPER WITH WATER SUPPLY.

F. NON-STORM WATER MANAGEMENT

NON-STORM WATER DISCHARGES SHALL BE MINIMIZED TO THE EXTENT FEASIBLE. SEDIMENT-LADEN NON-STORM WATER IS REQUIRED TO BE FILTERED (OR EQUIVALENT TREATMENT) PRIOR TO DISCHARGING. MEASURES REQUIRED TO MANAGE NON-STORM WATER DISCHARGES INCLUDE: WATER CONSERVATION PRACTICES, DUST CONTROL, MATERIAL STORAGE PRACTICES, VEHICLE/EQUIPMENT OPERATION AND MAINTENANCE REQUIREMENTS, WASTE MANAGEMENT PRACTICES, AND SPILL PREVENTION / CONTROL MEASURES.

G. DISTURBED SOIL AREA MANAGEMENT

DISTURBED SOIL AREAS (DSA) SHALL BE PROTECTED WITH AN "EFFECTIVE COMBINATION" OF MEASURES INCLUDING SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. THERE MAY BE SITUATIONS WHERE "SEDIMENT BASINS" OR "TREATMENT" ARE ABLE TO SUBSTITUTE AS ALTERNATIVE CONTROL MEASURES TO THE NORMALLY REQUIRED "EFFECTIVE COMBINATION" OF SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. HOWEVER, WHEN SUBSTITUTING THESE MEASURES, THE CONTRACTOR MUST BE PREPARED TO DEMONSTRATE THAT THE SEDIMENT LOAD WITHIN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE DOES NOT EXCEED NATURAL OR PRE-CONSTRUCTION LEVELS.

1. SOIL STABILIZATION MEASURES INCLUDE:
   – HYDRAULIC MULCH (REF. CASQA BMP # EC-3)
   – HYDROSEEDING (REF. CASQA BMP # EC-4)
   – SUITABLY STABILIZED, NON-POLLUTING STRAW / WOOD / ORGANIC MULCH (REF. CASQA BMP #'s EC-6 & EC-8).
   – GEOTEXTILES, MATS, PLASTIC COVERS AND EROSION CONTROL BLANKETS (REF. CASQA BMP # EC-7)
   – STABILIZED CONSTRUCTION ROADWAYS (REF. CASQA BMP # TC-2)
2. SEDIMENT BARRIERS INCLUDE:
   – SILT FENCES (REF. CASQA BMP # SE-1)
   – SAND / GRAVEL BAG BARRIERS (REF. CASQA BMP #'S SE-8 & SE-8)
   – STRAW BALE BARRIERS (REF. CASQA BMP # SE-9)
   – FIBER ROLLS (REF. CASQA BMP # SE-5)
3. BASIN / TRAPS INCLUDE:
   – DESILTING BASINS (REF. CALTRANS BMPS)
   – SEDIMENT TRAPS (REF. CALTRANS BMPS)
4. ON DSAs WITH SLOPE LENGTHS GREATER THAN 10 FEET, THE FOLLOWING MEASURES SHALL BE DEPLOYED:

a. RAINY SEASON (OCT. 15TH TO MAY 1ST):
   – NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES EQUAL TO OR FLATTER THAN 1:20 (V/H), SOIL STABILIZATION
   * ON SLOPES STEEPER THAN 1:20 (V/H), SOIL STABILIZATION AND SEDIMENT BARRIERS
   – ACTIVE AREAS
   * ON SLOPES STEEPER THAN 1:20 (V/H), SEDIMENT BARRIERS
   * ON SLOPES STEEPER THAN 1:2 (V/H) WITH SLOPE LENGTHS GREATER THAN 50 FEET: SOIL STABILIZATION; SEDIMENT BARRIERS; AND WHERE FEASIBLE, BASINS / TRAPS

b. NON-RAINY SEASON:
   – NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES STEEPER THAN 1:2 (V/H), SEDIMENT BARRIERS.

5. GENERAL:
   PROTECTION SHALL BE DEPLOYED ON NON-ACTIVE DSAs WITHIN 14 DAYS FROM THE CESSATION OF SOIL-DISTURBING ACTIVITIES OR ONE DAY PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION. PROTECTION SHALL BE DEPLOYED ON ACTIVE DSAs PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION.

   "TERRACES:" FOR CUT SLOPES UP TO 60 FEET IN HEIGHT, TERRACES AT LEAST 8 FEET (2.4 METERS) IN WIDTH SHALL BE ESTABLISHED AT NOT MORE THAN 30-FOOT (9.1 METERS) VERTICAL INTERVALS ON ALL CUT SLOPES TO CONTROL SURFACE DRAINAGE AND DEBRIS EXCEPT THAT WHERE ONLY ONE TERRACE IS REQUIRED, IT SHALL BE AT MIDHEIGHT. FOR CUT SLOPES GREATER THAN 60 FEET (18 METERS) AND UP TO 120 FEET (37 METERS) IN VERTICAL HEIGHT, ONE ADDITIONAL TERRACE AT APPROXIMATELY MIDHEIGHT SHALL BE 12 FEET (3.6 METERS) IN WIDTH. TERRACES SHALL SLOPE A MINIMUM OF 5 PERCENT GRADIENT TOWARD THE HILLSIDE. TERRACE WIDTHS AND SPACING FOR CUT SLOPES GREATER THAN 120 FEET (36 METERS) IN HEIGHT SHALL BE DESIGNED BY THE CIVIL ENGINEER AND APPROVED BY THE DIRECTOR. SUITABLE ACCESS SHALL BE PROVIDED TO FACILITATE PROPER CLEANING AND MAINTENANCE.

   "SEDIMENT BASIN:" A BASIN WITH A CAPACITY EQUIVALENT TO AT LEAST 3600 CUBIC FEET OF STORAGE (AS MEASURED FROM THE BOTTOM OF THE BASIN TO THE PRINCIPAL OUTLET) PER ACRE DRAINING INTO THE BASIN. THE LENGTH OF THE BASIN SHALL BE MORE THAN TWICE THE BASIN'S WIDTH (LENGTH IS DETERMINED BY MEASURING THE DISTANCE BETWEEN THE INLET AND THE OUTLET). THE DEPTH OF THE BASIN MUST NOT BE LESS THAN THREE FEET NOR GREATER THAN FIVE FEET.

   "TREATMENT": A COMBINATION OF BASIN AND TREATMENT ENGINEERED TO CAPTURE AND TREAT (TO REMOVE 0.01 MM SIZED PARTICLES AND LARGER) THE 10-YEAR, 6-HOUR RAIN EVENT USING C=CxIxA WHERE C=0.5 AND I RANGES FROM 0.286 (EL DORADO HILLS) TO 0.500 (SLY PARK).

GENERAL REFERENCE: EL DORADO COUNTY "STORM WATER MANAGEMENT PLAN", OCTOBER 2004. AVAILABLE ON-LINE AT: HTTP://WWW.CO.EL-DORADO.CA.US/EMD/SOLIDWASTE/STORM.HTML

DETAILED REFERENCES:

1. CALIFORNIA STORM WATER QUALITY ASSOCIATION (CASQA) "CONSTRUCTION HANDBOOK", JANUARY 2003. ERRATA SEPTEMBER 2004. AVAILABLE ON-LINE ATHTTP://WWW.CABMPHANDBOOKS.COM/
2. CALTRANS "STATEWIDE STORM WATER QUALITY PRACTICE GUIDELINES", APRIL 2003. AVAILABLE ON-LINE AT: HTTP://WWW.DOT.CA.GOV/HQ/ENV/STORMWATER/SPECIAL/NEWSETUP/INDEX.HTM
3. HIGH SIERRA RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL "VEGETATION ESTABLISHMENT GUIDELINES FOR THE SIERRA NEVADA FOOTHILLS AND MOUNTAINS," AVAILABLE ON-LINE AT: HTTP://WWW.CO.EL-DORADO.CA.US/EMD/SOLIDWASTE/STORMWATER/HYDRO/SDOVEGETATIONGUIDELINES%20FINAL%202005.PDF

CRITICAL AREA PLANTING CONSTRUCTION SPECIFICATIONS (JANUARY 2006)

A. SCOPE

ESTABLISHING VEGETATION ON SEVERELY ERODING AREAS OR AREAS WITH AN EROSION POTENTIAL. ITS PURPOSE IS TO STABILIZE THE SOIL, MINIMIZE OR PREVENT DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS, PROTECT WILDLIFE HABITAT, AND MAINTAIN AESTHETIC QUALITIES.

B. AREAS TO BE SEEDED, TIMING OF SEEDING

COMPLETE REVEGTATION AND STABILIZATION OF ALL DISTURBED SOILS, BOTH WITHIN AND OUTSIDE COUNTY RIGHT-OF-WAY, WILL BE ACCOMPLISHED WITH SPECIFIED AMOUNTS AND TYPES OF VEGETATIVE SPECIES, MULCH, AND FERTILIZER MATERIAL. SEE MAJOR LAND RESOURCE AREA EXHIBITS MLRA 18 OR 22.

ALL EROSION AND SEDIMENT CONTROL PRACTICES PERFORMED AFTER OCTOBER 15, SHALL FOLLOW "RAINY SEASON" SPECIFICATION CONTAINED IN THE STORM WATER MANAGEMENT PRACTICES.

C. MATERIAL

1. SEED – ALL SEED SHALL BE DELIVERED TO THE SITE TAGGED AND LABELED IN ACCORDANCE WITH THE CALIFORNIA AGRICULTURAL CODE AND SHALL BE ACCEPTABLE TO THE COUNTY AGRICULTURAL COMMISSIONER.

SEED SHALL BE OF A QUALITY WHICH HAS A MINIMUM PURE LIVE SEED CONTENT OF 80% (% PURITY X % GERMINATION) AND WEED SEED SHALL NOT EXCEED 0.5% OF THE AGGREGATE OF PURE LIVE SEED AND OTHER MATERIALS. LEGUME SEED SHALL BE INOCULATED WITH INOCULATE SPECIFIC TO ITS NEEDS WITHIN TWO HOURS PRIOR TO SEEDING. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER OR AS OTHERWISE SPECIFIED. ALL INOCULATED SEED SHALL BE LABELED TO SHOW WEIGHT OF SEED, THE DATE OF INOCULATION, AND THE WEIGHT AND SOURCE OF INOCULANT MATERIALS.

2. FERTILIZER – A COMMERCIAL FERTILIZER SHALL BE AMMONIUM PHOSPHATE AND CONTAIN A MINIMUM OF 16% NITROGEN, 20% PHOSPHORUS, AND 0% POTASH, UNIFORM IN COMPOSITION, DRY AND FREE FLOWING, PELLETED OR GRANULAR.

ALL FERTILIZER SHALL BE DELIVERED IN UNIBROKEN OR UNOPENED CONTAINERS, LABELED IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS AND BEARING THE WARRANTY OF THE PRODUCER FOR THE GRADE FURNISHED.

3. MULCH – MULCH SHALL BE ONE OF THE FOLLOWING MATERIALS AS APPROVED BY THE GOVERNMENT REPRESENTATIVE.

4. STRAW – STRAW SHALL BE NEW STRAW DERIVED FROM RICE, WHEAT, OATS, OR BARLEY, AND BE FREE OF MOLD AND NOXIOUS WEED SEED. STRAW SHALL BE FURNISHED IN AIR DRY BALES. EVIDENCE SHALL BE FURNISHED THAT CLEARANCE HAS BEEN OBTAINED FROM THE COUNTY AGRICULTURAL COMMISSIONER, AS REQUIRED BY LAW, BEFORE STRAW OBTAINED FROM OUTSIDE THE COUNTY IN WHICH IT IS TO BE USED IS DELIVERED TO THE SITE OF THE WORK.

5. WOOD FIBER MULCH – WOOD FIBER MULCH IS A WOOD CELLULOSE FIBER THAT CONTAINS NO GERMINATION OR GROWTH INHIBITING FACTORS. IT IS COLORED WITH A NON-TOXIC, WATER SOLUBLE, GREEN DYE TO PROVIDE A PROPER GAUGE FOR METERING OVER GROUND SURFACES. IT HAS THE PROPERTY TO BE EVENLY DISPERSED AND SUSPENDED WHEN AGITATED IN WATER.

D. SEEDING REQUIREMENTS

1. GENERAL – ALL SEEDING, FERTILIZER AND MULCHING OPERATIONS SHALL BEGIN WHEN APPROVAL IS GIVEN BY THE APPROPRIATE COUNTY ENGINEER OR CONSERVATION DISTRICT REPRESENTATIVE.

2. SEEDBED PREPARATION – THE ENTIRE AREA TO BE SEEDED SHALL BE REASONABLY SMOOTH AND CONFORM TO THE DESIRED SHAPE BEFORE ACTUAL SEEDBED PREPARATION IS BEGUN. ANY DEBRIS WHICH WOULD INTERFERE WITH SEEDING OPERATIONS GROWTH OR MAINTENANCE OF THE VEGETATIVE COVER WILL BE REMOVED. THE AREA TO BE SEEDED SHALL HAVE A FIRM SEEDBED WHICH HAS PREVIOUSLY BEEN ROUGHENED BY SCARIFYING, DISKING, HARROWING, CHISELING, OR OTHERWISE WORKED TO A DEPTH OF TWO TO FOUR INCHES (2" – 4"). NO IMPLEMENT SHALL BE USED THAT WILL CREATE AN EXCESSIVE AMOUNT OF DOWNWARD MOVEMENT OF SOIL OR CLOGS OF SLOPING AREAS. SEEDBED MAY BE PREPARED AT TIME OF COMPLETION OF EARTH-MOVING WORK.

3. FERTILIZING – FERTILIZER SHALL BE DISTRIBUTED UNIFORMLY OVER THE SEEDBED AT THE RATE OF 300 POUNDS PER ACRE, AND SHALL BE IN SUCH PHYSICAL CONDITION TO INSURE UNIFORM APPLICATION OVER THE AREA TO BE FERTILIZED. FERTILIZER MAY BE APPLIED IN ANY WAY THAT WILL RESULT IN UNIFORM DISTRIBUTION. THE FERTILIZER SHALL BE INCORPORATED INTO THE SOIL.

4. SEEDING – SEED SHALL BE BROADCAST BY HAND, MECHANICAL HAND SEEDER, POWER OPERATED SEEDER, HYDROSEEDER OR OTHER APPROVED EQUIPMENT. SEED SHALL HAVE A SOIL COVER OF NOT MORE THAN ONE-HALF INCH. SEEDING WILL BE CARRIED OUT USING EITHER OF THE FOLLOWING METHODS:

METHOD 1 THE SEED MAY BE DRILLED, NOT TO EXCEED ONE-HALF (1/2) INCH DEEP AND CULTIPACKED OR ROLLED ONCE OVER WITH A CORRUGATED ROLLER ON ALL AREAS WHERE EQUIPMENT CAN BE OPERATED SAFELY. SEED OPERATIONS WILL BE ACROSS THE SLOPE.

METHOD 2 THE SEED MAY BE APPLIED IN A SLURRY MIX OF WOOD CELLULOSE FIBER DISTRIBUTED UNIFORMLY AT THE PRESCRIBED RATE. THE APPLICATION UNIT USED FOR "HYDRO MULCH" SHALL BE EQUIPPED WITH AN AGITATOR TO MAINTAIN THE SEED AND MULCH IN SUSPENSION WITHIN THE UNIT'S TANK PRIOR TO AND DURING APPLICATION.

METHOD 3 WHERE EMERGENCY TREATMENT OF EXPOSED SOILS EXTENDS BEYOND OCTOBER 15, EMERGENCY MULCHING WITHOUT SEED WILL BE PRESCRIBED IN ACCORDANCE WITH "SOIL STABILIZATION MEASURES" DESCRIBED PREVIOUSLY.

SPECIAL NOTE: A MINIMUM 70% SEED GERMINATION WITH AT LEAST 1" GROWTH MUST BE OBTAINED BY DECEMBER 1ST, OR AREA MUST BE COVERED WITH STRAW MULCH.

Fugitive Dust Prevention/Control and Asbestos Hazard Dust Mitigation Notes

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 10, "DUST CONTROL" OF THE STANDARD SPECIFICATIONS, COUNTY OF EL DORADO AIR POLLUTION CONTROL DISTRICT (APCD) RULE 223, AND COUNTY OF EL DORADO ORDINANCE 4548. COPIES OF APCD RULE 223 AND ORDINANCE 4548 MAY BE OBTAINED FROM THE COUNTY OF EL DORADO DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667.
2. THE CONTRACTOR SHALL KEEP A COPY OF THE FUGITIVE DUST PLAN AND THE ASBESTOS MITIGATION PLAN (IF ISSUED) AT THE CONSTRUCTION SITE AT ALL TIMES DURING THE CONSTRUCTION PERIOD.

MLRA 22

FOR SEEDING PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
KIND OF SEED AND AMOUNT (HYDROSEEDED OR BROADCASTED)

POTOMAC ORCHARD GRASS OR LUNA PUBESCENT WHEAT GRASS	24 LBS/ACRE 36 LBS/ACRE	0.55 LBS/1000 SqFt 0.80 LBS/1000 SqFt
OR TOPAR PUBESCENT WHEAT GRASS AND WIMMERA '62' RYE GRASS	36 LBS/ACRE 6 LBS/ACRE	0.80 LBS/1000 SqFt .15 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

FOR SEEDING NOT PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
HYDROSEEDED OR BROADCASTED

POTOMAC ORCHARD GRASS OR LUNA PUBESCENT WHEAT GRASS	48 LBS/ACRE 72 LBS/ACRE	1.10 LBS/1000 SqFt 1.60 LBS/1000 SqFt
OR TOPAR PUBESCENT WHEAT GRASS AND WIMMERA '62' RYE GRASS	72 LBS/ACRE 12 LBS/ACRE	1.60 LBS/1000 SqFt .3 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

Notes–SITE CONSULTING, INC

1. THE CONTRACTOR SHALL PROCURE AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY THE OWNER AS MAY BE NECESSARY TO COMPLY WITH FEDERAL, STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK.
2. EXISTING UTILITIES ARE INDICATED ON THE PLANS WHERE SUCH UTILITIES ARE KNOWN. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE, PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT, (USA) 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. (TELEPHONE 1–800–642–2444) ALSO NOTIFY THE EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION WORK.
3. PERIODIC INSPECTION AND REPAIR WILL BE REQUIRED BY THE OWNER TO KEEP DRAINAGE IMPROVEMENTS OPERABLE. REMOVAL OF SEDIMENT DEPOSITS AND VEGETATIVE MATERIALS IN PIPES, INLET STRUCTURES AND DRAINAGE INVERTS SHALL BE PERFORMED AT A REGULAR MAINTENANCE INTERVAL TO PREVENT ACCUMULATION AND OBSTRUCTION OF DRAINAGE IMPROVEMENT OPERATION.
4. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER, OWNER AND THE COUNTY OF EL DORADO AT LEAST 24 HOURS PRIOR TO ANY GRADING.
5. ALL GRADING IS TO BE DONE IN ACCORDANCE WITH THE COUNTY OF EL DORADO REQUIREMENTS AND THE SOILS ENGINEER:
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE EROSION CONTROL PLAN. ALL SUCH MEASURES SHALL CONFORM TO THE COUNTY OF EL DORADO GRADING, EROSION AND SEDIMENT CONTROL ORDINANCE TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGH THE DURATION OF THE PROJECT. IF GRADING ACTIVITIES ARE NOT COMPLETED BY OCTOBER 15, THE OWNER SHALL IMPLEMENT THE TEMPORARY EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. ALL AREAS GRADED DURING THE RAINY SEASON (OCTOBER 15 – MAY 15) SHALL BE RE-VEGETATED WITHIN 15 DAYS UPON COMPLETION.
7. EARTHWORK ESTIMATES ARE TO BE USED FOR ESTIMATING PURPOSES ONLY AND NO GUARANTEE IS MADE AS TO THE ACCURACY OF THIS INFORMATION. THE CONTRACTOR ACKNOWLEDGES THAT HE IS SATISFIED AS TO THE CHARACTER, QUALITY, AND QUANTITY OF THE SURFACE AND SUBSURFACE MATERIALS TO BE ENCOUNTERED AND WILL BE RESPONSIBLE FOR PROPERLY ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK.

CUBIC YARDS – EXCAVATION: 800± CUBIC YARDS – EXPORT: 0

CUBIC YARDS – EMBANKMENT: 800± CUBIC YARDS – IMPORT: 0

8. IT IS THE APPLICANT AND CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL THE STATE AND FEDERAL LAWS AND REGULATIONS INCLUDING THE FEDERAL AND STATE ENDANGERED SPECIES ACT AND THE CLEAN WATER ACT FOR ALL ON-SITE IMPACTS. THE COUNTY GRADING PERMIT DOES NOT AUTHORIZE THE CONTRACTOR TO CONDUCT ACTIVITIES NOT PERMITTED BY APPLICABLE STATE AND FEDERAL AGENCIES IN AREAS SUBJECT TO STATE AND FEDERAL JURISDICTION.
9. THE AREA OF DISTURBANCE IS APPROXIMATELY 0.4 ACRES.

Standard General Notes Grading and Drainage Notes

1. MATERIALS, CONSTRUCTION QUALITY, AND METHODS FOR THIS PROJECT ARE SUBJECT TO THE COUNTY OF EL DORADO DESIGN AND IMPROVEMENT STANDARDS PLANS, AND THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS.
2. ALL WORK SHALL BE ACCOMPLISHED TO THE SATISFACTION OF THE COUNTY OF EL DORADO, AUTHORIZED REPRESENTATIVE.
3. ALL REFERENCE TO COUNTY SHALL MEAN THE COUNTY OF EL DORADO OR AUTHORIZED REPRESENTATIVE.
4. ALL REFERENCE TO THE STANDARD SPECIFICATIONS SHALL MEAN THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JULY 2006.
5. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO SHALL HAVE FULL AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR ON SITE AT ALL TIMES DURING WORKING HOURS.
6. THE CONTRACTOR SHALL NOTIFY COUNTY AND RCD 48 HOURS IN ADVANCE OF COMMENCING WORK TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND INSPECTION WITH THE ENGINEER AND COUNTY. NO WORK SHALL BEGIN UNTIL AFTER THE PRE-CONSTRUCTION CONFERENCE AND INSPECTION HAVE BEEN COMPLETED.
7. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7, "LEGAL RELATIONS AND RESPONSIBILITY" OF THE STANDARD SPECIFICATIONS.
8. RIGHTS TO ENTER AND CONSTRUCT SHALL BE OBTAINED PRIOR TO CONSTRUCTING ANY OFF-SITE WORK SHOWN IN THESE PLANS. COPIES OF SUCH DOCUMENTS SHALL BE KEPT ON-SITE AT ALL TIMES DURING THE PERFORMANCE OF OFF-SITE WORK.
9. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) 811 OR 1-800-227-2600 PRIOR TO PERFORMING ANY EXCAVATION ON THE PROJECT SITE. THE OWNER(S) OF IDENTIFIED EXISTING UNDERGROUND FACILITIES SHALL ALSO BE CONTACTED PRIOR TO CONSTRUCTION.
10. STAKING MAY BE REQUIRED BY COUNTY DUE TO THE NATURE AND/OR COMPLEXITY OF THE WORK. LOST OR DAMAGED STAKES SHALL BE REPLACED TO THE SATISFACTION OF COUNTY WHETHER RESULTING FROM CONSTRUCTION PROCEDURES, VANDALISM, OR ANY OTHER CAUSE.
11. CONSTRUCTION HOURS SHALL BE LIMITED FROM MONDAY THROUGH SATURDAY, 7:00 A.M. TO 7:00 P.M. DURING WEEKDAYS AND 8 A.M. TO 5 P.M. ON SATURDAY. ALL HEAVY EQUIPMENT AND ANY INTERNAL COMBUSTION ENGINES SHALL BE FITTED WITH ADEQUATE MUFFLERS.
12. THE CONTRACTOR SHALL PROVIDE, PLACE AND MAINTAIN ALL LIGHTS, SIGNS, DELINEATORS, BARRICADES, TEMPORARY TRAFFIC STRIPING, FLAGMEN, DETOURS OR OTHER DEVICES NECESSARY TO PROVIDE FOR THE SAFE AND CONVENIENT PASSAGE OF PUBLIC VEHICLE AND PEDESTRIAN TRAFFIC THROUGH THE CONSTRUCTION SITE.
13. THE CONTRACTOR SHALL OBTAIN THE EXPRESS WRITTEN CONSENT OF COUNTY PRIOR TO IMPLEMENTING ANY LANE CLOSURE OR DETOUR ON A COUNTY MAINTAINED STREET OR HIGHWAY. ALL LANE CLOSURES OR DETOURS SHALL CONFORM TO CHAPTER 5, "TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC MANUAL (LATEST EDITION).
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION. AT LEAST ONE WATER TRUCK SHALL BE ON SITE AT ALL TIMES. ADDITIONAL EQUIPMENT MAY BE REQUIRED AS DETERMINED BY COUNTY.
15. IF THE PRESENCE OF SERPENTINE ROCK (SAF) IS DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, CITY AND THE EL DORADO COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT THAT SERPENTINE ROCK IS PRESENT ON THE SITE.
16. UPON JOB COMPLETION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE INFORMATION TO SITE CONSULTING, INC. (ENGINEER), REGARDING ANY MATERIAL CHANGES MADE DURING CONSTRUCTION AS WELL AS ANY OTHER INFORMATION REQUIRED TO BE SHOWN ON THE RECORD DRAWINGS BY COUNTY.
17. CLEARING AND GRUBBING SHALL CONFORM TO THE PROVISIONS OF SECTION 16, "CLEARING AND GRUBBING" OF THE STANDARD SPECIFICATIONS. ROOTS, STUMPS, TREES, ROCKS OR OTHER DELETERIOUS SUBSTANCES SHALL BE DISPOSED OF OFF-SITE AND IN A LAWFUL MANNER.
18. EARTHWORK SHALL CONFORM TO THE PROVISIONS OF SECTION 19, "EARTHWORK" OF THE STANDARD SPECIFICATIONS. WIDENING OF EMBANKMENTS AND FLATTENING OF SLOPES, WHICH RESULT IN AN INCREASED AREA OF GRADING, WILL NOT BE PERMITTED WITHOUT EXPRESS WRITTEN APPROVAL OF COUNTY.
19. AGGREGATE BASE SHALL CONFORM TO THE PROVISIONS OF SECTION 26, "AGGREGATE BASE" OF THE STANDARD SPECIFICATIONS FOR CLASS 2 AGGREGATE BASE, 3/4" MAXIMUM GRADATION. AGGREGATE BASE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY COUNTY.
20. ASPHALT CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 39, "ASPHALT CONCRETE" OF THE STANDARD SPECIFICATIONS FOR TYPE B ASPHALT CONCRETE. ASPHALT BINDER SHALL BE PERFORMANCE GRADE 64-16. AGGREGATE FOR THE TOP LIFT SHALL BE 1/2" MAXIMUM, MEDIUM GRADATION. AGGREGATE FOR LOWER LIFTS SHALL BE 3/4" MAXIMUM, MEDIUM GRADATION. LIFT THICKNESS SHALL CONFORM TO THE PROVISIONS OF SECTION 39-6, "SPREADING AND COMPACTION" OF THE STANDARD SPECIFICATIONS. ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY CITY, AND ALL UTILITIES WITHIN THE PAVED AREA HAVE BEEN PLACED, TESTED, AND APPROVED.
21. PRECAST CONCRETE STRUCTURES SHALL CONFORM TO SECTION 70-1.02H "PRECAST CONCRETE STRUCTURES" OF THE STANDARD SPECIFIC

PARCEL HISTORY AND APPLICANT STATEMENT

The parcel in question is one of the earliest properties settled in what is now the Eldorado National Forest. The associated buildings on the parcel were one of two sets of dwellings recorded by the Government Land Office in its original October 1874 survey of T12N, R14E.

As the third generation of my family associated with the property, I have been actively engaged in its use my entire life.

My most recent efforts to construct a dwelling are, quite literally, the culmination of a lifetime dream and an honoring of the property legacy with the historic dwelling on the property.

Back in early 2007, I joined my cousins in the process of actively working with various El Dorado County offices and departments. Concerning the various rules and regulations governing use of our property to honor a family settlement agreement and create certificates of compliance for the now three parcels of which the middle parcel is the parcel in question.

In that regard, I have invested hundreds of hours and tens of thousands of dollars to maintain the property in accordance with established forest management practices. I have had two harvests under that plan on my property since I have owned it (primary harvest and a supplemental harvest). I have every intention to continue to harvest timber on my property as market conditions allow.

The areas of my property area impacted by my plans as follows:

- Area of house: 5891 square feet including grading and parking area or 0.135 acres. (number 2 on area map)
- Area of Pad: 5242 square feet or 0.1204 acres. (number 9 on the area map)
- Area of Leach field and septic: 3544 square feet or 0.081 acres. (number 5 on the area map)
- Area of Solar Panels: 2076 square feet or 0.0476 acres (number 7 on the area map)
- A total area that is proposed to be occupied or disturbed of 0.384 acres or 16,753 square feet.
- That is one third of an acre on a 65.78 acre parcel amounting to less than a percent of the total property.

The house location was specifically chosen in an area where trees are not growing readily with large rock outcrops and the house is proposed to be located inside unsuitable fill of an existing loading pad on the property. The solar panels were chosen in an area where no trees are growing to provide best sun exposure. The Leach field was chosen to also include minimal tree interference. Of the existing trees that will be impacted only two trees might need to be removed with the proposed plans. The proposed pad is there to correct the uncompacted and

unsuitable fill existing on the property and to allow for any loss in temporary log deck storage. The majority of the tree harvesting has occurred and will likely continue to occur to the north of the proposed area or in the boot section of the property. The house location was also chosen because limited harvesting may occur near the meadow and Union Valley Reservoir Timber Harvest Plan setbacks.

All roads are existing and only additions to the roads are turnouts according to the plans which adds to the safety of the logging operations to have turnouts every 400 feet pursuant to fire safe regulations which are higher standards than those required for the Timber Harvest Plan.

El Dorado, County Recorder
William Schultz Co Recorder Office
DOC- 2017-0021033-00
Check Number 2334
Wednesday, MAY 24, 2017 09:16:51
Ttl Pd $75.00 Nbr-0001854361
JLR / C1 / 1-20

Recording requested by
and when recorded mail to

Douglas R. Roeca
Attorney at Law
3062 Cedar Ravine Road
Placerville, CA 95667

Space above this line for recorder's use
Documentary Transfer Tax: $0.00 - R&T 11911
Total Consideration: $0.00 VALUE LESS THAN $100.00

GRANT OF EASEMENTS

Grant of Easement made this 21 day of April, 2017, by (1) MICHAEL J. KUHL (hereinafter "Kuhl"), (2) PENELOPE A. HOCKING as Trustee of the Rex P. Hocking and Penelope A. Hocking Revocable Trust dated June 22, 2006, GARY B. WILLIAMS and PENNY L. WILLIAMS as co-trustees of The Williams Living Trust U/A dated December 8, 2015, and PAULA R. HUSTEAD (hereinafter jointly "HWH"), and (3) SAMUEL JOSEPH ANGULO, FREDERICK JAMES ANGULO, and ANTHONY JEFFREY ANGULO as Co-Trustees of the Angulo Dynasty Trust Dated November 13, 1996 (hereinafter jointly "Angulo"), with the properties affected by and benefitting from these easements being referenced in the recorded Certificate of Compliance filed in the office of the County Recorder of the County of El Dorado, State of California, as Document No. 2017-21032 on 5-24, 2017.

1. **Grant of Easement from Kuhl to Angulo:** Kuhl hereby grants to Angulo a nonexclusive easement for emergency ingress and egress. The easement is fifty (50) feet wide and is described and depicted in Exhibit A-1 and A-2 attached hereto.

2. Grant of Easement from HWH to Angulo: HWH hereby grants to Angulo a nonexclusive easement for emergency ingress and egress. The easement is fifty (50) feet wide and is described and depicted in Exhibit B-1 and B-2 attached hereto.

3. Grant of Easement from Kuhl to HWH: Kuhl hereby grants to HWH a nonexclusive easement for emergency ingress and egress. The easement is fifty (50) feet wide and is described and depicted in Exhibit C-1 and C-2 attached hereto.

4. Grant of Easement from HWH to Kuhl:

a. Easement 1: HWH hereby grants to Kuhl a nonexclusive easement for emergency ingress and egress. The easement is fifty (50) feet wide and is described as Easement 1 and depicted in Exhibit D-1 and D-2 attached hereto.

b. Easement 2: HWH hereby grants to Kuhl a nonexclusive easement for ingress and egress. The easement is fifty (50) feet wide and is described as Easement 2 and depicted in Exhibit D-1 and D-2 attached hereto.

5. Binding Effect: This instrument shall bind and inure to the benefit of the respective heirs, personal representatives, successors, and assigns of the parties hereto.

IN WITNESS WHEREOF, the undersigned have executed this instrument on the day and year set forth by each signature.

Dated:_____ _____
MICHAEL J. KUHL

Dated: 4-21-17 Penelope A. Hocking
PENELOPE A. HOCKING, Trustee

Dated:_____ _____
GARY B. WILLIAMS. Trustee

Dated:_____ _____
PENNY L. WILLIAMS. Trustee

Dated:_____ _____
PAULA R. HUSTEAD

b. Easement 2: HWH hereby grants to Kuhl a nonexclusive easement for ingress and egress. The easement is fifty (50) feet wide and is described as Easement 2 and depicted in Exhibit D-1 and D-2 attached hereto.

5. Binding Effect: This instrument shall bind and inure to the benefit of the respective heirs, personal representatives, successors, and assigns of the parties hereto.

IN WITNESS WHEREOF, the undersigned have executed this instrument on the day and year set forth by each signature.

Dated: 5/18/2017 — MICHAEL J. KUHL

Dated: _____ — PENELOPE A. HOCKING, Trustee

Dated: 4/4/17 — GARY B. WILLIAMS. Trustee

Dated: 4-4-17 — PENNY L. WILLIAMS. Trustee

Dated: _____ — PAULA R. HUSTEAD

b. Easement 2: HWH hereby grants to Kuhl a nonexclusive easement for ingress and egress. The easement is fifty (50) feet wide and is described as Easement 2 and depicted in Exhibit D-1 and D-2 attached hereto.

5. Binding Effect: This instrument shall bind and inure to the benefit of the respective heirs, personal representatives, successors, and assigns of the parties hereto.

IN WITNESS WHEREOF, the undersigned have executed this instrument on the day and year set forth by each signature.

Dated:_____ _____
MICHAEL J. KUHL

Dated:_____ _____
PENELOPE A. HOCKING, Trustee

Dated:_____ _____
GARY B. WILLIAMS. Trustee

Dated:_____ _____
PENNY L. WILLIAMS. Trustee

Dated: 4/18/2017 Paula R Hustead
PAULA R. HUSTEAD

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

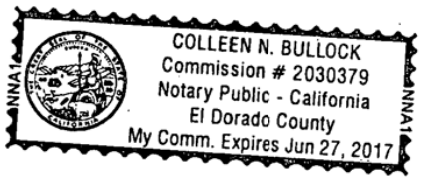
State of California)
) ss
County of El Dorado)

On May 18, 2017 before me, Colleen N. Bullock, a notary public, personally appeared Michael J. Kuhl, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Colleen N. Bullock (SEAL)



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of California)
) ss
County of El Dorado)

On _____, 2017, before me, Colleen N. Bullock, a notary public, personally appeared MICHAEL KUHL, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by his signature on the instrument, the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature _____(SEAL)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of ~~California~~ Montana)
) ss
County of Madison)

On April 21, 2017 before me, Bob Briggs, a notary public, personally appeared PENELOPE A. HOCKING, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument, the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature _____(SEAL)

BOB BRIGGS NOTARIAL SEAL STATE OF MONTANA

BOB BRIGGS
NOTARY PUBLIC for the
State of Montana
Residing at Ennis, Montana
My Commission Expires
September 08, 2019

Grant of Easement

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of ~~California~~ WASHINGTON)
) ss
County of CLALLAM)

On APRIL 4TH, 2017 before me, NOELLE K FAZIO a notary public, personally appeared GARY B. WILLIAMS and PENNY L. WILLIAMS, who proved to me on the basis of satisfactory evidence to be the persons whose name are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacity, and that by their signatures on the instrument, the persons, or the entity upon behalf of which the persons acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____(SEAL)

NOTARY PUBLIC
NOELLE K FAZIO
COMM. EXPIRES
JAN 15, 2019
STATE OF WASHINGTON

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of California)
) ss
County of _____)

On _____, 2017 before me, _____, a notary public, personally appeared PAULA R. HUSTEAD, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument, the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature _____(SEAL)

GOVERNMENT CODE 27361.7

I certify under the penalty of perjury that the portion(s) of the document that will not reproduce a readable copy to which this statement is attached, reads as follows:

STATE of CALIFORNIA
NOTARY PUBLIC for
STATE of WASHINGTON
Idelty of

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document, to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

DATED: 5-19-17

Signature
COUNTY SURVEYOR
(Firm Name, if applicable)

h:govcode1.dot

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of California)
) ss
County of _____)

On _____, 2017 before me, _____, a notary public, personally appeared GARY B. WILLIAMS and PENNY L. WILLIAMS, who proved to me on the basis of satisfactory evidence to be the persons whose name are subscribed to the within instrument and acknowledged to me that they executed the same in their authorized capacity, and that by their signatures on the instrument, the persons, or the entity upon behalf of which the persons acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____(SEAL)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

ACKNOWLEDGMENT

State of ~~California~~ Arizona)
) ss
County of Maricopa)

On 18 April, 2017 before me, James Anderson, a notary public, personally appeared PAULA R. HUSTEAD, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument, the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

Signature _____(SEAL)

JAMES ANDERSON
Notary Public - State of Arizona
MARICOPA COUNTY
My Commission Expires
December 27, 2018

Grant of Easement

EXHIBIT A-1

Kuhl to Angulo

All that real property situated in the County of El Dorado, State of California:

All that portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Ruth S. Kuhl Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Ruth S. Kuhl, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 734 in the office of said Recorder (Kuhl Parcel) more particularly described as follows:

An Emergency access easement on, over and across a 50.00 foot wide strip of land lying 25.00 feet on each side of the following described centerline:

Beginning at a point on the East boundary of said "Kuhl Parcel" being the centerline of an existing road, from which the Northeast corner of said "Kuhl Parcel" bears North 02° 44' 36" West, 91.33 feet; thence along said centerline the following fifteen courses:

1. **South 55° 36' 53" West, 70.20 feet;**
2. **South 68° 21' 30" West, 77.11 feet;**
3. **South 36° 22' 40" West, 155.67 feet;**
4. **South 35° 57' 02" East, 164.64 feet;**
5. **South 17° 06' 34" East, 226.36 feet;**
6. **South 03° 42' 23" West, 114.65 feet;**
7. **South 24° 06' 42" West, 402.62 feet;**
8. **South 04° 18' 41" East, 122.12 feet;**
9. **South 10° 28' 26" West, 248.81 feet;**
10. **South 19° 44' 32" West, 229.53 feet;**
11. **South 39° 28' 09" West, 152.44 feet;**
12. **South 33° 58' 54" West, 294.79 feet;**
13. **South 24° 30' 16" West, 86.44 feet;**
14. **South 32° 57' 47" West, 388.15 feet;**
15. **South 17° 26' 37" West, 327.11 feet;**

Thence leaving said centerline North 71° 18' 01" West, 39.29 feet to a point on the Westerly boundary of said "Kuhl Parcel" and the terminus of said easement, from which an angle point in said Westerly boundary bears South 19° 26' 45" West, 46.39 feet.

The sidelines of said easement shall be shorten or lengthen to intersect said East boundary and said Westerly boundary.

The Meridian of this description is the same as said Record of Survey filed in Book 21 of Record of Surveys at Page 41

This easement shall be appurtenant to a portion of the tract of land lying within Section 16, Township 12 North, Range 14 East, Mount Diablo Meridian as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 84 acre parcel labeled as the Eleanor Angulo Parcel under item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records. Said Parcel being conveyed to Eleanor Angulo, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 716 in the office of said Recorder.



SIGNING DATE: 2-16-17

EXHIBIT A–2
KUHL TO ANGULO
EMERGENCY ACCESS FOR ANGULO PARCEL

BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21–41

2-16-17

LICENSED LAND SURVEYOR
JAMES C. WILLSON
NO. 4663
Exp. 9/30/2018
STATE OF CALIFORNIA

400 0 200 400
1 inch = 400 ft.

N

(61) N 02°46'55" E 78.51'
(62) N 19°26'45" E 414.75'
(63) N 30°48'28" E 196.15'
(64) N 36°31'00" E 168.54'
(65) N 23°12'29" E 232.92'

USFS
C–W–NE 1/64 CORNER SECTION 16
NW 1/16 CORNER SECTION 16
BOUNDARY TIE N 02°44'36" W 91.33'
S 36°22'40" W 155.67'
℄ 50.00' EMERGENCY ACCESS EASE.
S 55°36'53" W 70.20'
N 68°21'30" E 77.11'
ROAD CL
S 35°57'02" E 164.64'
S 17°06'34" E 226.36'
S 03°42'23" W 114.65'
N 1/16 CORNER SECTION 16
1891.83'
S 02°44'36" E 1333.27'
NE 1/16 CORNER SECTION 16
N 02°40'02" W 1006.12'
SPI 4274–297
ROAD CL
ANGULO PARCEL
4379 OR 716
83.55 ACRES
PER R/S 21–41
KUHL PARCEL
4379 OR 734
65.78 ACRES
PER R/S 21–41
CENTER SECTION 16 1337.05'
S 24°06'42" W 402.62'
HWH PARCEL
4379 OR 724
64.84 ACRES
PER R/S 21–41
W 1/16 CORNER SECTION 16
S 04°18'41" E 122.12'
S 10°28'26" W 248.81'
ROAD CL
E 1/16 CORNER SECTION 16
E–W CENTERLINE SECTION 16
E–W CENTERLINE SECTION 16
S 19°44'32" W 229.53'
554.78'
N 02°49'07" W
S 02°51'16" E 676.57'
N 39°28'09" E 152.44'
S 33°58'54" W 294.79'
(65)
S 24°30'16" W 86.44'
(64)
(63)
S 32°57'47" W 388.15'
(62)
S 17°26'37" W 327.11'
N 71°18'01" W 39.29'
BOUNDARY TIE S 19°26'45" W 46.39'
(61)
N–S CENTER LINE SECTION 16
N 23°28'49" E 744.74'
S 02°53'26" E 1352.47'
S 02°48" E 16.11'
USFS
USFS
USFS
Union Valley Reservoir

EXHIBIT B-1

HWH to Angulo

All that real property situated in the County of El Dorado, State of California:

All that portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Estate of Phyllis S. Fox Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Gary B. Williams, executor of the estate of Phyllis S. Fox, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 724 in the office of said Recorder (Fox Parcel) more particularly described as follows:

An Emergency access easement on, over and across a 50.00 foot wide strip of land lying 25.00 feet on each side of the following described centerline:

Beginning at a point on the West boundary of said "Fox Parcel" being the centerline of an existing road, from which the Northwest corner of said "Fox Parcel" bears North 02° 44' 36" West, 91.33 feet; thence along said centerline North 55° 36' 53" East, 83.30 feet; thence North 24° 06' 00" East, 49.99 feet to a point on the North boundary of said "Fox Parcel" and the terminus of said easement, from which the said Northwest corner bears South 89° 06' 33" West, 93.54 feet.

The sidelines of said easement shall be shorten or lengthen to intersect said West boundary and said North boundary.

The Meridian of this description is the same as said Record of Survey filed in Book 21 of Record of Surveys at Page 41

This easement shall be appurtenant to a portion of the tract of land lying within Section 16, Township 12 North, Range 14 East, Mount Diablo Meridian as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 84 acre parcel labeled as the Eleanor Angulo Parcel under item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records. Said Parcel being conveyed to Eleanor Angulo, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 716 in the office of said Recorder.



SIGNING DATE: 2-16-17

EXHIBIT B–2
HWH TO ANGULO
EMERGENCY ACCESS FOR ANGULO PARCEL

BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21–41

2-16-17

LICENSED LAND SURVEYOR
JAMES C. WILLSON
NO. 4663
Exp. 9/30/2018
STATE OF CALIFORNIA

400 0 200 400
1 inch = 400 ft.

61	N 02°46'55" E	78.51'
62	N 19°28'45" E	414.75'
63	N 30°46'28" E	196.15'
64	N 36°31'00" E	168.54'
65	N 23°12'29" E	232.92'

USFS
C–W–NE 1/64 CORNER SECTION 16
BOUNDARY TIE N 89°06'33" E 93.54'
BOUNDARY TIE N 02°44'36" W 91.33'
S 24°06'00" W 49.99'
℄ 50.00' EMERGENCY ACCESS EASE.
S 55°36'53" W 83.30'
NW 1/16 CORNER SECTION 16
N 1/16 CORNER SECTION 16
1891.83'
ROAD CL
NE 1/16 CORNER SECTION 16
S 02°44'36" E 1333.27'
N 02°40'02" W 1008.12'
USFS
ROAD CL
ANGULO PARCEL
4379 OR 716
83.55 ACRES
PER R/S 21–41
CENTER SECTION 16 1337.05'
KUHL PARCEL
4379 OR 734
65.78 ACRES
PER R/S 21–41
HWH PARCEL
4379 OR 724
64.84 ACRES
PER R/S 21–41
W 1/16 CORNER SECTION 16
E 1/16 CORNER SECTION 16
SPI 4274–297
ROAD CL
E–W CENTERLINE SECTION 16
E–W CENTERLINE SECTION 16
554.78' N 02°49'07" W
S 02°51'16" E 676.57'
USFS
USFS
65
64
63
62
61
Union Valley Reservoir
N–S CENTER LINE SECTION 16
N 23°28'49" E 744.74'
S 02°53'28" E 1352.47'
52'49" E
-16.11'

EXHIBIT C-1

Kuhl to HWH

All that real property situated in the State of California, County of El Dorado:

All that portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Ruth S. Kuhl Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Ruth S. Kuhl, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 734 in the office of said Recorder (Kuhl Parcel) more particularly described as follows:

An Emergency access easement on, over and across a 50.00 foot wide strip of land lying 25.00 feet on each side of the following described centerline:

Beginning at a point on the East boundary of said "Kuhl Parcel" being the centerline of an existing road, from which the Northeast corner of said "Kuhl Parcel" bears North 02° 44' 36" West, 91.33 feet; thence along said centerline the following twenty-two courses:

1. **South 55° 36' 53" West, 70.20 feet;**
2. **South 68° 21' 30" West, 77.11 feet;**
3. **South 36° 22' 40" West, 155.67 feet;**
4. **South 35° 57' 02" East, 164.64 feet;**
5. **South 17° 06' 34" East, 226.36 feet;**
6. **South 03° 42' 23" West, 114.65 feet;**
7. **South 24° 06' 42" West, 402.62 feet;**
8. **South 04° 18' 41" East, 122.12 feet;**
9. **South 10° 28' 26" West, 248.81 feet;**
10. **South 19° 44' 32" West, 229.53 feet;**
11. **South 39° 28' 09" West, 152.44 feet;**
12. **South 33° 58' 54" West, 294.79 feet;**
13. **South 24° 30' 16" West, 86.44 feet;**
14. **South 32° 57' 47" West, 388.15 feet;**
15. **South 17° 26' 37" West, 327.11 feet;**
16. **South 05° 03' 36" West, 113.18 feet;**
17. **South 12° 49' 49" East, 139.00 feet;**
18. **South 14° 22' 48" West, 109.42 feet;**
19. **South 07° 02' 27" West, 181.34 feet;**
20. **South 23° 00' 34" East, 253.87 feet;**
21. **South 41° 03' 19" East, 113.42 feet;**

22. South 56° 20' 21" East, 213.61 feet to a point on the Easterly boundary of said "Kuhl Parcel" and the terminus of said easement, from which an angle point in the said Easterly boundary bears South 18° 44' 06" West, 315.71 feet.

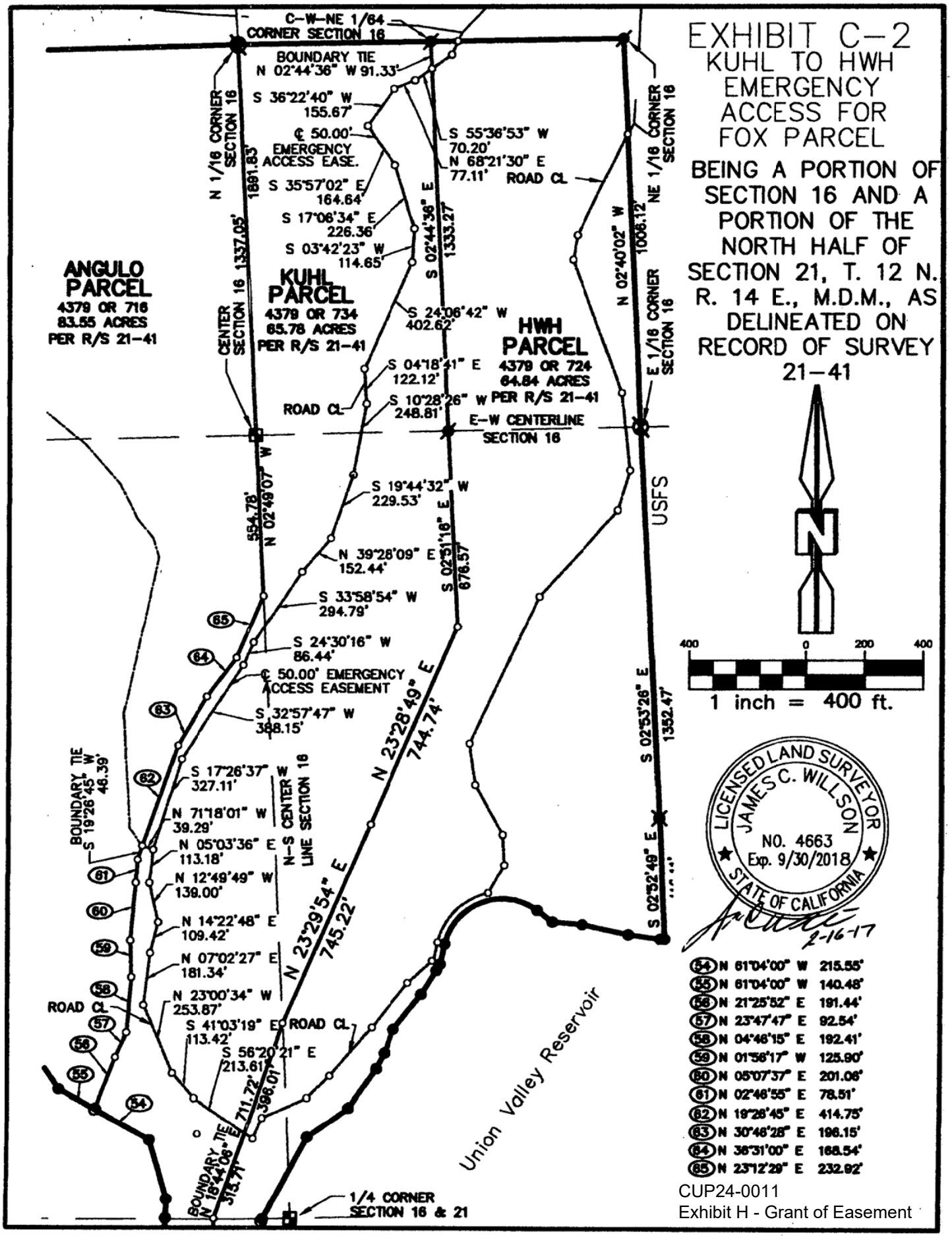
The sidelines of said easement shall be shorten or lengthen to intersect said East boundary.

The Meridian of this description is the same as said Record of Survey filed in Book 21 of Record of Surveys at Page 41

This easement shall be appurtenant to a portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Estate of Phyllis S. Fox Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Gary B. Williams, executor of the estate of Phyllis S. Fox, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 724 in the office of said Recorder.



SIGNING DATE: 2-16-17



CUP24-0011
Exhibit H - Grant of Easement

EXHIBIT D-1

HWH to Kuhl

All that real property situated in the State of California, County of El Dorado:

All that portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Estate of Phyllis S. Fox Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Gary B. Williams, executor of the estate of Phyllis S. Fox, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 724 in the office of said Recorder (Fox Parcel) more particularly described as follows:

Easement 1

An Emergency access easement on, over and across a 50.00 foot wide strip of land lying 25.00 feet on each side of the following described centerline:

Beginning at a point on the East boundary of said "Fox Parcel", being the centerline of an existing road, from which the Northeast corner of said "Fox Parcel" bears North 02° 40' 02" West, 323.38 feet; thence along said centerline the following eleven courses:

1. **South 26° 44' 14" West, 384.75 feet;**
2. **South 10° 11' 57" West, 84.87 feet;**
3. **South 20° 17' 09" East, 490.73 feet;**
4. **South 06° 09' 11" East, 268.12 feet;**
5. **South 16° 59' 21" West, 143.11 feet;**
6. **South 41° 58' 29" West, 402.95 feet;**
7. **South 25° 00' 58" West, 561.36 feet;**
8. **South 07° 53' 40" East, 144.53 feet;**
9. **South 29° 04' 57" East, 196.34 feet;**
10. **South 02° 54' 54" East, 104.19 feet;**
11. **South 29° 35' 24" West, 107.88 feet to a point 25.00 feet distance from and measured perpendicular to the Southerly boundary of said "Fox Parcel";**

Thence leaving said centerline parallel with said Southerly boundary along the arc of a curve 225.12 foot radius curve to the left through a central angle of 65° 00' 27" and subtended by a chord of South 45° 09' 43" West, 241.94 feet; thence continuing parallel with said Southerly boundary South 12° 39' 14" West, 60.11 feet to a point in said centerline; thence along said centerline the following seven courses:

1. **South 47° 51' 53" West, 120.29 feet;**
2. **South 38° 29' 17" West, 196.83 feet;**
3. **South 41° 14' 22" West, 220.99 feet;**
4. **South 45° 19' 09" West, 107.86 feet;**

5. **South 66° 25' 46" West, 166.37 feet;**
6. **South 23° 12' 22" West, 77.02 feet;**
7. **North 56° 20' 21" West, 34.04 feet to a point on the Westerly boundary of said "Fox Parcel" and the terminus of said easement, from which an angle point in the said Westerly boundary bears South 18° 44' 06" West, 315.71 feet.**

The sidelines of said easement shall be shorten or lengthen to intersect said East boundary and Westerly boundary.

Easement 2

A Road easement for the purpose of ingress and egress on, over and across a 50.00 foot wide strip of land lying 25.00 foot on each side of the following described centerline:

Beginning at a point on the West boundary of said "Fox Parcel" being the centerline of an existing road, from which the Northwest corner of said "Fox Parcel" bears North 02° 44' 36" West, 91.33 feet; thence along said centerline North 55° 36' 53" East, 83.30 feet; thence North 24° 06' 00" East, 49.99 feet to a point on the North boundary of said "Fox Parcel" and the terminus of said easement, from which the said Northwest corner bears South 89° 06' 33" West, 93.54 feet.

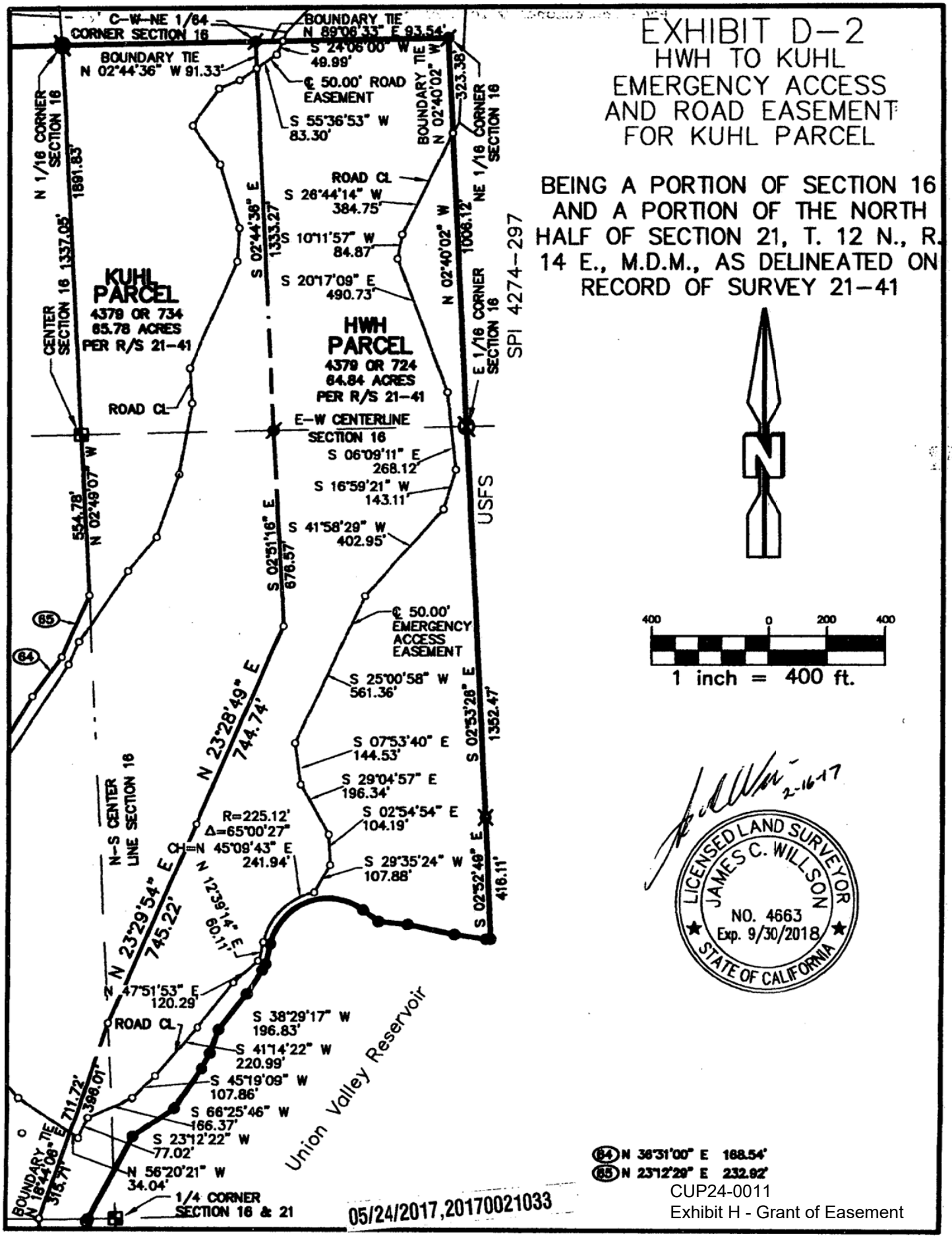
The sidelines of said easement shall be shorten or lengthen to intersect said West boundary and said North boundary.

The Meridian of these descriptions is the same as said Record of Survey filed in Book 21 of Record of Surveys at Page 41

These easement shall be appurtenant to a portion of the tract of land lying within Section 16 and Section 21, Township 12 North, Range 14 East, Mount Diablo Meridian, as delineated on the Record of Survey filed in El Dorado County Recorder's Office in Book 21 of Record of Surveys at page 41; said portion being the approximately 65 acre parcel labeled as the Ruth S. Kuhl Parcel under Item 2 the "Lake Property" as referenced and ordered by the Court Ruling recorded on January 6, 1994 in the El Dorado County Recorder's Office in Book 4288 Page 335, Official Records; said Parcel being conveyed to Ruth S. Kuhl, and described as Union Valley Lake Parcel in the Grant Deed recorded November 21, 1994 in Book 4379 of official records at Page 734 in the office of said Recorder.



SIGNING DATE: 2-16-17



CUP24-0011
Exhibit H - Grant of Easement

Recording requested by
and when recorded mail to

Douglas R. Roeca
Attorney at Law
3062 Cedar Ravine Road
Placerville, CA 95667

10/26/2016,20160051532

Space above this line for recorder's use

R&T 11911 Value Less than $100
Documentary Transfer Tax: $ -0-
Total Consideration: $ -0-

GRANT OF EASEMENT AND AGREEMENT

Grant of Easement and Agreement made this 25th day of October, 2016, by SIERRA PACIFIC INDUSTIRES, a California corporation (hereinafter "Grantor"), to MICHAEL J. KUHL (hereinafter referred to as "Grantee").

1. Grant of Easement and Description: Grantor hereby grants to Grantee an easement for ingress and egress. The easement is fifty (50) feet wide and is described and depicted in Exhibit A attached hereto.

2. Dominant and Servient Tenements. The easements run to the benefit of the property located in El Dorado County, California, hereinafter referred to as the "Dominant Tenement," more particularly described the Union Valley Lake Parcel in that certain deed recorded on November 21, 1994 in Book 4379 at Page 734, in the Office of the County Recorder of the County of El Dorado, State of California.

The easements encumber property located in El Dorado County, California, hereinafter referred to as the "Servient Tenement," more particularly described as follows:

All that real property situated in the County of El Dorado, State of California, described as follows:

The Northwest quarter of the Northeast quarter of Section 16, Township 12 North, Range 14 East, M. D. M.

3. Type of Easement: The easements granted herein are nonexclusive right-of-ways for ingress and egress for all reasonable uses of the Dominant Tenement and is appurtenant thereto.

4. Easement is Nonexclusive: The easements granted herein are not exclusive.

5. Right to Maintain and Improve: The easement granted herein includes incidental rights to maintain, improve, and repair the easement.

6. Limitation to One Parcel: The easement granted herein shall be for the benefit of only one parcel. If there is any subdivision of the Dominant Tenement, the easement granted herein shall not be used to service the additional parcels.

7. Right of First Refusal: Grantor shall have a right of first refusal to purchase the Dominant Tenement on the same terms and conditions as those offered by a third party and accepted by Grantee subject to this right of first refusal. Grantee shall notify Grantor in writing of any such third party offer and the terms thereof and Grantor may exercise its right of first refusal by providing Grantee with written notice of its exercise of such right within thirty (30) days after Grantor's receipt of notice from Grantee of such third party offer. Terms of the purchase will be full payment in cash within thirty (30) days after Grantor delivers such exercise notice. However, if Grantor has declined to exercise its right of first refusal to purchase the Dominant Tenement and the Dominant Tenement is sold by Grantee to a third party, the Grantor's right of first refusal as to the Dominant Tenement is extinguished and cannot again be exercised. In the event of termination, Grantor shall sign a quitclaim deed or other documents as may be necessary referencing the termination of this right of first refusal and Grantee may record such document in the Official Records of the County of El Dorado, State of California.

8. Binding Effect: This instrument shall bind and inure to the benefit of the respective heirs, personal representatives, successors, and assigns of the parties hereto.

IN WITNESS WHEREOF, the Grantor has executed this instrument on the day and year set forth by each signature.

GRANTOR:
SIERRA PACIFIC INDUSTRIES

Dated: 10/12/16

By: _____
M D Emmerson
Its: Chairman and Chief Financial Officer

GRANTEE:

Dated: 10/25/2016

By: _____
MICHAEL KUHL

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Shasta)

On October 12, 2016 before me, Susan E. Witherspoon, Notary Public
(insert name and title of the officer)

personally appeared M. D. Emmerson,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

SUSAN E. WITHERSPOON
COMM. NO. 2089237
NOTARY PUBLIC - CALIFORNIA
SHASTA COUNTY
MY COMMISSION EXPIRES
NOVEMBER 21, 2018

Signature Susan E. Witherspoon (Seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
) ss
County of El Dorado)

On October 25, 2016 before me, Colleen N. Bullock, a notary public, personally appeared Michael J. Kuhl, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Colleen N. Bullock (SEAL)

COLLEEN N. BULLOCK
Commission # 2030379
Notary Public - California
El Dorado County
My Comm. Expires Jun 27, 2017

EXHIBIT A-1

All that real property situated in the County of El Dorado, State of California described as follows:

A portion of the northwest quarter of the northeast quarter of Section 16, Township 12 North, Range 14 East, M. D. M. more particularly described as follows:

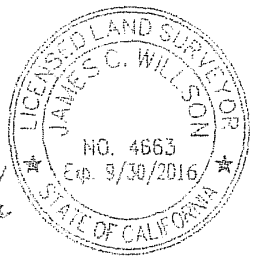
A 50.00 foot wide non-exclusive road easement for ingress and egress being 25.00 feet on each side of the centerline of an existing road; the approximate location of said road is described as follows:

Beginning at the intersection of the south line of said northwest quarter of the northeast quarter as shown on that certain Record of Survey filed in Book 21 of Record of Surveys at Page 41 in the El Dorado County Recorder's Office, and the centerline of an existing road, from which the northwest corner of the east half of the southwest quarter of the northeast quarter of said Section 16 bears South 89° 06'' 33" West, 93.61 feet; thence along the said centerline North 24° 06' 00" East, 32.19 feet to the centerline of the U. S. Forest Service road designated as "12N30"; thence along the centerline of the said U. S. Forest Service road North 44° 37'59" East, 300.62 feet; thence continuing along said road North 16° 33' 45" East, 107.06 feet more or less to the centerline of that certain road right of way described in the document from Michigan-California Lumber Company to R. S. Swift and Sarah E. Swift, recorded June 9, 1960 at Book 511 of Official Records at Page 122, in the El Dorado County Recorder's Office, and the terminus of said easement.

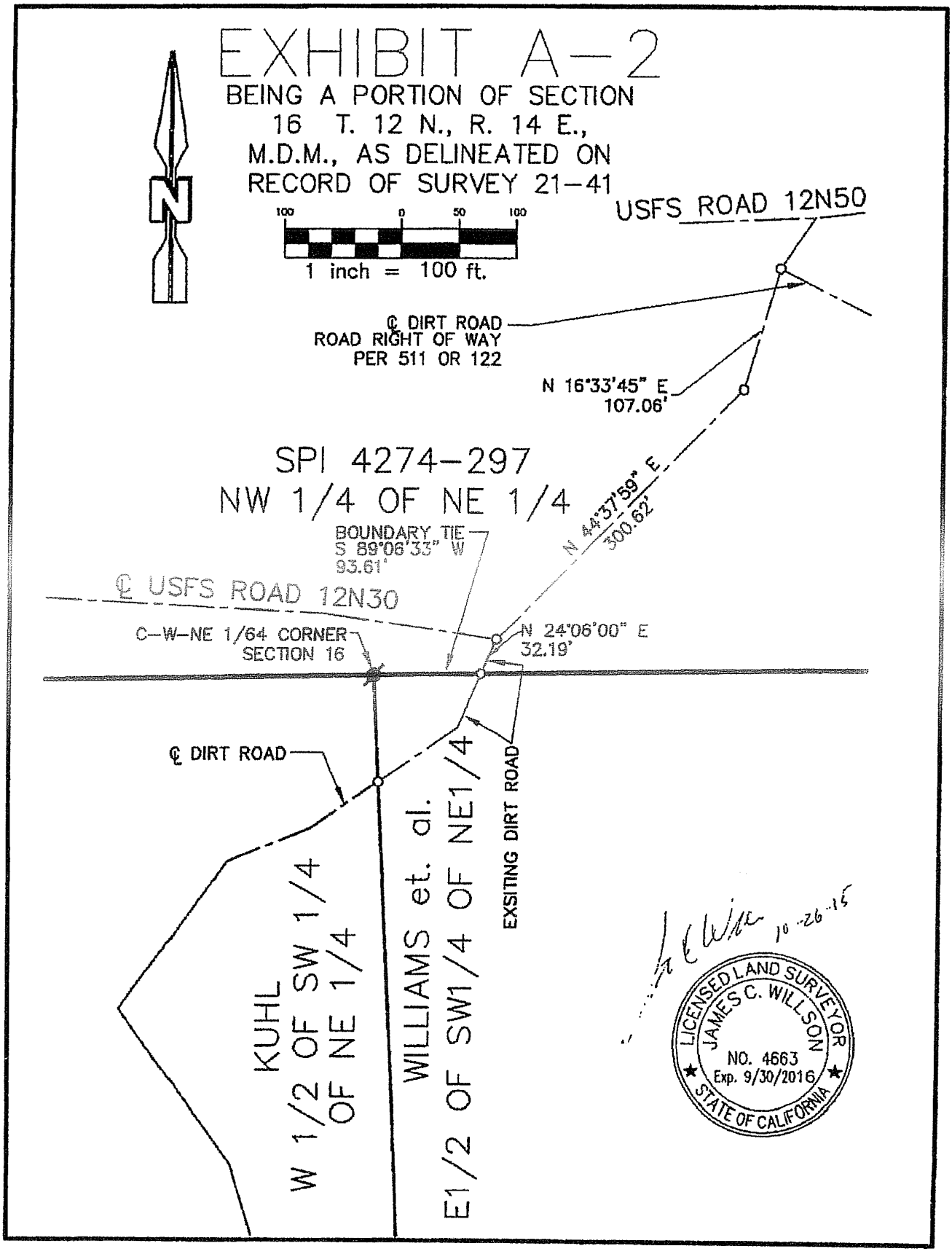
The side lines of said easement shall be shortened or lengthened as to intersect the said south line of the north half of the northeast quarter.

The basis of bearings of this description is the same as that of said Record of Survey filed in Book 21 of Record of Surveys at page 41.

This easement shall be appurtenant to that certain parcel of land designated as "UNION VALLEY LAKE PARCEL" In that certain Grant Deed recorded November 21, 1994 in Book 4379 of Official Record at Page 734, in the El Dorado County Recorder's Office.



SIGNING DATE: 7-25-2016


EXHIBIT A-2
BEING A PORTION OF SECTION 16 T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41
N
100 0 50 100
1 inch = 100 ft.
USFS ROAD 12N50
℄ DIRT ROAD
ROAD RIGHT OF WAY
PER 511 OR 122
N 16°33'45" E
107.06'
SPI 4274-297
NW 1/4 OF NE 1/4
N 44°37'59" E
300.62'
BOUNDARY TIE
S 89°06'33" W
93.61'
℄ USFS ROAD 12N30
C-W-NE 1/64 CORNER
SECTION 16
N 24°06'00" E
32.19'
℄ DIRT ROAD
EXSITING DIRT ROAD
KUHL
W 1/2 OF SW 1/4
OF NE 1/4
WILLIAMS et. al.
E1/2 OF SW1/4 OF NE1/4
10-26-15
LICENSED LAND SURVEYOR
JAMES C. WILLSON
NO. 4663
Exp. 9/30/2016
STATE OF CALIFORNIA

COUNTY OF EL DORADO

AGRICULTURAL COMMISSION

311 Fair Lane
Placerville CA 95667

(530) 621-5520 (530) 626-4756 FAX
eldcag@edcgov.us

Greg Boeger, Chair – Agricultural Processing Industry
Dave Bolster, Vice-chair – Fruit and Nut Farming Industry
Shamarie Tong – Livestock Industry
Bill Draper – Forestry/Related Industries
Tim Neilsen – Livestock Industry
Lloyd Walker – Other Agricultural Interests
Charles Mansfield – Fruit and Nut Farming Industry

MEMORANDUM

DATE: June 12, 2025

TO: Development Services/Planning

FROM: Greg Boeger, Chair

SUBJECT: Revised Request for Review - Conditional Use Permit CUP24-0011 Kuhl SFD on Property Zoned Timber Production Zone (TPZ)

Assessor's Parcel Numbers (APNs) 011-030-055 and 011-030-058

During the Agricultural Commission's regularly scheduled in person and ZOOM meeting held on June 11, 2025, an application was reviewed for a Conditional Use Permit CUP24-0011 Kuhl SFD on Property Zoned Timber Production Zone. The request was for a Conditional Use Permit to allow a 3,300 square foot, single-unit residence on property zoned Timber Production Zone (TPZ

The subject parcels, APNs 011-030-055 (20.2-acres) and 011-030-058 (45.58-acres) (legal parcels, Admin by tax rate) totaling 65.78-acres, located on the south side of Wolf Creek Road, approximately five (5) miles east of the intersection with Ice House Road in the Pollock Pines area of El Dorado County, Supervisor District 4, zoned Timber Production Zone (TPZ), with a General Plan land use designation of Natural Resources (NR), and not located within an Agricultural District.

Parcel Description:

- Parcel Number and Acreage: 011-030-055 and 011-030-058, totalling 65.78 acres
- Agricultural District: No
- Land Use Designation: NR, Natural Resources
- Zoning: TPZ, Timber Production Zone
- Choice Soils:

A site visit was conducted on February 21, 2025 to review consistency with pertinent ordinances and General Plan policies. Agricultural Commissioner, Bill Draper, representing the timber industry was present at the site visit.

General Plan Policies:

Policy 8.3.1.1

Lands suitable for timber production which are designated Natural Resource (NR) on the General Plan land use map and zoned Timber Production Zone (TPZ) or Forest

Resource (FR) are to be maintained for the purposes of protecting and encouraging the production of timber and associated activities.

Policy 8.4.2.1

The County Agricultural Commission shall evaluate all discretionary development applications involving identified timber production lands which are designated Natural Resource or lands zoned Timberland Production Zone (TPZ) or lands adjacent to the same and shall make recommendations to the approving authority. Prior to granting an approval, the approving authority shall make the following findings: Agriculture and Forestry Element El Dorado County General Plan Page 180 (Amended December 2015) July 2004

A. The proposed use will not be detrimental to that parcel or to adjacent parcels for long-term forest resource production value or conflict with forest resource production in that general area;

B. The proposed use will not intensify existing conflicts or add new conflicts between adjacent proposed uses and timber production and harvesting activities;

C. The proposed use will not create an island effect wherein timber production lands located between the project site and other non-timber production lands are negatively affected;

D. The proposed use will not hinder timber production and harvesting access to water and public roads or otherwise conflict with the continuation or development of timber production harvesting; and

E. The proposed use will not significantly reduce or destroy the buffering effect of existing large parcel sizes adjacent to timber production lands

Policy 8.4.1.2

A permanent setback of at least 200 feet shall be provided on parcels located adjacent to lands identified as timber production lands designated Natural Resource and/or lands zoned Timberland Production Zone (TPZ). These setback areas shall be included in the zoning ordinance and shall be delineated on newly recorded parcel or subdivision maps. The Agricultural Commission may recommend a lesser setback to a minimum of 100 feet. Projects located within a Community Region or Rural Center planning concept area shall maintain a minimum setback of 50 feet. The 50-foot setback shall only apply to incompatible uses including residential structures. All setbacks are measured from the property line.

Zoning Ordinance:

EXPAND

LA: Limited Agricultural PA: Planned Agricultural AG: Agricultural Grazing RL: Rural Lands FR: Forest Resource TPZ: Timber Production Zone	P A TUP CUP MUP TMA —	Allowed use Administrative permit required (130.52.010) Temporary use permit required (130.52.060) Conditional use permit required(130.52.021) Minor use permit required (130.52.020) Temporary mobile home permit (130.52.050) Use not allowed in zone					
USE TYPE	LA	PA	AG	RL	FR	TPZ	Specific Use Reg.

Dwelling: Single-unit, Detached	P	P	P	P	P	CUP	130.40.350
Temporary During Construction	P	P	P	P	P	TUP	130.40.190
Employee Housing: Agricultural 6 or Fewer Employees	P	P	P	P	P	—	130.40.120
Agricultural up to 36 Beds or 12 Units in Compliance with Standards	MUP	MUP	MUP	MUP	MUP	—	130.40.120
Agricultural Not in Compliance with Standards	CUP	CUP	CUP	CUP	CUP	—	130.40.120
Construction	—	—	TUP	TUP	TUP	—	130.40.190
Seasonal Worker	—	—	A	A	A	—	130.40.120
Seasonal Workers Not in Compliance with Standards	—	—	CUP	CUP	CUP	—	130.40.120
Guest House	P	P	P	P	P	—	130.40.150
Temporary Mobile Home	TMA	TMA	TMA	TMA	TMA	—	130.40.190
Kennel, Private [2]	P	P	P	P	P	—	
Room Rental: One Bedroom, Only	P	P	P	P	P	—	
Accessory Dwelling Unit	P	P	P	P	P	CUP [6]	130.40.060, 130.40.300

Sec. 130.40.350 - Timber Production Zone: Criteria, Regulations, and Zone Change Requirements.

G.

Required Findings to Support Residential, Recreational and Other Non-Timber Uses. Certain uses within the TPZ may be compatible with growing and harvesting timber in certain circumstances, and may be allowed by Conditional Use Permit. When approving a Conditional Use Permit, as allowed in Table 130.21.020 (Agriculture, Rural Lands and Resource Zone Districts Use Matrix) in Article 2 (Zones, Allowed Uses, and Zoning Standards) of this Title, for compatible, non-timber related uses, the review authority shall consider the recommendations of the Ag Commission and shall make the following findings:

1. The proposed use is compatible with and will not detract from the land's ability to produce timber;
2. Fire protection and public safety concerns have been adequately met, including the ability to provide adequate public access, emergency ingress and egress, and sufficient water supply and sewage disposal facilities;
3. The proposed use will not adversely impact the area's watershed, wildlife, and other natural resources.

Discussion:

The residential structure construction project on this site involves building a proposed residential structure, septic area, fire hydrant, a turnout, and solar arrays. A site visit was conducted on February 21, 2025 to review consistency with pertinent County Ordinances and General Plan policies. Agricultural Commissioner, Bill Draper, representing the timber industry was present at the site visit. Commissioner Draper is also a Registered Professional Forester.

Mr. Kuhl is in a forest management plan with 2 other parcels. Mr. Kuhl's parcel and the adjacent parcels in the management plan were all walked and visually inspected to

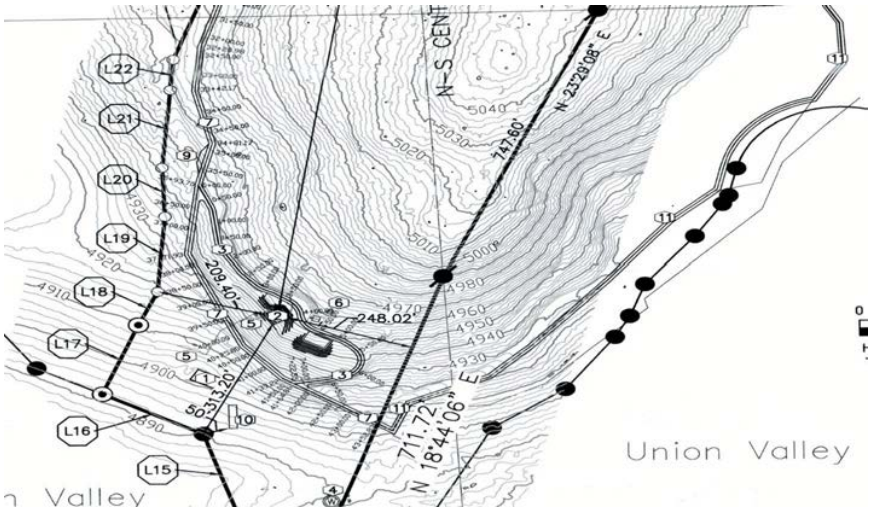
ascertain their adherence to the Forest Management Plan. It appeared at the time of the site visit that Mr. Kuhl is managing his property in accordance with the Forest Management Plan.

- With regards to **General Plan Policy 8.4.2.1** –

  Mr. Kuhl has submitted a memo from Fred Buhlert, Registered Professional Forester that states in which he certifies that this project is in compliance with General Plan Policy 8.4.2.1.

- With regards to **General Plan Policy 8.4.1.2**

  Setback requirements are being met with the minimum proposed setback at 209.40 ft.



- With regards to **Zoning Ordinance Sec. 130.40.350, G.1**

  Mr. Kuhl has submitted a memo from Fred Buhlert, Registered Professional Forester stating that the proposed project will not detract from the land's ability to produce timber.

Commissioner Draper submitted a public record and read into the record.

Chair Boeger brought the item back to the Commission for discussion. Aaron Mount from Planning Department clarified questions of the Commission. The applicant's legal representative addressed questions of the Commission. The applicant addressed the Commission explaining some of the locations of structure and total square footage of the project. Danny Vandekoolwyk, Deputy

County Counsel gave guidance on the issues before the Commissioners. There were no public comments in the Board Room or on Zoom. Chair Boeger asked for questions or a motion. This was a two-phase motion due to the different elements of the request. For a complete video of this item # 25-0907 discussion please go to the El Dorado County Website at: County of El Dorado - Calendar (legistar.com)

Phase I:
It was moved by Commissioner Draper and seconded by Commissioner Tong to recommend to the Planning Commission denial of the Conditional Use Permit CUP24-0011, due to the findings in the General Plan Policy 8.4.2.1, Part A as the proposed use will be detrimental to the parcel or to adjacent parcels for the long-term forest resource production value or conflict with forest resource production in that general area.

Motion passed:
AYES: Tong, Walker, Draper, Boeger
NOES: Mansfield, Bolster
Absent: Neilsen

Phase II:
It was moved by Commissioner Mansfield and seconded by Commissioner Bolster to recommend that the findings in the Zoning Ordinance,* Sec. 130.40.350 Timber Production Zone, G-*1 stating the proposed use is compatible with and will not detract from the land's ability to produce timber; are met.

Motion passed:
AYES: Bolster, Mansfield, Walker, Draper, Boeger
NOES: Tong
Absent: Neilsen

Robert W. Allen, Forester

6221 Sly Park Road
Placerville, CA 95667
USA

Phone 530 644-4838
Fax 530 644-4838

Forest Management Plan for Angulo, Kuhl and Fox Property

The following is a forest management plan for a portion of Section 16 and a small portion of Section 21 T12N R14E MDM. The El Dorado county assessor's Parcel Numbers are 011-030-45 and 46. This 214.17 acre ownership is located on the west slope of the Sierra Nevada, approximately 24 air miles northeast of Placerville, CA. Topographic map coverage is provided by the Robbs Peak, Calif. 7.5' Quadrangle. The elevation of the property ranges from approximately 4,880 feet to 5,080 feet. Soils in the area are mostly Pilliken coarse sandy loam with areas of Aquepts and Umbrepts. Pilliken soils are deep and well drained, formed from material weathered from granitic rock. This soil is moderate to high site quality. This soil is used mainly for timber production and also for summer range. The Aquepts and Umbrepts are very poor to poorly drained soils that formed in alluvial material located on broad valley flats and along drainages and the periphery of these areas. The Sedge-Rush series typically occurs on these soils, along with willows, alders and other riparian vegetation. These areas are well suited for intensive use as summer range. The property is located in the Union Valley Reservoir Watershed, Calwater ID v2.2 #5514.340301. There are two main watercourses that are tributaries to Union Valley reservoir. These watercourses are unnamed on the Robbs Peak 7.5' Quadrangle Map. The watercourse flowing through the Angulo parcel is named Jack's Creek by the family since it flows through Jack's Meadow and the watercourse flowing through the Fox and Kuhl parcel called Timothy Creek since it flows through Timothy Meadow.

Ownership History: Rufus and Sarah Swift purchased the full ranch on 1/7/1941. That interest passed to their heirs in an 11/21/1994 grant deed. The Angulo Dynasty Trust received their interest on 12/27/1995. The Phyllis Swift Fox Family Revocable Trust received theirs on 6/13/1995. Michael Kuhl received a 1/3 interest on 12/28/1994, and a 2/3 interest on 2/22/2005.

Timberland Preserve Zone (TPZ) Chapter 17.44.070 (Prior Code 9432) requires a plan for forest management to include a discussion and recommendations on at least the following items:

1. Commercial harvesting, a history of past operations and recommendations for the future.

The property being discussed in this report and the surrounding property has a long history of timber harvesting as well as homesteading and ranching dating back to the 1800's. The majority of the land in the immediate vicinity of the subject property is currently managed for timber production by Sierra Pacific Industries and the U.S. Forest Service for multiple use as well as smaller parcels which have been harvested for timber under approved Timber Harvest Plans approved by the California Department of Forestry and Fire Protection. Land owned and managed for timber production by Sierra Pacific Industries was once owned and managed by

Michigan-California Lumber Company from the late 1800's to the mid 1990's. Michigan-Cal exercised their timber rights on subject property in 1958. Family members remember Rufus and Sarah Swift harvesting more timber, sometime during the 1960s, but remember no details. The most recent timber harvests were in 1994 on the Fox portion and extending through 1997 for the Kuhl and Angulo portion. The Fox portion was harvested under THP #4-94-56 and the Kuhl/Angulo portion under THP #4-94-107/ELD-45. There has been no harvesting since then. A salvage operation was considered in 2008, when the bottom dropped out of the log market. Of the 214 acres, approximately 47 acres are in meadow/grassland. The remaining land is mixed conifer, site class I and II, with White Fir the predominate species. Current growth is estimated to be 600 to 800 bd. ft./acre/yr. This could potentially be improved to 1,000 to 1,200 bd. ft./acre/yr following a series of growth improvement harvest and achieving fully stocked stands.

Recommendations: Until an economically feasible log market returns, it is recommended that the landowners work with a portable sawmill owner-operator to salvage dead and dying trees before they become unmerchantable and either a safety hazard or become large fuel material. The rough lumber can be marketed through the internet or classified ads.
When the market rebounds, a commercial timber harvest including removal of recently dead, dying and diseased trees should be done every 20 to 25 years on the property. It should also include a light selection harvest of green trees of all ages, sizes and species to create a multiple aged stand consisting of mixture of species which can maximize the growth potential on the property. The residual trees in the mixed conifer stand should be left at 15 to 25 foot spacing depending on the age and size. Older snags that do not pose a safety hazard to the landowners or the improvements should be left for wildlife purposes, as they provide habitat for birds and cavity nesting animals. Intermediate harvests to remove dead dying or diseased trees should be done as needed.
The elevation of the property is ideal for white firs which can be grown and sold for Christmas trees. Existing White Fir thickets can be thinned and pruned with Christmas tree sales in mind. Fast growing well spaced trees can be retained for future timber crop trees where managing for Christmas trees.
The meadow/grasslands should not be planted to trees as they provide habitat for a diversity of wildlife species and acts as a filter buffer for water runoff retaining a high level of water quality. Small conifer trees encroaching on the meadows/grassland areas can be removed by weed eating or hand pulling. Advanced regeneration can be cut and piled for wildlife habitat.

2. Provisions for legal and physical access to the property so commercial operations can be carried out.

Physical access to the property is east from Placerville on Highway 50 to Ice House road, a surfaced county/SMUD/USFS maintained road. Ice House Road is approximately 8.4 miles east of the Sly Park Road exit at Pollock Pines. The route continues northeast up Ice House Road approximately 19 miles to Union Valley Road, formerly known as Wolfe Creek Road. Union Valley Road is a co-op road between Sierra Pacific Industries and the U.S. Forest Service heading in a westerly direction that is surfaced for approximately 0.7 miles, then rock and native surface road for approximately 1.4 miles. The route continues on road 12N30 approximately 0.2 miles to the northeast corner of the Kuhl property or on an unnamed road approximately 0.3 miles to the northeast corner of the Fox property.

Commercial use of Union Valley Road and the short spur roads require a road use permit from the U.S. Forest Service. The application for the permit should be submitted to the Pacific Ranger District of the El Dorado National Forest for their review and recommendations before it is passed along to the El Dorado National Forest Supervisors Office.

3. A reasonable attempt to locate the boundaries of the property and attempts to protect his property against trespass.

Landowner Michael Kuhl and RPF have located all survey monuments required to run boundary lines. The most recent check of the survey monuments surrounding the property was done in the fall of 2008. The boundary lines of the property have been identified at one time or another for previous harvest operations, including interior lines separating the three proposed parcels. The portion of the property boarding U.S. Forest Service managed land has been blazed with the blaze marks painted red, excluding the 200 foot strip of U.S. Forest Service managed land between the high water mark for Union Valley Reservoir and subject property. The survey corners that delineate the 200 foot buffer strip for Union Valley Reservoir have been flagged and are generally close enough to be seen from one to the next. The landowners have attempted to hide these survey monuments to prevent vandalism from lake users.

The two access roads are gated with fences extending to the sides to reduce access to Off Road Vehicles. U.S. Forest Service padlocks are used in addition to private locks in case emergency access is required. There are fences on three portions of the property. The oldest is the fence along two points of the northern edge of the Fox parcel. Next is a fence along much of the western most edge of the Angulo parcel. And then there is the fence started this summer along the western edge of the Angulo and Kuhl boundary of the lower meadow.

Besides the gates and fences that block illegal access to the property by vehicles, frequent visits to the property by the landowners and selected guests attempt to protect the property against trespass.

Private Property and No Trespassing signs have been posted near the gates. It is recommended to provide more signage to inform the public that this is private property. The use of signs is allowed for under chapter 17.44.030 J and K.

4. Disease and insect control work.

The property was surveyed for possible insect or disease problems during the summers of 2008 and 2009. No serious outbreaks were observed but some mortality was observed mostly in the White fir component. Bark beetles have killed some trees in the stand. To minimize the potential for tree loss, diseased trees and the weakest trees should be removed during timber harvest operations, and adequate tree spacing will minimize the competition for light, water and nutrients. There is a small amount of dwarf mistletoe in some of the pines and firs on the property. It does not occur in large enough concentrations to cause major problems but should be removed from the stand to minimize its spread during commercial timber harvest operations. An attempt to harvest the mortality was made in 2008, but the cost of road maintenance and logging costs prevented harvesting because of the lack of markets for the logs. The use of a portable sawmill to process this material is being considered if a market can be found for the lumber.

5. Thinning, slash disposal, pruning and other appropriate silvicultural work.

Thinning: Periodic thinning of seedling and sapling size trees should be done to promote the most rapid growth on the healthiest trees. Larger trees will be thinned during the commercial harvest, and future thinning should be timed with commercial harvest in order to get an economical return on those trees large enough to be merchantable.

Slash disposal: In areas of recreational use by the landowners and guests and near roads, slash and forest debris can be unsightly, hazardous and be a fire hazard. Annual maintenance will prevent the buildup of forest debris in high use areas. Any future THPs should include provisions for slash treatment. Logging slash can be piled and burned or physically moved to areas away from high use areas and used for erosion control. Logging slash spread out on skid trails or other areas of exposed soil can reduce erosion by reducing raindrop impact on granitic soils and by catching sediment that may be transported across the soil surface.

Pruning: Pruning for log quality is not appropriate for this timber stand and with the current economy would not be justified. Pruning is appropriate in the high use areas and along roads to improve aesthesis and to create a break in forest fuels for fire hazard reduction.

6. A fire protection plan including a fuels management program.

Purpose: to reduce the potential of wildfires starting on the property and to slow the rate of spread in case of a wildfire.

To reduce the potential of a wildfire, the landowners shall comply with all California Department of Forestry and Fire Protection and U.S. Forest Service fire rules and regulations and implement a fuels management plan. A fuels management plan to reduce fuels will also assist fire suppression efforts by slowing the rate of spread of a wildfire. Establishing a fire reporting system will also assist local fire authorities by improving reaction time.

Forest fuels management:

Ground fuels consist of natural limb pruning and needle cast, trees dying and falling over, logging slash and ground cover vegetation and brush. Ground fuels should be treated within 100 feet of roads and 150 feet of high use areas. Treatment could include removal, pile and burn or chip and scatter. During timber harvest operations, trees should be felled away from roads and high use areas. Logging slash should be removed from all areas within 100 feet of the edge of roads and 150 feet from high use areas and structures. This slash can be piled and burned or moved to areas away from the roads and high use areas. Treatment of logging slash should be discussed in harvest documents as part of hazard reduction.

Ladder fuels are smaller trees and lower dead and live limbs on larger trees which can provide a ladder for fire to climb from the ground to the crowns of trees. Ladder fuels can be reduced by limbing up the larger trees for 10 feet above the ground, but no more than 50% of the live crown for trees less than 20 feet in height. Small trees growing in the understory should be thinned so the spacing is such that the crowns do not touch and also leaving room for the residual tree crowns to grow without touching for a period of 5 to 10 years.

Crown fuels are the canopies of trees which can carry a fire in high winds and low moisture conditions. It usually occurs where there is a continuous layer of limbs and needles in interlocking tree crowns. Prevention of crown fires can be done by spacing out the larger trees so there is a minimum of 15 feet between crowns and removal of ladder fuels. The spacing of larger trees should be done by the RPF while marking harvest trees in preparation of a commercial logging operation.

Fuel breaks are gaps in the forest fuels where a fire can be stopped. The dirt roads and high use areas within the property that have been treated for fuel reduction as discussed above and the wet meadows provide adequate fuel breaks for this property.
Water sources for firefighting: The closest source for large trucks is a constructed water hole used for dust abatement during commercial harvesting operations. This water hole is located along Union Valley Road approximately 1.5 miles from the north side of the property. When Union Valley Reservoir is full, water trucks could draft from the reservoir in emergency situations. Union Valley Reservoir would also be the source of water for helicopter equipped with buckets. Water from the watercourse flowing along the eastern portion of the property has been diverted by a man made ditch to provide domestic water to all three parcels. This ditch feeds two 600 gallon water tanks on the Fox parcel and a 525 gallon water tank on the Kuhl parcel located near the high use areas. A 2,500 gallon water tank is planned to be functioning sometime during the summer of 2010 for the Kuhl parcel.
A water system has been developed at the high use areas and can be used for initial response to small fires. Fire reporting system: With the popularity of cell phones and the increase of coverage in remote areas, emergency phone numbers should be posted at the high use areas and on any structures. Guest visiting the property should be made aware of these numbers when first arriving.
Emergency vehicle access: U.S. Forest Service padlocks should remain on all gates providing access to the property. All roads within the property shall remain open and wide enough for fire trucks with occasional wide areas for turning around.

7. Erosion control on existing roads and skid trails and maintenance of existing roads.

Union Valley Road and the short spur roads from Union Valley Road to the property are under the control of the U.S. Forest Service.
The native surface roads within the property are located on flat or gentle slopes and had erosion control structures constructed following the most recent harvest. Landowners should conduct periodic inspections and maintain and repair any damage to the existing erosion control structures on the roads to insure proper drainage by cleaning out the throats of all water bars and drainage areas and make sure runoff is onto non erodible material or into native vegetation for filtration before entering a watercourse. Skid trails were water barred according to the Timber Harvest Plan specifications and Forest Practice Regulations following the last harvest and the trails have stabilized since then with native vegetation and forest litter.
Requirements for erosion control on skid trails and roads following future timber harvests will be specified in the harvest documents. Following the Forest Practice Regulations for any future timber harvest swill reduce to insignificant any impacts to soil or sediment movement.
Existing road crossings of watercourses have permanent culverts in place. These culverts have withstood 100+ year storm events. These culverts should be inspected and maintained to function properly each spring and fall and following any major storm event during the summer.
If equipment is used on the property in projects not related to timber harvesting, they should not be operated within 25 feet of seasonal watercourses, within the wet meadow area or within 75 feet of the class I watercourses. Where watercourses are crossed by equipment, and there is a potential for soil to be washed into the watercourses, exposed soils should be protected from erosion by spreading clean straw or forest litter on the soil surface to a depth of two inches.

8. Planting of a significant portion of the under stocked areas of the land.

The under stocked portions of this property are meadows and grassland and should be managed to remain meadows and grassland.

The timbered portion of the property is adequately stocked with mixed conifers. Small opening created by natural events or by harvesting insect and disease trees will fill in by local seed fall. Logging operations usually expose soft soils which create good seed beds for natural regeneration.

9. Structures

There is currently one structure on the Kuhl parcel. Chapter 17.44.050 allows for one owner or caretaker occupied single-family detached dwelling or a mobile home on an approved foundation. It is recommended that out buildings be constructed on the three parcels for the storage of equipment necessary for the management of the property as well as fire fighting tools and equipment.

Maps:

Exhibit A: Ownership map with roads prepared by James Nicklos, April 1994
Timber Type Map prepared by James Nicklos, March 1991
Aerial Photograph, July 1986

Management plan prepared by: **Robert W. Allen, RPF #2108**
December 2, 2009

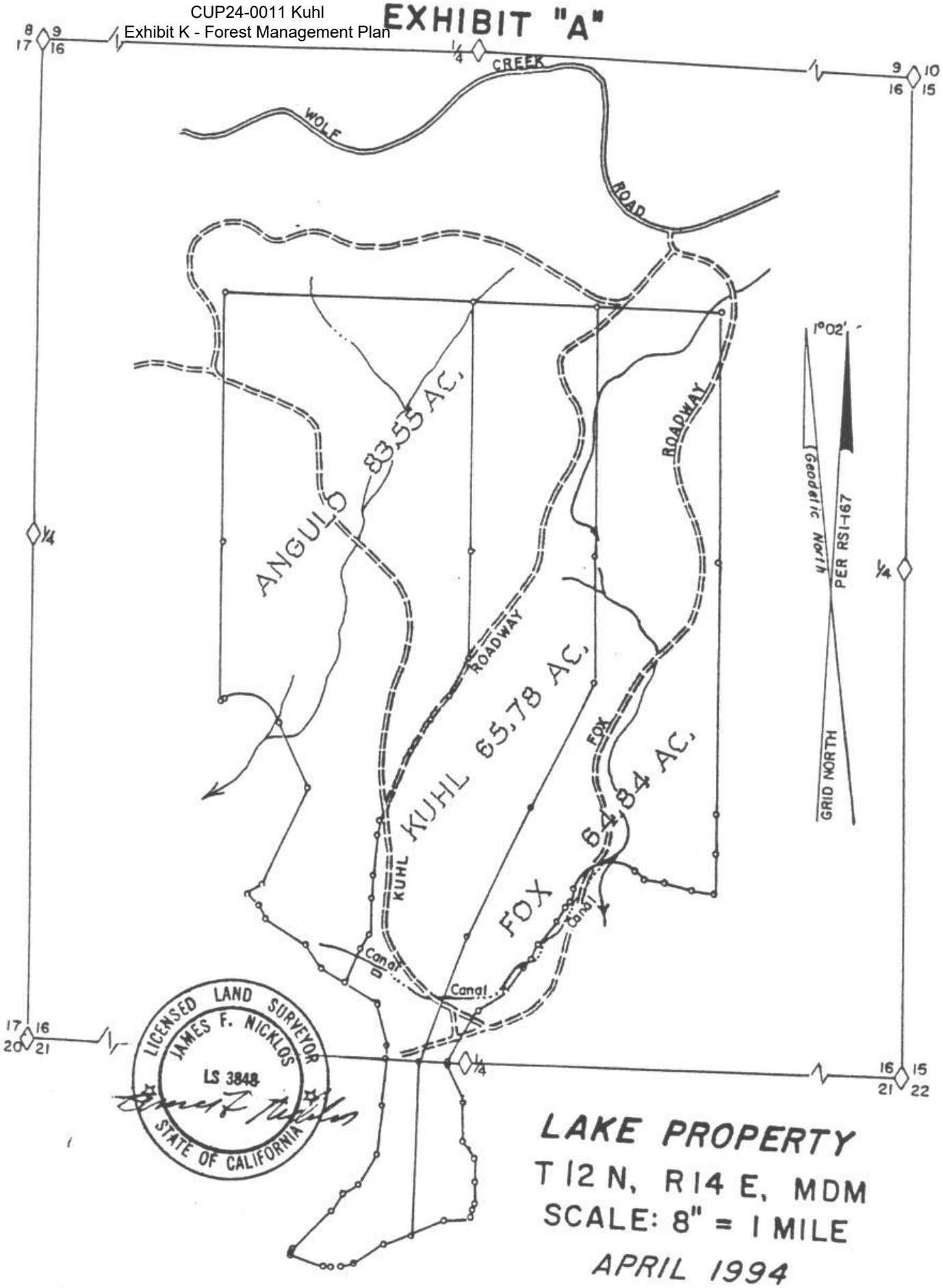
I have read and agree with the above Forest Management Plan

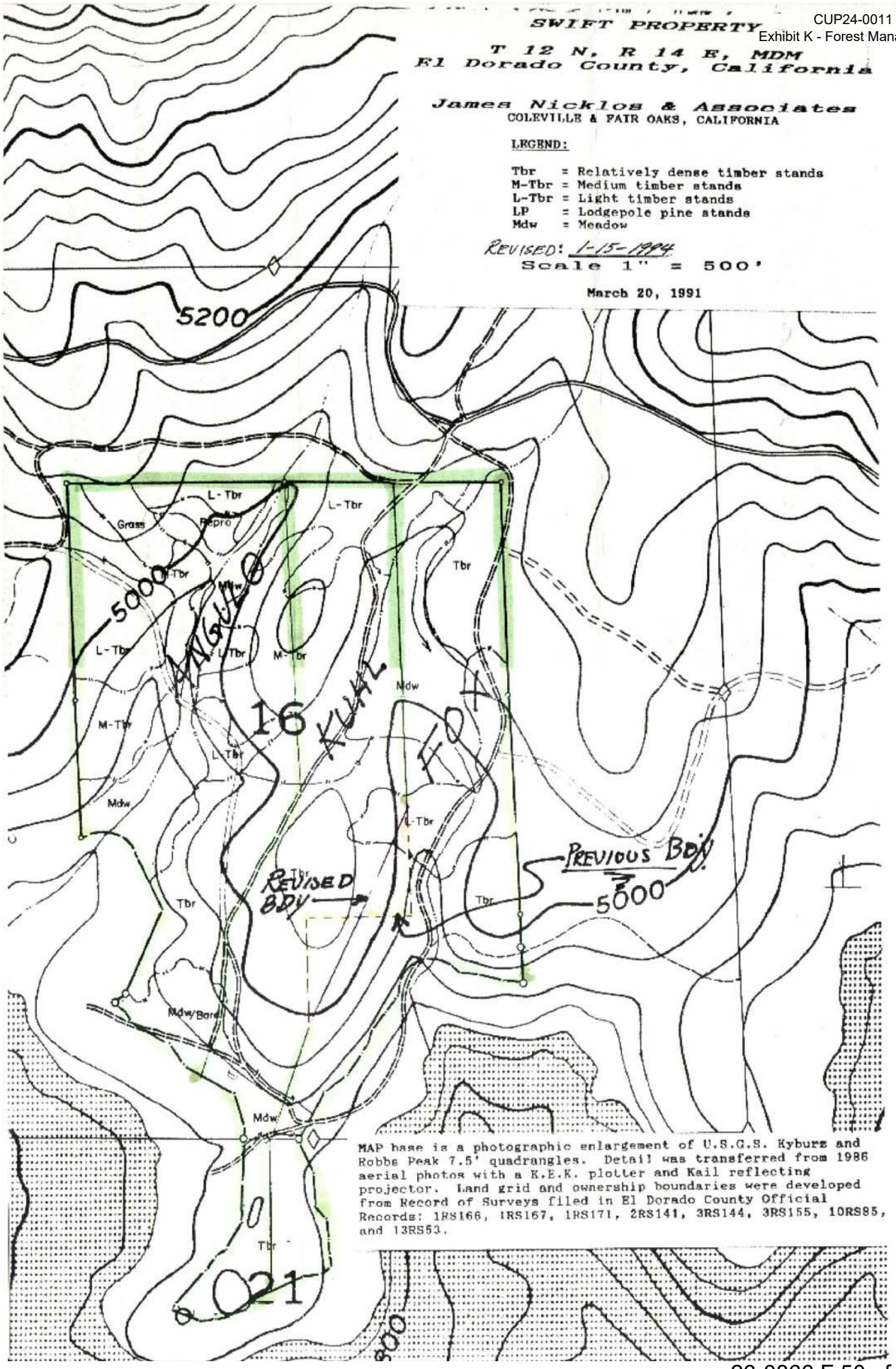
Penny Hocking

Penny Hocking

Michael J. Kuhl

Tony Angulo


EXHIBIT "A"
WOLF CREEK ROAD
ANGULO 83.55 AC.
KUHL 65.78 AC.
FOX 64.84 AC.
ROADWAY
ROADWAY
KUHL
FOX
Canal
Canal
Canal
1°02'
GEODETIC NORTH
PER RSI-167
GRID NORTH
LICENSED LAND SURVEYOR
JAMES F. NICKLOS
LS 3848
STATE OF CALIFORNIA
LAKE PROPERTY
T 12 N, R 14 E, MDM
SCALE: 8" = 1 MILE
APRIL 1994


SWIFT PROPERTY
T 12 N, R 14 E, MDM
El Dorado County, California
James Nicklos & Associates
COLEVILLE & FAIR OAKS, CALIFORNIA
LEGEND:
Tbr = Relatively dense timber stands
M-Tbr = Medium timber stands
L-Tbr = Light timber stands
LP = Lodgepole pine stands
Mdw = Meadow
REVISED: 1-15-1994
Scale 1" = 500'
March 20, 1991
5200
5000
L-Tbr
Grass
Repro
Tbr
Mdw
M-Tbr
16 KUHL FOA
REVISED BDY
PREVIOUS BDY
Mdw/Bare
021
MAP base is a photographic enlargement of U.S.G.S. Kyburz and Robbs Peak 7.5' quadrangles. Detail was transferred from 1986 aerial photos with a K.E.K. plotter and Kail reflecting projector. Land grid and ownership boundaries were developed from Record of Surveys filed in El Dorado County Official Records: 1RS166, 1RS167, 1RS171, 2RS141, 3RS144, 3RS155, 10RS85, and 13RS53.


7-3-86
USDA-F 12 615030
686- 62

Fred Buhlert
Registered Professional Forester #2536
1680 Quarry Road
Placerville CA 95667
530-409-9149

May 16, 2025

RE: Conditional Use Permit #24-0011 Kuhl ~ Parcel #011-030-055 & #011-030-058

To Whom It May Concern:

In 2012, myself and an associate prepared the Timber Harvest Plan #4-12-020-ELD on the parcels referenced above where the Conditional Use Permit #24-011-Kuhl is proposed. I was involved in and had direct oversight of the logging of these parcels in 2014 and 2017. Due to these timber harvests, I am very familiar with this timberland and can definitely certify that the proposed project complies with the EDC General Plan 8.4.2.1 (A.) "The proposed use will not be detrimental to that parcel or to adjacent parcels for long-term forest resource production value or conflict with forest resource production in that general area." The proposed project is also compatible with the El Dorado County Zoning Ordinance Sec. 130.40.350 Timber Production Zone, and will not detract from this land's ability to produce timber.

I have continued to do annual inspections of this timberland to assess the health of the timber stand, and I have maintained contact with the landowner, Michael Kuhl.

Fred Buhlert
RPF #2536

BIOLOGICAL REPORT
KUHL RESIDENTIAL STRUCTURE CONSTRUCTION PROJECT

Prepared by:

Sierra Ecosystem Associates

1024 Simon Drive, Suite H
Placerville, CA 95667

For:

Michael Kuhl
APN: 011-030-058, 011-030-055

DRAFT REPORT

JULY 31, 2024

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1.0 PROJECT DESCRIPTION

The residential structure construction Project (Project) involves building a proposed residential structure, septic area, fire hydrant, a turnout, and solar arrays. The property already has an existing shed, driveway, well, water tank, and roads. The Project area is shown in Figure 1.

1.1 Project Setting

The Project is located on the north shore of Union Valley Reservoir at approximately 5,000 feet elevation. The Project area consists of mostly upland mixed conifer with a meadow to the west and a meadow on the eastern boundary 2,000 feet to the north of the proposed construction site. The meadows are fed by snowmelt in the spring and groundwater throughout the summer and fall and flow into Union Valley Reservoir. The overstory consists of fir and pine species with a mix of incense cedar, black oak, and Douglas fir. A complete species list is shown in Appendix B.

Figure 1. Residential Project Site



2.0 METHODOLOGY

Development of this biological report involved: 1) a desktop evaluation, and 2) a field survey. The methodology for each is described below.

2.1 Desktop Research

Prior to the site visit, preparatory desktop research work was completed using Site Plans and parcel boundaries provided by El Dorado County and high-resolution imagery (dated June 2024). A review of current databases maintained by CDFW was also performed to identify special-status species that could occur on the Project site (CDFW 2024). The CNDDB search covered a 5-mile radius around the Project site and is shown in Figure 2. Table 1 summarizes the species identified in this focused query.

Figure 2. CNDDB Search

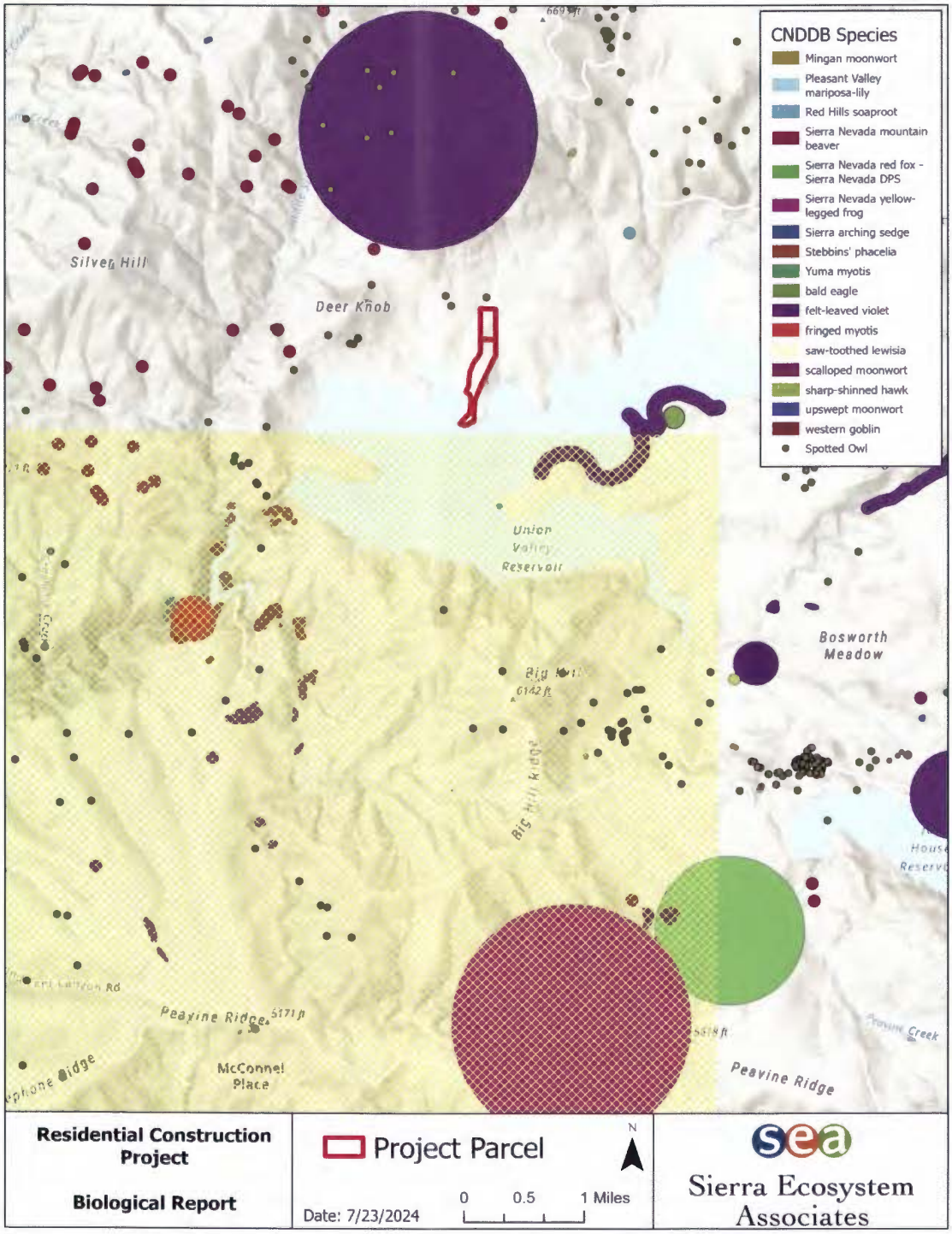


Table 1. CNDDB Species

Common Name	Scientific Name	Federal Listing	California Listing	Rare Plant Rank	CDFW Status
bald eagle	*Haliaeetus leucocephalus*	Delisted	Endangered		
Sierra Nevada yellow-legged frog	*Rana sierrae*	Endangered	Threatened		Watchlist species
Sierra Nevada mountain beaver	*Aplodontia rufa californica*	None	None		Species of special concern
Mingian moonwort	*Botrychium minganense*	None	None	4.2	
Pleasant Valley Mariposa lily	*Calochortus clavatus var. avius*	None	None	1B.2	
Red hills soaproot	*Chlorogalum grandiflorum*	None	None	1B.2	
Sierra Nevada Red Fox	*Vulpes vulpes necator pop. 2*	Endangered	Threatened		
Sierra arching sedge	*Carex cyrtostachya*	None	None	1B.2	
Stebbins phacelia	*Phacelia stebbinsii*	None	None	1B.2	
Yuma myotis	*Myotis yumanensis*	None	None		
Felt leaved violet	*Viola tomentosa*	None	None	4.2	
Saw toothed lewisa	*Lewisia serrata*	None	None	1B.1	
Scalloped moonwort	*Botrychium crenulatum*	None	None	2B.2	
Upswept moonwort	*Botrychium ascendens*	None	None	2B.3	
Western goblin	*Botrychium montanum*	None	None	2B.1	
Spotted owl	*Strix occidentalis*	None	None		
Fringed myotis	*Myotis thysanodes*	None	None		
sharp-shinned hawk	*Accipiter striatus*	None	None		Watchlist species

2.2 Pedestrian Field Survey

Sierra Ecosystem Associates, Inc. (SEA) staff Senior Ecologist, Jeremy Waites, Environmental Scientist Summer Abel, and Assistant Environmental Scientist Aria Pauling completed a pedestrian field survey on June 20, 2024 and June 21, 2024. The survey consisted of a floristic botanical survey, nesting raptor and migratory bird survey, and habitat analysis of the Project site. The focus of the survey was to analyze habitat characteristics and to assess if any threatened, endangered, or special status (TES) plants or animals would be affected by Project activities. The Project area including the proposed building location was surveyed and all plant and animal species observed were recorded. Pictures were taken of plant occurrences as well as the overview of the site and are included in Appendix A. A wetland delineation was also completed to map the existing wetlands within or near the Project site.

3.0 RESULTS BASED ON DESKTOP EVALUATION AND SURVEY

The following sections describe the information that was gathered from the desktop searches and the June 2024 field survey. These sections also provide details on Project impacts and the specific habitat characteristics for potential TES species that are present in the vicinity of the Project site. TES species, which are listed in Table 1, are plants and animals that historically occur in the surrounding area and those with potential habitat.

3.1 Wetland Features

The wetland and hydrological features from the National Wetland Inventory and the National Hydrology Dataset (USFWS 2024) are shown in Figure 3. Overland flow is generally from north to south. Two streams (ST-1, ST-2) shown in Figure 3 are on either side of the Project. Both flow through meadows and empty into Union Valley Reservoir.

Following completion of the field assessment, delineated features of the wetland differ from those defined by the NWI. NWI wetland data is presented in Figure 4. Specifically, based on the field survey data, the wetlands extend farther and the most southern wetland (W-1) is more complex. W-1 has many wetland plant species, but trends to more upland invasive plant species in the later drier season. The NWI dataset classifies the wetlands within the study area as: Emergent Wetland but also contains Forested Shrub Wetland and Riverine.

Figure 3. Wetlands and Hydrology

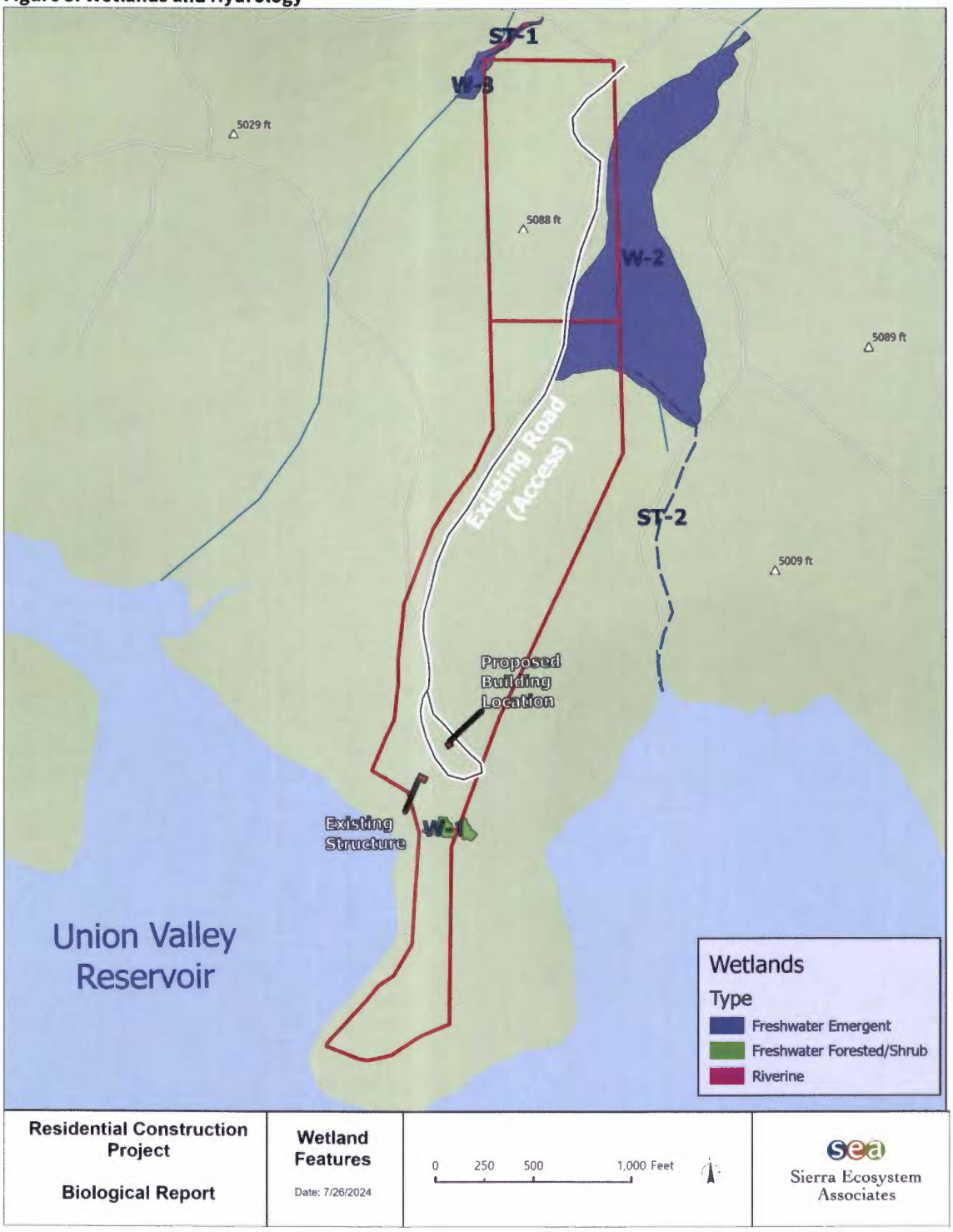
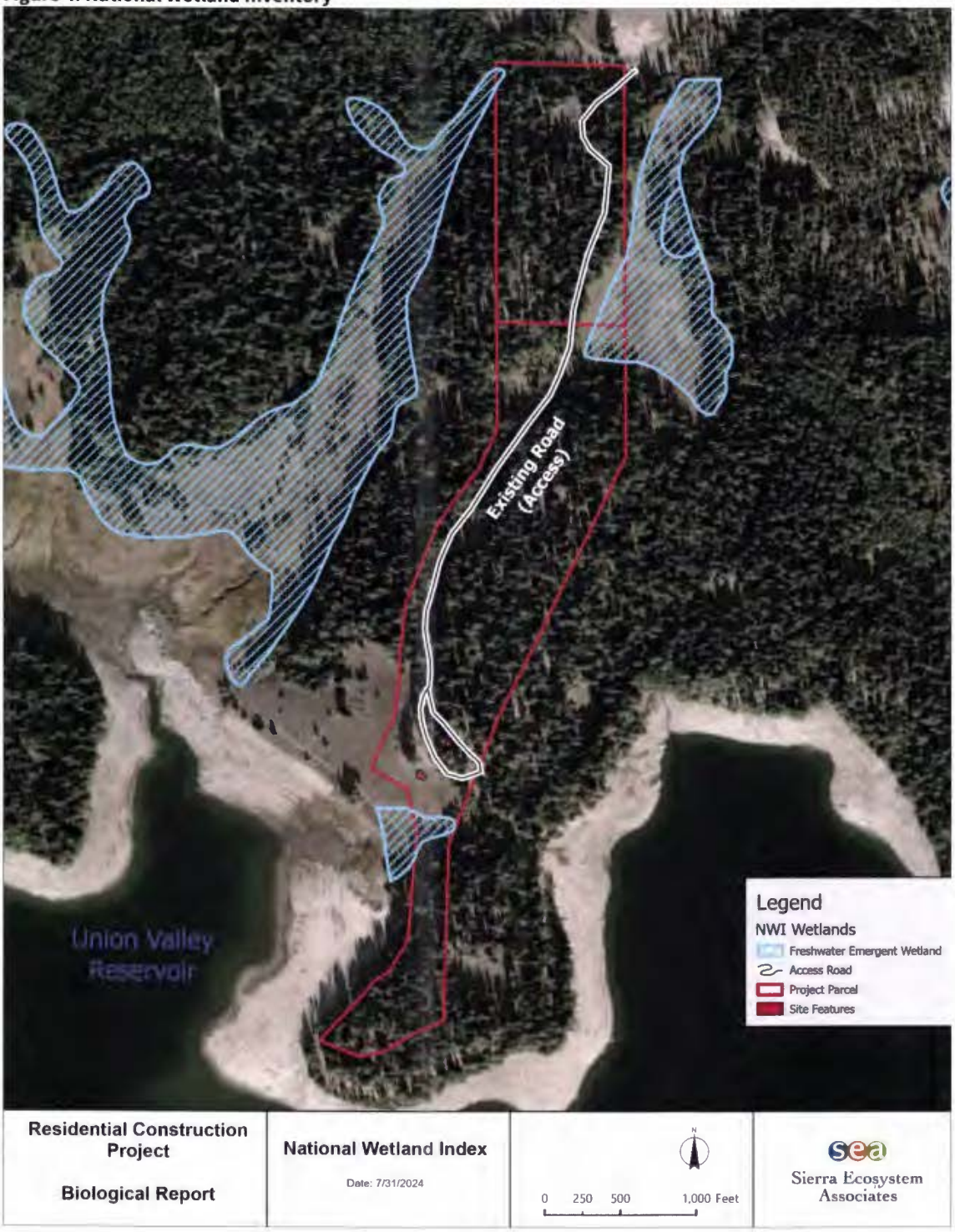


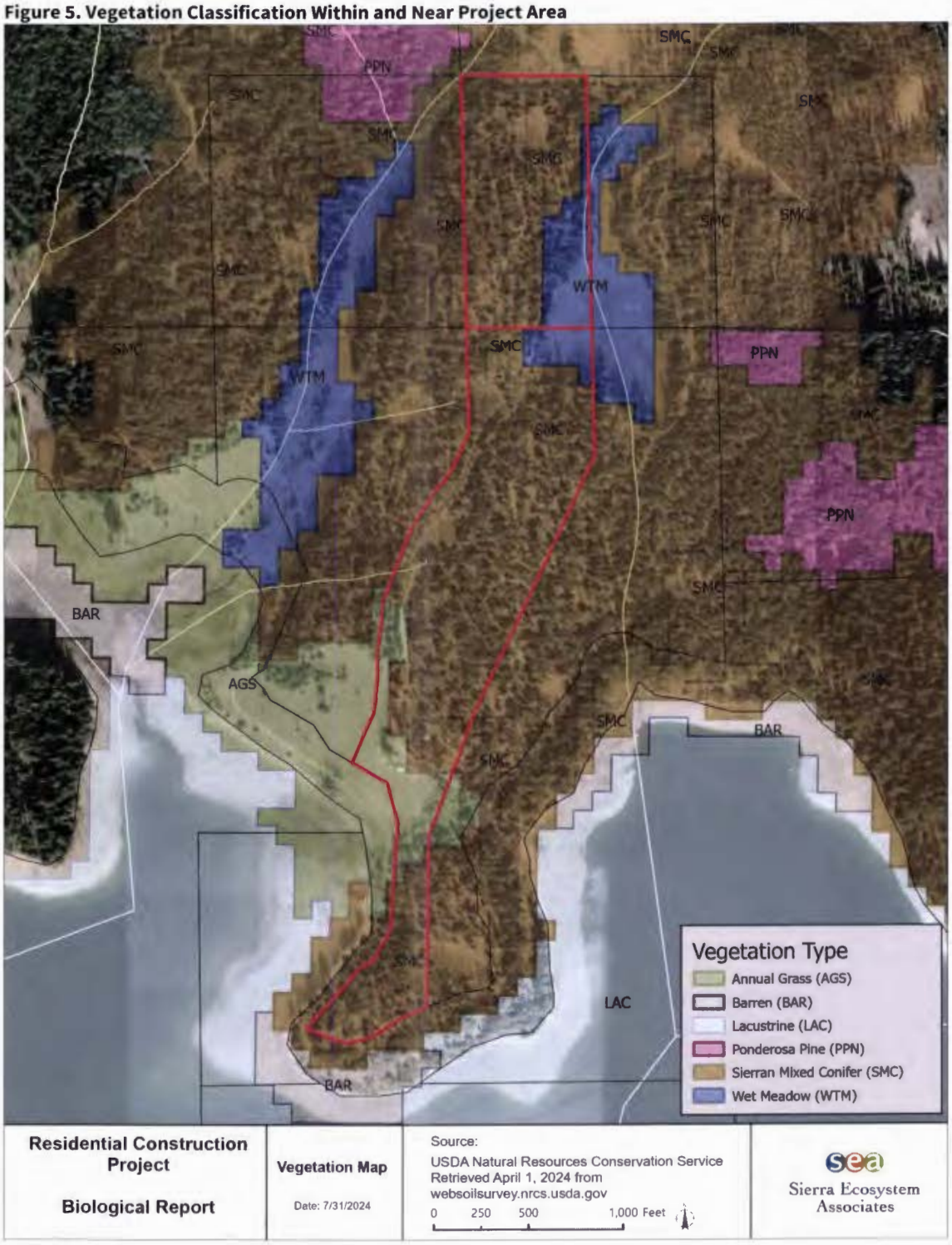
Figure 4. National Wetland Inventory



3.2 Vegetation Classification

There are numerous vegetation classification schemes for California, which have been developed by various agencies and ecologists for several user groups. The California Wildlife Habitat Relationship (CWHR) system was developed by CDFW to predict the habitat value for vertebrate animal species in California (CWHR 2024). Figure 5 shows the vegetation classification of the Project area according to the CWHR system. Although the data shown in Figure 5 is coarse, the vegetation types displayed are consistent with observations of vegetation types identified during the pedestrian field survey. The Project area mainly consists of Sierran mixed conifer with some wet meadow and annual grass classification.

Figure 5. Vegetation Classification Within and Near Project Area



3.3 Soils

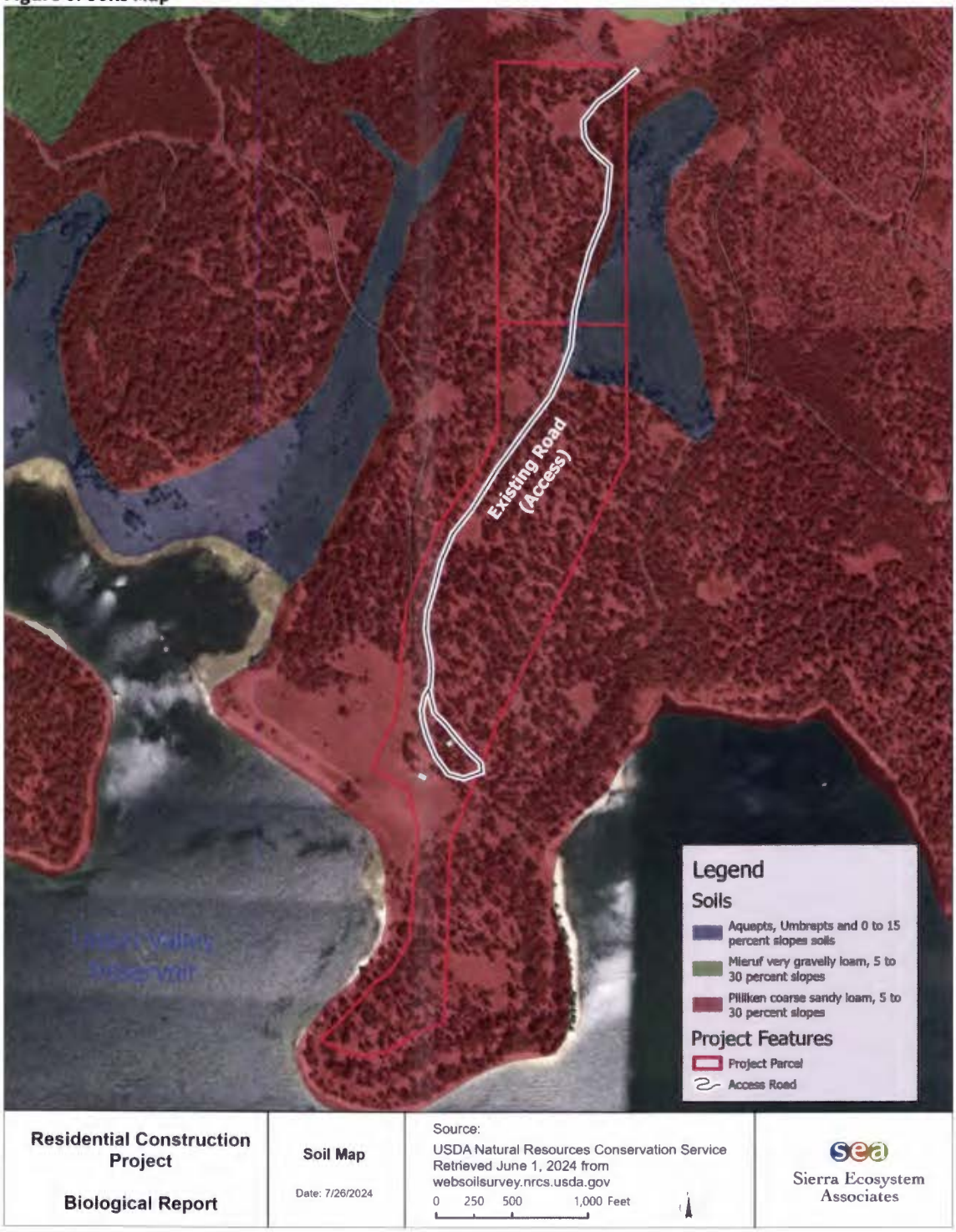
The Project is in the USDA Land Resource Region (LRR) 22A, Sierra Nevada Mountains, which is characterized by hilly to steep mountain relief and occasional mountain valleys.

The NRCS Soil Survey indicates that there are four soil series within the study area (see Figure 6). The following description is summarized from the USDA NRCS Custom Soil Resource Report (NRCS 2024).

Table 2. Soil Series in Study Area

Map Unit Name	Acres in Parcel	Percent of Parcel
Aquepts and Umbrepts 0 to 15 percent slopes	6.95	10.6%
Pilliken coarse sandy loam, 5 to 30 percent slopes	58.83	89.4%

Figure 6. Soils Map



4.0 DISCUSSION

The following section provides details on Project impacts and the specific habitat characteristics for potential TES species that are present in the vicinity of the CMT treatment sites. TES species, which are listed in Table 1, are plants and animals that historically occur in the surrounding area and those with potential habitat.

4.1 Plants

Mingan Moonwort (*Botrychium minganense)*
Mingian Moonwort typically grows in soils with high concentrations of lime. The species can be found in or near streambanks, open fields and meadows. Habitat exists in meadows nearby but not within the Project site. Project activities are not likely to cause impacts to this species.

Pleasant Valley mariposa-lily (*Calochortus clavatus var. avius)*
Endemic to Central California and found on dry, rocky slopes, chaparral, and open fields, typically in elevations less than 4,200 feet. Habitat is poor within the treatment areas with limited bare exposed areas, and at a higher elevation than the species are typically found. Project activities are not likely to cause impacts to this species.

Red Hills soaproot (*Chlorogalum grandiflorum)*
Red Hills soaproot is found in chapparal, woodland, and forested areas on gabbro and serpentine soils. This habitat is not present within the Project area. Project activities are not likely to cause impacts to this species.

Sierra arching sedge (*Carex cyrtostachya)*
Sierra arching sedge is found in wet meadows, marshes, seasonally wet outcrops, and riparian margins. Some habitat is present in meadows nearby, with little habitat present within the project area. Project activities are not likely to cause impacts to this species.

Stebbins' phacelia (*Phacelia stebbinsii)*
Stebbins' phacelia is endemic to Central and Northern California and found in rocky soils in forests and open meadows. Some habitat may be present nearby, but there are not many dry, rocky soils within the Project site to support this species. Project activities are not likely to cause impacts to this species.

felt-leaved violet (*Viola tomentosa)*
Felt-leaved violet is endemic to central Sierra Nevada and can be found in dry, open, coniferous forests with gravelly soils. Habitat is poor within the Project area with limited bare exposed areas and gravelly soils. Project activities are not likely to cause impacts to this species.

Saw-toothed lewisia (*Lewisia serrata*)
Saw-toothed Lewisia is found in shady, moist, rocky canyon and ravine walls. This habitat is not present within the Project area. Project activities are not likely to cause impacts to this species.

scalloped moonwort (*Botrychium crenulatum*)
Scalloped moonwort is found sporadically in wet environments, including meadows in coniferous forests and subalpine regions, and marshes. They are typically found in elevations between 3,800 and 9,200 ft. Some habitat may exists in nearby meadows, but habitat is poor within the Project area. Project activities are not likely to cause impacts to this species.

upswept moonwort (*Botrychium ascendens*)
Upswept moonwort is present in Northern California can usually be found in moist environments near riversides or in lowland meadows. Some habitat may exist in nearby meadows, but habitat is poor within the Project Area. Project activities are not likely to cause impacts to this species.

Western goblin (*Botrychium montanum*)
Western Goblin is found in California usually in moist, dark understories of coniferous forests in soils with a high organic matter content. Habitat is poor within the Project area but exists in nearby meadows. Project activities are not likely to cause impacts to this species.

4.2 Animals

Sierra Nevada mountain beaver (*Aplodontia rufa californica*)
The Sierra Nevada Mountain beaver is a CDFW Species of Special Concern. Sierra Nevada mountain beavers occur in dense riparian-deciduous and open, brushy stages of most forest types. Typical habitat in the Sierra Nevada is montane riparian with frequent open and intermediate-canopy coverage with a dense understory near water. Deep, friable soils are required for burrowing, along with a cool, moist microclimate (Beier 1989). This type of habitat is present adjacent to nearby meadows. Project activities would not occur near these habitat locations and are not likely to cause impacts to this species.

Sierra Nevada red fox (*Vulpes vulpes necator pop. 2*)
Sierra Nevad red foxes are found in alpine and barren areas, subalpine forests, red fir forests, lodgepole pine forests, and mixed conifer forest. They are usually found above 7,000 feet. There is little of this habitat present within the Project area, and red foxes are generally found at a higher elevation. Project activities are not likely to cause impacts to this species.

Sierra Nevada yellow-legged frog (*Rana sierrae*)
The Sierra Nevada yellow-legged frog is federally listed as endangered and listed as threatened

in California. This amphibian inhabits lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains. Waters that do not freeze to the bottom or dry up are required. It prefers open shorelines that gently slope up to shallows of a few inches (CalHerps 2017). Habitat for this species is very poor in the Project area and most water sources do not stay wet or unfrozen year-round. Project activities are not likely to cause impacts to this species.

Yuma myotis (*Myotis yumanensis*)
Yuma myotis are found in forests, riparian zones, grassland and deserts. This species also likes to be near rivers, streams, ponds, and lakes. Habitat like this is present in meadows and lakes outside of the Project area but not within the Project area boundaries. Project activities are not likely to cause impacts to this species.

fringed myotis (*Myotis thysanodes*)
Fringed myotis are typically found in dry environments throughout open grasslands and mature ponderosa, oak and pinyon-juniper forests. There is no habitat near or in the Project area to support this species. Project activities are not likely to cause impacts to this species.

Bald eagle (*Haliaeetus leucocephalus*)
The Bald eagle is listed as endangered in California. Bald eagles forage in large bodies of water. They typically nest in large trees adjacent to a body of water. Nesting occurrences are common nearby on Union Valley Reservoir as there are large trees and snags that may offer potential nesting sites. No nesting raptors were found during the field survey. Project activities are unlikely to adversely impact this species as no trees are being removed or disturbed.

Sharp-shinned hawk (*Accipiter striatus*)
Sharp-shinned hawk is a CDFW Watchlist Species. Sharp-shinned hawks can be found in mixed or coniferous forests, open deciduous woodlands, thickets, and edges. They usually nest in groves of coniferous or deciduous trees with brush or clearings nearby (Sulivan 1994). The adjacent Jeffrey pine and ponderosa forests surrounding may offer potential nesting sites, but Project activities are unlikely to adversely impact this species.

Spotted owl (*Strix occidentalis*)
Habitat includes old growth forests and, in California, oak woodlands and forested canyons. The adjacent Jeffrey pine and ponderosa forests surrounding may offer potential nesting sites, but treatment activities are unlikely to adversely impact this species.

5.0 CONCLUSION

No raptors or migratory birds were observed nesting during the field survey. No nests from previous years were observed. No occurrences of threatened, endangered, or other special status species were observed during the field survey.

The CNDDB database search found that most special status plants and animals prefer habitat within meadows or coniferous forests that exist within 5 miles of the Project. Based on the existing conditions of the Project area, there is very little wetland habitat or year-round water to support these species. Some meadow habitat is present nearby but is outside of the Project area. Species that are most likely to occur are nesting raptors and migratory birds. Because project activities do not include the removal of trees or shrubs that provide suitable nesting habitat, and because no evidence exists of current/past nesting in the Project vicinity, neither nesting raptors nor migratory birds are likely to be impacted.

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7.0 REPORT AUTHORS

The following individuals prepared the text presented in this analysis.

Sierra Ecosystem Associates

Rick A. Lind	Principal-In-Charge – Document Review
Jeremy Waites	Arborist/GIS Specialist – Co-author
Summer Abel	Environmental Scientist – Primary Author
Rayann La France	Administrative Services Manager – Editor and Document Production

Appendix A

Project Photos

Photograph 1. View from the bike trail facing the Project site showing the existing structure



Photograph 2. View from the Project site looking towards the lake



Photograph 3. View of existing road and septic tanks to be installed



Photograph 4. Proposed residential structure site



Photograph 5. Overview of the northeastern wetland



Photograph 6. The stream running through the northwestern part of the Project site



Appendix B

Species List

Scientific Name	Common Name
Abies concolor	White fir
Abies magnifica	California red fir
Achillea millefolium	Yarrow
Agrostis pallens	Diego bent grass
Agrostis scabra	Rough bentgrass
Alnus incana	Creek alder
Amelanchier utahensis	Pale leaved serviceberry
Anaphalis margaritacea	Pearly everlasting
Apocynum androsaemifolium	Spreading dogbane
Aquilegia formosa	Columbine
Arctostaphylos nevadensis	Pine mat manzanita
Arctostaphylos patula	Green leaf manzanita
Arctostaphylos patula	Green leaf manzanita
ArtemBistorta bistortoides	American bistortisia
Asarum lemmonii	Lemmon's wild ginger
Bromus tectorum	Downy chess
Calocedrus decurrens	Incense cedar
Carex fracta	Fragile sheathed sedge
Ceanothus cordulatus	Mountain whitethorn
Ceanothus integerrimus	Deer brush
Chamerion angustifolium	Fireweed
Chlorogalum pomeridianum	Amole
Cirsium vulgare	Bullthistle
Cirsium vulgare	Bullthistle
Collomia grandiflora	Large flowered collomia
Corallorhiza striata	Striped coral root
Cornus nuttallii	Mountain dogwood
Cornus sericea	Red osier dogwood
Elymus elymoides	Squirrel tail grass
Elymus glaucus	Blue wild rye
Equisetum arvense	Common horsetail

Erythranthe guttata	Seep monkey flower
Festuca rubra	Red fescue
Fragaria vesca	Wild strawberry
Galium bolanderi	Bolander's bedstraw
Goodyera oblongifolia	Rattlesnake plantain
Hackelia micrantha	Jessica's stickseed
Heracleum maximum	Common cow parsnip
Hieracium albiflorum	White flowered hawkweed
Hordeum brachyantherum	Meadow barley
Hosackia oblongifolia	Narrow leaved lotus
Hypericum perforatum	Klamathweed
Juncus balticus	Wire rush
Lactuca serriola	Prickly lettuce
Lonicera conjugialis	Purpleflower honeysuckle
Lupinus fulcratus	Green stipuled lupine
Madia elegans	Common madia
Monardella sheltonii	Shelton's coyote mint
Pedicularis semibarbata	Pine woods lousewort
Penstemon newberryi	Mountain pride
Pinus contorta	Lodgepole pine
Pinus jeffreyi	Jeffrey pine
Pinus lambertiana	Sugar pine
Pinus ponderosa	Yellow pine
Potentilla flabellifolia	Fan leaved cinquefoil
Pseudotsuga menziesii	Douglas fir
Pteridium aquilinum	Western bracken fern
Pterospora andromedea	Pine drops
Quercus kelloggii	California black oak
Rhododendron occidentale	Western azalea
Ribes nevadense	Mountain pink currant
Ribes roezlii	Sierra gooseberry
Rosa californica	California wild rose
Rumex acetosella	Sheep sorrel
Sambucus mexicana	Elderberry
Senecio integerrimus	Lambstongue groundsel
Senecio triangularis	Groundsel
Sidalcea glaucescens	Glaucous checker mallow
Sisyrinchium bellum	Blue eyed grass
Stipa occidentalis	Common western needle grass
Symphoricarpos albus	Common snowberry
Taraxacum officinale	Red seeded dandelion

Tragopogon dubius	Goat's beard
Veratrum californicum	California corn lily
Verbascum thapsus	Woolly mullein
Viola purpurea	Goosefoot violet

Sierra Ecosystem Associates

RECEIVED
SEP - 9 2024
EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

Mr. Michael Kuhl

July 31, 2024

Subject: Environmental Compliance Documentation for the Union Valley Residential Construction Project

Dear Mr. Kuhl:

Sierra Ecosystem Associates (SEA) is pleased to submit the following environmental compliance documentation for the Union Valley Residential Construction Project:

- Draft Biological Resources Report
- Draft Preliminary Wetland Delineation Report

Please review the attached documents and advise us as to any necessary changes or if you have any questions. If there are no changes to the enclosed or if you have suggested changes, we will finalize the reports for you to submit to El Dorado County.

Thank you for this opportunity to assist you with this Project. Please feel free to contact me if you have any questions on the above or enclosed.

Sincerely,

Jeremy Waites

Attachments:

- Draft Biological Resource Report
- Draft Preliminary Wetland Delineation Report

CUP24-0011

1024 Simon Drive, Suite H P.O. Box 2260 Placerville, CA 95667 tel 530 622 8740 www.sierraecos.com

A division of EN2 Resources, Inc.

DRAFT

PRELIMINARY WETLAND DELINEATION REPORT

KUHL RESIDENTIAL STRUCTURE CONSTRUCTION PROJECT



Prepared for:

Michael Kuhl
APN: 011-030-058,
011-030-055

Prepared by:

Sierra Ecosystem Associates

1024 Simon Drive
Placerville, CA 95667

JULY 31, 2024

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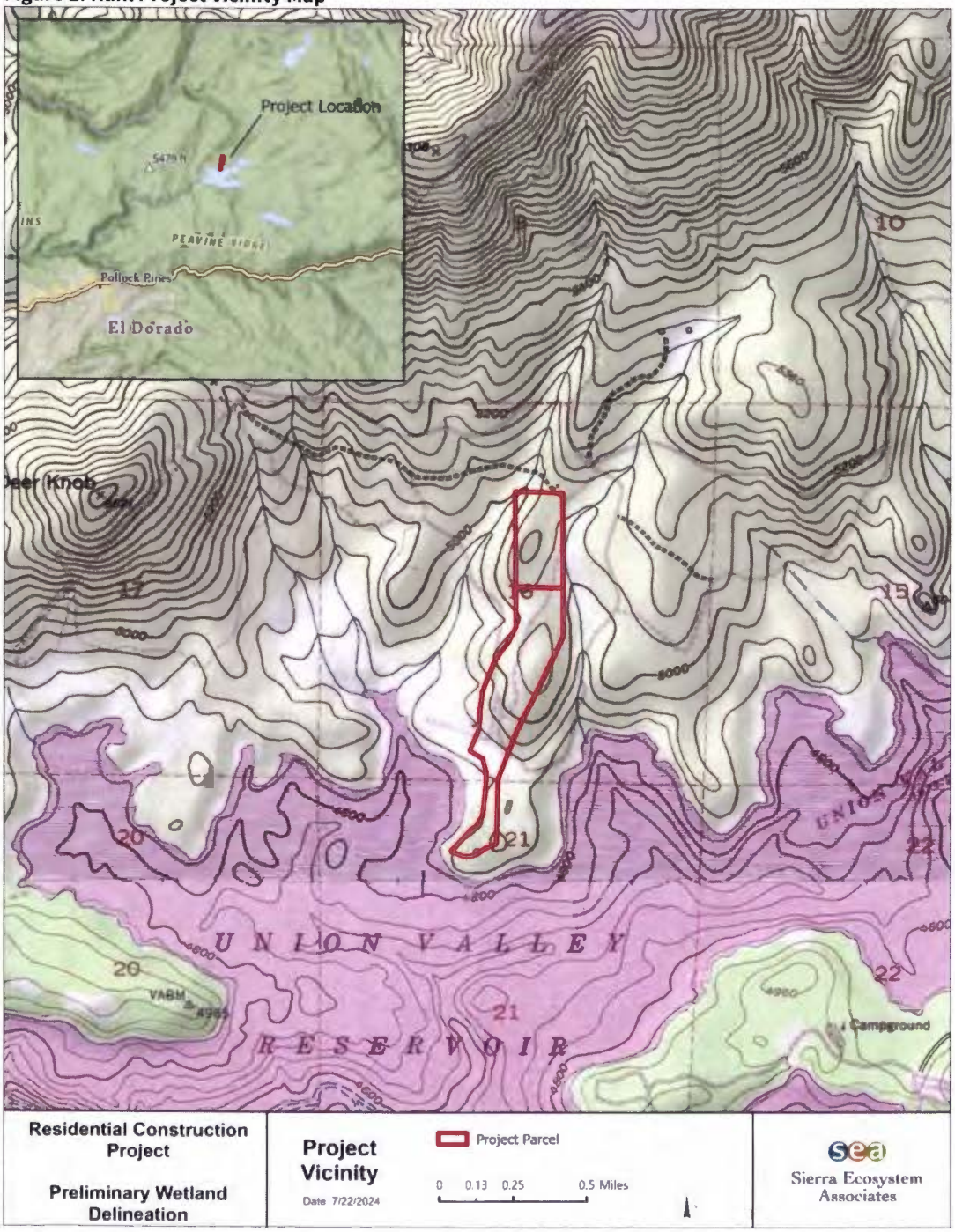
1.0 INTRODUCTION

This document represents a preliminary wetland determination and delineation subject to verification by the U.S. Army Corps of Engineers (USACE). The Preliminary Wetland Delineation (PWD) report describes the existing wetland resources within and near an area identified for a residential construction project on the north shore of Union Valley Reservoir. The PWD consisted of a desktop database review and field data collection in the Project area. The report presents determination of the location of wetland boundaries and includes several maps identifying wetland features of the area including streams and wetlands based on vegetation, soil, and hydrology characteristics.

1.1 Setting

The residential structure construction Project (Project) is located on the north shore of Union Valley Reservoir at approximately 5,000 feet elevation. The Project area consists of mostly upland mixed conifer with a meadow to the west (M-1) and a meadow (M-2) on the eastern boundary 2,000 feet to the north of the proposed construction site. The meadows are fed by snowmelt in the spring and groundwater throughout the summer and fall and flow into Union Valley Reservoir. The overstory consists of fir and pine species with a mix of incense cedar, black oak, and Douglas fir. Figure 1 shows the Project vicinity.

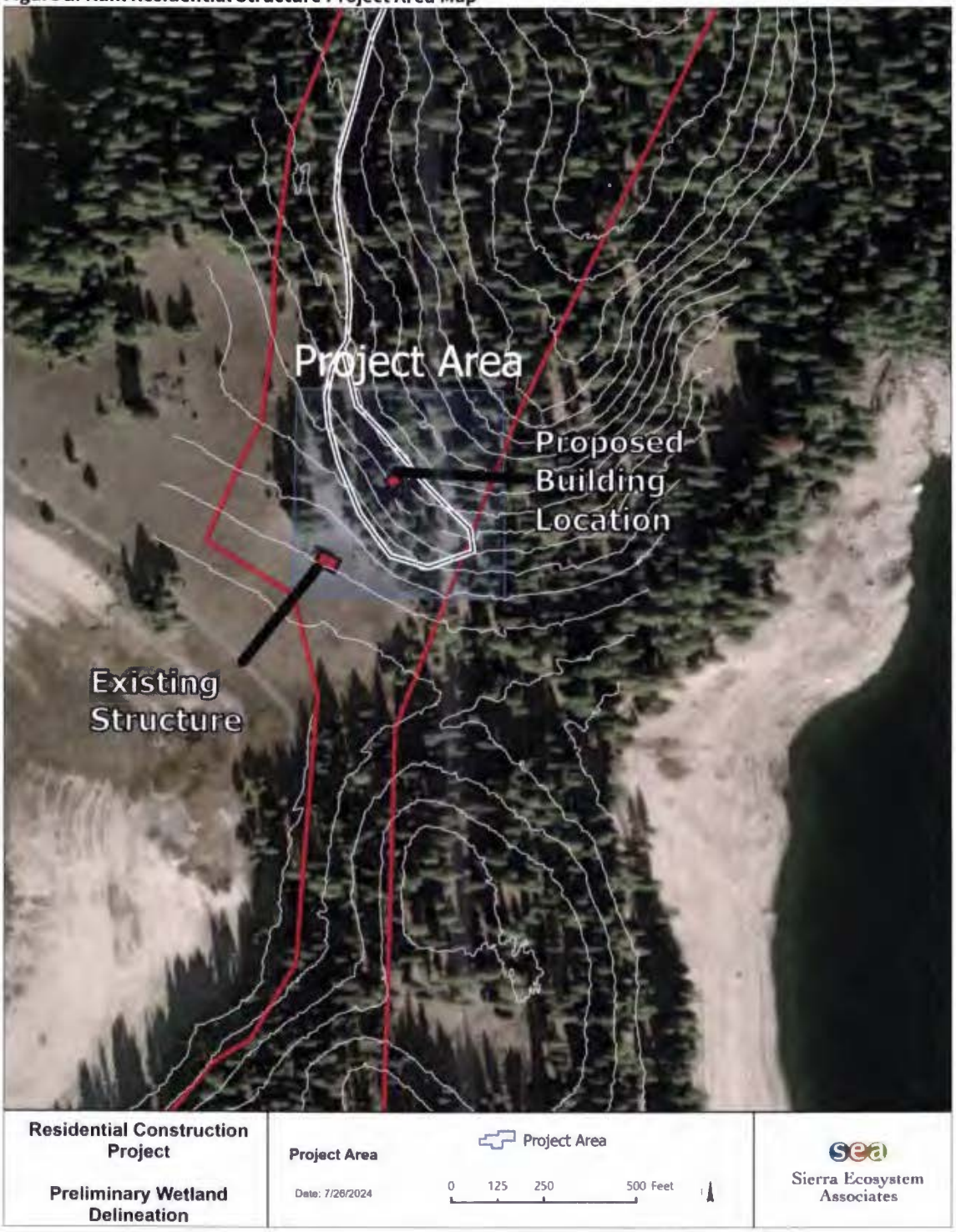
Figure 1. Kuhl Project Vicinity Map



1.2 Project Description

The Project is to construct a residential structure approximately 250 feet northwest of an existing structure and 50 feet higher in elevation. The locations of the existing structure and proposed structure are shown below in Figure 2. Staging areas will be located outside the Project area and access routes will be on existing roads.

Figure 2. Kuhl Residential Structure Project Area Map



2.0 METHODOLOGY

This PWD was prepared in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the USACE of Engineers Wetland Delineation Manual: Western Mountains Region (Version 2.0) (USACE 2008). The Study Area was surveyed on June 20, 2024 to gather the necessary soil, vegetation, and hydrology data to prepare the PWD report. Data was collected according to procedures of the above referenced documents for determination of the wetland boundaries and data was collected and entered into the Wetland Determination Data Forms (Appendix A). The Study Area where data collection and field surveys took place is shown on Figure 1 in the Project Parcel. The Project Area outline with the existing structure and proposed building location are defined and shown above in Figure 2.

- Wetland Delineation Study Area (Study Area): Total area of data collection that includes the Project Area and the entire parcel.
- Project Area: Total area where work is planned that is the approximate location of the residential structure construction site.

Sierra Ecosystem Associates (SEA) Senior Ecologist, Jeremy Waites, served as the principal author of the PWD report. Mr. Waites has over 18 years of professional experience completing a variety of biological studies and preparing associated reports and has completed numerous wetland delineations in the Sierra Nevada region.

Observation/data points were composed of paired data collection locations based on field conditions. Each pair of points was placed equidistant from the wetland boundary determined by the indicators at each data point. At each data point, the site was examined for hydrophytic vegetation, hydric soils, and wetland hydrology and recorded on the attached Data Forms (Appendix A). Wetland boundaries, data points and other waters, including streams, were mapped using a sub-meter accuracy GPS unit and are shown in Figure 5.

Vegetation was sampled and quantified at each point by each taxon's percent cover of the observation area and identified to species level wherever possible using the Jepson Manual: Higher Plants of California nomenclature (Hickman 1993) (Jepson eFlora 2024). The 2016 National Wetland Plant List and the U.S. Department of Agriculture (USDA) Plants database were consulted to determine the wetland indicator status for each plant [Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate (OBL)] (Lichvar et al. 2016, USDA NRCS 2024).

Soil pits were dug to a depth necessary to document evidence of hydric soils and examined at each potential wetland and adjacent upland. Each soil sample was moistened before determining texture and color. Soil texture was determined in the field by approximating the percentage of sand, silt, and clay using the USDA soil texture triangle. Soil colors were determined using the Munsell Soil Color Charts (2000). The soils were classified using the USDA soil texture nomenclature as described in the University of Florida Extension Fact Sheet SL-29

(Brown 2003). Hydric soil indicators described in the Supplemental Manual and the USDA Natural Resource Conservation Service (NRCS) publication of Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils were used to determine if hydric soils are present (USDA 2017).

Wetland hydrology indicators were evaluated at potential wetlands. Determination of the ordinary high-water mark (OHWM) was based on the definition provided in the USACE regulations under the Clean Water Act (CWA) 33 CFR 328.3(e) and the Regulatory Guidance Letter No. 05-05 (USACE 2005). All existing conditions are described in more detail in Section 3.2. Environmental Conditions, and OHWM determinations were based upon direct or indirect evidence as described in both the 1987 Manual and the Supplemental Manual and the Regulatory Guidance Letter No. 05-05.

The following data sources were collected prior to going to the field on June 20, 2024:

- Web Soil Survey (NRCS 2024): The web soil survey was reviewed to determine which soil series have been mapped on-site and whether any hydric soils are present. A Custom Soil Resource Report for El Dorado County California, Digital GIS shapefiles of the mapped soils obtained from the NRCS were downloaded and mapped for the Project.
- National Wetlands Inventory (NWI) [U.S. Fish and Wildlife Service (USFWS) 2024]: Digital geographic information system (GIS) shapefiles of existing, mapped NWI wetlands were downloaded from the USFWS Wetlands Geodatabase and mapped for the Project.
- National Hydrography Dataset (NHD) [U.S. Geological Survey (USGS) 2023]: Digital GIS shapefiles of the hydrographic data for the region were downloaded from the USGS NHD Geodatabase and mapped for the Project.
- The USGS 7.5-minute Robbs Peak SE topographic quadrangle map: The quad map was reviewed for existing waters and other potential wetland features or topography that indicated the potential for drainage or ponding.
- Habitat Classification: The habitat was classified by reviewing the Manual of California Vegetation classification scheme and based on knowledge of plant communities in the region (Sawyer and Keeler-Wolf 2009). These vegetation communities can be cross-walked with other vegetation classification schemes as necessary.
- Aerial Photography: National Agricultural Imagery Program (NAIP) 2024 El Dorado County, color, ortho-rectified 0.3-meter pixel resolution: Aerial photography was used to determine coarse locations of wetland boundaries and data collection points.

2.1 Site Assessment

After completing the database review, SEA staff Senior Ecologist, Jeremy Waites, Environmental Scientist, Summer Abel, and Assistant Environmental Scientist Aria Pauling visited the Project area and completed a pedestrian field survey on June 20, 2024. The purpose of the field survey was to collect data that would aid in determining the boundaries of all

wetlands in the Project area. Data collected during the field assessment and photos of collected samples can be found in Appendix A and Appendix B, respectively.

3.0 RESULTS AND DISCUSSION

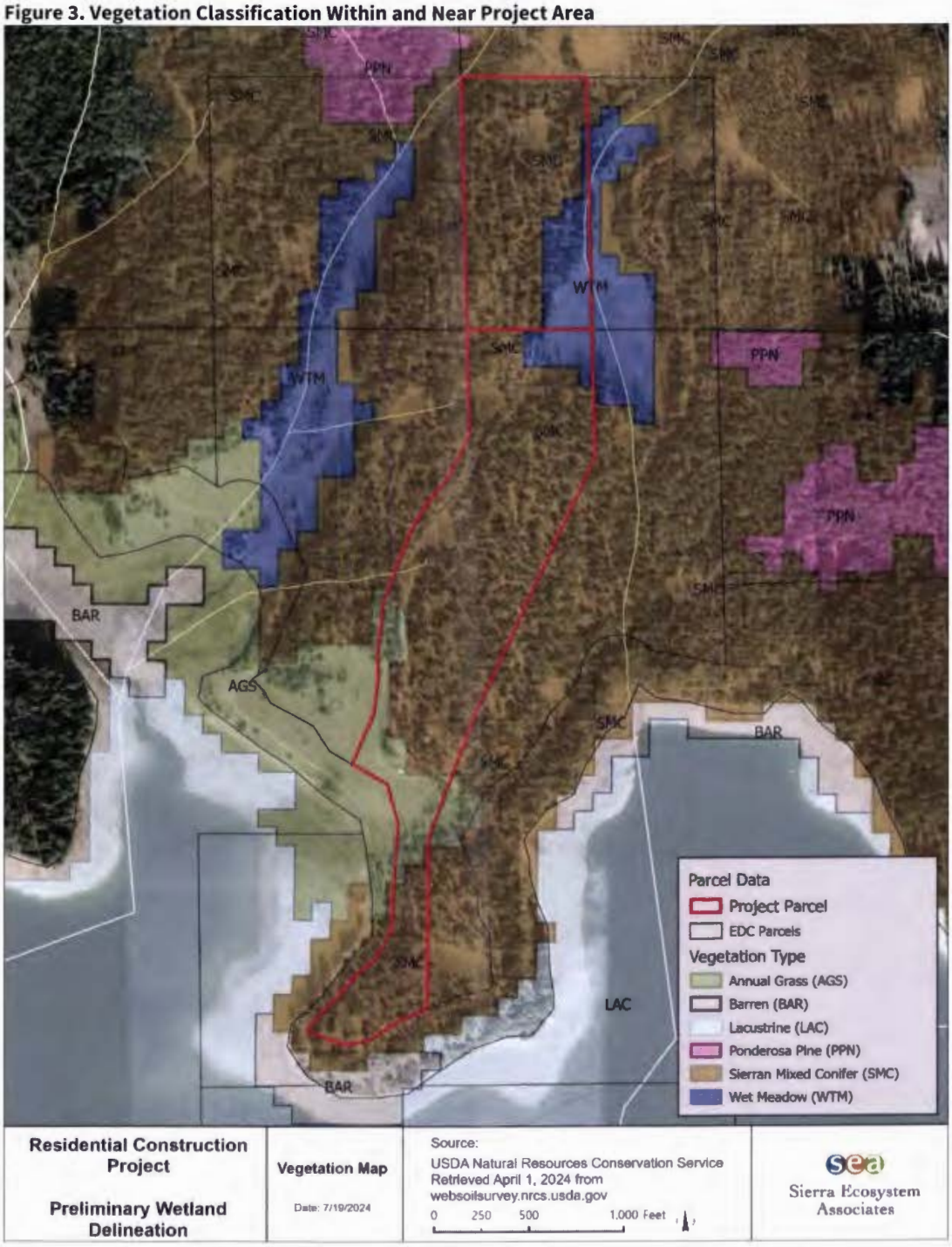
This section describes the existing environmental conditions including soils, vegetation, and wetland features.

3.1 Habitat Classification

There are numerous vegetation classification schemes for California, which have been developed by various agencies and ecologists for various user groups. The California Wildlife Habitat Relationship (CWHR) system was developed by CDFW to predict the habitat value for vertebrate animal species in California (CWHR 2024). Figure 3 shows the vegetation classification of the Project area according to the CWHR system. Although the data shown in Figure 3 are coarse, the vegetation types displayed are consistent with observations of vegetation types identified during the pedestrian field survey. The following descriptions characterize the four major vegetation types found within the Study area.

- Annual Grassland usually contains perennial bunch grasses such as squirrel tail (*Elymus*), mules ear (*Wyethia*), and sometimes sagebrush (*Artemisia*). Many of these species have been displaced by non-native annual grasses. This is more common at lower elevations.
- Wet Meadow is made up of a large variety of plant species. Those species most common to wet meadows in the north-central Sierra at this elevation include *Agrostis, Carex, Danthonia, Juncus, Salix, and Scirpus*. Important grass and grass-like species include thingrass, abruptbeak sedge, beaked sedge, Nebraska sedge, tufted hairgrass, needle spikerush, fewflowered spikerush, common spikerush, baltic rush, Nevada rush, iris-leaf rush, pullup muhly, and panicled bulrush.
- Sierran Mixed Conifer is defined by vegetation consisting of thinleaf alder, aspen, cottonwood, dogwood, wild azalea, willow, and water birch. Montane riparian is found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Within the Project Area, lodgepole and honeysuckle are common in the upper edges of the meadow.

Figure 3. Vegetation Classification Within and Near Project Area



3.2 Environmental Conditions

The Project is in the USDA Land Resource Region (LRR) 22A, Sierra Nevada Mountains, which is characterized by hilly to steep mountain relief and occasional mountain valleys.

Soils

The NRCS Soil Survey indicates that there are four soil series within the study area (see Figure 4). The following description is summarized from the USDA NRCS Custom Soil Resource Report (NRCS 2024).

Table 1. Soil Series in Study Area

Map Unit Name	Acres in Parcel	Percent of Parcel
Aquepts and Umbrepts 0 to 15 percent slopes	6.95	10.6%
Pilliken coarse sandy loam, 5 to 30 percent slopes	58.83	89.4%

Aquepts Series

Aquepts are poorly drained or very poorly drained soils that are formed in alluvial material on broad valley flats and along drainages. Slope ranges from 0 to 15 percent. Vegetation is the Sedge-Rush series.

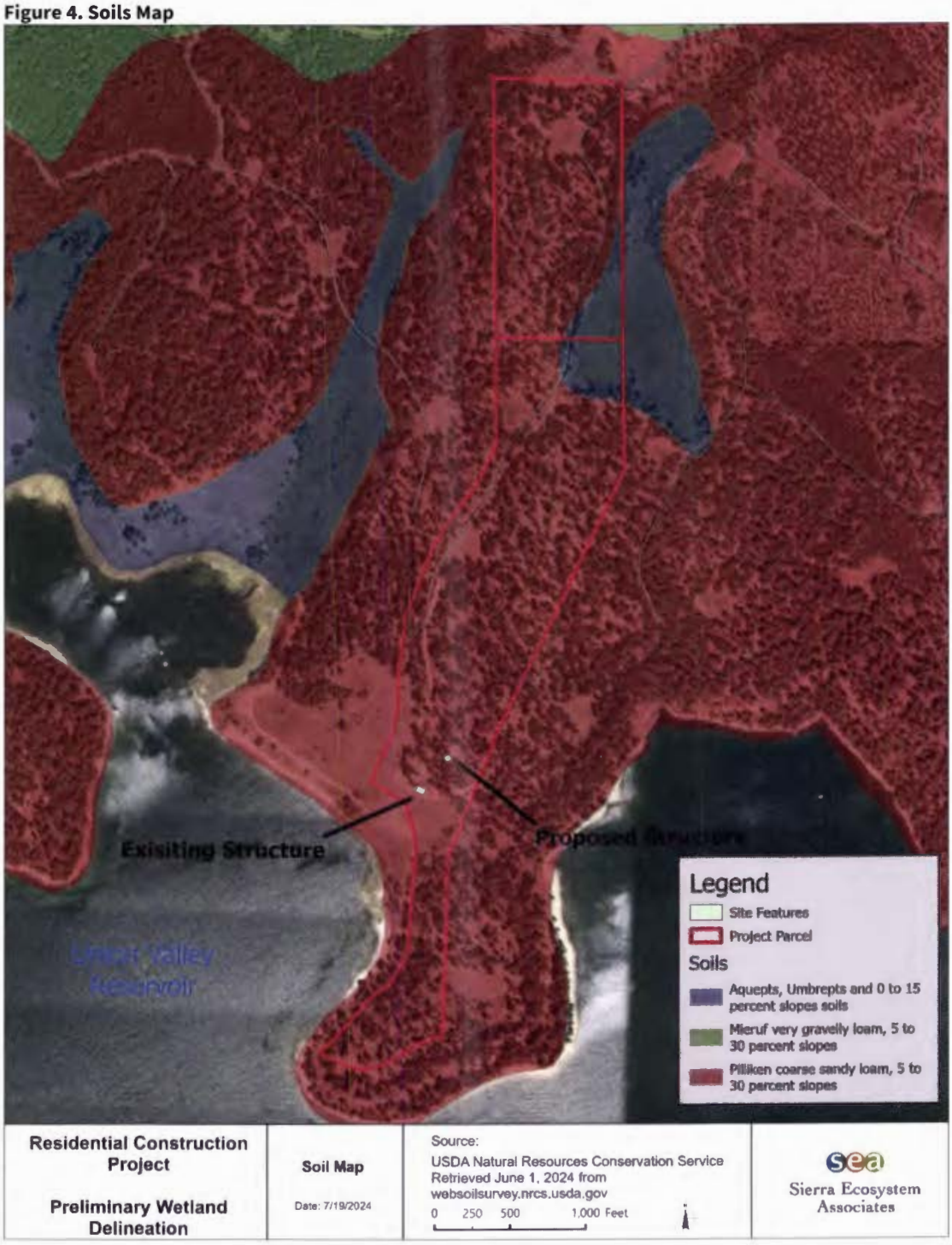
- Aquepts and Umbrepts, 0 to 15 percent slopes soils

Pilliken Series

The Pilliken series consists of deep, well drained soils formed in material weathered from granitic rocks. They are on mountainsides with slopes of 5 to 75 percent. Mean annual precipitation is 53 inches and mean annual temperature is 49 degrees F.

- Pilliken coarse sandy loam, 5 to 30 percent slopes

Figure 4. Soils Map



Wetlands and Other Potential Army Corps of Engineers' Jurisdictional Waters

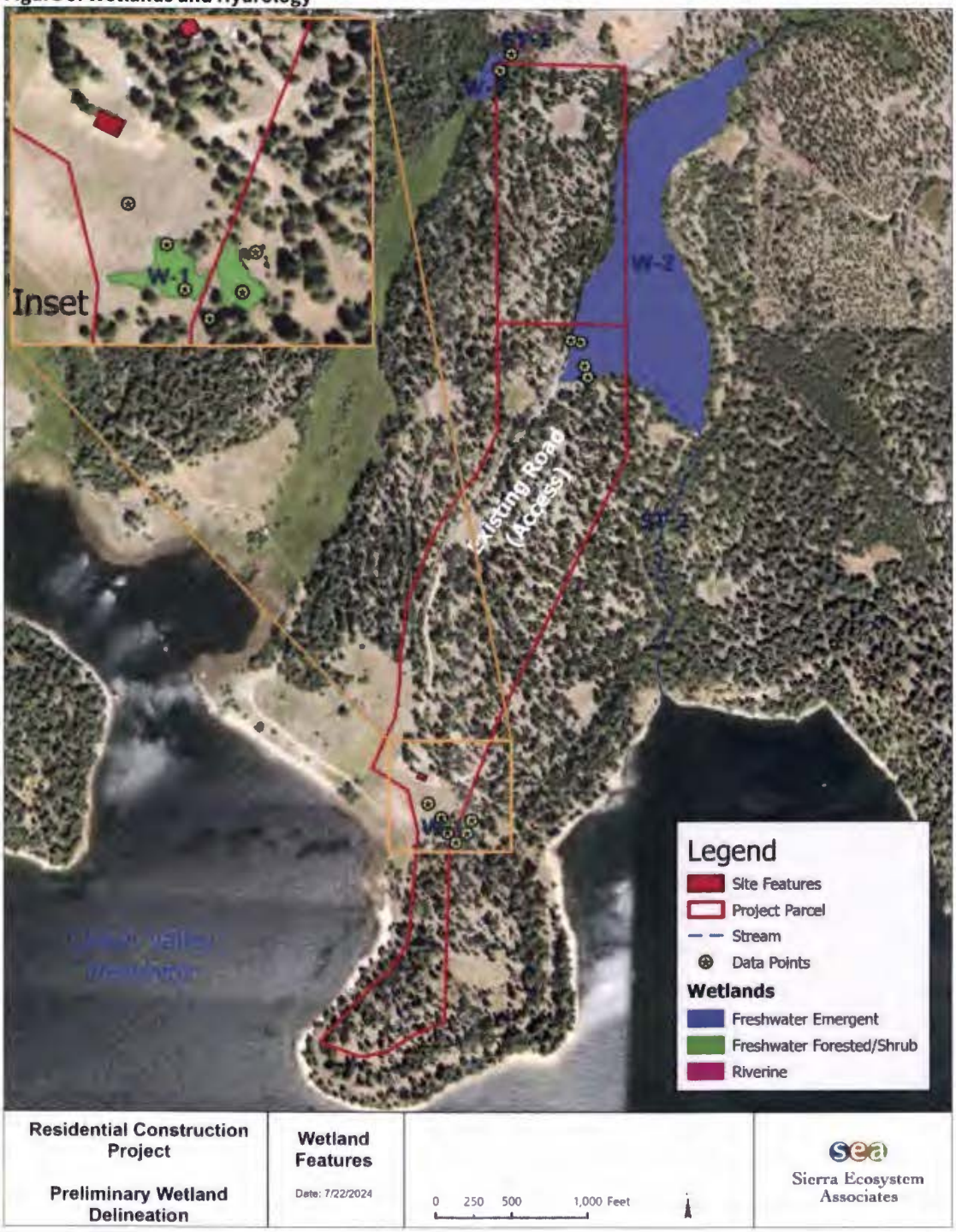
Wetlands are defined as, "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (USACE 1987). Wetland habitats occur within the Project Area.

During the site assessment, potential jurisdictional wetlands and waters were mapped based on vegetation indicators, the presence of hydric soils and visible hydrology. Data corresponding to the wetland determination is included in Appendix A. Figure 5 shows the wetlands that exist within and nearby the Project Area.

Deepwater Aquatic Habitats

Deepwater aquatic habitat is defined as, "areas that are permanently inundated at mean annual water depths > 6.6 feet or permanently inundated areas ≤ 6.6 feet in depth that do not support rooted-emergent or woody plant species" (USACE 1987). There is one feature within the study area that meets this definition which is Union Valley Reservoir. Union Valley Reservoir is a Sacramento Municipal Utility District maintained reservoir that decreases in volume in the fall to early winter and is close to full pool in normal rain years following snowmelt periods. The ordinary high-water mark for this reservoir is approximately 770 feet from Project activities.

Figure 5. Wetlands and Hydrology



3.3 Aquatic Features and Potential Wetlands

The wetland and hydrological features from the National Wetland Inventory and the National Hydrology Dataset (USFWS 2024) are shown in Figure 6. Overland flow is generally from north to south. Two streams (ST-1, ST-2) shown in Figure 5 are on either side of the Project. Both flow through meadows and empty into Union Valley Reservoir.

Following completion of the field assessment, delineated features of the wetland differ from those defined by the NWI. NWI wetland data is presented in Figure 6. Specifically, based on the field survey data, the wetlands extend farther and the most southern wetland (W-1) is more complex. W-1 has many wetland plant species, but trends to more upland invasive plant species in the later drier season. The NWI dataset classifies the wetlands within the study area as: Emergent Wetland but also contains Forested Shrub Wetland and Riverine.

Figure 6. National Wetland Inventory



4.0 SUMMARY OF FINDINGS

Wetlands within the study area are localized to the three wetland areas W-1, W-2, and W-3. W-1 was a mix of wetland and upland species and its characteristics barely indicated it as a wetland. W-2 is part of a large meadow complex in which the overland flow converged into (ST-2) on the southeastern side into a culvert and road. W-3 forms from a stream (ST-1) and is a riverine wetland. The overland flow of ST-1 disperses and forms a large freshwater emergent wetland.

The annual grass area between the existing structure and the lake was examined closely for wetland indicators. This area had sandy and very well drained soils with no indicators of being a wetland.

0 acres of wetlands and other waters have been identified within the Project disturbance area as shown in Table 2, below. The disturbance area is based on the following Project features:

- Construction of new residential structure
- Access routes and staging areas

Table 2. Wetland Area Calculations

Location	Acres	Square Feet
Within Study Area and Outside Project Area	4.2	183,514
Within Project Construction Area	0	0

Based on this PWD, no impacts to wetlands will result from the Project.

5.0 REPORT AUTHORS

The following individuals prepared the text presented in this analysis.

Sierra Ecosystem Associates

Rick A. Lind	Principal-In-Charge – Document Review
Jeremy Waites	Arborist/GIS Specialist – Primary Author
Summer Abel	Environmental Scientist – Document Review
Rayann La France	Administrative Services Manager – Editor and Document Production

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Appendix A

Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-1
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
	0	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Rumex acetosella*	30	Y	FACU
2. *Verbascum thapsus*	1		FACU
3. *Madia elegans*	1		-
4. *Juncus tenuis*	1		FAC
5. *Leptosiphon ciliatus*	1		-
6.			
7.			
8.			
	34	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	1	x 3 =	3
FACU species	32	x 4 =	128
UPL species		x 5 =	0
Column Totals:	33 (A)		131 (B)

Prevalence Index = B/A = 3.97

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type	LOC[2]	Texture	Remarks
12	7.5 YR 3/2	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10) (LRR B)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ Very Shallow Dark Surface
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Red Parent Material (TF2)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Other (Explain in Remarks)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11	___ Depleted Dark Surface (F7)	
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:
Surface Water Present? Yes ___ No X Depth (inches) _____
Water Table Present? Yes ___ No X Depth (inches) _____
Saturation Present? Yes ___ No X Depth (inches) _____
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-2
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.8793 Longitude: -120.4140 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: Freshwater Emergent Wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes x No ___	
Wetland Hydrology Present?	Yes x No ___	

Remarks:

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1. *Pinus jeffreyii*	5		
2. *Pinus contorta*	2		
3.			
4.			
	7 Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0 Total Cover		
Herb Stratum (Plot size: ___)			
1. *Carex integra*	90	Y	OBL
2. *Poa pratensis*	5		FAC
3. *Lolium pratense*	5		-
4.			
5.			
6.			
7.			
8.			
	100 Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0 Total Cover		

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species		x 5 =	0
Column Totals:	95 (A)		105 (B)

Prevalence Index = B/A = 1.11

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type	LOC[2]	Texture	Remarks
12	10 YR 3/4	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___	Histosol (A1)	X	Sandy Redox (S5)	___	
___	Histic Epipedon (A2)	___	Stripped Matrix (S6)	___	2 cm Muck (A10) (LRR B)
___	Black Histic (A3)	___	Loamy Mucky Mineral(F1)	___	Very Shallow Dark Surface
___	Hydrogen Sulfide (A4)	___	Loamy Gleyed Matrix (F2)	___	Red Parent Material (TF2)
___	Depleted Below Dark Surface (A11	___	Depleted Matrix (F3)	___	Other (Explain in Remarks)
___	Thick Dark Surface (A12)	___	Redox Dark Surface (F6)		
___	Depleted Below Dark Surface (A11	___	Depleted Dark Surface (F7)		
___	Sandy Mucky Mineral (S1)	___	Redox Depressions (F8)		
___	Sandy Gleyed Matrix (S4)	___			

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) ___
Water Table Present? Yes ___ No X Depth (inches) ___
Saturation Present? Yes ___ No X Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-3
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879073 Longitude: -120.4139 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: Freshwater Emergent Wetland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X No ___	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus jeffreyii*	5		-
2.			
3.			
4.			
	5 Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0 Total Cover		
Herb Stratum (Plot size: ___)			
1. *Rumex acetosella*	5		FACU
2. *Verbescum thapsus*	2		FACU
3. *Carex fracta*	80	Y	FAC
4. *Juncus tenuis*	1	5	FAC
5. *Leymus triticoides*	2		FAC
6.			
7.			
8.			
	90 Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0 Total Cover		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	83	x 3 =	249
FACU species	2	x 4 =	8
UPL species		x 5 =	0
Column Totals:	85 (A)		257 (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	LOC[2]	Texture	Remarks
6	10 YR 3/3	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	_X_ Sandy Redox (S5)	___	
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___	2 cm Muck (A10) (LRR B)
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___	Very Shallow Dark Surface
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___	Red Parent Material (TF2)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	___	Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)		
___ Depleted Below Dark Surface (A11'	___ Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)		
___ Sandy Gleyed Matrix (S4)	___		

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes _X_ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:
Surface Water Present? Yes ___ No _X_ Depth (inches) ___
Water Table Present? Yes ___ No _X_ Depth (inches) ___
Saturation Present? Yes ___ No _X_ Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No _X_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-4
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 18, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.878934 Longitude: -120.4137 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus jeffreyii*	40	X	-
2. *Abies concolor*	20		-
3.			
4.			
	60	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Lotus corniculatus*	1		FAC
2. *Verbascum thapsus*	1		FACU
3. *Achillea millefolium*	5		FACU
4. *Cynosurus echinatus*	1		-
5. *Leptosiphon ciliatus*	3		-
6.			
7.			
8.			
	11	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	1	x 3 =	3
FACU species	6	x 4 =	24
UPL species		x 5 =	0
Column Totals:	7 (A)		27 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	LOC[2]	Texture	Remarks
8	10 YR 3/2	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10) (LRR B)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ Very Shallow Dark Surface
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Red Parent Material (TF2)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Other (Explain in Remarks)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)		

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:
Surface Water Present? Yes ___ No X Depth (inches) ___
Water Table Present? Yes ___ No X Depth (inches) ___
Saturation Present? Yes ___ No X Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-5
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879061 Longitude: -120.4135 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	X No X	
Wetland Hydrology Present?	Yes ___ No ___	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus jeffreyii*	10		-
2. *Abies concolor*	5		-
3.			
4.			
	15	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Rumex acetosella*	5		FACU
2. *Bromus tectorum*	5		-
3. *Hypericum perforatum*	5		FACU
4. *Carex fracta*	30	X	FAC
5. *Leptosiphon ciliatus*	1		-
6.			
7. *Achillea millefolium*	5		FACU
8.			
	51	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	15	x 4 =	60
UPL species	___	x 5 =	0
Column Totals:	45 (A)		150 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL

Sampling Point: WD-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	LOC[2]	Texture	Remarks
8	10YR 4/4	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10) (LRR B)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ Very Shallow Dark Surface
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Red Parent Material (TF2)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Other (Explain in Remarks)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)		

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes_____ No__X__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:

Surface Water Present? Yes___ No X Depth (inches) _____

Water Table Present? Yes___ No X Depth (inches) _____

Saturation Present? Yes___ No X Depth (inches) _____

(includes capillary fringe)

Wetland Hydrology Present? Yes___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-1
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus jeffreyii*	25		-
2.			
3.			
4.			
	25	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Carex fracta*	5		FAC
2. *Stipa occidentalis*	15	Y	-
3. *Rumex acetosella*	15		FACU
4. *Madia elegans*	5		-
5. *Leptosiphon ciliatus*	1		-
6. *Lupinus fulcratus*	1		-
7.			
8.			
	42	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	15	x 4 =	60
UPL species		x 5 =	0
Column Totals:	20 (A)		75 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

US Army Corp of Engineers

Western Mountains, Valleys and Coast Region

SOIL

Sampling Point: WD-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type	LOC[2]	Texture	Remarks
12	10 YR 3/2	100					sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10) (LRR B)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ Very Shallow Dark Surface
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Red Parent Material (TF2)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Other (Explain in Remarks)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) _____

Water Table Present? Yes ___ No X Depth (inches) _____

Saturation Present? Yes ___ No X Depth (inches) _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-1
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Abies concolor*	50	X	-
2. *Calocedrus decurrens*	10		-
3.			
4.			
	60	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Viola adunca*	1		FAC
2. *Adenocaulon bicolor*	5		-
3. *Fragaria virginiana*	5		FACU
4. *Sphagnum ssp.*	25		-
5.	1		
6.			
7.			
8.			
	37	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	1	x 3 =	3
FACU species	5	x 4 =	20
UPL species		x 5 =	0
Column Totals:	6 (A)		23 (B)

Prevalence Index = B/A = 3.83

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL

Sampling Point: WD-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type	Redox Features LOC[2]	Texture	Remarks
12	2.5 YR 3/2	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11
- ___ Thick Dark Surface (A12)
- ___ Depleted Below Dark Surface (A11)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral(F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Very Shallow Dark Surface
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface
- ___ Algal Mat or Crust
- ___ Iron Deposits
- ___ Salt Crust (B11)
- ___ Water Stained Leaves
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Stained Leaves
- ___ Raised Ant Mounds
- ___ Frost Heave Hummocks
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Geomorphic Position

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) ___
Water Table Present? Yes ___ No X Depth (inches) ___
Saturation Present? Yes ___ No X Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-8
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): meadow Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: Freshwater emergent
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X No ___	
Wetland Hydrology Present?	Yes X No ___	

Remarks:

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
	0	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Alnus incana ssp. tenuifolia*	5		FACW
2.			
3.			
4.			
5.			
	5	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Carex utriculata*	50	Y	OBL
2. *Scirpus microcarpus*	10		OBL
3. *Veratrum californicum*	5		FAC
4. *Erythranthe guttata*	1		OBL
5. *Epilobium angustifolium*	3		-
6. *Camassia leichtlinii ssp. suksdorfii*	1		FACW
7.			
8.			
	70	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	61	x 1 =	61
FACW species	6	x 2 =	12
FAC species	5	x 3 =	15
FACU species	32	x 4 =	128
UPL species		x 5 =	0
Column Totals:	104 (A)		216 (B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type	LOC[2]	Texture	Remarks
8	7.5 YR 2.5/1	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

	Histosol (A1)		Sandy Redox (S5)		
	Histic Epipedon (A2)	X	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
X	Black Histic (A3)		Loamy Mucky Mineral(F1)		Very Shallow Dark Surface
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
	Depleted Below Dark Surface (A11		Depleted Matrix (F3)		Other (Explain in Remarks)
	Thick Dark Surface (A12)		Redox Dark Surface (F6)		
	Depleted Below Dark Surface (A11		Depleted Dark Surface (F7)		[3]Indicators of hydrophytic vegetation and wetland hydrology
	Sandy Mucky Mineral (S1)		Redox Depressions (F8)		must be present, unless disturbed or problematic.
	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):
Type:
Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)			Secondary Indicators (2 or more required)
Surface Water (A1)		Salt Crust (B11)	Water Stained Leaves
High Water Table (A2)		Water Stained Leaves	Raised Ant Mounds
Saturation (A3)		Aquatic Invertebrates (B13)	Frost Heave Hummocks
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2)		Oxidized Rhizospheres along Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)		Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)		Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C2)
Inundation Visible on Aerial Imagery (B7)		Stunted or Stressed Plants	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface		Other (Explain in Remarks)	FAC-Neutral Test (D5)
Algal Mat or Crust			Geomorphic Position
Iron Deposits			

Field Observations:
Surface Water Present? Yes No X Depth (inches)
Water Table Present? Yes No X Depth (inches)
Saturation Present? Yes X No Depth (inches)
(includes capillary fringe)

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-9
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X No ___	
Wetland Hydrology Present?	Yes X No ___	

Remarks:

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1. *Pinus jeffreyii*	5		-
2.			
3.			
4.			
	5	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Rhododendron occidentale*			FAC
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Bistorta bistortoides*	10		FACW
2. *Scirpus microcarpus*	20	Y	OBL
3. *Veratrum californicum*	2		FAC
4. *Erythranthe guttata*	3		OBL
5. *Poa pratensis*	40	Y	FAC
6. *Camassia leichtlinii ssp. suksdorfii*	3		FACW
7.			
8.			
	78	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	23	x 1 =	23
FACW species	13	x 2 =	26
FAC species	42	x 3 =	126
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	78 (A)		175 (B)

Prevalence Index = B/A = 2.24

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL Sampling Point: WD-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type	Redox Features LOC[2]	Texture	Remarks
12	7.5 YR 3/2	100					Mucky loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

X Histosol (A1)	Sandy Redox (S5)		
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
Black Histic (A3)	X Loamy Mucky Mineral(F1)		Very Shallow Dark Surface
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
Depleted Below Dark Surface (A11	Depleted Matrix (F3)		Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11	Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)		
Sandy Gleyed Matrix (S4)			

Restrictive Layer (if present):
Type:
Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
X Surface Water (A1)	Salt Crust (B11)	Water Stained Leaves
X High Water Table (A2)	Water Stained Leaves	Raised Ant Mounds
X Saturation (A3)	Aquatic Invertebrates (B13)	Frost Heave Hummocks
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living Roots (C3)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C2)
Inundation Visible on Aerial Imagery (B7)	Stunted or Stressed Plants	Shallow Aquitard (D3)
Sparsely Vegetated Concave Surface	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Algal Mat or Crust		Geomorphic Position
Iron Deposits		

Field Observations:
Surface Water Present? Yes X No Depth (inches)
Water Table Present? Yes X No Depth (inches) 2
Saturation Present? Yes X No Depth (inches)
(includes capillary fringe)

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-18
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): D Latitude: 38.879483 Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Calocedrus decurrens*	10		-
2. *Pinus jeffreyii*	40		-
3. *Pinus ponderosa*	60	X	FACU
4. *Abies concolor*	2		-
	112	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Rhododendron occidentale*	3		FAC
2.			
3.			
4.			
5.			
	3	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Taraxacum officinale*	2		FACU
2. *Chrysolepis sempervirens*	5		-
3. *Equisetum arvense*	2		FAC
4. *Hypericum perforatum*	5		FACU
5. *Collomia grandiflora*	3		-
6.			
7.			
8.			
	17	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	67	x 4 =	268
UPL species		x 5 =	0
Column Totals:	72 (A)		283 (B)

Prevalence Index = B/A = 3.93

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

US Army Corp of Engineers
Western Mountains, Valleys and Coast Region

SOIL Sampling Point: WD-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type	LOC[2]	Texture	Remarks
12	5 YR 3/3	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10) (LRR B)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ Very Shallow Dark Surface
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Red Parent Material (TF2)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Other (Explain in Remarks)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11	___ Depleted Dark Surface (F7)	
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)		

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust		___ Geomorphic Position
___ Iron Deposits		

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) ___
Water Table Present? Yes ___ No X Depth (inches) ___
Saturation Present? Yes ___ No X Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-11
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5
Subregion (LRR): D Latitude: 38.879483□ Longitude: -120.4142 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___ No X	Is the Sampled Area within a Wetland? Yes ___ No X
Hydric Soil Present?	Yes ___ No X	
Wetland Hydrology Present?	Yes ___ No X	

Remarks:

VEGETATION - Use scientific names of plants

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Calocedrus decurrens*	40		-
2.			
3. *Pinus ponderosa*	40	X	FACU
4. *Abies concolor*	10		-
	90	Total Cover	

Sapling/Shrub Stratum (Plot size: ___)			
1.			-
2.			
3.			
4.			
5.			
	0	Total Cover	

Herb Stratum (Plot size: ___)			
1. *Adenocaulon bicolor*	5		-
2. *Ribes roezlii var. roezlii*	1		-
3. *Equisetum arvense*	20		FAC
4. *Goodyera oblongifolia*	1		FACU
5. *Galium triflorum*	1		FACU
6.			
7.			
8.			
	28	Total Cover	

Woody Vine Stratum (Plot size: ___)			
1			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species		x 5 =	0
Column Totals:	60 (A)		220 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes ___ No X

US Army Corp of Engineers Western Mountains, Valleys and Coast Region

SOIL Sampling Point: WD-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	LOC[2]	Texture	Remarks
12	5 YR 3/3	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___ Histosol (A1)	___ Sandy Redox (S5)	___
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 2 cm Muck (A10) (LRR B)
___ Black Histic (A3)	___ Loamy Mucky Mineral(F1)	___ Very Shallow Dark Surface
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Red Parent Material (TF2)
___ Depleted Below Dark Surface (A11	___ Depleted Matrix (F3)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Dark Surface (F6)	
___ Depleted Below Dark Surface (A11	___ Depleted Dark Surface (F7)	[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
___ Sandy Mucky Mineral (S1)	___ Redox Depressions (F8)	
___ Sandy Gleyed Matrix (S4)	___	

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

		Secondary Indicators (2 or more required)
___ Surface Water (A1)	___ Salt Crust (B11)	___ Water Stained Leaves
___ High Water Table (A2)	___ Water Stained Leaves	___ Raised Ant Mounds
___ Saturation (A3)	___ Aquatic Invertebrates (B13)	___ Frost Heave Hummocks
___ Water Marks (B1)	___ Hydrogen Sulfide Odor (C1)	___ Drainage Patterns (B10)
___ Sediment Deposits (B2)	___ Oxidized Rhizospheres along Living Roots (C3)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Presence of Reduced Iron (C4)	___ Crayfish Burrows (C8)
___ Surface Soil Cracks (B6)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Saturation Visible on Aerial Imagery (C2)
___ Inundation Visible on Aerial Imagery (B7)	___ Stunted or Stressed Plants	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface	___ Other (Explain in Remarks)	___ FAC-Neutral Test (D5)
___ Algal Mat or Crust	___	___ Geomorphic Position
___ Iron Deposits		

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) ___
Water Table Present? Yes ___ No X Depth (inches) ___
Saturation Present? Yes ___ No X Depth (inches) ___
(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Union Valley City/County: El Dorado Sampling Date: 6/20/2024
Applicant/Owner: Michael Kuhl State: CA Sampling Point: WD-12
Investigator(s): Jeremy Waites, Summer Abel Section, Township, Range: Section 16, T12N, R14E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): D Latitude: 38.8898 Longitude: -120.4129 Datum: WGS84
Soil Map Unit Name: Pilliken coarse sandy loam, 5 to 30 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes? X No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ___	Is the Sampled Area within a Wetland? Yes X No ___
Hydric Soil Present?	Yes X No ___	
Wetland Hydrology Present?	Yes X No ___	

Remarks:

VEGETATION - Use scientific names of plants

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
	0	Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Alnus incana ssp. tenuifolia*	25		FACW
2.			
3.			
4.			
5.			
	25	Total Cover	
Herb Stratum (Plot size: ___)			
1. *Equisetum arvense*	50	X	FAC
2. *Artemisia douglasiana*	5		FACW
3. *Erythranthe guttata*	5		OBL
4. *Scirpus microcarpus*	5		OBL
5. *Pteridium equilinum ver. pubescens*	1		FACU
6. *Poa pratensis*	20		FAC
7. *Senecio triangularis*	10		FACW
8.			
	96	Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	0	Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	40	x 2 =	80
FAC species	70	x 3 =	210
FACU species	1	x 4 =	4
UPL species		x 5 =	0
Column Totals:	121 (A)		304 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

Hydrophytic Vegetation Present?
Yes X No ___

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

SOIL

Sampling Point: WD-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type	LOC[2]	Texture	Remarks
8	5 YR 3/2	100					Loamy muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils[3]:

___	Histosol (A1)	X	Sandy Redox (S5)	___	
___	Histic Epipedon (A2)	___	Stripped Matrix (S6)	___	2 cm Muck (A10) (LRR B)
___	Black Histic (A3)	___	Loamy Mucky Mineral(F1)	___	Very Shallow Dark Surface
___	Hydrogen Sulfide (A4)	___	Loamy Gleyed Matrix (F2)	___	Red Parent Material (TF2)
___	Depleted Below Dark Surface (A11	___	Depleted Matrix (F3)	___	Other (Explain in Remarks)
___	Thick Dark Surface (A12)	___	Redox Dark Surface (F6)		
___	Depleted Below Dark Surface (A11	___	Depleted Dark Surface (F7)		
X	Sandy Mucky Mineral (S1)	X	Redox Depressions (F8)		
___	Sandy Gleyed Matrix (S4)	___			

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)	
___	Surface Water (A1)	___	Salt Crust (B11)	___	Water Stained Leaves
___	High Water Table (A2)	___	Water Stained Leaves	___	Raised Ant Mounds
X	Saturation (A3)	___	Aquatic Invertebrates (B13)	___	Frost Heave Hummocks
___	Water Marks (B1)	___	Hydrogen Sulfide Odor (C1)	___	Drainage Patterns (B10)
___	Sediment Deposits (B2)	___	Oxidized Rhizospheres along Living Roots (C3)	___	Dry-Season Water Table (C2)
___	Drift Deposits (B3)	___	Presence of Reduced Iron (C4)	___	Crayfish Burrows (C8)
___	Surface Soil Cracks (B6)	___	Recent Iron Reduction in Tilled Soils (C6)	___	Saturation Visible on Aerial Imagery (C2)
___	Inundation Visible on Aerial Imagery (B7)	___	Stunted or Stressed Plants	___	Shallow Aquitard (D3)
___	Sparsely Vegetated Concave Surface	___	Other (Explain in Remarks)	___	FAC-Neutral Test (D5)
___	Algal Mat or Crust	___		___	Geomorphic Position
___	Iron Deposits				

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches) _____

Water Table Present? Yes ___ No X Depth (inches) _____

Saturation Present? Yes X No ___ Depth (inches) _____

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Western Mountains, Valleys and Coast Region

US Army Corp of Engineers

Appendix B

Photographs from Data Collection


WD1
06/20/24 10:32


WD2
06/20/24 10:42


WD3
06/20/24 11:14


WD4
06/20/24 11:15


WD5
06/20/24 11:15


WD6
06/20/24 11:25


WD7
06/20/24 13:03


WD8
06/20/24 13:10


WD9
06/20/24 13:18


WD10
06/20/24 13:35


WD11
06/20/24 14:05


WD12
06/20/24 14:07

DocuSign Envelope ID: 8961C4BC-6630-4188-9C44-8C8776356F81

WUI Fire Safe Plan



Kuhl Single-Family Residential Dwelling
El Dorado County Parcels # 011-030-055 / 011-030-058
County of El Dorado CUP24-0000
July 9, 2024

Phillips Consulting Services

4328 Empire Creek Circle, Georgetown, CA 95634
E-Mail: Rphillips3401@yahoo.com
Cell Phone # 530.217.7432

PREPARED FOR THE COUNTY OF EL DORADO

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PLAN APPROVAL SHEET

The Kuhl Single-Family Residential Dwelling WUI Fire Protection Plan (Fire Safe Plan or FSP) for El Dorado County Permit # CUP24-000 has been designed to mitigate the wildfire risk presented for the single-family residential dwelling project at El Dorado County Parcel #'s 011-030-055 and 011-030-058 in Pollock Pines, CA. The plan has been developed to conform with California Code of Regulations Title 14 §§ 1270-1276 (Fire Safe Regulations), California Code of Regulations Title 24, Part 9 – § 4903 (Plans) and El Dorado County Fire Protection Standard W-002 (Wildland Urban Interface Fire Protection Plans).

The Kuhl Single-Family Residential Dwelling WUI Fire Safe Plan has been reviewed and approved by the following fire agencies located in El Dorado County:

DATE PUBLISHED: July 9, 2024

PREPARED BY:

DocuSigned by:
Ronald Phillips, Jr.
DFF4B5E2CDDA4C4...

Ronald A. Phillips
Phillips Consulting Services

APPROVED BY:

DocuSigned by:
Jeff Hoag
EF9F8B40873747E...

Jeff Hoag, Battalion Chief
CAL FIRE – AEU

FORWARD

The following **Kuhl Single-Family Residential Dwelling** WUI Fire Protection Plan (Fire Safe Plan or FSP) has been prepared for the Kuhl Single-Family Residential Dwelling (Project) in Pollock Pines, California. This FSP for the Project meets the requirements described in Chapter 49 of the California Fire Code and various other State and County statues and regulations. The FSP addresses the following topics:

- Project Scope
- Fire Risk Analysis
- Fuel Modification Practices for the Project
- Fire Safety Plan Recommendations
- Plan Appendix Materials

The goals of this Fire Safe Plan are as follows:

- Reduce the exposure of vulnerable buildings to high intensity flames.
- Reduce the quantity of embers accumulating at a building based on factors related to the building characteristics and adjacent fuel treatments.
- Reduce the likelihood of urban conflagration due to treatment of fuels in proximity to buildings.

The FSP specifically applies to the Kuhl Single-Family Residential Dwelling Project (CUP24-000). The FSP provides a framework for protection of residents and visitors from natural hazards, the prevention of fire, and preparation for responding to an emergency evacuation of the Project should the need arise. The FSP is intended to be utilized during the development, construction, and occupancy phases of the Project.

For the purpose of interpreting and applying the provisions found within each chapter the terms shall and should are found throughout. The use of the term “shall” refer to requirements of the Plan as mandated through State statue or regulation. The use of the term “should” refer to recommendations cited in the document by the authors. Refer to Chapter 5 – Appendix A for a Glossary of Terms associated with this Project.

CHAPTER 1: INTRODUCTION

1.1 Plan Purpose, Project Location, Description and Environmental Setting

1.1.1 Plan Purpose

The purpose of this plan is to generate and memorialize the fire safety requirements of the Fire Authority Having Jurisdiction (FAHJ), namely the California Department of Forestry and Fire Protection (CAL FIRE), during all phases of the development process. Recommendations for effectively mitigating identified impacts are based on site-specific characteristics and incorporate input from the project applicant and CAL FIRE. This FSP incorporates applicable fire safety regulations and requirements and documents a selection of these regulations that are most pertinent to the Project's unique residential development and location.

This FSP has been prepared for the proposed Project in unincorporated area of Pollock Pines in El Dorado County, California. The purpose of the FSP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate those impacts. As part of the assessment, this plan has considered the fire risk presented by the site including: property location and topography, geology (soils and slopes), combustible vegetation (fuel types), climatic conditions, fire history and the proposed land use and configuration.

This FSP addresses water supply, access, structural ignitability and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management. This plan identifies fuel modification/management zones and recommends the types and methods of treatment that will protect this project and its essential infrastructure. In addition, this FSP recommends enhanced fire protection measures that the Project and the property owners will take to reduce the probability of structural ignition during the occupancy phase of the Project.

The FSP should be updated no less than once every 5 years or as changes to state and local regulations occur to ensure that the plan can be effectively utilized by all stakeholders.

1.1.2 Location

The Project is located north of Union Valley Reservoir in the unincorporated area of Pollock Pines, California. The El Dorado County Assessor Parcel Numbers for the project are # 011-030-055 and 011-030-058. The Project is approximately 65.78 acres in size, and is currently zoned as a Timberland Preserve Zone (TPZ) parcel. The map coordinate for the Project is 38.88145, -120.41552. The Project applicant is Mr. Michael J. Kuhl of San Rafael, CA. See Figure 1 for an area map for the Project site.

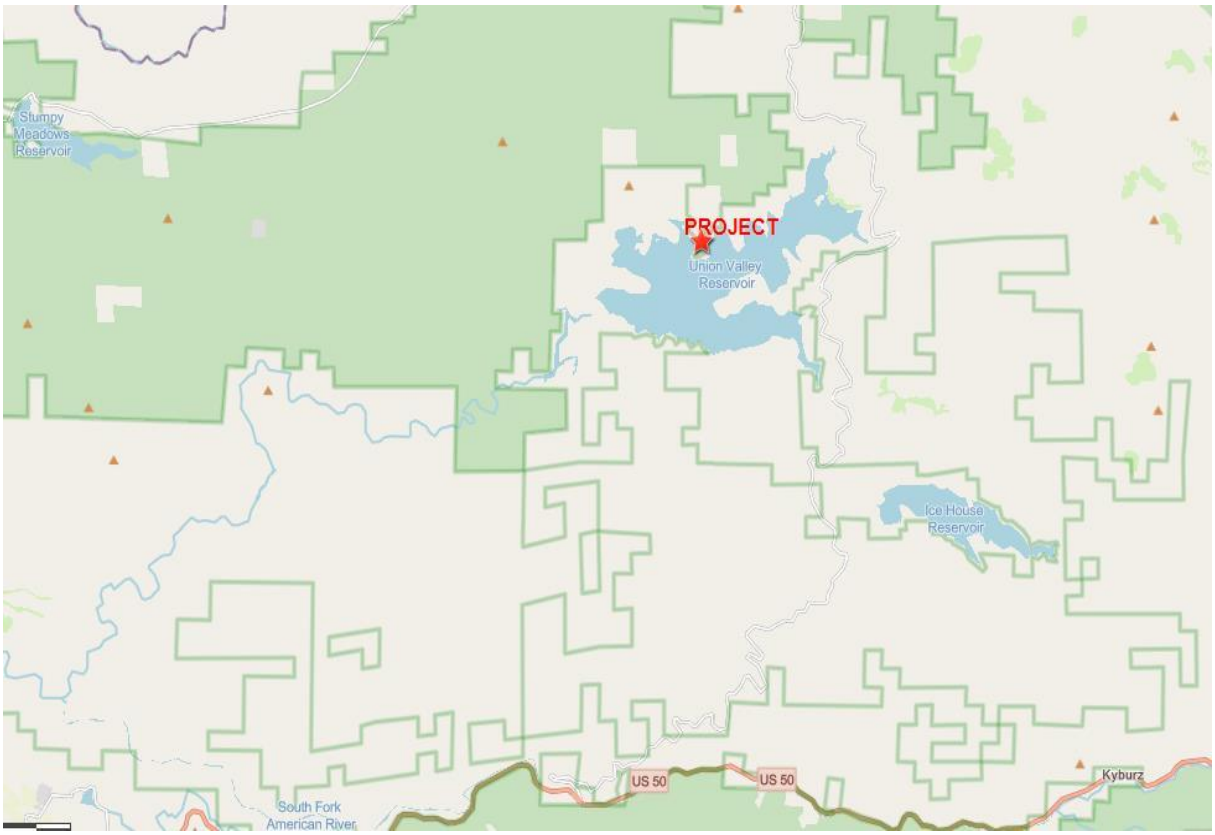


Figure 1: Area Map

1.1.3 Project Description

The Project is seeking to obtain a Conditional Use Permit (CUP) from the County of El Dorado for the construction of a 2,556 square foot, multi-story single-family residential dwelling (SFD). The Project will be located on the southern end of the parcel near the Union Valley Reservoir. See Appendix F for a Preliminary Site and Grading Plan, dated February, 2024, for the Project.

The Project is partially developed at this time with an existing historic building on the south end of the property. The Project site will be accessed by a private driveway that connects the parcel to Forest Service Road 12N30. The existing 10-foot-wide unimproved driveway is approximately 4,000 feet in length, and is located within an existing 50-foot-wide road and emergency access easement. See Figure 2 for the existing land use condition of the Project.



Figure 2: Existing Land Use Condition at Homesite

The Project is bordered by the following adjoining properties:

- **North Side** – A 120-acre unimproved parcel, APN # 011-030-004, is located north of the Project. The parcel is zoned TPZ.

- **West Side** – A 40.80-acre unimproved parcel, APN # 011-030-054, and a 42.75-acre unimproved parcel, APN # 011-030-057 are located west of the Project. Both parcels are zoned TPZ.

- **East Side** – A 20.10-acre unimproved parcel, APN # 011-030-056, and a 44.74-acre unimproved parcel, APN # 011-030-059 are located east of the Project. Both parcels are zoned TPZ.

- **South Side** – A 210.60-acre exempt parcel is located south of the Project. The parcel is zoned as Vacant Recreational Land. Union Valley Reservoir is also located south of the Project.

See Figure 3 for a photo the shows the proposed SFD location in proximity to the existing historic building on the south end of the parcel.



Figure 3: Proposed Project Location and Historic Building Looking East

1.1.4 Environmental Setting

A site inspection of the parcel was conducted on May 22, 2024, by myself, Battalion Chief Jeff Hoag from CAL FIRE and Mr. Michael J. Kuhl. Access to the Project is gated by a manual swing gate from Forest Service Road 12N30. The Project was evaluated using personal observations, site plans provided prior to the site visit, and architectural plans made available on-site by Mr. Kuhl.

The Project is located in a densely forested area and is adjacent to both public and private lands used for timber harvesting, hydroelectric power generation, and recreation uses. The lands are generally described as being mixed-conifers. No significant tree mortality was observed near the Project site. See Figure 4 for a photo that shows the proposed SFD location on the parcel.



Figure 4: Proposed Project Looking West

Chapter 2: FIRE PROTECTION PLANNING

2.1 Fire Hazard Versus Fire Risk

The threat of wildfire exposure to people, critical infrastructure, structures, and communities is based upon a comprehensive vulnerability assessment of an area. This vulnerability assessment is usually completed through the evaluation of both *fire hazard* and *fire risk* factors. The term "hazard" describes the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fires intensity or rate of spread such as topography or weather conditions. The term "risk" describes the potential damage a fire can cause to buildings, critical assets/infrastructure, and other values at risk in individual open space areas and other wildland urban interface areas.

Landowners, managers, and fire officials need to consider the potential fire hazard and risk factors that may make their community vulnerable to a wildfire when making land management and development decisions in fire-prone areas[1]. This assessment also aids fire agencies in the preparation of pre-incident plans and resource deployment actions such as fire equipment staffing levels and resource placement during critical fire periods. This assessment should consider the factors described in Table 1 when assessing the wildfire exposure potential for an area:

Table 1: **Hazard and Risk Assessment Factors**

Hazard Assessment Factors	Risk Assessment Factors
• Vegetation (fuel) types present • Topography of the area • Weather conditions present during both seasonal and critical fire weather periods • Other criteria as determined by either CAL FIRE or the local fire agency	• Size and configuration of the WUI • Proximity of structures to the WUI • Building construction and defensible space provisions for structures near the WUI • Emergency access including public/private roads and trails • Local Fire Protection Capabilities • Water supply sources and other risk factors

[1] Wildfire Hazard and Risk Assessment, United Nations Office for Disaster Risk Reduction, 2017

2.2 Fire Hazard Assessment for the Project

The term Fire Hazard refers to the dangerous accumulation of flammable fuels in open space areas and other wildland urban interface areas (WUI). It is typically described at the landscape (area) level, usually referring to the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fires intensity or rate of spread. Fire hazard is based on the vegetation types likely to be present over the next 50 years that contribute to fire severity and ember production, the topography of the area and the average fire weather conditions present in the area.

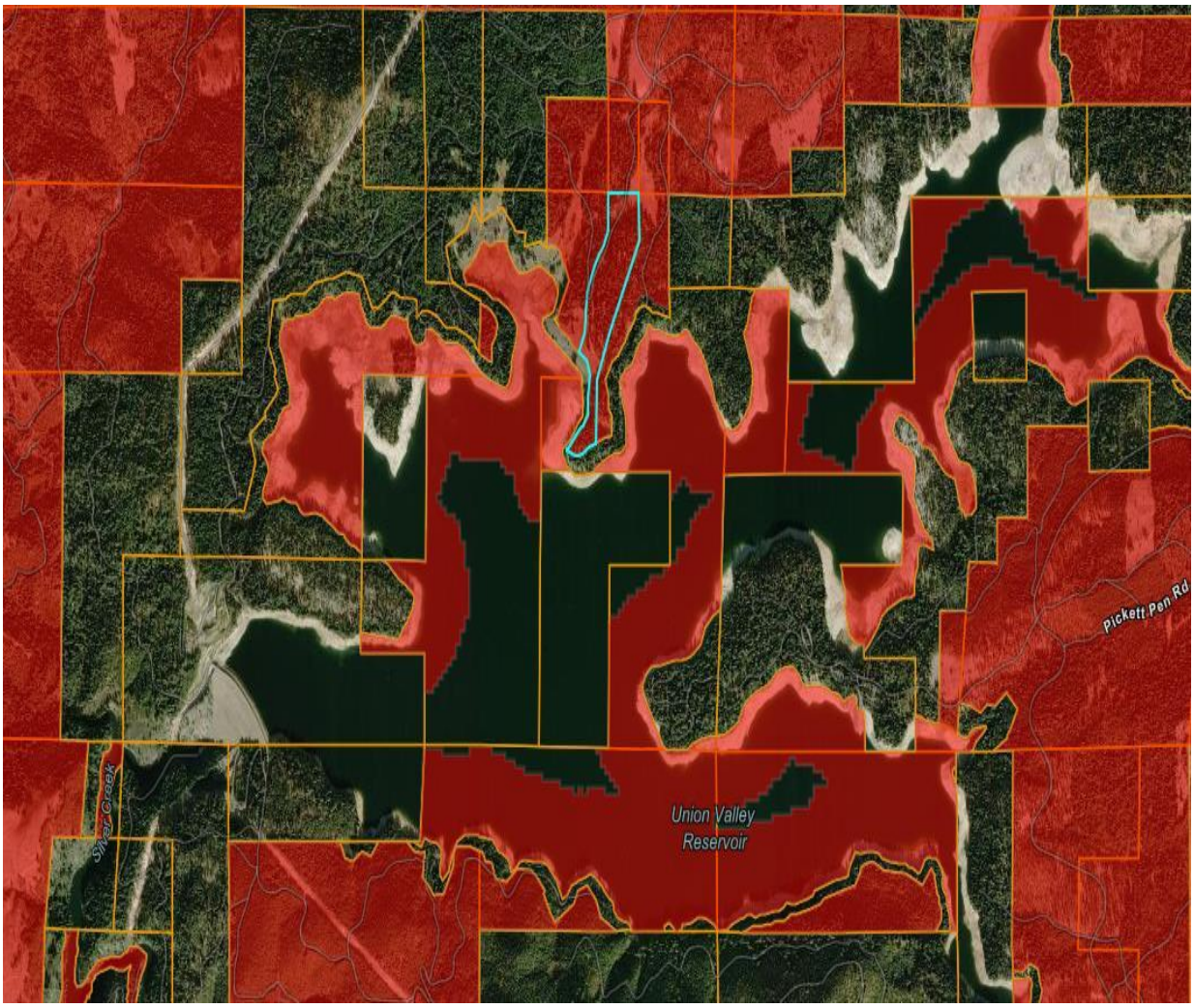
Fire Hazard ratings are provided by CAL FIRE as part of their *Fire Hazard Zone Severity Mapping* program. One of the major hazards in the Western El Dorado County region is the threat of a disastrous wildfire endangering both people and property. The Project is also located within a designated[2] Wildland Urban Interface (WUI) community identified by the Federal Government as being at risk from a large wildfire due to fire behavior potential and values at risk.

The area is vulnerable to the threat of wildfire throughout the year subject to a variety of conditions including, but not limited to:

- Daily weather conditions such as air temperature, humidity, wind speed and direction.
- Climatic conditions such as drought, extended seasonal periods of hot, dry weather typically found in the summer and fall months, or seasonal rains typically found in the winter and spring months.
- Fuel moisture and growth cycle periods, especially in fine fuels such as the herbs and shrubs that are prevalent in the area.
- Human caused ignition factors such as arson, escaped debris burns and unsafe equipment operation.

[2] Federal Register *Urban Wildland Interface Communities within the Vicinity of Federal Lands that are at High Risk from Wildfires; (January, 2001);* Federal Register :: Urban Wildland Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire

The Project area is located within a State Responsibility Area (SRA) for fire management. The current CAL FIRE Hazard Severity Zone[3] Map for El Dorado County identifies the Project as being inside a **Very-High Fire Hazard Severity Zone (VHFHSZ).** All lands within 1,000 feet of the Project are located within either an SRA **VHFHSZ** zone or Federal Responsibility Area (FRA) lands. See Figure 4 for the Fire Hazard Map information for the Project and surrounding community.



Red State Responsibility Area (SRA) Very-High Fire Hazard Severity Zone
No Color Federal Responsibility Area (FRA) - No Fire Hazard Classification

Figure 4: Fire Hazard Severity Zone Classification for the Project Site

[3] CAL FIRE; Fire Hazard Severity Zone Map for El Dorado County (April, 2024); Fire Hazard Severity Zones in State Responsibility Area - El Dorado County (azureedge.net).

2.3 Historical Fire Weather Conditions in the Project Area

Fire weather in El Dorado County is typically dominated by three general weather phenomena; the Delta push influence, north wind events, and east foehn winds caused by high pressure development in the Great Basin[4]. All three weather conditions cause potential increases in fire intensity and size. The Delta influence is the most common and occurs frequently throughout the summer.

Characteristically, high pressure systems will dominate Northern California in the summer months bringing extremely hot and dry conditions over much of the region. As these systems develop, they tend to originate near the Delta and Sacramento areas bringing the marine influence to the area. This is generally considered a beneficial condition for fire behavior; slightly cooler afternoon temperatures and increases in relative humidity. However, the downside is the strong winds that typically accompany these patterns which can override any benefit that may come from cool, moist marine air.

This type of wind generally subsides after sundown causing fire behavior to drop off dramatically. The other critical wind patterns that are difficult to predict for El Dorado County are the northerly and easterly winds. They are relatively rare, and often are forecasted only the day before. Northerly or easterly winds are typically warmer and drier than most other wind patterns due to air compression. These conditions provide the perfect environment for increased fire intensity and large fire growth.

Predominant local weather patterns in the Project area[5] are characterized by warm, dry summers and cool, wet winters. Dry conditions traditionally begin around the beginning of May and last into late October. An average summer day is 95°- 105° Fahrenheit, winds from the southwest at 0-10 miles per hour, and relative humidity levels in the 15-25 percent range. Summer lightning storms are frequent in the area. On average, the strongest wind speeds in the Pollock Pines area occur in March through May, but winds can frequently exceed 20 mph throughout the local fire season period.

[4] See Strategic Fire Plan for Amador El Dorado Unit; 2023; 2023 Strategic Fire Plan Amador El Dorado Unit (ca.gov); P.5.
[5] Ben Bolt Remote Automated Weather Station Site; National Weather Service. https://weather.nifc.gov

2.4 Vegetation (Fuels)

The predominant fire fuel types found in the Union Valley area include White Fir (*Abies concolor*), Ponderosa Pine (*Pinus ponderosa)*, and meadow / grassland. No significant tree mortality was observed at the Project site. See Chapter 3 for additional details on the hazardous vegetation management requirements for the Project.

2.5 Topography

The topography in the general area of the Project is classified as being a "Mixed-conifer Forest" terrain type which transitions from the Central Valley area of California to the Sierra Nevada Mountain range. The Project is located in the Union Valley Reservoir area at an elevation range of between 4,880 – 5,080 feet above sea level. Existing slopes within the Project are generally between 20-40%. See Figure 5 for the existing topographic condition of the Project area.

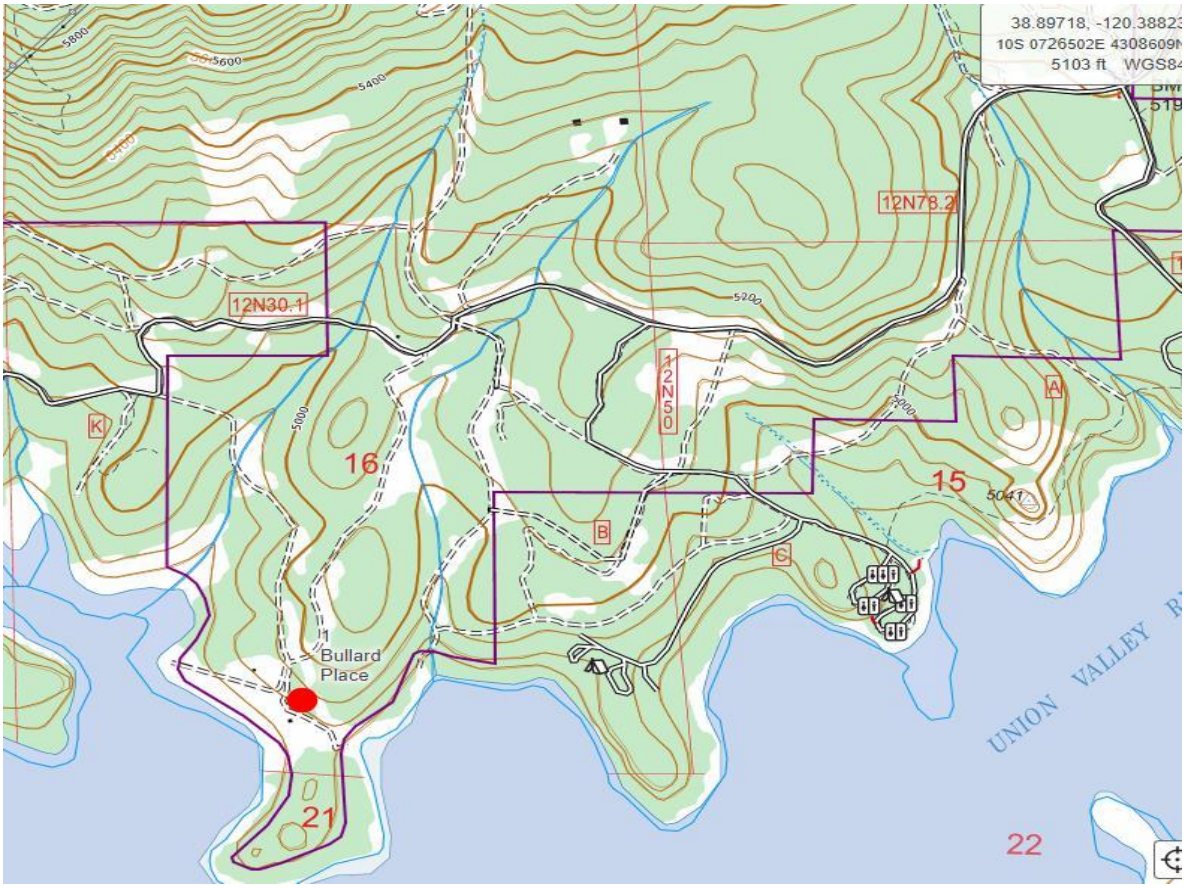


Figure 5: Topography Map for the Project and Surrounding Area

2.6 Wildfire History

According to CAL FIRE statistics the majority of wildland fires that have occurred in the El Dorado County area were human caused[6]. Common fire ignition sources have included arson, equipment failure, escaped debris burns, and vehicle related causes. Table 2 describes the significant wildland fire history in the vicinity of the Project area:

Table 2: **Pollock Pines Area Fire History** [7]

Year	Fire Name	Acres Damaged
1992	Cleveland	22,519
2002	Hunter	545
2004	Freds	7,558
2014	King	97,685
2021	Caldor	221,786

No recorded wildfires have impacted the Project site within the reporting period,

2.7 Fire Risk Assessment for the Project Area

A comprehensive fire risk analysis is an important component of the Fire Safety Plan for the Project. The term "risk[8]" describes the probability of adverse wildfire exposure to people, to structures, critical assets/infrastructure and other values at risk located in the WUI Zone. This fire risk assessment was performed for the Project to determine relative risk, the extent of the wildfire hazards present, and applicable mitigation measures as outlined in National Fire Protection Association Standard No. 1144 (*Assessing Wildland Fire Hazards in the Structure Ignition Zone*), 2018 Edition.

Risk factors examined as part of this Project analysis include the following:

- Existing Conditions Found on the Project Site
- Size and configuration of the Wildland Urban Interface (WUI) Zone Adjacent to the Project
- Proximity of Structures Within the Project to the WUI Zone

[6] 2023 *Strategic Fire Plan Amador-El Dorado-Alpine-Sacramento Unit;* P.60.
[7] Capitol Radio (2023) *A History of California Wildfires;* California Wildfire History Map (capradio.org)
[8] National Fire Protection Association Standard No 1144 (2018); Chapter 3, Section 3.3.19

- Building Construction of Structures and Hazardous Fuel Reduction Strategies Required to Reduce the Risk of Fire
- Emergency Vehicle Access Including Public/ Private Roads
- Local Fire Protection Capabilities
- Water Supply Sources for Fire Protection
- Critical Assets / Infrastructure at Risk

A detailed risk analysis of each of these points can be found below within this section.

2.8 Existing Conditions Found on the Project Site

The Project site is currently mostly undeveloped. An existing historic building is located at the south end the Project on the parcel. See Figure 6 for additional information on the existing condition of the Project site.



Figure 6: Existing Structure and Project Area

No high-voltage electric transmission power lines, essential service facilities, populations at risk, or critical infrastructure were identified within the current lands of the Project. See Chapter 5 - Appendix B for a complete inventory of the locations described as part of this Project.

2.9 Size and Configuration of the Wildland Urban Interface (WUI) Zone Adjacent to the Project

The Project is located approximately north of the Union Valley Reservoir. The Project is located within an area that is generally described as a wildland urban intermix zone[9]. Wildland vegetation is adjacent to the Project which will place the buildings on the property at very-high fire risk due to firebrands, embers, and crown fires from a wildfire within ½ mile of the parcel. Unless the buildings are properly designed to withstand this vulnerability and defensible space is maintained, the Project will be vulnerable to destruction during a wildland fire.

2.10 Building Construction and Fuel Modification Strategies Required to Reduce the Risk of Fire

New buildings constructed within the Project shall comply with the current requirements of the California Building Standards Code (CBSC). The new single-family residential dwellings shall be provided with an approved automatic fire sprinkler system, as required by State law, and County of El Dorado Planning & Building Department requirements. Accessory buildings, detached garages, outdoor living space buildings, and other miscellaneous buildings located on the property shall be constructed in accordance with the current CBSC requirements to reduce the risk of a fire spreading to the primary buildings on-site. For general building construction standards for new residential dwellings refer to the current California Building Standards Code located at: Codes (ca.gov).

The Project is proposing a future garage structure as an accessory structure to the SFD. The applicant indicates that the SFD will be provided with a detached solar power system and a liquified propane (LP) gas tank for heating and lighting of the SFD. The water well will be powered by the solar power supply and outfitted with a generator for secondary power. Both the

[9] A location where scattered house intermingle with wildland vegetation.

future accessory structure and the equipment supporting the SFD shall be designed, constructed, and maintained in accordance with the CBSC.

Single-family dwellings, storage buildings and accessory buildings constructed within the Project shall be constructed and maintained in accordance with the current design standards found in *California Building Code (CBC) Chapter 7A* (**Materials and Construction Methods for Exterior Wildfire Exposure**). Examples of where construction methods and other development activities shall meet the ignition resistant requirements found in this Chapter include, but are not limited to, the following:

- Class A roof assembly with a Class A roof covering, fire resistant valley flashing, and an approved means to prevent the accumulation of leaves and debris in roof gutters.
- Ventilation openings into enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces and underfloor ventilation openings.
- Exterior wall materials, decks, porches, balconies, stairs, and other projections.
- Roof eaves and exterior porch ceilings.
- Exterior windows, doors, glazing and skylights.
- Accessory buildings and miscellaneous buildings located within 50' of another building.

Areas located between 0-feet and 5-feet from a building shall remain non-combustible. Landscape materials and other vegetation located within 30' of buildings shall comply with the fire-resistant standards of CAL FIRE. Avoid planting highly flammable trees and shrubs such as those described in Appendix G.

Exterior decks that cantilever over the natural slope of the property shall be constructed of ignition-resistant materials and enclosed to reduce the potential of burning embers from a wildfire creating spot fires that can extend into the building.

Construction activities shall comply with California Fire Code (CCR T24 - Part 9), Chapter 33 (Fire Safety During Construction and Demolition) as required by CAL FIRE. The relevant provisions found in this Chapter of the fire code include:

- Section 3303 - Development of a Site Safety Plan
- Section 3304 - Temporary Heating Equipment

- Section 3305 - Precautions Against Fire
- Section 3306 - Flammable and Combustible Liquids
- Section 3307 - Flammable Gases
- Section 3308 - Explosive Materials
- Section 3309 - Portable Generators
- Section 3310 - Fire Reporting
- Section 3311 - Required Access for Emergency Vehicles
- Section 3313 - Water Supply for Fire Protection
- Section 3316 - Portable Fire Extinguishers
- Section 3317 - Motorized Construction Equipment

2.11 Emergency Vehicle Access Including Public/Private Roads

Emergency vehicle access to the Project is from Ice House Road onto Forest Service Roads 12N78 and 12N30. Both Forest Service roads are improved. The existing driveway to the Project is compacted soil. See Figure 7 for information showing the existing driveway serving the Project.



Figure 7: Existing Driveway Serving the Project

Primary emergency vehicle access for the Project site shall comply with all of the driveway requirements described in CCR Title 14 – Sections 1273.01. See Appendix E for additional information on the regulation provisions described below. An emergency vehicle access driveway shall be constructed from Road 12N30 to the Project site. This access driveway shall comply with the following measures:

a. The driveway shall provide a minimum of one (1) ten (10) foot traffic lane, not including shoulders and striping, with fourteen (14) feet unobstructed horizontal clearance, and an unobstructed vertical clearance of thirteen feet, six inches (13'6") as required by CCR Title 14 – Section 1273.01 (Width).

b. The driveway shall support the imposed load of fire apparatus weighing at least 40,000 pounds and shall provide an aggregate base, as required by CCR Title 14 – Section 1273.02 (Road Surface).

c. The driveway shall provide turnouts along the entire route from Road 12N30 to the dwelling at distances of no less than one for every 400-feet. Turnouts shall be constructed to a minimum of twelve (12) feet in width and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.

d. Road structures[10] shall be designed and maintained to support at least 40,000 pounds, as required by CCR Title 14 – Section 1273.02 (b).

e. At no point along the road shall the grade exceed 16%, as required by CCR Title 14 – Section 1273.03 (Grades).

f. No road or road structures shall have a horizontal inside radius or curvature of less than fifty (50) feet, as required by CCR Title 14 – Section 1273.04 (Radius).

[10] CCR Title 14 – Section 1270.01 (Road Structure) includes bridges, culverts, and other appurtenant structures which supplement the traffic lane or shoulders.

g. A turnaround shall be provided within fifty (50) feet of the building when the driveway is a dead-end. The minimum turning radius for the turnaround shall be forty (40) feet, not including parking, in accordance with Figure B of CCR Title 14 – Section 1273.05(f).

h. An area of no less than thirty (30) feet in length and ten (10) feet in width shall be constructed in front of the existing gated location from Road 12N30 to the Project to allow for a vehicle to stop without obstructing traffic on the road.

i. Gated entrances across the road shall comply with the requirements described in El Dorado County Fire Chiefs Association Standard No. B-002 (Automatic & Manual Gates on Fire Access Roadways & Driveways). This document can be accessed via the following link: Fire Prevention Officers - El Dorado County Fire Chiefs association (edchiefs.org).

The Project shall be issued an address by the County of El Dorado which conforms with its overall address system. The Project is currently described as **1 Bullard Place** by the applicant. This proposed address will need to be confirmed by the County to ensure that it does not conflict with other address number assignments in the area to avoid confusion during an emergency.

When the building address is located more than 150-feet from the road serving the Project the address sign shall be placed at the driveway entrance onto the parcel. The address sign shall meet the following additional criteria:

- Signs shall be mounted between 4-feet and 7-feet above grade.
- Posted no further than 5-feet from either the driveway or roadway travelled way, and on the same side of the road as the serviced driveway.
- Oriented perpendicular to the direction of travel on the roadway and legible from both directions of travel on the driveway.
- Address numbers shall be reflective and contrasting in color to the sign background, and with a number height of not less than 4-inches and with a stroke width of 1/2-inch.

Where multiple addresses are served by a single driveway they shall be mounted on a single sign or post at the driveway entrance from Forest Service Road 12N30 to the Project.

2.12 Local Fire Protection Capabilities

The Project location is not currently within a local government fire protection and rescue services service area[11]. Wildland and structural fire protection responsibility is under the authority of the California Department of Forestry and Fire Protection, Amador-El Dorado-Alpine-Sacramento Ranger Unit (CAL FIRE). Emergency medical services, including ground ambulance transport, are provided to the Project under the authority of El Dorado County.

The closest fire station to the Project area is CAL FIRE Station No. 20 located at 1 Mt. Danaher Road in the Camino community. Station 20 is approximately 35 miles west of the Project site. Services are provided by a minimum of one Type III fire engine staffed daily by three full-time firefighters.

The Project is located within an Insurance Service Office (ISO) Fire Suppression rating schedule class of 10Y[12]. CAL FIRE emergency response travel times for the first arriving unit to the Project are, on-average, less than forty-five (45) minutes[13]. These response times are consistent with El Dorado County General Plan Policy 5.1.2.2[14] which calls for an average response time to emergency calls of between fifteen (15) and forty-five (45) minutes in rural region areas.

2.13 Water Supply Sources for Fire Protection

The design, installation, and maintenance of the water supply system for fire protection shall be in accordance with CCR Title 14 §§ 1275-1275.04 (Emergency Water Standards) and CCR Title 24 – Part 9 (California Fire Code), Section 507 (Fire Protection Water Supplies).

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[11] Per phone communications on May 16, 2024, with Fire Marshal Braden Sterling of the El Dorado County Fire Protection District (ECF). The Project is outside the service area of ECF and the District has elected to not request the parcel be annexed into it at this time.
[12] ISO Class 10Y is assigned to areas without a municipal fire hydrant within 1,000 feet of the property.
[13] Response times are based on an average 90 second turnout time by firefighters from their station plus travel time using the closest roads available to the project. The response time standard the county uses to evaluate the adequacy of the project meeting General Plan Policy 6.2.3.1 are based on the closest station (Station 20) only, and not the average response times of all resources responding to an incident.
[14] See *El Dorado County General Plan*, 2004; Public Services and Utilities Element Section, P.91.

The Project is not located within a rural region that receives municipal water service. The nearest available municipal fire hydrant is located in the community of Kyburz, nearly 20 miles away. The Project has an on-site well that will be utilized for both domestic drinking and fire protection water supply. A storage tank system for emergency water supply is proposed for the Project.

Where a municipal-type water system is unavailable to serve the Project, as determined by CAL FIRE, National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Firefighting", (2017 Edition) shall be accepted as meeting the emergency water standards found in Title 14 and 24. The required fire-flow requirements, based on NFPA 1142, for the Project is shown in Table 3 below.

Table 3: Fire-Flow Requirements[15] for the Project Based on NFPA 1142

Building Name	Square Footage (FT^2)	OHC[16]	CCN[17]	GPM[18]	Flow Duration (minutes)	Total Gallons Stored Required
Single-Family Dwelling	2,556	7	V-000	500	10	5,000

The minimum emergency water supply storage on-site at all times for the Project is **5,000** gallons. One draft hydrant is required between fifty (50) feet and two-hundred and fifty (250) feet of the structure. The draft hydrant outlet size shall be 4.5 inches. A 4.5" outlet requires a minimum 4" supply piping from the tank to the 4.5" male national hose thread (NH) draft hydrant outlet assembly and shall include a 4.5" female to 2.5" male NH reducer with cap.

The location of the water system and fire hydrant location shall be approved by CAL FIRE. The installation of the water system shall comply with the requirements described in El Dorado County Fire Chiefs Association Standard No. D-003 (Water Supplies for Suburban and Rural Fire Fighting). This document can be accessed via the following link: Fire Prevention Officers - El Dorado County Fire Chiefs association (edchiefs.org).

[15] "Fire Flow" is the flow rate of a water supply, measured at 20 pounds per square inch (psi) residual pressure, that is available for firefighting.
[16] Refers to Occupancy Hazard Classification. See NFPA 1142 – Chapter 5.
[17] Refers to Construction Classification Number. See NFPA 1142 – Chapter 6.
[18] Refers to Gallons Per Minute.

2.14 Critical Assets / Infrastructure at Risk

The identification and analysis of Critical Assets and Infrastructure at Risk is an important part of a comprehensive fire risk analysis. This analysis also looks at potential risks associated with public service sites designated in California as being "Essential" that must conform to current seismic design criteria. Refer to *Appendix B: Critical Assets / Infrastructure at Risk Table* for additional information on the various categories of uses that have been identified within the Project area.

The Project has no proposed uses that are identified as *Critical Assets* that could be at risk during a wildfire. No *Essential Service* building uses are proposed within the Project. No *Infrastructure at Risk* site has been identified as a location within the Project area that could be adversely impacted by a wildfire.

2.15 Fire Risk Rating for the Project

The fire risk factor scoring for the Project is found in Table 4. The overall risk rating can be described as Low (0-29), Moderate (30-59), High (60-79) and Very-High (80-100). When analyzing individual fire risk factor ratings within the Project area the following terms are used:

- **LOW RISK** – Fire risk factors present typically do not support rapid fire spread.
- **MODERATE RISK** – Fire risk factors present may support moderate fire spread, but burning ember distribution is limited to less than ½ mile.
- **HIGH RISK** – Fire risk factors present may support rapid fire spread and ember distribution beyond ½ mile.
- **VERY-HIGH RISK** – Fire risk factors present may support extreme fire spread and intensity.

Table 4 provides the analysis of the fire risk rating that are specific for the Project site.

Table 4: Fire Risk Factor Rating for the Project

No.	Risk Factor	Low	Moderate	High	Very-High	Total
		0-3	4-6	7-8	9-10	
1	Fire Hazard Severity Rating				⑩	10
2	Local Fire Department Capabilities				⑩	10
3	Anticipated Fire Behavior in Area				⑩	10
4	Size / Configuration of the WUI				⑩	10
5	Proximity of Structures to WUI				⑩	10
6	Building Construction Meets CBC CH 7A			⑧		8
7	Defensible Space Complies with PRC 4291		⑥			6
8	Emergency Access to WUI			⑧		8
9	Water Supply for Fire Suppression			⑧		8
10	Critical Assets / Infrastructure at Risk	①				1
	Total	1	6	24	50	**81**

Overall Wildfire Risk Rating: *Very-High (80-100)*

NOTE: **Five** Very High-Risk factors are currently found within the Project area.

It is important to remember that the risk factor ratings described do not infer that a community is at greater or less risk due to its overall rating. Fires can, and do, cause significant damage to property even when they occur in areas that may receive an overall low or moderate rating. Failure to maintain adequate defensible space, critical fire weather conditions and/or lack of available fire suppression resources due to other emergency incidents may cause a fire to increase its intensity and fire spread beyond the capabilities of firefighters on scene.

CHAPTER 3: FUEL REDUCTION PRACTICES

The purpose of this chapter is to describe the recommended long-term comprehensive hazardous fuel reduction management and defensible space best practices for the Project. The best practices include adequate defensible space within 100' of all buildings. This Chapter is based on California Government Code Section 51182 and California Fire Code Section 4903 and includes analysis on the following subjects:

- Defensible Space Requirements
- Defensible Space Zone Criteria
- Hazardous Fuel Reduction Near the Driveway / Utilities
- Reoccurring Hazardous Fuel Reduction Maintenance Frequency

3.1 Hazardous Fuel Reduction Regulations Applicable to the Project

Both California Public Resource Code (PRC) 4291 and County of El Dorado Code Chapter 8.09 state that property owners shall maintain a 100-feet defensible space perimeter around all structures[19]on their property if they are in proximity to forests, grasslands, or similar undeveloped areas. Defensible space on each property is the responsibility of the individual property owner, except as required by El Dorado County Code Chapter 8.09. Defensible space within the Project starts at the structure and extends out 100-feet or to the property line that faces the undeveloped area if the property line is less than 100 feet from the structure.

3.2 Hazardous Fuel Reduction Program

A *Kuhl Single-Family Residential Dwelling Hazardous Fuel Reduction Program*[20] shall be established to maintain defensible space for the Project and associated parcels where required by El Dorado County Code. The program should be designed to ensure the following fuel management activities are completed in a timely manner:

[19] Defensible space is required on each side, and from the front and rear, of all structures.
[20] The program includes the administration, resource types used and funding sources to apply the Fuel Management Plan described here.

a. Confirm that fuel reduction activities are identified, scheduled, and completed in accordance with the Fuel Management Program.
b. Coordinate the use of resources (e.g., crews, mechanical equipment, domestic livestock, prescribed fire, etc.) that are most appropriate for the fuel reduction work that is required.
c. Ensure that sensitive biological resources within each area are identified in advance of the fuel management Project. Complete pre/post activity inspections of these areas to safeguard sensitive areas from damage and/or destruction.
d. Ensure the safe disposal (e.g., hauling it to a landfill, chipping/mulching on site, etc.) of biomass materials removed as part of a fuel management program.

3.3 Defensible Space Requirements

The term “Defensible Space” refers to reducing the wildfire vulnerability in WUI Zones by actions that will decrease the potential of heat, flames and embers spreading to buildings. Figure 8 provides additional information on defensible zone spaces around buildings.

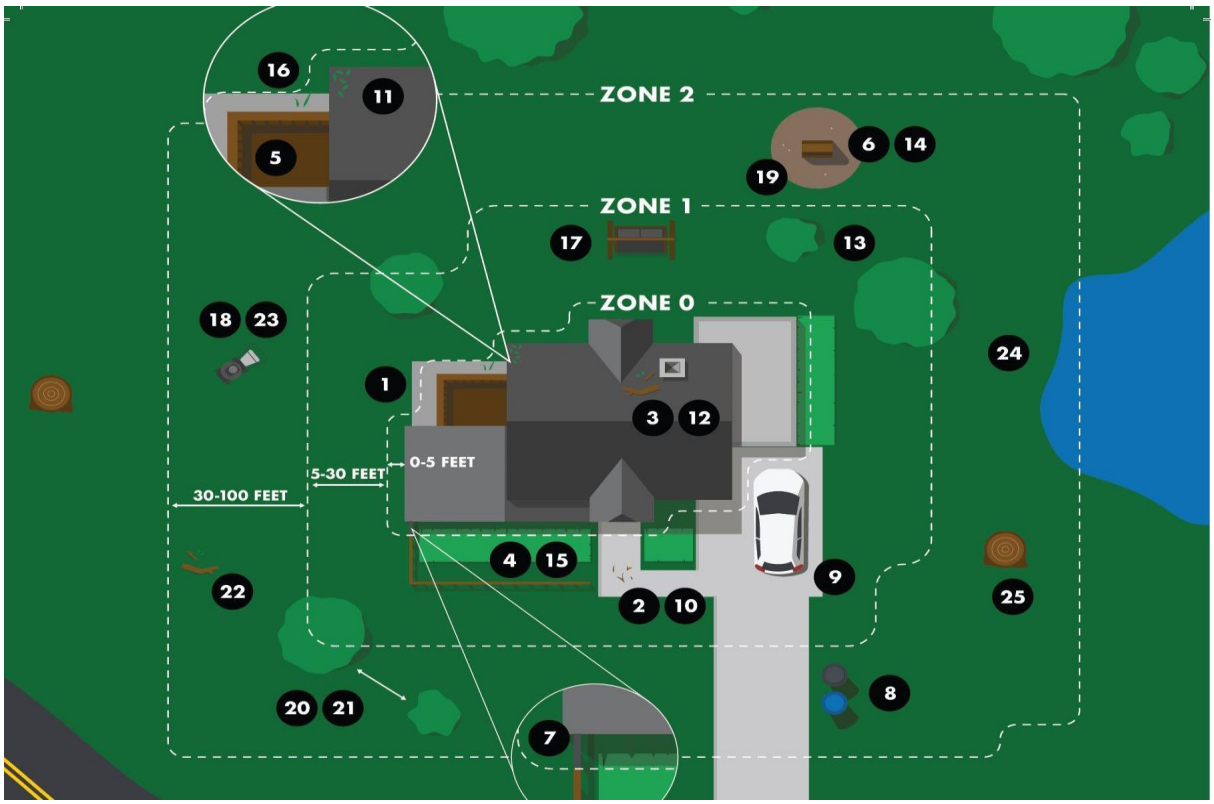


Figure 8: CAL FIRE Defensible Space Zones

Defensible space work around the buildings on site should be performed within 3 zone areas based on the fire risk reduction efforts necessary to protect the occupants and property. The 3 defensible space zones around buildings are described as:

Zone 0 – Ember Resistant Zone

Zone 0 extends 5-feet from buildings, buildings, decks, etc.

The ember-resistant zone is currently not required by law, but scientific data has proven it to be the most important of all the defensible space zones. This zone includes the area under and around all attached decks, and requires the most stringent wildfire fuel reduction. The ember-resistant zone is designed to keep fire or embers from igniting materials that can spread the fire to the home. The following provides guidance for this zone, which may change based on the regulation developed by the California Board of Forestry and Fire Protection.

1. Use hardscape like gravel, pavers, concrete, and non-combustible mulch materials. No combustible bark or mulch.
2. Remove all dead and dying weeds, grass, plants, shrubs, trees, branches, and vegetative debris (leaves, needles, cones, bark, etc.); Check roofs, gutters, decks, porches, stairways, etc.
3. Remove all branches within 10-feet of any chimney or stovepipe outlet
4. Limit plants in this area to low growing, nonwoody, properly watered, and maintained plants.
5. Limit combustible items (outdoor furniture, planters, etc.) on top of decks
6. Relocate firewood and lumber to Zone 2
7. Replace combustible fencing, gates, and arbors attached to the home with non-combustible alternatives
8. Consider relocating garbage and recycling containers outside this zone
9. Consider relocating boats, RVs, vehicles, and other combustible items outside this zone

Zone 1 – Lean, Clean and Green Zone

Zone 1 extends 30-feet from buildings, decks, etc. or to the property line, whichever is closer.

10. Remove all dead plants, grass, and weeds (vegetation).
11. Remove dead or dry leaves and pine needles from yard, roof, and rain gutters.
12. Remove branches that hang over roof and keep dead branches 10-feet away from your chimney.
13. Trim trees regularly to keep branches a minimum of 10- feet from other trees.
14. Relocate wood piles to Zone 2.
15. Remove or prune flammable plants and shrubs near windows.
16. Remove vegetation and items that could catch fire from around and under decks, balconies, and stairs.
17. Create a separation between trees, shrubs and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

Zone 2 – Reduce Fuel Zone

Zone 2 extends from 30-feet to 100-feet out from buildings, buildings, decks, etc. or to the property line, whichever is closer.

18. Cut or mow annual grass down to a maximum height of 4 inches.
19. All exposed wood piles must have a minimum of 10 feet clearance around them, down to bare mineral soil, in all directions.
20. Create horizontal space between shrubs and trees. (See diagram)
21. Create vertical space between grass, shrubs, and trees. (See diagram)
22. Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 3 inches.

All Zones

23. Mow before 10:00 am, but never when its windy or excessively dry.

24. Protect water quality, do not clear vegetation near waterways to bare soil. Vegetation removal can cause soil erosion – especially on steep slopes.

25. Logs or stumps embedded in the soil must be removed in Zone 0. In Zones 1 and 2 they need to be removed or isolated from other vegetation.

3.4 Hazardous Fuel Reduction Criteria for the Project

A. Fuel reduction work shall include the mowing of annual grasses down to a height of 2-inches or less, removal of dead and diseased trees, debris, and the removal of tree limbs on live trees up to a height of 6-feet above the ground. Tree branches are to be limbed to at least 6-feet when possible. The minimum height may be lowered when trees are young or small; or if it is unsafe to reach a 6-foot height due to terrain, equipment, or skill level.

B. Understory fuels over 1-foot in height are to be removed in order to develop vertical separation and low horizontal continuity of fuels. Individual plants or pairs of plants may be retained provided there is a horizontal separation between plants of 3 to 5 times the height of the residual plants and the residual plants are not within the drip lines of an overstory tree.

C. Fuel reduction work shall include the removal of all dead vegetation 2 inches or less in diameter. Trunks shall be cut flush with the ground. The removal of additional trees shall be done in consultation with CAL FIRE and El Dorado County Planning & Building Department staff.

D. Threatened and/or endangered species may be present within the Project area. The recommendations of the Project biologist shall be implemented with respect to avoiding loss or harm to the affected species, or restoration and/or compensation measures to be undertaken if the species' habitat cannot be avoided. For example, if nesting raptors are present, the nesting tree shall not be removed and no tree removal or mechanical activity shall occur within a buffer zone established around the nest until the young have fledged. The Federal and/or State agency with jurisdiction over the affected protected species shall also be consulted.

E. Annual grasses shall be maintained below 2-inches in height just after the grasses cure in early summer. Additional fuel treatment work may be necessary throughout the year within 100-feet of structures to maintain defensible space requirements.

F. Tree snags shall be removed when they meet one or more of the following criteria:

- Snags 17-inch Diameter Breast Height (DBH) or smaller
- Snags greater than 30-feet in height
- Snags which are capable of reaching a structure
- Snags closer than 100-feet from adjoining snags.

G. The cutting of vegetation materials shall be done with CAL FIRE approved spark arrestors.

H. The removal of annual grasses and similar hazardous vegetation shall be completed through the use of plastic string weed trimmers or other DSP or CAL FIRE approved equipment.

I. Chipping of material is permitted. Chipped material shall be removed from the site unless otherwise approved by the landowner representative.

J. Prescribed burning and / or herbicide use is not allowed within the Project area unless such use is approved by the County of El Dorado and CAL FIRE.

K. Approved fire suppression equipment is required on-site at all times during the fuel-modification activities

L. All fuel reduction work shall be performed using every reasonable measure to minimize erosion, ground disturbing activities and soil damage. Where the ground is exposed by fuel reduction efforts, the area shall be revegetated and/or erosion control measures shall be installed prior to October 15.

M. Pruning on live trees shall be performed in accordance with the Best Management Practices set forth by the International Society of Arboriculture (ISA) and conform to ANSI A300 Standards for Tree Care.

N. The following tree-spacing guidelines are recommended when feasible; when not in conflict with applicable standards or codes; and after consultation with the CAL FIRE, County of El Dorado, or the respective agency representative(s):

- Intermediate Zone (5-feet to 30-feet from structures) - trees / clumps of trees should have a minimum of 18 feet between tree tops. This provision would typically include those trees on private property that extend into the open space.

- Extended Zone (30-feet to 100 feet from structures) - trees/clumps of trees should have a minimum of 12 feet between tree tops.

- Extended Zone (100-feet to 300-feet from structures) - trees/clumps of trees should have a minimum of 6 feet between tree tops.

3.5 Hazardous Fuel Reduction Near the Driveway / Utilities

To reduce the risk of wildfires obstructing the emergency vehicle access route to the Project, and the use of the driveway by occupants during an evacuation, the following hazardous vegetation requirements shall be provided prior to occupancy:

A. All diseased and dead trees within ten (10) feet beyond the edge of the driveway on both sides shall be removed.

B. All ladder fuels shall be cleared to a minimum width of a ten (10) foot wide strip of land beyond the edge of the driveway on both sides.

C. All tree limbs and hazardous vegetation shall be maintained to an unobstructed vertical clearance height of fifteen (15) feet above the driveway.

D. Free standing photovoltaic systems and equipment, not exceeding 1,500 square feet in combined panel area, shall provide a minimum ten (10) foot clearance to bare mineral soil, or other approved non-combustible surface. Panel areas greater than 1,500 square feet shall provide a minimum thirty (30) foot clearance.

E. The emergency water supply storage tanks on-site shall have a minimum thirty (30) foot clearance from hazardous vegetation on all sides of the tank. The draft hydrant shall have a minimum three (3) foot clearance on all sides from hazardous vegetation.

F. Create and maintain a minimum ten (10) foot clearance to bare mineral soil and no flammable vegetation for an additional 10 feet around the exterior of LP-Gas storage tanks.

3.6 Annual Hazardous Fuel Management Maintenance Frequency

The effectiveness of the Hazardous Fuel Modification program requires certain elements to be maintained on an annual or otherwise noted frequency. The coordination of fuel modification work between the property owner and CAL FIRE staff, and the adjacent land owner(s) to complete these activities in a timely fashion is imperative for the success in minimizing the wildfire risk in the Project area. Table 5 provides additional details regarding the recommended maintenance frequency for various activities described in the Plan.

Table 5: Maintenance Frequency for Hazardous Fuel Management Work

Action Item	Party Responsible	Frequency
Remove/trim annual grasses to less than 2-inches height within 100-feet of buildings.	**Property Owner**	**Annual**
Remove debris piles, dead trees (snags) or dying trees, down trees, and limbs.[21]	**Property Owner**	**Annual**
Removal of understory fuels that contribute to fire spread.	**Property Owner**	**Annual**
Remove biomass materials from the site and dispose of in accordance with best practices.	**Property Owner**	**Annual**
Remove ladder fuels (tree limbs) to 6-foot DBH and increase tree canopy spacing.	**Property Owner**	**10 Year**

[21] This plan recognizes that dead and dying trees may provide a beneficial use for the habitat. The removal of this vegetation should be completed after an annual inspection by representatives from CAL FIRE and the Property Owner has been completed and a scope of work agreed on by both parties.

CHAPTER 4: KEY FINDINGS, APPLICABLE CODES AND DESIGN CONSIDERATIONS

4.1 Key Findings for the Project

4.1.1 The Project is consistent with the regulations described in Sections 4290 and 4291 of the California Public Resources Code in accordance with California Government Code § 66474.02 (a)(1).

4.1.2 Fire and rescue services for the Project site are the responsibility of the California Department of Forestry and Fire Protection (CAL FIRE) in accordance with California Government Code § 66474.02(a)(2)(B).

4.1.3 The Fire Department response to the Project will, on-average, meet the 15-45-minute minimum level of service for Rural Regions as described in Policy 5.1.2.2 of the El Dorado County General Plan.

4.1.4 Wildfire protection for the adjacent undeveloped SRA lands near the Project are the responsibility of CAL FIRE.

4.1.5 The Project is located within a CAL FIRE SRA designated **Very-High** Fire Hazard Severity Zone. The Project is therefore subject to the regulations found in California Public Resource Code Section's 4290 and 4291. See Appendix E for additional information.

4.1.6 The Project shall be subject to the wildfire regulations found in the California Building Standard Codes (California Code of Regulations Title 24, Parts 1-12).

4.1.7 The Project has no proposed uses that are identified as Critical Assets, Essential Service Locations, or Vulnerable Populations that could be at risk during a wildfire.

4.1.8 No strategic ridgelines to reduce fire risk and improve fire protection, as described by California Code of Regulations Title 14 - §1276.02, have been identified by CAL FIRE within the Project or adjoining areas.

4.2 Fire Protection Statutes and Regulations Applicable to the Project

1.2.1 An approved address number shall be assigned to the Project parcel by the County of El Dorado Surveyors Office.

1.2.2 All roads and driveways associated with the Project shall meet the current design requirements found in CCR Title 14 §§ 1273.00 – 1273.09. See the design considerations described in Section 2.13 of this Plan for additional details.

4.2.3 The Project shall provide an immediately available water supply that is capable of providing the required fire flow for fire protection at the premise as required by CCR Title 14 - §§ 1275.00 – 1273.04. See Section 2.13 of this plan for additional information regarding the design criteria for the Project water system.

4.2.4 The single-family dwelling structure shall comply with all applicable material and construction methods for exterior wildfire exposure as described in the current version of California Code of Regulations Title 24 – Parts 1 through 9 (Building Standards Code), and as found in Section 4.3 of this plan.

4.3 Design Considerations

4.3.1 An approved address sign shall be placed near the road entrance from Forest Service Road 12N30 to the Project site. The address sign shall have address numbers no less than 4-inches high with a minimum stroke width of ½-inch. The address numbers shall contrast with their background and remain unobstructed at all times. Where multiple addresses are required at a single road they shall be mounted on a single sign or post.

4.3.2 An emergency vehicle access driveway shall be constructed from Forest Service Road 12N30 to the Project site. This access road shall comply with the following measures:

j. The driveway shall provide a minimum of one (1) ten (10) foot traffic lane, not including shoulders and striping, with fourteen (14) feet unobstructed horizontal clearance, and an unobstructed vertical clearance of thirteen feet, six inches (13'6") as required by CCR Title 14 – Section 1273.01 (Width).

k. The driveway shall support the imposed load of fire apparatus weighing at least 40,000 pounds and shall provide an aggregate base, as required by CCR Title 14 – Section 1273.02 (Road Surface).

l. The driveway shall provide turnouts along the entire route from Forest Service Road 12N30 to the dwelling at distances of no less than one for every 400-feet. Turnouts shall be constructed to a minimum of twelve (12) feet in width and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.

m. Road structures[22] shall be designed and maintained to support at least 40,000 pounds, as required by CCR Title 14 – Section 1273.02 (b).

n. At no point along the road shall the grade exceed 16%, as required by CCR Title 14 – Section 1273.03 (Grades).

o. No road or road structures shall have a horizontal inside radius or curvature of less than fifty (50) feet, as required by CCR Title 14 – Section 1273.04 (Radius).

p. A turnaround shall be provided within fifty (50) feet of the building. The minimum turning radius for the turnaround shall be forty (40) feet, not including parking, in accordance with Figure B of CCR Title 14 – Section 1273.05(f).

q. An area of no less than thirty (30) feet in length and ten (10) feet in width shall be constructed in front of the existing gated location from Forest Service Road 12N30 to the Project to allow for a vehicle to stop without obstructing traffic on the road.

[22] CCR Title 14 – Section 1270.01 (Road Structure) includes bridges, culverts, and other appurtenant structures which supplement the traffic lane or shoulders.

r. Gated entrances across the road shall comply with the requirements described in El Dorado County Fire Chiefs Association Standard No. B-002 (Automatic & Manual Gates on Fire Access Roadways & Driveways). This document can be accessed via the following link: Fire Prevention Officers - El Dorado County Fire Chiefs association (edchiefs.org).

4.3.3 The minimum emergency water supply storage on-site for the Project is 5,000 gallons. The installation of the water system shall comply with the requirements described in El Dorado County Fire Chiefs Association Standard No. D-003 (Water Supplies for Suburban and Rural Fire Fighting). This document can be accessed via the following link: Fire Prevention Officers - El Dorado County Fire Chiefs association (edchiefs.org).

4.3.4 A Kuhl Single-Family Residential Dwelling Hazardous Fuel Management program shall be established to ensure that all hazardous fuel reduction efforts, including creating and maintaining defensible space near each building in the Project, is completed annually or more frequently as determined by CAL FIRE. See Chapter 3 of this plan for additional details.

4.3.5 Undeveloped areas within the Project shall have all hazardous fuels, including annual grasses and dead vegetation, removed, and/or maintained in accordance with the provisions outlined in Chapter 3 of this plan.

4.3.6 The Project shall avoid the use of certain highly flammable trees and vegetation within 100-feet of buildings and structures as identified in Appendix G of this Plan.

4.3.7 Construction activities shall conform to the applicable provisions found in Chapter 33 (Fire Safety During Construction) of the California Fire Code as required by CAL FIRE. Cutting, welding and similar “Hot Work” activities shall be conducted under a valid permit issued by CAL FIRE during the period of time that such work is conducted within a wildfire risk area.

Chapter 5: PLAN APPENDIXES

Appendix A: Glossary of Terms

Biomass – Refers to "green waste" materials generated during the defensible space clearing Project. This includes grass, weeds, and tree trimming materials.

CAL FIRE – Refers to the California Department of Forestry and Fire Protection.

Defensible Space – Is the design and maintenance of natural and/or landscaped areas in an area where mitigation actions are undertaken to reduce structure loss from a wildfire. It is also intended to provide access to firefighters for fire suppression actions and to provide a safe zone for them to work. Defensible space is based on four general concepts:

1. Elimination of combustible vegetation and other materials within 5' of the structure.
2. Fuel removal or reduction within 100' of structures in all directions
3. Thinning, pruning and removal of continues and dense uninterrupted layers of vegetation
4. Removal of ladder fuels within 8'-10' from the ground to prevent fire spread through tree canopies.

Driveway – A vehicular pathway that serves no more than four (4) Residential Units and any number of non-commercial or non-industrial Utility or Miscellaneous Group U Buildings on each parcel. A Driveway shall not serve commercial or industrial uses of any size or scale.

Fire Hazard – Is the dangerous accumulation of flammable fuels in open space areas and other wildland urban interface areas. It is typically described at the landscape (area) level. Usually referring to the density of live or dead vegetation that may be ignited by the various fire risks or causes that can increase a fires intensity or rate of spread. Fire hazard is based on the vegetation types likely to be present over the next 50 years that contribute to fire severity and ember production, the topography of the area and the average fire weather conditions present in the area.

Fire Risk – Is the potential damage a fire can due to buildings, critical assets/infrastructure, and other values at risk in individual open space areas and other wildland urban interface areas.

Fire risk does consider modification that may affect susceptibility of property to damage such as defensible space, fire sprinkler systems and building construction that can reduce the risk of burning embers igniting buildings. Fire hazard does not equal fire risk but is an important factor in determining fire risk.

Hazardous Fuel Reduction – Refers to the reduction of wildfire fuels such as trees, shrubbery, grasses, and other natural materials to decrease risks to human life and damage to personal property. Hazardous fuel reduction result in less extreme fire behavior and intensity through decreased fire spread rates and reduced flame lengths.

Improved Parcel – A portion of land determined by the County Assessor's Office to contain a dwelling (occupied or unoccupied).

Ladder Fuel – Refers to live or dead vegetation that allows a fire to climb up from the ground into the tree canopy. They provide vertical continuity between different layers of fuels, making it easier for a fire to spread from the surface to the crowns or trees or shrubs. Ladder fuels help initiate and sustain crowning, which is the spread of fire from one tree crown to another.

Road – A public or private vehicular pathway to more than four (4) Residential Units, or to any industrial of commercial occupancy.

Snag – Refers to a dead or partly dead tree that is still standing.

Wildland fire – Any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property or resources as defined in Public Resources Code Sections 4103 and 4104.

Wildland Urban Interface Zone – A geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with Public Resources Code Sections 4201through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires.

Appendix B: Critical Assets / Populations at Risk Table

Facility Type	Essential Service	Population at Risk	Infrastructure at Risk	Facility Count
Fire Station	X			0
Police Station	X			0
Emergency Evacuation Shelter*	X			0
Government Facilities	X			0
General Acute Care Hospital	X			0
Medical Health Facility		X		0
Adult Residential Care Facility		X		0
Child Care Facility		X		0
Adult Care Facility		X		0
Public Elementary School		X		0
Private Elementary School		X		0
Public Middle School		X		0
Private Middle School		X		0
Public High School		X		0
Private High School		X		0
College / University		X		0
Vulnerable Population Centers**		X		0
Water Treatment Plant			X	0
Water Storage Facility			X	0
Water Conveyance System			X	0
Electrical Transmission Lines			X	0
Electrical Substation			X	0
Sewer Lift Station			X	0
Telecommunications Facilities			X	0
Corporation Yard				0
* Includes General Population, Access/Functional Needs Shelters, and Animal Shelters				
** Includes Disadvantaged, Disabled and Low-Income Census Areas				

Appendix C: PRC 4290 and 4291 Checklist

Project Name:				
	CCR Title 14	**Conforms**	**Does Not Conform**	**N/A**
Safe Access and Egress				
Road Width	§1273.01	X		
Roadway Surface	§1273.02	X		
Road Grades	§1273.03	X		
Road Radius	§1273.04	X		
Road Turnarounds	§1273.05	X		
Road Turnouts	§1273.06	X		
Road and Driveway Structures	§1273.07	X		
Dead-end Roads	§1273.08	X		
Gate Entrances	§1273.09		X	
Signing and Building Numbering				
Road Name Signs	§1274.01		X	
Road Sign Installation	§1274.02		X	
Addresses for Buildings	§1274.03		X	
Address Installation, Location	§1274.04		X	
Fire Water Standards				
Application	§1275.01	X		
Approved Fire Water Supply	§1275.02	X		
Hydrants	§1275.03	X		
Signing of Water Sources	§1275.04	X		
Building Siting and Fuel Mod.				
Building and Parcel Siting/Setbacks	§1276.01	X		
Ridgelines	§1276.02			X
Fuel Breaks	§1276.03			X
Greenbelts, Open Spaces	§1276.04			X
Disposal of Flammable Vegetation	§1276.05			X

NOTES:

1. See Section 4.2 (Fire Protection Statues and Regulations) regarding proposed mitigation measures.

Appendix D: Emergency Evacuation Planning Checklist

No.	Risk Factor	Yes	No	Unknown
1	Existing Evacuation Plan is Current?			X
2	General Population Shelters Identified?			X
3	Special Care Shelters Identified?			X
4	Animal Care Shelters Identified?			X
5	Temporary Safe Refuge Areas Identified?			X
6	Emergency Evacuation Routes Identified?			X
7	Mass Notification System Identified/Used?			X
8	Ready-Set-Go or Similar Program Used?			X
9	Evacuation Plans Available to the Public?			X
10	Are First Responders Briefed on the Plan?			X
	Total	0	0	10

Notes:

1. Project is located in El Dorado County. A search of public websites did not identify an existing evacuation plan for this area.

2-4. El Dorado County OES has no pre-designated emergency shelters throughout the County during prior large-scale emergencies.

5-6. There are no reported temporary refuge areas identified in the Project area.

7. El Dorado County OES uses *RAVE* as its emergency notification system. The system relies on notifications through existing telephone lines and through "opt-in" sign-ups for cell phones and other devices.

8-10. A search of public websites did not identify R-S-G materials, evacuation plans for the Project area or information that first responders are briefed on the evacuation planning efforts. All of this information will be made available in the Project area through handout materials distributed to both members of the public and first responders.

Appendix E: California Code of Regulations Title 14 §1270-1276

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State Minimum Fire Safe Regulations

Board of Forestry and Fire Protection

FOR INFORMATIONAL USE ONLY
View the official California Code of Regulations online at
govt.westlaw.com/calregs

As of April 1, 2023

California Code of Regulations
Title 14 Natural Resources
Division 1.5 Department of Forestry
Chapter 7 - Fire Protection
Subchapter 2 State Minimum Fire Safe Regulations
Articles 1-5

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Article 1 Administration

§ 1270.00. Title

Subchapter 2 shall be known as the "State Minimum Fire Safe Regulations," and shall constitute the minimum Wildfire protection standards of the California Board of Forestry and Fire Protection.

§ 1270.01. Definitions

The following definitions are applicable to Subchapter 2.
(a) Agriculture: Land used for agricultural purposes as defined in a Local Jurisdiction's zoning ordinances.
(b) Board: California Board of Forestry and Fire Protection.
(c) Building: Any Structure used or intended for supporting or sheltering any use or Occupancy, except those classified as Utility and Miscellaneous Group U.
(d) CAL FIRE: California Department of Forestry and Fire Protection.
(e) Dead-end Road: A Road that has only one point of vehicular ingress/egress, including cul-de-sacs and Roads that loop back on themselves
(f) Defensible Space: The area within the perimeter of a parcel, Development, neighborhood or community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching Wildfire or defense against encroaching Wildfires or escaping Structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or Development, excluding the physical Structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, Road names and Building identification, and fuel modification measures.
(g) Development: As defined in section 66418.1 of the California Government Code.
(h) Director: Director of the Department of Forestry and Fire Protection or their designee.
(i) Driveway: A vehicular pathway that serves no more than four (4) Residential Units and any number of non-commercial or non-industrial Utility or Miscellaneous Group U Buildings on each parcel. A Driveway shall not serve commercial or industrial uses at any size or scale.
(j) Exception: An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions, such as recorded historical sites, that provides mitigation of the problem.
(k) Fire Apparatus: A vehicle designed to be used under emergency conditions to transport personnel and equipment or to support emergency response, including but not limited to the suppression of fires.
(l) Fire Authority: A fire department, agency, division, district, or other governmental body responsible for regulating and/or enforcing minimum fire safety standards in the Local Jurisdiction.
(m) Fire Hydrant: A valved connection on a water supply or storage system for the purpose of providing water for fire protection and suppression operations.
(n) Fuel Break: A strategically located area where the volume and arrangement of vegetation has been managed to limit fire intensity, fire severity, rate of spread, crown fire potential, and/or ember production.
(o) Greenbelts: open space, parks, wildlands, other areas, or a combination thereof, as designated by Local Jurisdictions, which are in, surround, or are adjacent to a city or urbanized area, that may function as Fuel Breaks and where Building construction is restricted or prohibited.
(p) Greenways: Linear open spaces or corridors that link parks and neighborhoods within a community through natural or manmade trails and paths.

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(q) Hammerhead/T: A "T" shaped, three-point Turnaround space for Fire Apparatus on a Road or Driveway, being no narrower than the Road or Driveway that serves it.
(r) Hazardous Land Use: A land use that presents a significantly elevated potential for the ignition, prolonged duration, or increased intensity of a Wildfire due to the presence of flammable materials, liquids, or gasses, or other features that initiate or sustain combustion. Such uses are determined by the Local Jurisdiction and may include, but are not limited to, power-generation and distribution facilities; wood processing or storage sites; flammable gas or liquids processing or storage sites; or shooting ranges.
(s) Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that approves or has the authority to regulate Development.
(t) Municipal-Type Water System: A system having water pipes servicing Fire Hydrants and designed to furnish, over and above domestic consumption, a minimum of 250 gpm (950 L/min) at 20 psi (138 kPa) residual pressure for a two (2) hour duration.
(u) Occupancy: The purpose for which a Building, or part thereof, is used or intended to be used.
(v) One-way Road: A Road that provides a minimum of one Traffic Lane width designed for traffic flow in one direction only.
(w) Residential Unit: Any Building or portion thereof which contains living facilities including provisions for sleeping, eating, cooking and/or sanitation, for one or more persons. Manufactured homes, mobile homes, and factory-built housing are considered Residential Units.
(x) Ridgeline: The line of intersection of two opposing slope aspects running parallel to the long axis of the highest elevation of land; or an area of higher ground separating two adjacent streams or watersheds.
(y) Road: A public or private vehicular pathway to more than four (4) Residential Units, or to any industrial or commercial Occupancy.
(z) Road or Driveway Structures: Bridges, culverts, and other appurtenant Structures which supplement the Traffic Lane or Shoulders.
(aa) Same Practical Effect: As used in this subchapter, means an Exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including:

(1) access for emergency wildland fire equipment,
(2) safe civilian evacuation,
(3) signing that avoids delays in emergency equipment response,
(4) available and accessible water to effectively attack Wildfire or defend a Structure from Wildfire, and
(5) fuel modification sufficient for civilian and fire fighter safety.

(bb) Shoulder: A vehicular pathway adjacent to the Traffic Lane.
(cc) State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.
§(ee) Structure: That which is built or constructed or any piece of work artificially built up or composed of parts joined together in some definite manner.
(ff) Traffic Lane: The portion of a Road or Driveway that provides a single line of vehicle travel.
(gg) Turnaround: An area which allows for a safe opposite change of direction for Fire Apparatus at the end of a Road or Driveway.
(hh) Turnout: A widening in a Road or Driveway to allow vehicles to pass.

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(ii) Undeveloped Ridgeline: A Ridgeline with no Buildings.
(jj) Utility and Miscellaneous Group U: A Structure of an accessory character or a miscellaneous Structure not classified in any specific Occupancy permitted, constructed, equipped, and maintained to conform to the requirements of Title 24, California Building Standards Code.
(kk) Vertical Clearance: The minimum specified height of a bridge, overhead projection, or vegetation clearance above the Road or Driveway.
(*ll*) Vertical Curve: A curve at a high or low point of a Road that provides a gradual transition between two Road grades or slopes.
(mm) Very High Fire Hazard Severity Zone (VHFHSZ): As defined in Government Code section 51177(i).
(nn) Wildfire: Has the same meaning as "forest fire" in Public Resources Code Section 4103.

§ 1270.02. Purpose

(a) Subchapter 2 has been prepared and adopted for the purpose of establishing state minimum Wildfire protection standards in conjunction with Building, construction, and Development in the State Responsibility Area (SRA) and, after July 1, 2021, the Very High Fire Hazard Severity Zones, as defined in Government Code § 51177(i) (VHFHSZ).
(b) The future design and construction of Structures, subdivisions and Developments in the SRA and, after July 1, 2021, the VHFHSZ shall provide for basic emergency access and perimeter Wildfire protection measures as specified in the following articles.
(c) These standards shall provide for emergency access; signing and Building numbering; private water supply reserves for emergency fire use; vegetation modification, Fuel Breaks, Greenbelts, and measures to preserve Undeveloped Ridgelines. Subchapter 2 specifies the minimums for such measures.

§ 1270.03. Scope

(a) Subchapter 2 shall apply to:
(1) the perimeters and access to all residential, commercial, and industrial Building construction within the SRA approved after January 1, 1991, and those approved after July 1, 2021 within the VHFHSZ, except as set forth below in subsection (b).
(2) the siting of newly installed commercial modulars, manufactured homes, mobilehomes, and factory-built housing, as defined in Health and Safety Code sections 18001.8, 18007, 18008, and 19971;
(3) all tentative and parcel maps or other Developments approved after January 1, 1991; and
(4) applications for Building permits on a parcel approved in a pre-1991 parcel or tentative map to the extent that conditions relating to the perimeters and access to the Buildings were not imposed as part of the approval of the parcel or tentative map.
(b) Subchapter 2 does not apply where an application for a Building permit is filed after January 1, 1991 for Building construction on a parcel that was formed from a parcel map or tentative map (if the final map for the tentative map is approved within the time prescribed by the local ordinance) approved prior to January 1, 1991, to the extent that conditions relating to the perimeters and access to the Buildings were imposed by the parcel map or final tentative map approved prior to January 1, 1991.
(c) Affected activities include, but are not limited to:
(1) permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d);
(2) application for a Building permit for new construction not relating to an existing Structure;

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(3) application for a use permit;
(4) Road construction including construction of a Road that does not currently exist, or extension of an existing Road.

(d) The standards in Subchapter 2 applicable to Roads shall not apply to Roads used solely for Agriculture; mining; or the management of timberland or harvesting of forest products.

§ 1270.04. Provisions for Application of these Regulations

This Subchapter shall be applied as follows:
(a) the Local Jurisdictions shall provide the Director of the California Department of Forestry and Fire Protection (CAL FIRE) or their designee with notice of applications for Building permits, tentative parcel maps, tentative maps, and installation or use permits for construction or Development within the SRA, or if after July, 1 2021, the VHFHSZ.
(b) the Director or their designee may review and make fire protection recommendations on applicable construction or development permits or maps provided by the Local Jurisdiction.
(c) the Local Jurisdiction shall ensure that the applicable sections of this Subchapter become a condition of approval of any applicable construction or Development permit or map.

§ 1270.05. Local Regulations

(a) Subchapter 2 shall serve as the minimum Wildfire protection standards applied in SRA and VHFHSZ. However, Subchapter 2 does not supersede local regulations which equal or exceed the standards of this Subchapter.
(b) A local regulation equals or exceeds a minimum standard of this Subchapter only if, at a minimum, the local regulation also fully complies with the corresponding minimum standard in this Subchapter.
(c) A Local Jurisdiction shall not apply exemptions to Subchapter 2 that are not enumerated in Subchapter 2. Exceptions requested and approved in conformance with § 1270.07 (Exceptions to Standards) may be granted on a case-by-case basis.
(d) Notwithstanding a local regulation that equals or exceeds the State Minimum Fire Safe Regulations, Building construction shall comply with the State Minimum Fire Safe Regulations.

§ 1270.06. Inspections

Inspections shall conform to the following requirements:
(a) Inspections in the SRA shall be made by:
(1) the Director, or
(2) Local Jurisdictions that have assumed state fire protection responsibility on SRA lands, or
(3) Local Jurisdictions where the inspection duties have been formally delegated by the Director to the Local Jurisdictions, pursuant to subsection (b).

(b) The Director may delegate inspection authority to a Local Jurisdiction subject to all of the following criteria:
(1) The Local Jurisdiction represents that they have appropriate resources to perform the delegated inspection authority.
(2) The Local Jurisdiction acknowledges that CAL FIRE's authority under subsection (d) shall not be waived or restricted.
(3) The Local Jurisdiction consents to the delegation of inspection authority.
(4) The Director may revoke the delegation at any time.
(5) The delegation of inspection authority, and any subsequent revocation of the delegation, shall be documented in writing, and retained on file at the CAL FIRE Unit headquarters that administers SRA fire protection in the area.

(c) Inspections in the VHFHSZ shall be made by the Local Jurisdiction.

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(d) Nothing in this section abrogates CAL FIRE's authority to inspect and enforce state forest and fire laws in the SRA even when the inspection duties have been delegated pursuant to this section.
(e) Reports of violations within the SRA shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in the Local Jurisdiction.
(f) When inspections are conducted, they shall occur prior to: the issuance of the use permit or certificate of Occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or Building permit.

§ 1270.07. Exceptions to Standards

(a) Upon request by the applicant, an Exception to standards within this Subchapter may be allowed by the Inspection entity in accordance with 14 CCR § 1270.06 (Inspections) where the Exceptions provide the Same Practical Effect as these regulations towards providing Defensible Space. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06, shall be made on a case-by-case basis only. Exceptions granted by the Local Jurisdiction listed in 14 CCR § 1270.06 shall be forwarded to the appropriate CAL FIRE unit headquarters that administers SRA fire protection in that Local Jurisdiction, or the county in which the Local Jurisdiction is located and shall be retained on file at the Unit Office.
(b) Requests for an Exception shall be made in writing to the Local Jurisdiction listed in 14 CCR § 1270.06 by the applicant or the applicant's authorized representative.
At a minimum, the request shall state the specific section(s) for which an Exception is requested; material facts supporting the contention of the applicant; the details of the Exception proposed; and a map showing the proposed location and siting of the Exception. Local Jurisdictions listed in § 1270.06 (Inspections) may establish additional procedures or requirements for Exception requests.
(c) Where an Exception is not granted by the inspection entity, the applicant may appeal such denial to the Local Jurisdiction. The Local Jurisdiction may establish or utilize an appeal process consistent with existing local building or planning department appeal processes.
(d) Before the Local Jurisdiction makes a determination on an appeal, the inspector shall be consulted and shall provide to that Local Jurisdiction documentation outlining the effects of the requested Exception on Wildfire protection.
(e) If an appeal is granted, the Local Jurisdiction shall make findings that the decision meets the intent of providing Defensible Space consistent with these regulations. Such findings shall include a statement of reasons for the decision. A written copy of these findings shall be provided to the CAL FIRE Unit headquarters that administers SRA fire protection in that Local Jurisdiction.

§ 1270.08. Distance Measurements

All specified or referenced distances are measured along the ground, unless otherwise stated.

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Article 2 Ingress and Egress

§ 1273.00. Intent

Roads, and Driveways, whether public or private, unless exempted under 14 CCR § 1270.03(d), shall provide for safe access for emergency Wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a Wildfire emergency consistent with 14 CCR §§ 1273.00 through 1273.09.

§ 1273.01. Width.

(a) All roads shall be constructed to provide a minimum of two ten (10) foot traffic lanes, not including shoulder and striping. These traffic lanes shall provide for two-way traffic flow to support emergency vehicle and civilian egress, unless other standards are provided in this article or additional requirements are mandated by Local Jurisdictions or local subdivision requirements. Vertical clearances shall conform to the requirements in California Vehicle Code section 35250.

(b) All One-way Roads shall be constructed to provide a minimum of one twelve (12) foot traffic lane, not including Shoulders. The Local Jurisdiction may approve One-way Roads.

(1) All one-way roads shall, at both ends, connect to a road with two traffic lanes providing for travel in different directions, and shall provide access to an area currently zoned for no more than ten (10) Residential Units.

(2) In no case shall a One-way Road exceed 2,640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each One-way Road.

(c) All driveways shall be constructed to provide a minimum of one (1) ten (10) foot traffic lane, fourteen (14) feet unobstructed horizontal clearance, and unobstructed vertical clearance of thirteen feet, six inches (13′ 6″).

§ 1273.02. Road Surface

(a) Roads shall be designed and maintained to support the imposed load of Fire Apparatus weighing at least 75,000 pounds, and provide an aggregate base.

(b) Road and Driveway Structures shall be designed and maintained to support at least 40,000 pounds.

(c) Project proponent shall provide engineering specifications to support design, if requested by the Local Jurisdiction.

§ 1273.03. Grades

(a) At no point shall the grade for all Roads and Driveways exceed 16 percent.

(b) The grade may exceed 16%, not to exceed 20%, with approval from the Local Jurisdiction and with mitigations to provide for Same Practical Effect.

§ 1273.04. Radius

(a) No Road or Road Structure shall have a horizontal inside radius of curvature of less than fifty (50) feet. An additional surface width of four (4) feet shall be added to curves of 50-100 feet radius; two (2) feet to those from 100-200 feet.

(b) The length of vertical curves in Roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than one hundred (100) feet.

§ 1273.05. Turnarounds

(a) Turnarounds are required on Driveways and Dead-end Roads.

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(b) The minimum turning radius for a turnaround shall be forty (40) feet, not including parking, in accordance with the figures in 14 CCR §§ 1273.05(e) and 1273.05(f). If a hammerhead/T is used instead, the top of the "T" shall be a minimum of sixty (60) feet in length.
(c) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the Driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.
(d) A turnaround shall be provided on Driveways over 300 feet in length and shall be within fifty (50) feet of the building.
(d) Each Dead-end Road shall have a turnaround constructed at its terminus. Where parcels are zoned five (5) acres or larger, turnarounds shall be provided at a maximum of 1,320 foot intervals.
(e) Figure A. Turnarounds on roads with two ten-foot traffic lanes.
Figure A/Image 1 on the left is a visual representation of paragraph (b).
(f) Figure B. Turnarounds on driveways with one ten-foot traffic lane.
Figure B/Image 2 on the right is a visual representation of paragraph (b).

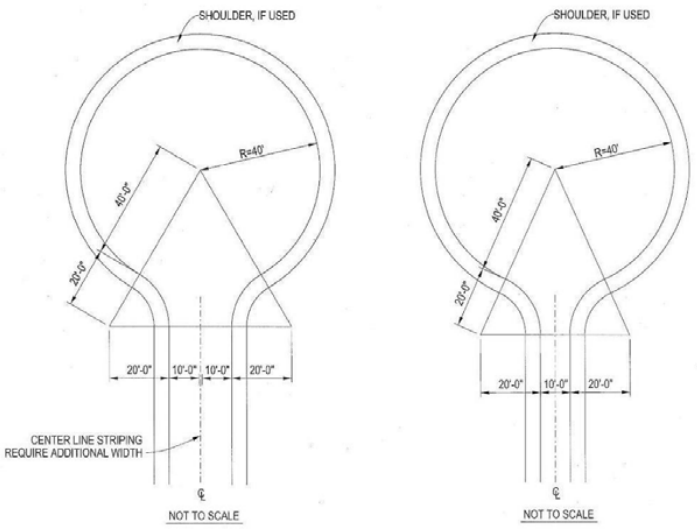


FIGURE FOR 14 CCR § 1273.05. TURNAROUND EXAMPLES

§ 1273.06. Turnouts

Turnouts shall be a minimum of twelve (12) feet wide and thirty (30) feet long with a minimum twenty-five (25) foot taper on each end.

§ 1273.07. Road and Driveway Structures

(a) Appropriate signing, including but not limited to weight or vertical clearance limitations, One-way Road or single traffic lane conditions, shall reflect the capability of each bridge.
(b) Where a bridge or an elevated surface is part of a Fire Apparatus access road, the bridge shall be constructed and maintained in accordance with the American Association of State and

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Highway Transportation Officials Standard Specifications for Highway Bridges, 17th Edition, published 2002 (known as AASHTO HB-17), hereby incorporated by reference. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the local authority having jurisdiction.
(c) Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, barriers, or signs, or both, as approved by the local authority having jurisdiction, shall be installed and maintained.
(d) A bridge with only one traffic lane may be authorized by the Local Jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

§ 1273.08. Dead-end Roads

(a) The maximum length of a Dead-end Road, including all Dead-end Roads accessed from that Dead-end Road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

parcels zoned for less than one acre - 800 feet
parcels zoned for 1 acre to 4.99 acres - 1,320 feet
parcels zoned for 5 acres to 19.99 acres - 2,640 feet
parcels zoned for 20 acres or larger - 5,280 feet

All lengths shall be measured from the edge of the Road surface at the intersection that begins the Road to the end of the Road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes requiring different length limits, the shortest allowable length shall apply.
(b) See 14 CCR § 1273.05 for dead-end road turnaround requirements.

§ 1273.09. Gate Entrances

(a) Gate entrances shall be at least two (2) feet wider than the width of the traffic lane(s) serving that gate and a minimum width of fourteen (14) feet unobstructed horizontal clearance and unobstructed vertical clearance of thirteen feet, six inches (13′ 6″).
(b) All gates providing access from a Road to a Driveway shall be located at least thirty (30) feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that Road.
(c) Where a One-way Road with a single traffic lane provides access to a gated entrance, a forty (40) foot turning radius shall be used.
(d) Security gates shall not be installed without approval. Where security gates are installed, they shall have an approved means of emergency operation. Approval shall be by the local authority having jurisdiction. The security gates and the emergency operation shall be maintained operational at all times.

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Article 3 Signing and Building Numbering

§ 1274.00. Intent

To facilitate locating a fire and to avoid delays in response, all newly constructed or approved Roads and Buildings shall be designated by names or numbers posted on signs clearly visible and legible from the Road. This section shall not restrict the size of letters or numbers appearing on road signs for other purposes.

§ 1274.01. Road Signs.

(a) Newly constructed or approved Roads must be identified by a name or number through a consistent system that provides for sequenced or patterned numbering and/or non-duplicative naming within each Local Jurisdiction. This section does not require any entity to rename or renumber existing roads, nor shall a Road providing access only to a single commercial or industrial Occupancy require naming or numbering.
(b) The size of letters, numbers, and symbols for Road signs shall be a minimum four (4) inch letter height, half inch (.5) inch stroke, reflectorized, contrasting with the background color of the sign.

§ 1274.02. Road Sign Installation, Location, and Visibility.

(a) Road signs shall be visible and legible from both directions of vehicle travel for a distance of at least one hundred (100) feet.
(b) Signs required by this article identifying intersecting Roads shall be placed at the intersection of those Roads.
(c) A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end roads, one-way roads, or single lane conditions, shall be placed:
(1) at the intersection preceding the traffic access limitation, and
(2) no more than one hundred (100) feet before such traffic access limitation.
(d) Road signs required by this article shall be posted at the beginning of construction and shall be maintained thereafter.

§ 1274.03. Addresses for Buildings.

(a) All Buildings shall be issued an address by the Local Jurisdiction which conforms to that jurisdiction's overall address system. Utility and miscellaneous Group U Buildings are not required to have a separate address; however, each Residential Unit within a Building shall be separately identified.
(b) The size of letters, numbers, and symbols for addresses shall conform to the standards in the California Fire Code, California Code of Regulations title 24, part 9.
(c) Addresses for residential Buildings shall be reflectorized.

§ 1274.04. Address Installation, Location, and Visibility.

(a) All buildings shall have a permanently posted address which shall be plainly legible and visible from the Road fronting the property.
(b) Where access is by means of a private Road and the address identification cannot be viewed from the public way, an unobstructed sign or other means shall be used so that the address is visible from the public way.
(c) Address signs along one-way Roads shall be visible from both directions.
(d) Where multiple addresses are required at a single driveway, they shall be mounted on a single sign or post.

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(e) Where a Road provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest Road intersection providing access to that site, or otherwise posted to provide for unobstructed visibility from that intersection.
(f) In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter.

Article 4 Emergency Water Standards

§ 1275.00. Intent

Emergency water for Wildfire protection shall be available, accessible, and maintained in quantities and locations specified in the statute and these regulations in order to attack a Wildfire or defend property from a Wildfire.

§ 1275.01. Application

The provisions of this article shall apply in the tentative and parcel map process when new parcels are approved by the Local Jurisdiction.

§ 1275.02. Water Supply.

(a) When a water supply for structure defense is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when alternative methods of protection are provided and approved by the Local Jurisdiction.
(b) Water systems equaling or exceeding the California Fire Code, California Code of Regulations title 24, part 9, or, where a municipal-type water supply is unavailable, National Fire Protection Association (NFPA) 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 2017 Edition, hereby incorporated by reference, shall be accepted as meeting the requirements of this article.
(c) Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or man made containment structure, as long as the specified quantity is immediately available.
(d) Nothing in this article prohibits the combined storage of emergency Wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.
(e) Where freeze or crash protection is required by Local Jurisdictions, such protection measures shall be provided.

§ 1275.03. Hydrants and Fire Valves.

(a) The hydrant or fire valve shall be eighteen (18) inches above the finished surface. Its location in relation to the road or driveway and to the building(s) or structure(s) it serves shall comply with California Fire Code, California Code of Regulations title 24, part 9, Chapter 5, and Appendix C.
(b) The hydrant head shall be a two and half (2 1/2) inch National Hose male thread with cap for pressure and gravity flow systems and four and a half (4 1/2) inch for draft systems.
(c) Hydrants shall be wet or dry barrel and have suitable freeze or crash protection as required by the local jurisdiction.
§ 1275.04. Signing of Water Sources.
(a) Each hydrant, fire valve, or access to water shall be identified as follows:
(1) if located along a driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the driveway address sign and mounted on a fire retardant post, or
(2) if located along a road,

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(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said hydrant or fire valve, with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the driveway, or
(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

§ 1275.04. Signing of Water Sources.

(a) Each Fire Hydrant or access to water shall be identified as follows:
(1) if located along a Driveway, a reflectorized blue marker, with a minimum dimension of three (3) inches shall be located on the Driveway address sign and mounted on a fire retardant post, or
(2) if located along a Road,
(i) a reflectorized blue marker, with a minimum dimension of three (3) inches, shall be mounted on a fire retardant post. The sign post shall be within three (3) feet of said Fire Hydrant with the sign no less than three (3) feet nor greater than five (5) feet above ground, in a horizontal position and visible from the Driveway, or
(ii) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

Article 5 Building Siting, Setbacks, and Fuel Modification

§ 1276.00 Intent

To reduce the intensity of a Wildfire, reducing the volume and density of flammable vegetation around Development through strategic fuel modification, parcel siting and Building setbacks, and the protection of Undeveloped Ridgelines shall provide for increased safety for emergency fire equipment, including evacuating civilians, and a point of attack or defense from a Wildfire.

§ 1276.01. Building and Parcel Siting and Setbacks

(a) All parcels shall provide a minimum thirty (30) foot setback for all Buildings from all property lines and/or the center of a Road, except as provided for in subsection (b).
(b) A reduction in the minimum setback shall be based upon practical reasons, which may include but are not limited to, parcel dimensions or size, topographic limitations, Development density requirements or other Development patterns that promote low-carbon emission outcomes; sensitive habitat; or other site constraints, and shall provide for an alternative method to reduce Structure-to-Structure ignition by incorporating features such as, but not limited to:
(1) non-combustible block walls or fences; or
(2) non-combustible material extending five (5) feet horizontally from the furthest extent of the Building; or
(3) hardscape landscaping; or
(4) a reduction of exposed windows on the side of the Structure with a less than thirty (30) foot setback; or
(5) the most protective requirements in the California Building Code, California Code of Regulations Title 24, Part 2, Chapter 7A, as required by the Local Jurisdiction.

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§ 1276.02. Ridgelines

(a) The Local Jurisdiction shall identify Strategic Ridgelines, if any, to reduce fire risk and improve fire protection through an assessment of the following factors:

(1) Topography;
(2) Vegetation;
(3) Proximity to any existing or proposed residential, commercial, or industrial land uses;
(4) Construction where mass grading may significantly alter the topography resulting in the elimination of Ridgeline fire risks;
(5) Ability to support effective fire suppression; and
(6) Other factors, if any, deemed relevant by the Local Jurisdiction.

(b) Preservation of Undeveloped Ridgelines identified as strategically important shall be required pursuant to this section.

(c) New Buildings on Undeveloped Ridgelines identified as strategically important are prohibited, as described in subsections (c)(1), (c)(2), and (c)(3).

(1) New Residential Units are prohibited within or at the top of drainages or other topographic features common to Ridgelines that act as chimneys to funnel convective heat from Wildfires.
(2) Nothing in this subsection shall be construed to alter the extent to which utility infrastructure, including but not limited to wireless telecommunications facilities, as defined in Government Code section 65850.6, subdivision (d)(2), or Storage Group S or Utility and Miscellaneous Group U Structures, may be constructed on Undeveloped Ridgelines.
(3) Local Jurisdictions may approve Buildings on Strategic Ridgelines where Development activities such as mass grading will significantly alter the topography that results in the elimination of Ridgeline fire risks.

(d) The Local Jurisdiction may implement further specific requirements to preserve Undeveloped Ridgelines.

§ 1276.03. Fuel Breaks

(a) When Building construction meets the following criteria, the Local Jurisdiction shall determine the need and location for Fuel Breaks in consultation with the Fire Authority:

(1) the permitting or approval of three (3) or more new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d); or
(2) an application for a change of zoning increasing zoning intensity or density; or
(3) an application for a change in use permit increasing use intensity or density.

(b) Fuel Breaks required by the Local Jurisdiction, in consultation with the Fire Authority, shall be located, designed, and maintained in a condition that reduces the potential of damaging radiant and convective heat or ember exposure to Access routes, Buildings, or infrastructure within the Development.

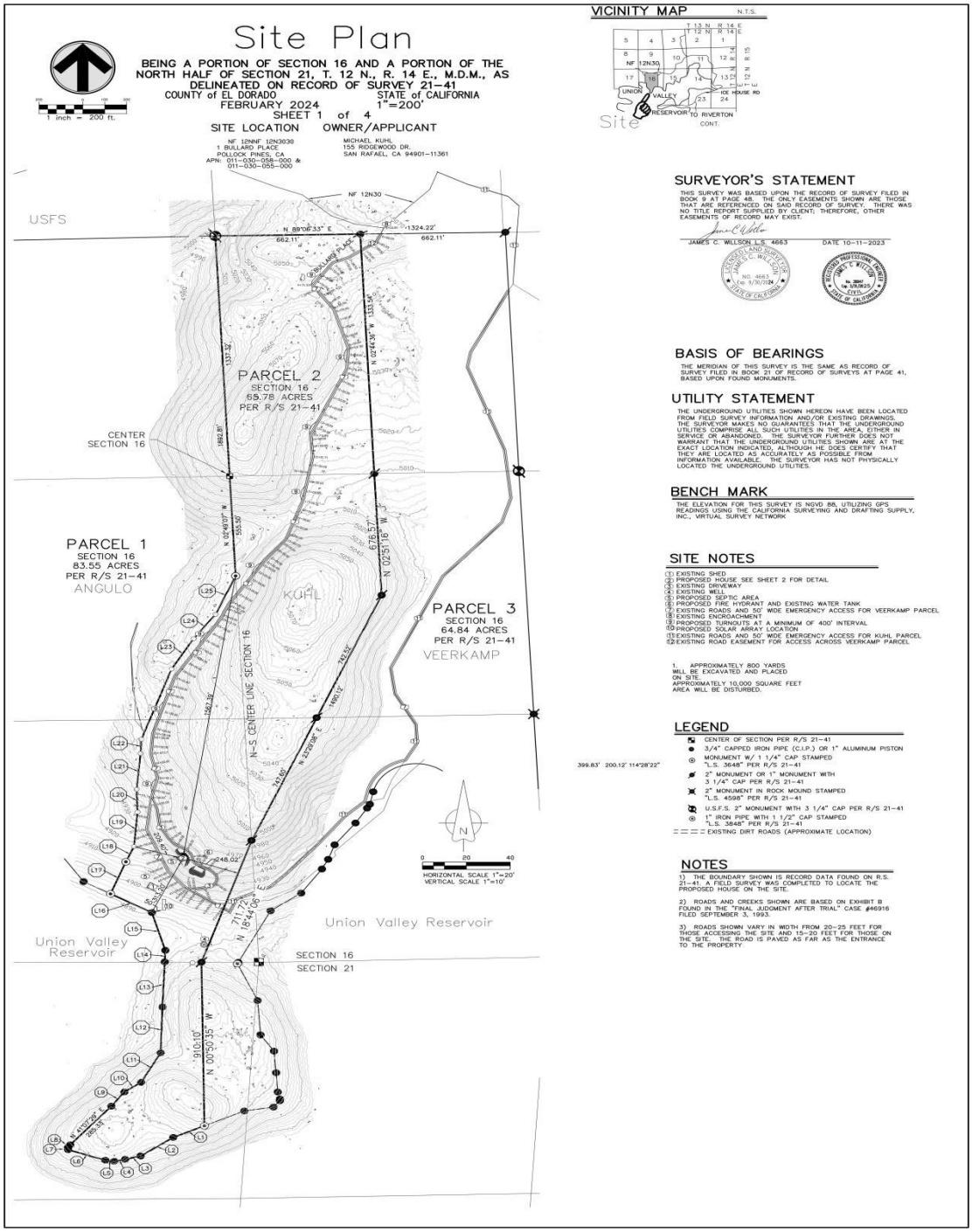
(c) Fuel Breaks shall have, at a minimum, one point of entry for fire fighters and any Fire Apparatus. The specific number of entry points and entry requirements shall be determined by the Local Jurisdiction, in consultation with the Fire Authority.

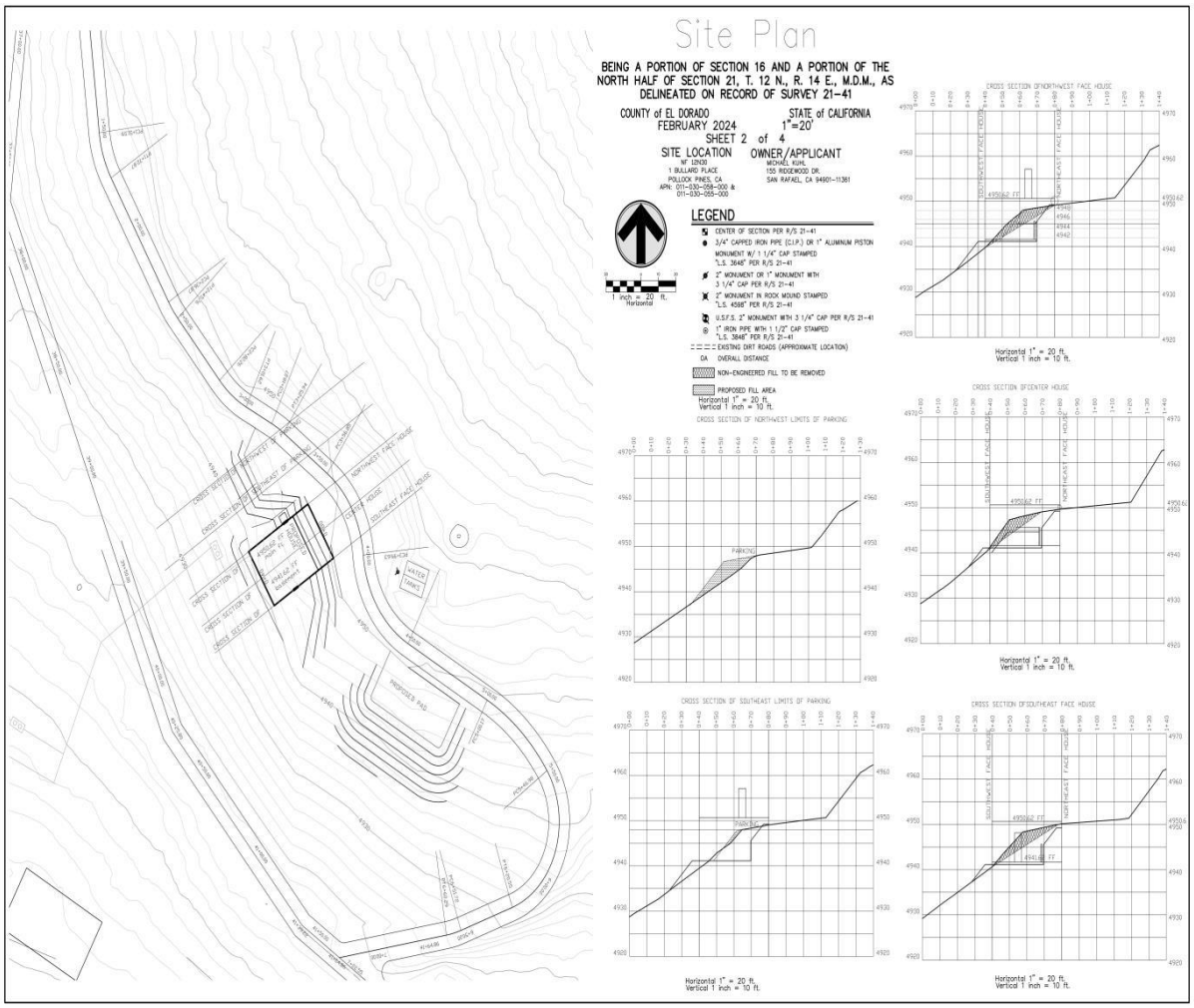
(d) Fuel Breaks may be required at locations such as, but not limited to:

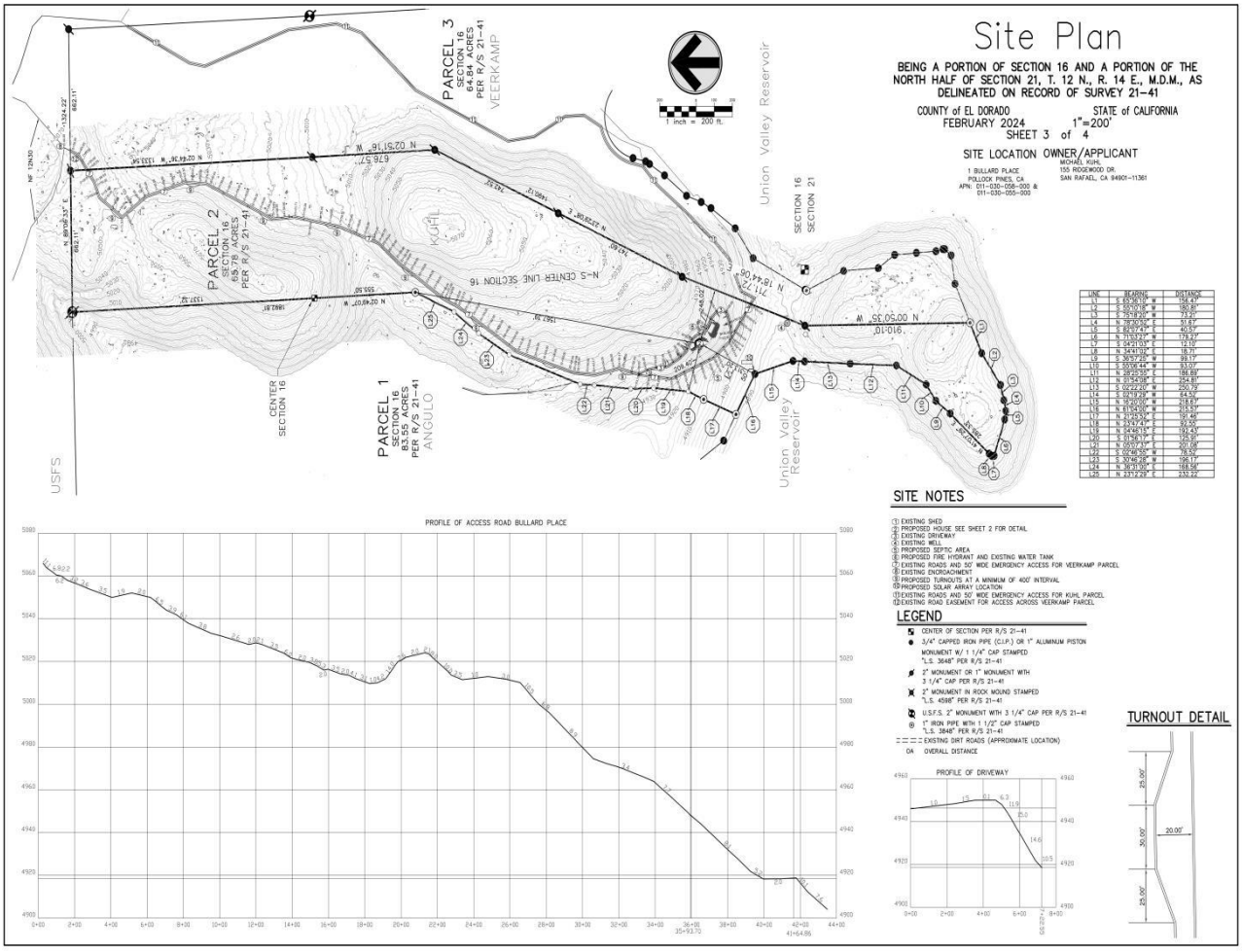
(1) Directly adjacent to defensible space as defined by 14 CCR § 1299.02 to reduce radiant and convective heat exposure, ember impacts, or support fire suppression tactics;
(2) Directly adjacent to Roads to manage radiant and convective heat exposure or ember impacts, increase evacuation safety, or support fire suppression tactics;
(3) Directly adjacent to a Hazardous Land Use to limit the spread of fire from such uses, reduce radiant and convective heat exposure, or support fire suppression tactics;

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Appendix F: Kuhl Single-Family Residential Dwelling Tentative Site Plans




Site Plan
BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41
COUNTY of EL DORADO
FEBRUARY 2024
SHEET 2 of 4
STATE of CALIFORNIA
1"=20'
SITE LOCATION
NF 12H20
1 BULLARD PLACE
POLLOCK PINES, CA
APN: 011-930-058-000 & 011-930-055-000
OWNER/APPLICANT
MICHAEL KUHL
155 RIDGEWOOD DR.
SAN RAFAEL, CA 94901-11361
LEGEND
CENTER OF SECTION PER R/S 21-41
3/4" CAPPED IRON PIPE (C.I.P.) OR 1" ALUMINUM PISTON MONUMENT W/ 3 1/4" CAP STAMPED "L.S. 3846" PER R/S 21-41
2" MONUMENT OR 1" MONUMENT WITH 3 1/4" CAP PER R/S 21-41
2" MONUMENT IN ROCK MOUND STAMPED "L.S. 4598" PER R/S 21-41
U.S.F.S. 2" MONUMENT WITH 3 1/4" CAP PER R/S 21-41
1" IRON PIPE WITH 1 1/2" CAP STAMPED "L.S. 3846" PER R/S 21-41
EXISTING DIRT ROADS (APPROXIMATE LOCATION)
OA OVERALL DISTANCE
NON-ENGINEERED FILL TO BE REMOVED
PROPOSED FILL AREA
1 inch = 20 ft. Horizontal
Horizontal 1" = 20 ft.
Vertical 1 inch = 10 ft.
CROSS SECTION OF NORTHWEST LIMITS OF PARKING
CROSS SECTION OF NORTHWEST FACE HOUSE
CROSS SECTION OF CENTER HOUSE
CROSS SECTION OF SOUTHEAST LIMITS OF PARKING
CROSS SECTION OF SOUTHEAST FACE HOUSE
PROPOSED PAD
PROPOSED DRIVEWAY
PROPOSED WELL
PROPOSED SEPTIC


Site Plan
BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41
COUNTY of EL DORADO
STATE of CALIFORNIA
FEBRUARY 2024
1"=200'
SHEET 3 of 4
SITE LOCATION
OWNER/APPLICANT
PARCEL 1
PARCEL 2
PARCEL 3
KUHL
VEERKAMP
ANGULO
Union Valley Reservoir
USFS
SITE NOTES
LEGEND
PROFILE OF ACCESS ROAD BULLARD PLACE
PROFILE OF DRIVEWAY
TURNOUT DETAIL

Appendix G: Highly Flammable Trees & Vegetation

Highly Flammable Trees & Vegetation

It is advised that these trees and vegetation be removed from the defensible space area around structures.

Trees:	Grasses, Shrubs, Ground Cover
Acacia	Algerian Ivy
Arboritae California Bay	American Holly
Arizona Cypress	Bamboo
Bald Cypress	Black Sage
Blue Gum	Boxwood
Cedar	Brooms
Cryptomeria	California buckwheat
Cypress	California sagebrush
Eucalyptus	Chamise or greasewood
Pine	Deer Grasses
Hemlock	Dry annual Grasses
Italian Cypress	Fountain Grasses
Juniper	Gallberry Holly
Larch	Hopseed Bush
Leyland Cypress	Juniper
Manna Gum	Laurel sumac
Palm (when left untrimmed)	Coyote Brush
Palm Pine	Manzanita
Pepper Tree	Melaleuca
Fir	Pampas Grass
Red Cedar	Pine straw
Spruce	Podocarpus
Sugar Gum	Red Shanks
Tamarisk	Rosemary
Wax Myrtle Cabbage Palm	Salal
Yew	Saw Palmetto
	Scotch broom
	Scrub oak
	Spanish broom
	Sugar bush
	Toyon
	Wax Myrtle
	Yaupon Holly





*These plants are among those known for the amount of dead fuel that accumulates in them, and high oil, high resin, or low moisture content of their leaves and branches

**All plants are flammable if not pruned periodically and the risk attached to any one plant can be greatly diminished with maintenance.

Appendix H: Ready – Set – Go Wildfire Evacuation Program

WILDFIRE IS COMING. ARE YOU READY?

The geography, weather patterns and number of Wildland Urban Interface communities in California make it a state particularly threatened by devastating wildfire. To help educate property owners and residents in areas most at risk, CAL FIRE has developed a communications program called “Ready, Set, Go!” that breaks down the actions needed to be ready for wildfire.

Get prepared for wildfire before it strikes by following Ready, Set, Go!

- Be Ready: Create and maintain defensible space and harden your home against flying embers.
- Get Set: Prepare your family and home ahead of time for the possibility of having to evacuate.
- Be Ready to GO!: Take the evacuation steps necessary to give your family and home the best chance of surviving a wildfire.

Go to this link for additional information on the Ready - Set - Go program: https://www.readyforwildfire.org/prepare-for-wildfire/ready-set-go-campaign/ .

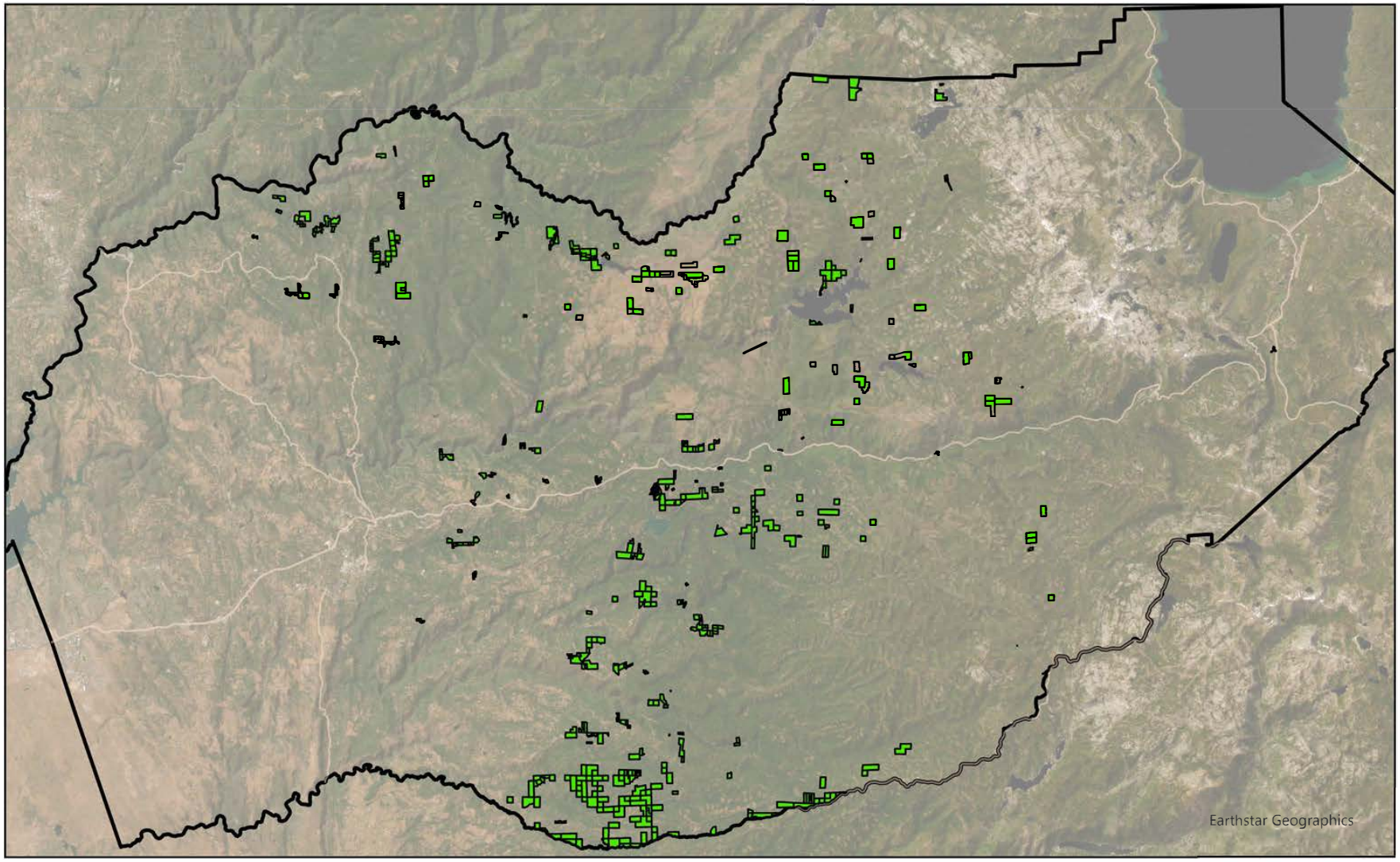
Appendix I: About the Author

This Fire Safe Plan was prepared in 2024 by Phillips Consulting Services of Georgetown, CA. The author, Ronald A. Phillips, has over 40 years of experience in both fire safety and emergency preparedness. Mr. Phillips served in a variety of positions within the California Fire Service including the position of Fire Chief for the City of Folsom between 2010 - 2016. He has a Bachelor of Science degree in Fire Administration along with several state and national program certificates in specialties such as the emergency management, fire prevention, arson & fire investigation, and the incident command system.

Phillips Consulting Services aids both public and private partners in the following areas of expertise:

Δ POST Incident Analysis & After-Action Reviews
Δ Homeland Security Exercises / Improvement Plans
Δ Emergency Management Planning & Documents
Δ Community Fire & Rescue Master Planning
Δ Special Event Planning
Δ Firewise™ Community Assessments & Plans
Δ WUI Site Assessments
Δ Pre-Incident Planning for First Responders
Δ Fire Code Inspections
Δ Emergency Evacuation Planning & Training

CUP24-0011 Kuhl
Privately-Owned TPZ Zoned Parcels Less than 160 Acres



Disclaimer: Parcel boundaries in this map are illustrative only and not considered the legal boundary.

Map created on July 14, 2025.

N

0 5 10 Miles

Legend

Privately-owned TPZ-zoned Parcels (Less than 160 acres)

Planning Commission Comments

CUP 24-0014

07/10/2025

Parcels APN 011-030-055 and 011-030-058 are non-conforming TPZ parcels totally 65.78 acres not 160 acres. The parcels were established by the courts and given TPZ zoning. TPZ zoned parcels of 160 acres by right can apply for a CUP. With the granting of a CUP the property can then have ADU's. These residential amenities are not compatible with the growing and harvesting of timber.

The actual area to be set aside for the residence and the planned necessities has not been clearly identified. There is a well, above ground storage tanks, septic system and leach field, and a solar array with the necessary surrounding openings to allow sufficient sunlight throughout the year. All of this needs to be protected from trees and logging.

If ADU's are constructed on the property, will they have their own well, water storage, septic system and solar array?

The new proposed residence will be built to the latest fire safe construction standards. There is a wildland fire safe plan for the proposed new residence. That does not preclude the possibility of a fire. The property is outside of all fire districts. The response time for emergency services is coming from Pollock Pines and Camino. The allowance of this CUP puts a new fire potential out in our forested area. We have lost thousands of acres of timber due to man caused fires in the last thirty years.

With the approval of this CUP, a dangerous precedent will be set in that there are 2 additional properties, one on either side of this

proposed project that can request the same type of CUP since they are also zoned TPZ and less than the 160-acre size.

Each new development subtracts available acreage from TPZ and the intended purpose of TPZ to grow and harvest timber.

While constraints from harvesting timber are placed on the developed area covered by the CUP, the remaining acreage is still available for forest management. There is a forest management plan for the total 214.17 acres. The Kuhl property has made efforts to manage his property according to the 2009 forest management plan. The adjacent properties have not shown evidence on forest management since the 2009 timber harvest.

In 2009 as a member of the El Dorado County Agricultural Commission I made a motion to recommend approval of a Certificate of Compliance for COC 09-0023. This motion and recommendation was for 2 parcels, parcel 1 was 165 acres and parcel 2 was 164.49 acres. These parcels should be recommended for TPZ zoning. The Motion and comments in 2009 have no bearing on the question of a CUP for the property in the CUP 24-0014.

William F. Draper
RPF #898
4645 Meadowlark Way
Placerville, CA 95667
530 644-5535

15060.5. PREAPPLICATION CONSULTATION

(a) For a potential project involving the issuance of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies, the lead agency shall, upon the request of a potential applicant and prior to the filing of a formal application, provide for consultation with the potential applicant to consider the range of actions, potential alternatives, mitigation measures, and any potential significant effects on the environment of the potential project.

(b) The lead agency may include in the consultation one or more responsible agencies, trustee agencies, and other public agencies who in the opinion of the lead agency may have an interest in the proposed project. The lead agency may consult the Office of Permit Assistance in the Trade and Commerce Agency for help in identifying interested agencies.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21080.1, Public Resources Code.

15061. REVIEW FOR EXEMPTION

(a) Once a lead agency has determined that an activity is a project subject to CEQA, a lead agency shall determine whether the project is exempt from CEQA.

(b) A project is exempt from CEQA if:

(1) The project is exempt by statute (see, e.g. Article 18, commencing with Section 15260).

(2) The project is exempt pursuant to a categorical exemption (see Article 19, commencing with Section 15300) and the application of that categorical exemption is not barred by one of the exceptions set forth in Section 15300.2.

(3) The activity is covered by the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

(4) The project will be rejected or disapproved by a public agency. (See Section 15270(b)).

(5) The project is exempt pursuant to the provisions of Article 12.5 of this Chapter.

(c) Each public agency should include in its implementing procedures a listing of the projects often handled by the agency that the agency has determined to be exempt. This listing should be used in preliminary review.

(d) After determining that a project is exempt, the agency may prepare a Notice of Exemption as provided in Section 15062. Although the notice may be kept with the project application at this time, the notice shall not be filed with the Office of Planning and Research or the county clerk until the project has been approved.

(e) When a non-elected official or decisionmaking body of a local lead agency decides that a project is exempt from CEQA, and the public agency approves or determines to carry out the project, the decision that the project is exempt may be appealed to the local lead agency's elected decisionmaking body, if one exists. A local lead agency may establish procedures governing such appeals.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Sections 21080, 21080.9, 21080.10, 21084, 21108, 21151, 21152, and 21159.21, Public Resources Code; Muzzy Ranch Co. v. Solano County Airport Land Use Commission (2007) 41 Cal. 4th 372, *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68.

Research and shall contain detailed information to support the request. The granting of such request shall be by amendment to these Guidelines.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

15300.4. APPLICATION BY PUBLIC AGENCIES

Each public agency shall, in the course of establishing its own procedures, list those specific activities which fall within each of the exempt classes, subject to the qualification that these lists must be consistent with both the letter and the intent expressed in the classes. Public agencies may omit from their implementing procedures classes and examples that do not apply to their activities, but they may not require EIRs for projects described in the classes and examples in this article except under the provisions of Section 15300.2.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

15301. EXISTING FACILITIES

Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use. The types of "existing facilities" itemized below are not intended to be all-inclusive of the types of projects which might fall within Class 1. The key consideration is whether the project involves negligible or no expansion of use.

Examples include but are not limited to:

(a) Interior or exterior alterations involving such things as interior partitions, plumbing, and electrical conveyances;

(b) Existing facilities of both investor and publicly owned utilities used to provide electric power, natural gas, sewerage, or other public utility services;

(c) Existing highways and streets, sidewalks, gutters, bicycle and pedestrian trails, and similar facilities (this includes road grading for the purpose of public safety), and other alterations such as the addition of bicycle facilities, including but not limited to bicycle parking, bicycle-share facilities and bicycle lanes, transit improvements such as bus lanes, pedestrian crossings, street trees, and other similar alterations that do not create additional automobile lanes);

(d) Restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety, unless it is determined that the damage was substantial and resulted from an environmental hazard such as earthquake, landslide, or flood;

(e) Additions to existing structures provided that the addition will not result in an increase of more than:

  (1) 50 percent of the floor area of the structures before the addition, or 2,500 square feet, whichever is less; or

  (2) 10,000 square feet if:

    (A) The project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan and

    (B) The area in which the project is located is not environmentally sensitive.

(f) Addition of safety or health protection devices for use during construction of or in conjunction with existing structures, facilities, or mechanical equipment, or topographical features including navigational devices;

(g) New copy on existing on and off-premise signs;

(h) Maintenance of existing landscaping, native growth, and water supply reservoirs (excluding the use of pesticides, as defined in Section 12753, Division 7, Chapter 2, Food and Agricultural Code);

(i) Maintenance of fish screens, fish ladders, wildlife habitat areas, artificial wildlife waterway devices, streamflows, springs and waterholes, and stream channels (clearing of debris) to protect fish and wildlife resources;

(j) Fish stocking by the California Department of Fish and Game;

(k) Division of existing multiple family or single-family residences into common-interest ownership and subdivision of existing commercial or industrial buildings, where no physical changes occur which are not otherwise exempt;

(l) Demolition and removal of individual small structures listed in this subdivision:

(1) One single-family residence. In urbanized areas, up to three single-family residences may be demolished under this exemption.

(2) A duplex or similar multifamily residential structure. In urbanized areas, this exemption applies to duplexes and similar structures where not more than six dwelling units will be demolished.

(3) A store, motel, office, restaurant, or similar small commercial structure if designed for an occupant load of 30 persons or less. In urbanized areas, the exemption also applies to the demolition of up to three such commercial buildings on sites zoned for such use.

(4) Accessory (appurtenant) structures including garages, carports, patios, swimming pools, and fences.

(m) Minor repairs and alterations to existing dams and appurtenant structures under the supervision of the Department of Water Resources.

(n) Conversion of a single family residence to office use.

(o) Installation, in an existing facility occupied by a medical waste generator, of a steam sterilization unit for the treatment of medical waste generated by that facility provided that the unit is installed and operated in accordance with the Medical Waste Management Act (Section 117600, et seq., of the Health and Safety Code) and accepts no offsite waste.

(p) Use of a single-family residence as a small family day care home, as defined in Section 1596.78 of the Health and Safety Code.

Note: Authority cited: Section 21083, Public Resources Code; References: Sections 21084, Public Resources Code; *North County Advocates v. City of Carlsbad* (2015) 241 Cal.App.4th 94; *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310; *Bloom v. McGurk* (1994) 26 Cal.App.4th 1307.

15302. REPLACEMENT OR RECONSTRUCTION

Class 2 consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced, including but not limited to:

(a) Replacement or reconstruction of existing schools and hospitals to provide earthquake resistant structures which do not increase capacity more than 50 percent.

(1) The direct referral of a violation of lease, permit, license, certificate, or entitlement for use or of a general rule, standard, or objective to the Attorney General, District Attorney, or City Attorney as appropriate, for judicial enforcement;

(2) The adoption of an administrative decision or order enforcing or revoking the lease, permit, license, certificate, or entitlement for use or enforcing the general rule, standard, or objective.

(b) Law enforcement activities by peace officers acting under any law that provides a criminal sanction;

(c) Construction activities undertaken by the public agency taking the enforcement or revocation action are not included in this exemption.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

15322. EDUCATIONAL OR TRAINING PROGRAMS INVOLVING NO PHYSICAL CHANGES

Class 22 consists of the adoption, alteration, or termination of educational or training programs which involve no physical alteration in the area affected or which involve physical changes only in the interior of existing school or training structures. Examples include but are not limited to:

(a) Development of or changes in curriculum or training methods.

(b) Changes in the grade structure in a school which do not result in changes in student transportation.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

15323. NORMAL OPERATIONS OF FACILITIES FOR PUBLIC GATHERINGS

Class 23 consists of the normal operations of existing facilities for public gatherings for which the facilities were designed, where there is a past history of the facility being used for the same or similar kind of purpose. For the purposes of this section, "past history" shall mean that the same or similar kind of activity has been occurring for at least three years and that there is a reasonable expectation that the future occurrence of the activity would not represent a change in the operation of the facility. Facilities included within this exemption include, but are not limited to, racetracks, stadiums, convention centers, auditoriums, amphitheaters, planetariums, swimming pools, and amusement parks.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

15324. REGULATIONS OF WORKING CONDITIONS

Class 24 consists of actions taken by regulatory agencies, including the Industrial Welfare Commission as authorized by statute, to regulate any of the following:

(a) Employee wages,

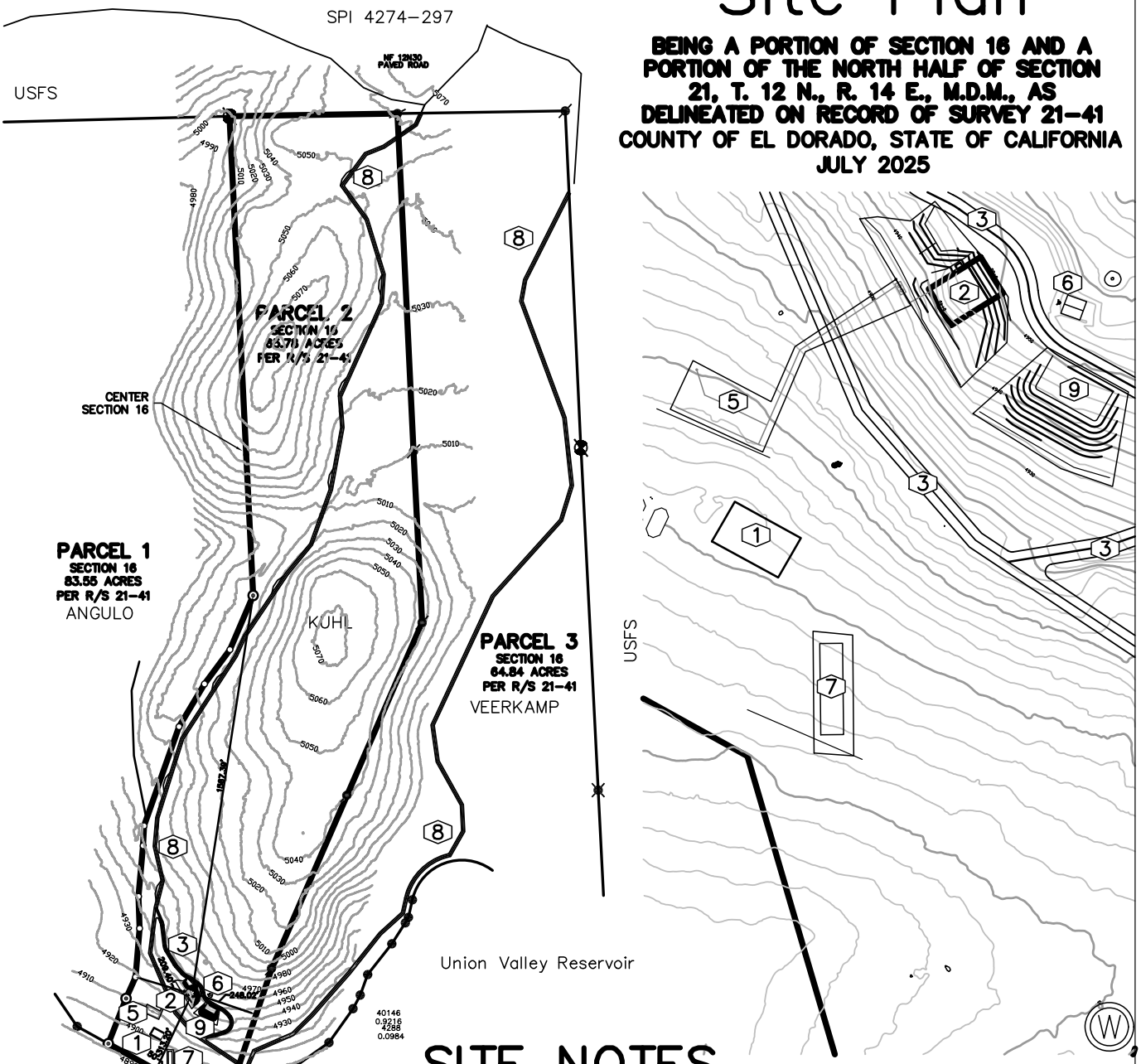
(b) Hours of work, or

(c) Working conditions where there will be no demonstrable physical changes outside the place of work.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

Site Plan

BEING A PORTION OF SECTION 16 AND A PORTION OF THE NORTH HALF OF SECTION 21, T. 12 N., R. 14 E., M.D.M., AS DELINEATED ON RECORD OF SURVEY 21-41
COUNTY OF EL DORADO, STATE OF CALIFORNIA
JULY 2025



SITE NOTES

1. EXISTING HISTORICAL SHED
2. PROPOSED HOUSE AND GRADING (5,891sqft)
3. EXISTING DRIVEWAY
4. EXISTING WELL
5. PROPOSED SEPTIC AREA (9,544sqft)
6. PROPOSED FIRE HYDRANT AND EXISTING WATER TANK
7. PROPOSED SOLAR ARRAY LOCATION (2,076sqft)
8. EXISTING ROADS AND 50' WIDE EMERGENCY ACCESS FOR KUHL PARCEL
   EXISTING ROAD EASEMENT FOR ACCESS ACROSS VEERKAMP PARCEL
9. PROPOSED PAD FROM EXCESS DIRT FOR PARKING AND STORAGE (5,242sqft)

1. MINIMUM CONSTRUCTION SITE STORM WATER MANAGEMENT PRACTICES

THE STORM WATER MANAGEMENT PRACTICES DESCRIBED BELOW ARE THE MINIMUM, REQUIRED WATER QUALITY PROTECTION MEASURES, APPLICABLE TO ALL CONSTRUCTION SITES WITHIN WESTERN EL DORADO COUNTY. THIS LISTING DOES NOT INCLUDE THE VARIOUS INSPECTION, RECORD KEEPING, TRAINING AND REPORTING REQUIREMENTS. ADDITIONALLY, THERE WILL BE INSTANCES WHERE PROJECT AND SITE CONDITIONS REQUIRE SUPPLEMENTING OR DEVIATING FROM THESE MINIMUM PROTECTION REQUIREMENTS. THE CONTRACTOR IS EXPECTED TO DEPLOY MEASURES SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE COUNTY'S GRADING ORDINANCE; AND, AS APPLICABLE (PROJECTS WHICH INVOLVE ONE ACRE OR MORE OF DISTURBED SOIL OR ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT ENCOMPASSES ONE ACRE OR MORE OF DISTURBED SOIL), WITH THE STATE WATER RESOURCES CONTROL BOARD'S (SWRCB) NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

A. SCHEDULING

CONSTRUCTION SHALL BE SCHEDULED TO MINIMIZE CONSTRUCTION ACTIVITIES IN "HIGH-RISK AREAS" AND THE AMOUNT OF ACTIVE DISTURBED SOIL AREAS, DURING THE RAINY SEASON (OCT. 15th TO MAY 1st). "HIGH-RISK AREAS" INCLUDE THOSE AREAS WITHIN 50 FEET OF USGS WATERCOURSES, 100-YEAR FLOOD PLAINS, REGULATED WETLANDS, AND WHERE SLOPES EXCEED 16%.

UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY'S ON-SITE REPRESENTATIVE, DURING THE RAINY SEASON THE CONTRACTOR SHALL NOT SCHEDULE CONSTRUCTION ACTIVITIES IN "HIGH RISK AREAS" OR SCHEDULE TO HAVE MORE THAN 5 ACRES OF ACTIVE DISTURBED SOIL AREA. WHERE PERMANENT STORM WATER TREATMENT DEVICES ARE TO BE CONSTRUCTED, THESE DEVICES SHOULD, WHENEVER FEASIBLE, BE CONSTRUCTED AS AN EARLY WORK ITEM.

B. PRESERVATION OF NATURAL FEATURES

PRIOR TO THE COMMENCEMENT OF SOIL-DISTURBING ACTIVITIES, AREAS OF EXISTING VEGETATION THAT ARE TO REMAIN AND ENVIRONMENTALLY SENSITIVE AREAS (I.E. WETLANDS, PROTECTED HABITATS, ETC) SHALL BE FENCED FOR PROTECTION. IN GENERAL, SITE DESIGNS SHALL PRESERVE EXISTING VEGETATION TO THE MAXIMUM EXTENT POSSIBLE; AND DURING CONSTRUCTION, EXISTING VEGETATION SHALL BE PRESERVED (AND PROTECTED BY FENCING) FOR AS LONG AS POSSIBLE TO MINIMIZE EROSION.

C. STORM WATER RUN-ON AND CONCENTRATED FLOWS

EXISTING WATERCOURSES SHALL BE PROTECTED; AND IF DIVERTED, HANDLED IN A NON-ERODING FASHION. TO THE EXTENT FEASIBLE, ALL CONCENTRATED WATER FLOWS SHALL BE CHANNELED AWAY FROM DISTURBED SOIL AREAS / STOCKPILES. CONCENTRATED WATER FLOWS SHALL BE CONVEYED IN A NON-ERODING FASHION.

D. STOCKPILE MANAGEMENT

STOCKPILES SHALL BE MANAGED AS FOLLOWS:

1. SOIL STOCKPILES
   RAINY SEASON:
   – COVERED, OR PROTECTED WITH SOIL STABILIZATION MEASURES & PERIMETER SEDIMENT BARRIERS.
   NON-RAINY SEASON:
   – COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS.
2. CONCRETE / ASPHALT RUBBLE, ROCK AND AGGREGATE BASE / SUB-BASE
   – COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS
3. "COLD MIX" ASPHALT
   – COVERED

E. SEDIMENT TRACKING CONTROL

APPROPRIATE MEASURES SHALL BE DEPLOYED TO MINIMIZE THE TRACKING OF SEDIMENT OFF-SITE BY VEHICLES AND/OR EQUIPMENT. THESE MEASURES INCLUDE STABILIZED CONSTRUCTION ENTRANCES/EXITS & ROADWAYS, AND TIRE WASHING. WHERE TRACKING OCCURS, STREETS SHALL BE SWEPT USING A PICKUP SWEEPER WITH WATER SUPPLY.

F. NON-STORM WATER MANAGEMENT

NON-STORM WATER DISCHARGES SHALL BE MINIMIZED TO THE EXTENT FEASIBLE. SEDIMENT-LADEN NON-STORM WATER IS REQUIRED TO BE FILTERED (OR EQUIVALENT TREATMENT) PRIOR TO DISCHARGING. MEASURES REQUIRED TO MANAGE NON-STORM WATER DISCHARGES INCLUDE: WATER CONSERVATION PRACTICES, DUST CONTROL, MATERIAL STORAGE PRACTICES, VEHICLE/EQUIPMENT OPERATION AND MAINTENANCE REQUIREMENTS, WASTE MANAGEMENT PRACTICES, AND SPILL PREVENTION / CONTROL MEASURES.

G. DISTURBED SOIL AREA MANAGEMENT

DISTURBED SOIL AREAS (DSA) SHALL BE PROTECTED WITH AN "EFFECTIVE COMBINATION" OF MEASURES INCLUDING SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. THERE MAY BE SITUATIONS WHERE "SEDIMENT BASINS" OR "TREATMENT" ARE ABLE TO SUBSTITUTE AS ALTERNATIVE CONTROL MEASURES TO THE NORMALLY REQUIRED "EFFECTIVE COMBINATION" OF SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. HOWEVER, WHEN SUBSTITUTING THESE MEASURES, THE CONTRACTOR MUST BE PREPARED TO DEMONSTRATE THAT THE SEDIMENT LOAD WITHIN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE DOES NOT EXCEED NATURAL OR PRE-CONSTRUCTION LEVELS.

1. **SOIL STABILIZATION MEASURES INCLUDE:**
   – HYDRAULIC MULCH (REF. CASQA BMP # EC-3)
   – HYDROSEEDING (REF. CASQA BMP # EC-4)
   – SUITABLY STABILIZED, NON-POLLUTING STRAW / WOOD / ORGANIC MULCH (REF. CASQA BMP #'s EC-6 & EC-8)
   – GEOTEXTILES, MATS, PLASTIC COVERS AND EROSION CONTROL BLANKETS (REF. CASQA BMP # EC-7)
   – STABILIZED CONSTRUCTION ROADWAYS (REF. CASQA BMP # TC-2)
2. **SEDIMENT BARRIERS INCLUDE:**
   – SILT FENCES (REF. CASQA BMP # SE-1)
   – SAND / GRAVEL BAG BARRIERS (REF. CASQA BMP #'S SE-6 & SE-8)
   – STRAW BALE BARRIERS (REF. CASQA BMP # SE-9)
   – FIBER ROLLS (REF. CASQA BMP # SE-5)
3. **BASIN / TRAPS INCLUDE:**
   – DESILTING BASINS (REF. CALTRANS BMPS)
   – SEDIMENT TRAPS (REF. CALTRANS BMPS)
4. **ON DSAs WITH SLOPE LENGTHS GREATER THAN 10 FEET, THE FOLLOWING MEASURES SHALL BE DEPLOYED:**

a. RAINY SEASON (OCT. 15TH TO MAY 1ST):
   – NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES EQUAL TO OR FLATTER THAN 1:20 (V/H), SOIL STABILIZATION
   * ON SLOPES STEEPER THAN 1:20 (V/H), SOIL STABILIZATION AND SEDIMENT BARRIERS
   – ACTIVE AREAS
   * ON SLOPES STEEPER THAN 1:20 (V/H), SEDIMENT BARRIERS
   * ON SLOPES STEEPER THAN 1:2 (V/H) WITH SLOPE LENGTHS GREATER THAN 50 FEET: SOIL STABILIZATION; SEDIMENT BARRIERS; AND WHERE FEASIBLE, BASINS / TRAPS

b. NON-RAINY SEASON:
   – NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES STEEPER THAN 1:2 (V/H), SEDIMENT BARRIERS.

5. **GENERAL:**
   PROTECTION SHALL BE DEPLOYED ON NON-ACTIVE DSAs WITHIN 14 DAYS FROM THE CESSATION OF SOIL-DISTURBING ACTIVITIES OR ONE DAY PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION, WHICHEVER OCCURS FIRST. PROTECTION SHALL BE DEPLOYED ON ACTIVE DSAs PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION.

"TERRACES." FOR CUT SLOPES UP TO 60 FEET IN HEIGHT, TERRACES AT LEAST 8 FEET (2.4 METERS) IN WIDTH SHALL BE ESTABLISHED AT NOT MORE THAN 30-FOOT (9.1 METERS) VERTICAL INTERVALS ON ALL CUT SLOPES TO CONTROL SURFACE DRAINAGE AND DEBRIS EXCEPT THAT WHERE ONLY ONE TERRACE IS REQUIRED, IT SHALL BE AT MIDHEIGHT. FOR CUT SLOPES GREATER THAN 60 FEET (18 METERS) AND UP TO 120 FEET (37 METERS) IN VERTICAL HEIGHT, ONE ADDITIONAL TERRACE AT APPROXIMATELY MIDHEIGHT SHALL BE 12 FEET (3.6 METERS) IN WIDTH. TERRACES SHALL SLOPE A MINIMUM OF 5 PERCENT GRADIENT TOWARD THE HILLSIDE. TERRACE WIDTHS AND SPACING FOR CUT SLOPES GREATER THAN 120 FEET (36 METERS) IN HEIGHT SHALL BE DESIGNED BY THE CIVIL ENGINEER AND APPROVED BY THE DIRECTOR. SUITABLE ACCESS SHALL BE PROVIDED TO PERMIT PROPER CLEANING AND MAINTENANCE.

"SEDIMENT BASIN:" A BASIN WITH A CAPACITY EQUIVALENT TO AT LEAST 3600 CUBIC FEET OF STORAGE (AS MEASURED FROM THE BOTTOM OF THE BASIN TO THE PRINCIPAL OUTLET) PER ACRE DRAINING INTO THE BASIN. THE LENGTH OF THE BASIN SHALL BE MORE THAN TWICE THE BASIN'S WIDTH (LENGTH IS DETERMINED BY MEASURING THE DISTANCE BETWEEN THE INLET AND THE OUTLET). THE DEPTH OF THE BASIN MUST NOT BE LESS THAN THREE FEET NOR GREATER THAN FIVE FEET.

"TREATMENT": A COMBINATION OF BASIN AND TREATMENT ENGINEERED TO CAPTURE AND TREAT (TO REMOVE 0.01 MM SIZED PARTICLES AND LARGER) THE 10-YEAR, 6-HOUR RAIN EVENT USING Q=CxIxA WHERE C=0.5 AND I RANGES FROM 0.286 (EL DORADO HILLS) TO 0.500 (SLY PARK).

GENERAL REFERENCE: EL DORADO COUNTY "STORM WATER MANAGEMENT PLAN", OCTOBER 2004.
AVAILABLE ON-LINE AT: HTTP://WWW.CO.EL-DORADO.CA.US//EMD/SOLIDWASTE/STORM.HTML

DETAILED REFERENCES:

1. CALIFORNIA STORM WATER QUALITY ASSOCIATION (CASQA) "CONSTRUCTION HANDBOOK", JANUARY 2003. ERRATA SEPTEMBER 2004. AVAILABLE ON-LINE ATHTTP://WWW.CABMPHANDBOOKS.COM/
2. CALTRANS "STATEWIDE STORM WATER QUALITY PRACTICE GUIDELINES", APRIL 2003. AVAILABLE ON-LINE AT: HTTP://WWW.DOT.CA.GOV/HQ/ENV/STORMWATER/SPECIAL/NEWSETUP/INDEX.HTM
3. HIGH SIERRA RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL "VEGETATION ESTABLISHMENT GUIDELINES FOR THE SIERRA NEVADA FOOTHILLS AND MOUNTAINS," AVAILABLE ON-LINE AT: HTTP://WWW.CO.EL-DORADO.CA.US/EMD/SOLIDWASTE/STORMWATER/HSRCD%20VEGITATION%20GUIDELINES%20FINAL%202005.PDF

CRITICAL AREA PLANTING CONSTRUCTION SPECIFICATIONS (JANUARY 2006)

A. SCOPE

ESTABLISHING VEGETATION ON SEVERELY ERODING AREAS OR AREAS WITH AN EROSION POTENTIAL. ITS PURPOSE IS TO STABILIZE THE SOIL, MINIMIZE OR PREVENT DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS, PROTECT WILDLIFE HABITAT, AND MAINTAIN AESTHETIC QUALITIES.

B. AREAS TO BE SEEDED, TIMING OF SEEDING

COMPLETE REVEGITATION AND STABILIZATION OF ALL DISTURBED SOILS, BOTH WITHIN AND OUTSIDE COUNTY RIGHT-OF-WAY, WILL BE ACCOMPLISHED WITH SPECIFIED AMOUNTS AND TYPES OF VEGETATIVE SPECIES, MULCH, AND FERTILIZER MATERIAL. SEE MAJOR LAND RESOURCE AREA EXHIBITS MLRA 18 OR 22.

ALL EROSION AND SEDIMENT CONTROL PRACTICES PERFORMED AFTER OCTOBER 15, SHALL FOLLOW "RAINY SEASON" SPECIFICATION CONTAINED IN THE STORM WATER MANAGEMENT PRACTICES.

C. MATERIAL

1. SEED – ALL SEED SHALL BE DELIVERED TO THE SITE TAGGED AND LABELED IN ACCORDANCE WITH THE CALIFORNIA AGRICULTURAL CODE AND SHALL BE ACCEPTABLE TO THE COUNTY AGRICULTURAL COMMISSIONER.

SEED SHALL BE OF A QUALITY WHICH HAS A MINIMUM PURE LIVE SEED CONTENT OF 80% (% PURITY X % GERMINATION) AND WEED SEED SHALL NOT EXCEED 0.5% OF THE AGGREGATE OF PURE LIVE SEED AND OTHER MATERIALS. LEGUME SEED SHALL BE INOCULATED WITH INOCULATE SPECIFIC TO ITS NEEDS WITHIN TWO HOURS PRIOR TO SEEDING. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER OR AS OTHERWISE SPECIFIED. ALL INOCULATED SEED SHALL BE LABELED TO SHOW WEIGHT OF SEED, THE DATE OF INOCULATION, AND THE WEIGHT AND SOURCE OF INOCULANT MATERIALS.

2. FERTILIZER – A COMMERCIAL FERTILIZER SHALL BE AMMONIUM PHOSPHATE AND CONTAIN A MINIMUM OF 16% NITROGEN, 20% PHOSPHORUS, AND 0% POTASH, UNIFORM IN COMPOSITION, DRY AND FREE FLOWING, PELLETED OR GRANULAR.

ALL FERTILIZER SHALL BE DELIVERED IN UNBROKEN OR UNOPENED CONTAINERS, LABELED IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS AND BEARING THE WARRANTY OF THE PRODUCER FOR THE GRADE FURNISHED.

3. MULCH – MULCH SHALL BE ONE OF THE FOLLOWING MATERIALS AS APPROVED BY THE GOVERNMENT REPRESENTATIVE.

4. STRAW – STRAW SHALL BE NEW STRAW DERIVED FROM RICE, WHEAT, OATS, OR BARLEY, AND BE FREE OF MOLD AND NOXIOUS WEED SEED. STRAW SHALL BE FURNISHED IN AIR DRY BALES. EVIDENCE SHALL BE FURNISHED THAT CLEARANCE HAS BEEN OBTAINED FROM THE COUNTY AGRICULTURAL COMMISSIONER, AS REQUIRED BY LAW, BEFORE STRAW OBTAINED FROM OUTSIDE THE COUNTY IN WHICH IT IS TO BE USED IS DELIVERED TO THE SITE OF THE WORK.

5. WOOD FIBER MULCH – WOOD FIBER MULCH IS A WOOD CELLULOSE FIBER THAT CONTAINS NO GERMINATION OR GROWTH INHIBITING FACTORS. IT IS COLORED WITH A NON-TOXIC, WATER SOLUBLE, GREEN DYE TO PROVIDE A PROPER GAUGE FOR METERING OVER GROUND SURFACES. IT HAS THE PROPERTY TO BE EVENLY DISPERSED AND SUSPENDED WHEN AGITATED IN WATER.

D. SEEDING REQUIREMENTS

1. GENERAL – ALL SEEDING, FERTILIZER AND MULCHING OPERATIONS SHALL BEGIN WHEN APPROVAL IS GIVEN BY THE APPROPRIATE COUNTY ENGINEER OR CONSERVATION DISTRICT REPRESENTATIVE.

2. SEEDBED PREPARATION – THE ENTIRE AREA TO BE SEEDED SHALL BE REASONABLY SMOOTH AND CONFORM TO THE DESIRED SHAPE BEFORE ACTUAL SEEDBED PREPARATION IS BEGUN. ANY DEBRIS WHICH WOULD INTERFERE WITH SEEDING OPERATIONS GROWTH OR MAINTENANCE OF THE VEGETATIVE COVER WILL BE REMOVED. THE AREA TO BE SEEDED SHALL HAVE A FIRM SEEDBED WHICH HAS PREVIOUSLY BEEN ROUGHENED BY SCARIFYING, DISKING, HARROWING, CHISELING, OR OTHERWISE WORKED TO A DEPTH OF TWO TO FOUR INCHES (2" – 4"). NO IMPLEMENT SHALL BE USED THAT WILL CREATE AN EXCESSIVE AMOUNT OF DOWNWARD MOVEMENT OF SOIL OR CLODS OF SLOPING AREAS. SEEDBED MAY BE PREPARED AT TIME OF COMPLETION OF EARTH-MOVING WORK.

3. FERTILIZING – FERTILIZER SHALL BE DISTRIBUTED UNIFORMLY OVER THE SEEDBED AT THE RATE OF 300 POUNDS PER ACRE, AND SHALL BE IN SUCH PHYSICAL CONDITION TO INSURE UNIFORM APPLICATION OVER THE AREA TO BE FERTILIZED. FERTILIZER MAY BE APPLIED IN ANY WAY THAT WILL RESULT IN UNIFORM DISTRIBUTION. THE FERTILIZER SHALL BE INCORPORATED INTO THE SOIL.

4. SEEDING – SEED SHALL BE BROADCAST BY HAND, MECHANICAL HAND SEEDER, POWER OPERATED SEEDER, HYDROSEEDER OR OTHER APPROVED EQUIPMENT. SEED SHALL HAVE A SOIL COVER OF NOT MORE THAN ONE-HALF INCH. SEEDING WILL BE CARRIED OUT USING EITHER OF THE FOLLOWING METHODS:

METHOD 1 THE SEED MAY BE DRILLED, NOT TO EXCEED ONE-HALF (1/2) INCH DEEP AND CULTIPACKED OR ROLLED ONCE OVER WITH A CORRUGATED ROLLER ON ALL AREAS WHERE EQUIPMENT CAN BE OPERATED SAFELY. SEED OPERATIONS WILL BE ACROSS THE SLOPE.

METHOD 2 THE SEED MAY BE APPLIED IN A SLURRY MIX OF WOOD CELLULOSE FIBER DISTRIBUTED UNIFORMLY AT THE PRESCRIBED RATE. THE APPLICATION UNIT USED FOR "HYDRO MULCH" SHALL BE EQUIPPED WITH AN AGITATOR TO MAINTAIN THE SEED AND MULCH IN SUSPENSION WITHIN THE UNIT'S TANK PRIOR TO AND DURING APPLICATION.

METHOD 3 WHERE EMERGENCY TREATMENT OF EXPOSED SOILS EXTENDS BEYOND OCTOBER 15, EMERGENCY MULCHING WITHOUT SEED WILL BE PRESCRIBED IN ACCORDANCE WITH "SOIL STABILIZATION MEASURES" DESCRIBED PREVIOUSLY.

SPECIAL NOTE: A MINIMUM 70% SEED GERMINATION WITH AT LEAST 1" GROWTH MUST BE OBTAINED BY DECEMBER 1ST, OR AREA MUST BE COVERED WITH STRAW MULCH.

Fugitive Dust Prevention/Control and Asbestos Hazard Dust Mitigation Notes

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 10, "DUST CONTROL" OF THE STANDARD SPECIFICATIONS, COUNTY OF EL DORADO AIR POLLUTION CONTROL DISTRICT (APCD) RULE 223, AND COUNTY OF EL DORADO ORDINANCE 4548. COPIES OF APCD RULE 223 AND ORDINANCE 4548 MAY BE OBTAINED FROM THE COUNTY OF EL DORADO DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667.
2. THE CONTRACTOR SHALL KEEP A COPY OF THE FUGITIVE DUST PLAN AND THE ASBESTOS MITIGATION PLAN (IF ISSUED) AT THE CONSTRUCTION SITE AT ALL TIMES DURING THE CONSTRUCTION PERIOD.

MLRA 22

FOR SEEDING PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
KIND OF SEED AND AMOUNT (HYDROSEEDED OR BROADCASTED)

POTOMAC ORCHARD GRASS	24 LBS/ACRE	0.55 LBS/1000 SqFt
OR		
LUNA PUBESCENT WHEAT GRASS	36 LBS/ACRE	0.80 LBS/1000 SqFt
OR		
TOPAR PUBESCENT WHEAT GRASS	36 LBS/ACRE	0.80 LBS/1000 SqFt
AND		
WIMMERA '62' RYE GRASS	6 LBS/ACRE	.15 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

FOR SEEDING NOT PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
HYDROSEEDED OR BROADCASTED

POTOMAC ORCHARD GRASS	48 LBS/ACRE	1.10 LBS/1000 SqFt
OR		
LUNA PUBESCENT WHEAT GRASS	72 LBS/ACRE	1.60 LBS/1000 SqFt
OR		
TOPAR PUBESCENT WHEAT GRASS	72 LBS/ACRE	1.60 LBS/1000 SqFt
AND		
WIMMERA '62' RYE GRASS	12 LBS/ACRE	.3 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

Notes–SITE CONSULTING, INC

1. THE CONTRACTOR SHALL PROCURE AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY THE OWNER AS MAY BE NECESSARY TO COMPLY WITH FEDERAL, STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK.
2. EXISTING UTILITIES ARE INDICATED ON THE PLANS WHERE SUCH UTILITIES ARE KNOWN. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE, PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT, (USA) 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. (TELEPHONE 1-800-642-2444) ALSO NOTIFY THE EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION WORK.
3. PERIODIC INSPECTION AND REPAIR WILL BE REQUIRED BY THE OWNER TO KEEP DRAINAGE IMPROVEMENTS OPERABLE. REMOVAL OF SEDIMENT DEPOSITS AND VEGETATIVE MATERIALS IN PIPES, INLET STRUCTURES AND DRAINAGE INVERTS SHALL BE PERFORMED AT A REGULAR MAINTENANCE INTERVAL TO PREVENT ACCUMULATION AND OBSTRUCTION OF DRAINAGE IMPROVEMENT OPERATION.
4. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER, OWNER AND THE COUNTY OF EL DORADO AT LEAST 24 HOURS PRIOR TO ANY GRADING.
5. ALL GRADING IS TO BE DONE IN ACCORDANCE WITH THE COUNTY OF EL DORADO REQUIREMENTS AND THE SOILS ENGINEER:
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE EROSION CONTROL PLAN. ALL SUCH MEASURES SHALL CONFORM TO THE COUNTY OF EL DORADO GRADING, EROSION AND SEDIMENT CONTROL ORDINANCE TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGH THE DURATION OF THE PROJECT. IF GRADING ACTIVITIES ARE NOT COMPLETED BY OCTOBER 15, THE OWNER SHALL IMPLEMENT THE TEMPORARY EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. ALL AREAS GRADED DURING THE RAINY SEASON (OCTOBER 15 – MAY 15) SHALL BE RE-VEGETATED WITHIN 15 DAYS UPON COMPLETION.
7. EARTHWORK ESTIMATES ARE TO BE USED FOR ESTIMATING PURPOSES ONLY AND NO GUARANTEE IS MADE AS TO THE ACCURACY OF THIS INFORMATION. THE CONTRACTOR ACKNOWLEDGES THAT HE IS SATISFIED AS TO THE CHARACTER, QUALITY, AND QUANTITY OF THE SURFACE AND SUBSURFACE MATERIALS TO BE ENCOUNTERED AND WILL BE RESPONSIBLE FOR PROPERLY ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK.

CUBIC YARDS – EXCAVATION: 800± CUBIC YARDS – EXPORT: 0

CUBIC YARDS – EMBANKMENT: 800± CUBIC YARDS – IMPORT: 0

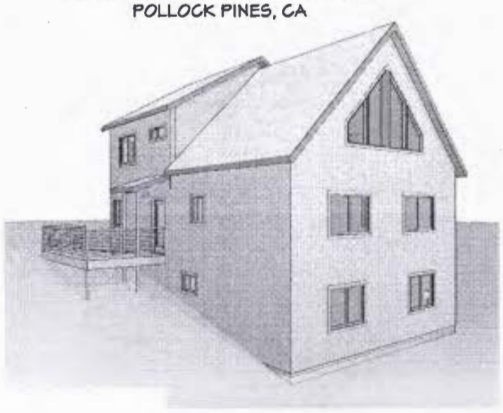
8. IT IS THE APPLICANT AND CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL THE STATE AND FEDERAL LAWS AND REGULATIONS INCLUDING THE FEDERAL AND STATE ENDANGERED SPECIES ACT AND THE CLEAN WATER ACT FOR ALL ON-SITE IMPACTS. THE COUNTY GRADING PERMIT DOES NOT AUTHORIZE THE CONTRACTOR TO CONDUCT ACTIVITIES NOT PERMITTED BY APPLICABLE STATE AND FEDERAL AGENCIES IN AREAS SUBJECT TO STATE AND FEDERAL JURISDICTION.
9. THE AREA OF DISTURBANCE IS APPROXIMATELY 0.4 ACRES.

Standard General Notes Grading and Drainage Notes

1. MATERIALS, CONSTRUCTION QUALITY, AND METHODS FOR THIS PROJECT ARE SUBJECT TO THE COUNTY OF EL DORADO DESIGN AND IMPROVEMENT STANDARD PLANS, AND THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS.
2. ALL WORK SHALL BE ACCOMPLISHED TO THE SATISFACTION OF THE COUNTY OF EL DORADO, AUTHORIZED REPRESENTATIVE.
3. ALL REFERENCE TO COUNTY SHALL MEAN THE COUNTY OF EL DORADO OR AUTHORIZED REPRESENTATIVE.
4. ALL REFERENCE TO THE STANDARD SPECIFICATIONS SHALL MEAN THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JULY 2006.
5. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO SHALL HAVE FULL AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR ON SITE AT ALL TIMES DURING WORKING HOURS.
6. THE CONTRACTOR SHALL NOTIFY COUNTY AND ROD 48 HOURS IN ADVANCE OF COMMENCING WORK TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND INSPECTION WITH THE ENGINEER AND COUNTY. NO WORK SHALL BEGIN UNTIL AFTER THE PRE-CONSTRUCTION CONFERENCE AND INSPECTION HAVE BEEN COMPLETED.
7. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7, "LEGAL RELATIONS AND RESPONSIBILITY" OF THE STANDARD SPECIFICATIONS.
8. RIGHTS TO ENTER AND CONSTRUCT SHALL BE OBTAINED PRIOR TO CONSTRUCTING ANY OFF-SITE WORK SHOWN IN THESE PLANS. COPIES OF SUCH DOCUMENTS SHALL BE KEPT ON-SITE AT ALL TIMES DURING THE PERFORMANCE OF OFF-SITE WORK.
9. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) 811 OR 1-800-227-2600 PRIOR TO PERFORMING ANY EXCAVATION ON THE PROJECT SITE. THE OWNER(S) OF IDENTIFIED EXISTING UNDERGROUND FACILITIES SHALL ALSO BE CONTACTED PRIOR TO CONSTRUCTION.
10. STAKING MAY BE REQUIRED BY COUNTY DUE TO THE NATURE AND/OR COMPLEXITY OF THE WORK. LOST OR DAMAGED STAKES SHALL BE REPLACED TO THE SATISFACTION OF COUNTY WHETHER RESULTING FROM CONSTRUCTION PROCEDURES, VANDALISM, OR ANY OTHER CAUSE.
11. CONSTRUCTION HOURS SHALL BE LIMITED FROM MONDAY THROUGH SATURDAY, 7:00 A.M. TO 7:00 P.M. DURING WEEKDAYS AND 8 A.M. TO 5 P.M. ON SATURDAY. ALL HEAVY EQUIPMENT AND ANY INTERNAL COMBUSTION ENGINES SHALL BE FITTED WITH ADEQUATE MUFFLERS.
12. THE CONTRACTOR SHALL PROVIDE, PLACE AND MAINTAIN ALL LIGHTS, SIGNS, DELINEATORS, BARRICADES, TEMPORARY TRAFFIC STRIPING, FLAGMEN, DETOURS OR OTHER DEVICES NECESSARY TO PROVIDE FOR THE SAFE AND CONVENIENT PASSAGE OF PUBLIC VEHICLE AND PEDESTRIAN TRAFFIC THROUGH THE CONSTRUCTION SITE.
13. THE CONTRACTOR SHALL OBTAIN THE EXPRESS WRITTEN CONSENT OF COUNTY PRIOR TO IMPLEMENTING ANY LANE CLOSURE OR DETOUR ON A COUNTY MAINTAINED STREET OR HIGHWAY. ALL LANE CLOSURES OR DETOURS SHALL CONFORM TO CHAPTER 5, "TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC MANUAL (LATEST EDITION).
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION. AT LEAST ONE WATER TRUCK SHALL BE ON SITE AT ALL TIMES. ADDITIONAL EQUIPMENT MAY BE REQUIRED AS DETERMINED BY COUNTY.
15. IF THE PRESENCE OF SERPENTINE ROCK (SAF) IS DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, CITY AND THE EL DORADO COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT THAT SERPENTINE ROCK IS PRESENT ON THE SITE.
16. UPON JOB COMPLETION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE INFORMATION TO SITE CONSULTING, INC. (ENGINEER), REGARDING ANY MATERIAL CHANGES MADE DURING CONSTRUCTION AS WELL AS ANY OTHER INFORMATION REQUIRED TO BE SHOWN ON THE RECORD DRAWINGS BY COUNTY.
17. CLEARING AND GRUBBING SHALL CONFORM TO THE PROVISIONS OF SECTION 16, "CLEARING AND GRUBBING" OF THE STANDARD SPECIFICATIONS. ROOTS, STUMPS, TREES, ROCKS OR OTHER DELETERIOUS SUBSTANCES SHALL BE DISPOSED OF OFF-SITE AND IN A LAWFUL MANNER.
18. EARTHWORK SHALL CONFORM TO THE PROVISIONS OF SECTION 19, "EARTHWORK" OF THE STANDARD SPECIFICATIONS. WIDENING OF EMBANKMENTS AND FLATTENING OF SLOPES, WHICH RESULT IN AN INCREASED AREA OF GRADING, WILL NOT BE PERMITTED WITHOUT EXPRESS WRITTEN APPROVAL OF COUNTY.
19. AGGREGATE BASE SHALL CONFORM TO THE PROVISIONS OF SECTION 26, "AGGREGATE BASE" OF THE STANDARD SPECIFICATIONS FOR CLASS 2 AGGREGATE BASE, 3/4" MAXIMUM GRADATION. AGGREGATE BASE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY COUNTY.
20. ASPHALT CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 39, "ASPHALT CONCRETE" OF THE STANDARD SPECIFICATIONS FOR TYPE B ASPHALT CONCRETE. ASPHALT BINDER SHALL BE PERFORMANCE GRADE 64-16. AGGREGATE FOR THE TOP LIFT SHALL BE 1/2" MAXIMUM, MEDIUM GRADATION. AGGREGATE FOR LOWER LIFTS SHALL BE 3/4" MAXIMUM, MEDIUM GRADATION. LIFT THICKNESS SHALL CONFORM TO THE PROVISIONS OF SECTION 39-6. "SPREADING AND COMPACTION" OF THE STANDARD SPECIFICATIONS. ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY CITY, AND ALL UTILITIES WITHIN THE PAVED AREA HAVE BEEN PLACED, TESTED, AND APPROVED.
21. PRECAST CONCRETE STRUCTURES SHALL CONFORM TO SECTION 70-1.02H "PRECAST CONCRETE STRUCTURES" OF THE STANDARD SPECIFICATIONS.
22. IF BLASTING ACTIVIT

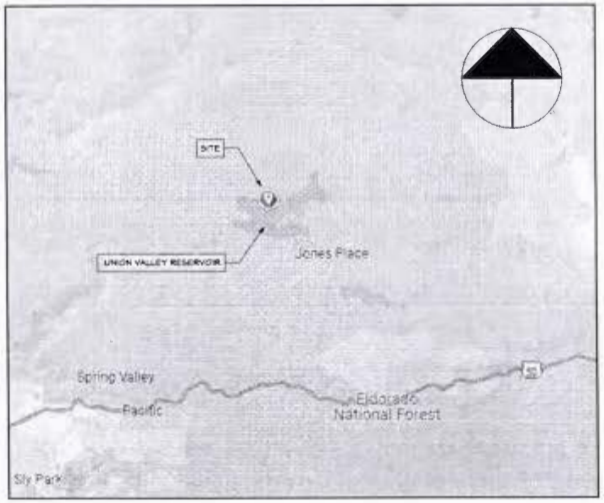
KUHL RESIDENCE

1 BULLARD PLACE (APN: 011-030-058)
POLLOCK PINES, CA



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EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

VICINITY MAP



SCOPE OF WORK

CONSTRUCT A NEW RESIDENCE.

SQUARE FOOTAGE SUMMARY

MAIN LEVEL	1120 ft²
LOWER LEVEL	785 ft²
UPPER LEVEL	685 ft²
	2590 ft²
ENTRY DECK	173 ft²
	173 ft²

PROJECT INFORMATION

CONSTRUCTION TYPE:	V-B
OCCUPANCY GROUP:	R3
SPRINKLERED:	YES
STORIES ABOVE GRADE:	3

2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

SHEET INDEX

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A0.1	ARCHITECTURAL NOTES
A1.0	ARCHITECTURAL FLOOR PLANS
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A3.0	ARCHITECTURAL ROOF PLAN & SECTIONS
E1.0	ELECTRICAL PLANS
G1.0	GAS PIPING PLAN
S1.0	STRUCTURAL FLOOR PLANS
S2.0	FOUNDATION & MAIN FLOOR FRAMING PLANS
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SD1	STRUCTURAL DETAILS
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FP1	FIRE SPRINKLER PLAN

BURNE ENGINEERING
(530) 672-1600

COVERSHEET
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-030-058)
POLLOCK PINES, CA

REVISIONS

SHEET #
A0.0

CUP24-0011

Title-24 Energy Requirement Summary

Project: Kuhl Custom Home, 1 Bullard Place — Climate Zone: 16
This Project complies with the Residential 2022 Building Energy Efficiency Standards with the following minimum assemblies and efficiencies.

* HERS VERIFICATIONS REQUIRED (see below)

Envelope Assemblies:
Roofing = Radiant Barrier on Sheeting Not Required. Cool Roof Shingles Not Required.
Ceiling = R-38 batt or blown on Lid, Vented Attic, Metal or Comp Roof
Vaulted Ceiling = R-38 in Vault Cavity, Sheathing, Comp or Metal Roof
Walls = 2x6, R-21, Wood Siding or Stucco
Underground Walls = Min. 6" Concrete/Masonry, 2x6 Wood Frame, R-21, Gyp.
Floor = R-30 Raised Floor
Front Door Orientation: 315 degrees (on plot plan)

Glazing:
Average Weighted Total = Wood, Vinyl, or T.B. Metal, Argon, Low-E3 (U=.28 & shgc=.30)
Skylights / Solar Tubes = NA

H.V.A.C.:
Whole House Fan = Not Required
Total Zone = 80kbtu Ducted Gas Furnace rated as a minimum 95% afue
NOTE: Pre-wire FAU Area for future Electrification; required per Mandatory Measures
Ducting = R-8.0 insulated ducts located in crawl space w/ min. 2" MERV 13 R/A & HRV Filters
HRV / ERV = Broan B130H65 (or equal) rated at 119cfm, SRE .58, ASRE .62, 69watts
HRV / ERV = All components (supply inlet, filter, cores) are accessible per RACM
Sizing of HVAC equipment is for reference only.
Mechanical Contractor responsible for properly sizing and installing the HVAC system.

Solar P.V.: Minimum 6.0 kWdc / 180 Azimuth / 22deg Array / 4.8 Tilt / 96% Inverter Eff
Battery Storage: Basic Control, 12kWh (60amps), 96% Charging/Discharging Efficiency, 5kW Rate

* HERS Verification / Testing Required:
* HERS Indoor Air Quality Balanced HRV (119cfm) Verification & HRV Requirements
* HERS Verification of Kitchen Exhaust Hood (per tables 150.0-G -H attached & per HVI or AHAM)
* HERS Duct Leakage Test (<9%)
* HERS Verification of R-7.2 Hot Water Pipe Insulation

Domestic Hot Water:
(1) Instant/Tankless Gas rated at a max. 199kbtu input and a min. .95 UEF. R-7.2 pipe insulation required on all hot water pipes. No Recirc. Pre-wire for future Electrification required per Mandatory Measures

Appliances:
Oven/Stove top = Electric or Gas (Pre-wire for future Electrification required per Mandatory Measures)
Clothes Dryer = Electric or Gas (Pre-wire for future Electrification required per Mandatory Measures)

Table 150.0-E Demand-Controlled Local Ventilation Exhaust Airflow Rates and Capture Efficiency

Application	Compliance Criteria
Enclosed Kitchen or Nonenclosed Kitchen	Vented range hood, including appliance-range hood combinations, shall rated either the capture efficiency (CE) or the airflow rate specified in Table 150.0-G as applicable
Enclosed Kitchen	Other kitchen exhaust fans, including downdraft: 300 cfm (120 L/s) or a capacity of 5 ACH
Nonenclosed Kitchen	Other kitchen exhaust fans, including downdraft: 300 cfm (120 L/s)
Bathroom	50 cfm (20 L/s)

Table 150.0-F Continuous Local Ventilating Exhaust Airflow Rate

Application	Airflow
Enclosed Kitchen	5 ach, based on kitchen volume
Bathroom	20 cfm (10 L/s)

SECTION 150.0 – MANDATORY FEATURES AND DEVICES

Table 150.0-G Kitchen Range Hood Airflow Rates (cfm) and ASTM E3087 Capture Efficiency (CE) Ratings According to Dwelling Unit Floor Area and Kitchen Range Fuel Type

Dwelling Unit Floor Area (SF)	Hood Over Electric Range	Hood Over Natural Gas Range
>5500	500 CE or 120 cfm	79% CE or 180 cfm
>3500 - 5500	350 CE or 120 cfm	85% CE or 250 cfm
750 - 3500	75% CE or 120 cfm	85% CE or 250 cfm
<750	60% CE or 120 cfm	85% CE or 250 cfm

Table 150.0-H Prescriptive Ventilation System Duct Sizing (ASHRAE 62.2 Table 5-3)

Fan Airflow Rating, cfm at minimum static pressure of 0.25 in. water (Lit at minimum 62.5 Pa)	≤50 (≤25)	≤80 (≤40)	≤100 (≤50)	≤125 (≤60)	≤150 (≤70)	≤175 (≤80)	≤200 (≤95)	≤250 (≤120)	≤300 (≤145)	≤400 (≤190)	≤450 (≤215)	≤700 (≤340)	≤800 (≤380)
Minimum Duct Diameter, in. (mm) [a] For Rigid duct	4 [100]	5 [125]	5 [125]	6 [150]	6 [150]	6 [150]	7 [180]	8 [200]	9 [225]	10 [250]	10 [250]	12 [300]	12 [300]
Minimum Duct Diameter, in. (mm) [a] For Flex duct [b]	6 [150]	7 [180]	8 [200]	8 [200]	8 [200]	9 [230]	9 [230]	10 [250]	12 [300]	12 [300]	NP [c]	NP [c]	NP [c]

Footnotes for Table 150.0-H:
a. For rectangular ducts, calculate the diameter as four times the cross-sectional area divided by the perimeter.
b. NP = application of the prescriptive table is not permitted for this scenario.
c. Use of this table for verification of flex duct systems requires flex duct to be fully extended and any flex duct elbows to have a minimum bend radius to duct diameter ratio of 1.0.
d. For this scenario, use of elbows is not permitted
e. For this scenario, 4 in. (100 mm) oval duct shall be permitted, provided the minor axis of the oval is greater than or equal to 3 in. (75 mm)
f. When a ventilation range hood utilizes a capture efficiency rating to demonstrate compliance with 150.0(J)2.6Bb, a static pressure greater than or equal to 0.25 in. of water at the rating point shall not be required, and the airflow listed in the approved directory corresponding to the compliant capture efficiency rating point shall be applied to Table 150.0-H for determining compliance.

Note: Authority: Sections 25213, 25218, 25218.5, 25401 and 25402.1, Public Resources Code. Reference: Sections 25007, 25008, 25218.5, 25218, 25402, 25402.1, 25402.4, 25402.5, 25402.8, and 25943, Public Resources Code.

METRIC 150.0 – MANDATORY FEATURES AND DEVICES

GREEN BUILDING CODE NOTES:

1. PLUMBING FIXTURES AND FITTINGS REQUIRED IN SECTION 4.303.1 SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE REFERENCED STANDARDS. CGBSC 4.303.2
2. AUTOMATIC IRRIGATION SYSTEMS CONTROLLERS INSTALLED AT THE TIME OF FINAL INSPECTION SHALL BE PROVIDED WITH INTEGRAL RAIN SENSORS OR SOIL MOISTURE SENSORS THAT ADJUST IRRIGATION IN RESPONSE TO CHANGE IN PLANTS' NEEDS AS WEATHER CONDITIONS CHANGE. CGBSC 4.304.1
3. ANNUAL SPACERS AROUND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALL SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENING WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR ACCEPTABLE METHODS. CGBSC. 4.406
4. A MINIMUM OF 65 PERCENT OF THE CONSTRUCTION WASTE GENERATED AT THE SITE SHALL BE DIVERTED TO RECYCLE OR SALVAGE. CGBSC 4.408.1
5. AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED PRIOR TO FINAL INSPECTION. CGBSC 4.410.1
6. GAS FIREPLACES SHALL BE A DIRECT-VENT SEALED COMBUSTION TYPE. WOODPELLET STOVES SHALL COMPLY WITH U.S. EPA NSPS SOURCE PERFORMANCE STANDARDS (NSPS) EMISSIONS LIMITS. CGBSC 4.503.1
7. DUCT AND VENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION. CGBSC 4.504.1
8. ADHESIVES, SEALANTS AND CAULK SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS. CGBSC 4.504.2.1
9. PAINTS, STAINS, AND OTHER COATINGS SHALL BE COMPLIANT WITH VOC LIMITS.
10. AEROSOL PAINTS AND COATING SHALL BE COMPLIANT WITH PRODUCTS WEIGHTED MIR LIMITS FOR ROC AND OTHER TOXIC COMPOUNDS. CGBSC 4.504.2.5
11. DOCUMENTATION SHALL BE PROVIDED TO VERIFY THAT COMPLIANT VOC LIMIT FINISH MATERIALS HAVE BEEN USED. CGBSC 4.504.2.4
12. CARPET AND CARPET SYSTEMS SHALL BE COMPLIANT WITH VOC LIMITS. CGBSC 4.504.3
13. 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH THE VOC-EMISSION LIMITS DEFINED IN THE COLLABORATIVE OF HIGH PERFORMANCE SCHOOLS (CHPS) HIGH PERFORMANCE PRODUCTS DATABASE OR COMPLIANT WITH CHPS CRITERIA CERTIFIED UNDER THE GREEN GUARD CHILDREN & SCHOOLS PROGRAM OR BE CERTIFIED UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOOR SCORE PROGRAM OR MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVACUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS." CG-9SSC 4.504.4
14. PARTICLEBOARD, MEDIUM DENSITY FIBERBOARD (MDF) AND HARDWOOD PLYWOOD USED IN INTERIOR FINISH SYSTEMS SHALL COMPLY WITH LOW FORMALDEHYDE EMISSION STANDARDS. CGBSC 4.504.5
15. MOISTURE CONTENT OF BUILDING MATERIALS USED IN ENCLOSED WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE AND CANNOT EXCEED 19%. CGBSC 4.505.3
16. DUCT SYSTEMS SHALL BE SIZED AND DESIGNED AND EQUIPMENT SHALL BE SELECTED USING THE FOLLOWING METHODS CGBSC 4.507.2
    A. ESTABLISH HEAT LOSS AND HEAT GAIN VALUES ACCORDING TO ANSI/ACCA MANUAL J-2016 OR EQUIVALENT
    B. SIZE DUCT SYSTEMS ACCORDING TO ANSI/ACCA 1 MANUAL D-2016 OR EQUIVALENT.
    C. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 OR EQUIVALENT.

PLUMBING FIXTURE REQUIREMENTS:

1. WATER CLOSETS: <= 1.28 gal/flush. CGBSC 4.303.1
2. SINGLE SHOWERHEADS: <= 1.8 gpm @ 80 psi. CGBSC 4.303.1.3
3. MULTIPLE SHOWERHEAD COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 gpm @ 80 psi OR ONLY ONE SHOWER OUTLET IS TO BE IN OPERATION AT A TIME. CGBSC 4.303.1.3.2
4. RESIDENTIAL LAVATORY FAUCETS: <= 1.2 gpm @ 60 psi. CGBSC 4.303.1.4.1
5. KITCHEN FAUCETS: <= 1.8 gpm @ 60 psi. TEMPORARY INCREASE TO 2.2 gpm ALLOWED BUT SHALL DEFAULT TO 1.8 gpm. 4.303.1.4.4

WATER HEATER NOTES:

1. WATER HEATER SHALL HAVE ISOLATION VALVES ON BOTH THE COLD WATER SUPPLY AND THE HOT WATER PIPE LEAVING THE WATER HEATER, AND HOSE BIBS OR OTHER FITTINGS ON EACH VALVE FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED.
2. PROVIDE A WATER-TIGHT DRIP PAN OF CORROSION-RESISTANT MATERIALS BENEATH THE WATER HEATER w/ a 3/4" DRAIN TO AN APPROVED LOCATIO
3. A CONDENSATE DRAIN THAT IS A MAXIMUM OF 2" HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER THAT ALLOWS NATURAL DRAIN WITHOUT PUMP ASSISTANCE SHALL BE INSTALLED.
4. A CATEGORY III, IV OR V TYPE B VENT WITH A STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINAL AND THE SPACE WHERE THE WATER HEATER IS LOCATED SHALL BE INSTALLED
5. TANK TYPE WATER HEATER REQUIRES 2 SEISMIC STRAPS, ONE TRAP WITHIN THE UPPER 1/3 AND THE OTHER WITHIN THE LOWER 1/3 OF THE WATER HEATER. THE LOWER STRAP SHALL NOT BE WITHIN 4" OF THE CONTROLS. CPC 521.2
6. STORAGE TYPE WATER HEATER SHALL BE PROVIDED WITHIN AN APPROVED, LISTED, ADEQUATELY SIZED COMBINATION PRESSURE AND TEMPERATURE RELIEF VALVE. WHERE A PRESSURE REGULATOR IS INSTALLED, AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVISE SHALL INSTALLED TO CONTROL INTERMITTENT THERMAL EXPANSION. CPC 608.2 & 608.3
7. WATER HEATERS INSTALLED IN THE GARAGE SHALL BE INSTALLED SO THAT ALL BURNERS AND BURNER-IGNITION DEVICES ARE LOCATED NOT LESS THAN 18" ABOVE THE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT. SUCH APPLIANCES SHALL BE PROTECTED FROM AUTO IMPACT. CPC507.13 & 507.13.1
8. WATER HEATERS AND OTHER BURNER & BURNER-IGNITION APPLIANCES THAT ARE INSTALLED IN THE GARAGE AND ADJACENT SPACES THAT OPEN TO THE GARAGE SHALL NOT BE LOCATED NOT LESS THAN 18 INCHES ABOVE THE FLOOR AND SHALL CONFORM WITH ONE OF THE BELOW (PER CMC 309.1.1):
    A. SHALL BE GUARDED AGAINST DAMAGE BY A PROTECTIVE BARRIER
    B. SHALL BE ELEVATED
    C. SHALL BE LOCATED OUT OF THE NORMAL PATH OF VEHICLES.

WILDLAND URBAN INTERFACE NOTES:

THIS PROJECT IS SUBJECT TO THE WILDLAND URBAN INTERFACE REQUIREMENTS. THE FOLLOWING METHODS FOR EXTERIOR WILDFIRE EXPOSURE UNDER THE FOLLOWING CODE SECTIONS WILL APPLY:

1. EXTERIOR WALL FINISHES / SIDING REQUIREMENTS: THIS PROJECT IS CONSTRUCTED WITH NON-COMBUSTIBLE OR IGNITION RESISTANT *HARDI-BOARD CEMENT SIDING* THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE TEST SET FORTH IN SFM STANDARD 12-7A-1.
2. VENTING-EVES & OVERHANGS: VENTILATION OPENINGS FOR ENCLOSED ATTICS, ENCLOSED EVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND UNDERFLOOR VENTILATION OPENINGS WILL MEET THE FOLLOWING REQUIREMENTS: 1) THE DIMENSIONS OF THE OPENINGS WILL BE A MINIMUM OF 1/16□ AND NOT TO EXCEED 1/8□. 2) THE MATERIALS USED WILL BE NON-COMBUSTIBLE. 3) THE MATERIALS WILL BE CORROSION RESISTANT. *VULCAN VENTS* WILL BE USED TO MEET THESE REQUIREMENTS.
3. WINDOW GLAZING & DOOR PROTECTION: ALL OF THE FOLLOWING WILL BE CONSTRUCTED OF DUAL GLAZED TEMPERED PANES MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING: 1) EXTERIOR WINDOWS. 2) EXTERIOR GLAZED DOORS. 3) GLAZED OPENINGS WITHIN EXTERIOR DOORS. 4) GLAZED OPENINGS WITHIN EXTERIOR GARAGE DOORS. 5) EXTERIOR STRUCTURAL GLASS VENEER.
4. EXTERIOR DOORS: WILL BE A SOLID-CORE, NON-COMBUSTIBLE OR IGNITION RESISTANT MATERIAL PER CRC 331.3
5. VEGETATION MANAGEMENT COMPLIANCE: PRIOR TO BUILDING PERMIT FINAL APPROVAL THE PROPERTY WILL BE IN COMPLIANCE WITH THE VEGETATION MANAGEMENT REQUIREMENTS PRESCRIBED IN CALIFORNIA PUBLIC RESOURCES CODE 4291 OR CALIFORNIA GOVERNMENT CODE SECTION 51182. ACCEPTABLE METHODS OF COMPLIANCE INSPECTION AND DOCUMENTATION SHALL BE DETERMINED BY THE ENFORCING AGENCY AND MAY INCLUDE ANY OF THE FOLLOWING: 1) LOCAL, STATE OR FEDERAL FIRE AUTHORITY OR DESIGNER AUTHORIZED TO ENFORCE VEGETATION MANAGEMENT REQUIREMENTS. 2) ENFORCING AGENCY. 3) THIRD PARTY INSPECTION AND CERTIFICATION AUTHORIZED TO ENFORCE VEGETATION MANAGEMENT REQUIREMENTS. 4) PROPERTY OWNER CERTIFICATION AUTHORIZED BY THE ENFORCING AGENCY.
6. THE EXPOSED UNDERSIDE OF EXTERIOR PORCH CEILINGS AND SOFFITS WILL BE CLAD IN NON-COMBUSTIBLE AND / OR IGNITION RESISTANT *HARDIE BOARD*

DOOR NOTES:

ALL EXTERIOR DOORS SHALL BE SOLID CORE w/ STILES AND RAILS NOT LESS THAN 1-3/8" THICK WITH INTERIOR FIELD PANEL THICKNESS NO LESS THAN 1-1/4" OR SHALL HAVE A FIRE RATING OF 20 MINUTES. PER CRC R337.8.3

TEMPERED GLASS REQUIREMENTS:

1. GLAZING IN ENCLOSURES FOR OR WALLS FACING BATHTUBS OR SHOWERS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" A.F.F. AND LESS THAN 60" FROM THE TUB/SHOWER SHALL BE TEMPERED.
2. GLAZING ADJACENT TO THE STAIRWAY WITHIN 60" HORIZONTALLY OF THE BOTTOM TREAD OF A STAIRWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLAZING IS LESS THAN 36" ABOVE THE NOSE OF THE TREAD SHALL BE TEMPERED.
3. GLAZING ADJACENT TO A DOOR AND WHERE GLAZING IS LESS THAN 60" A.F.F., AND MEET THE BELOW REQUIREMENTS PER CRC R308.4
    A. ALL WINDOWS ADJACENT TO AND WITHIN 24" OF EITHER EDGE OF A DOOR IN THE CLOSED POSITION
    B. GLAZING IS ON A WALL PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24" OF THE HINGE SIDE OF AN IN-SWINGING DOOR.
4. TEMPERED GLASS IS REQUIRED IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
    A. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET;
    B. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 13 INCHES ABOVE THE FLOOR;
    C. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR; AND
    D. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
5. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING OR SLIDING DOORS.
6. GLAZING ADJACENT TO STAIRWAYS OR LANDINGS WHEN THE EXPOSED SURFACE OF THE GLAZING IS LESS THAN 36" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.

EGRESS WINDOW REQUIREMENTS:

1. CLEAR OPENING THAT IS A MINIMUM OF 24"HIGH AND 20"WIDE.
2. NET CLEAR OPENABLE AREA OF NOT LESS THAN 5.7 SQUARE FEET.
    A. EXCEPTION: GRADE FLOOR OPENINGS OR BELOW GRADE OPENINGS SHALL HAVE A NET CLEAR OPENING AREA OF NOT LESS THAN 5 SQUARE FEET.
3. SILL HEIGHT TO BE A MAXIMUM OF 44" ABOVE THE FLOOR.

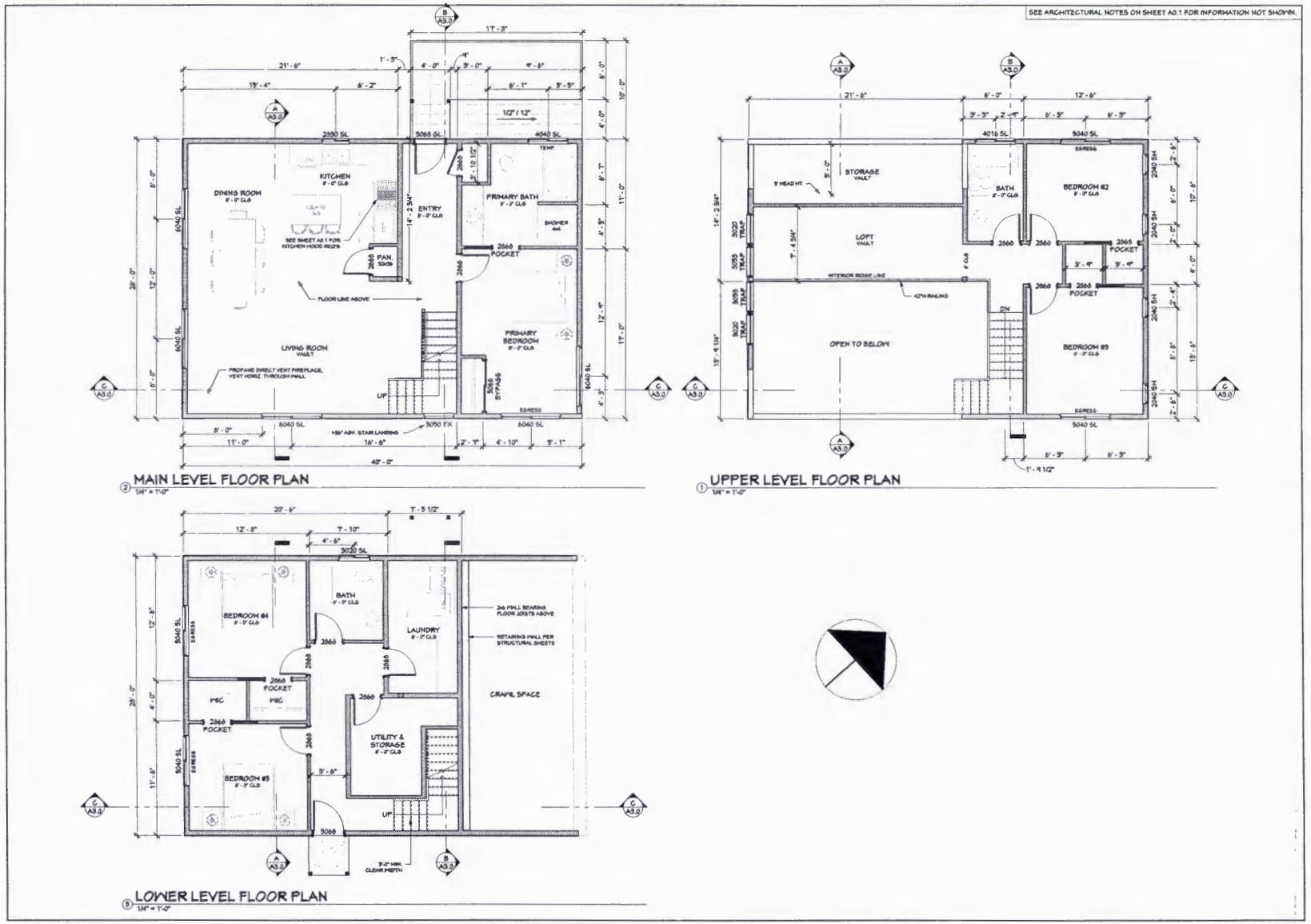
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ARCHITECTURAL NOTES
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-030-056)
POLLOCK PINES, CA

REVISIONS

REGISTERED PROFESSIONAL ENGINEER — TRAN OJIONCEA — No. 7852 — RENEWAL 08/31/2025 — STATE OF CALIFORNIA
09.02.2024

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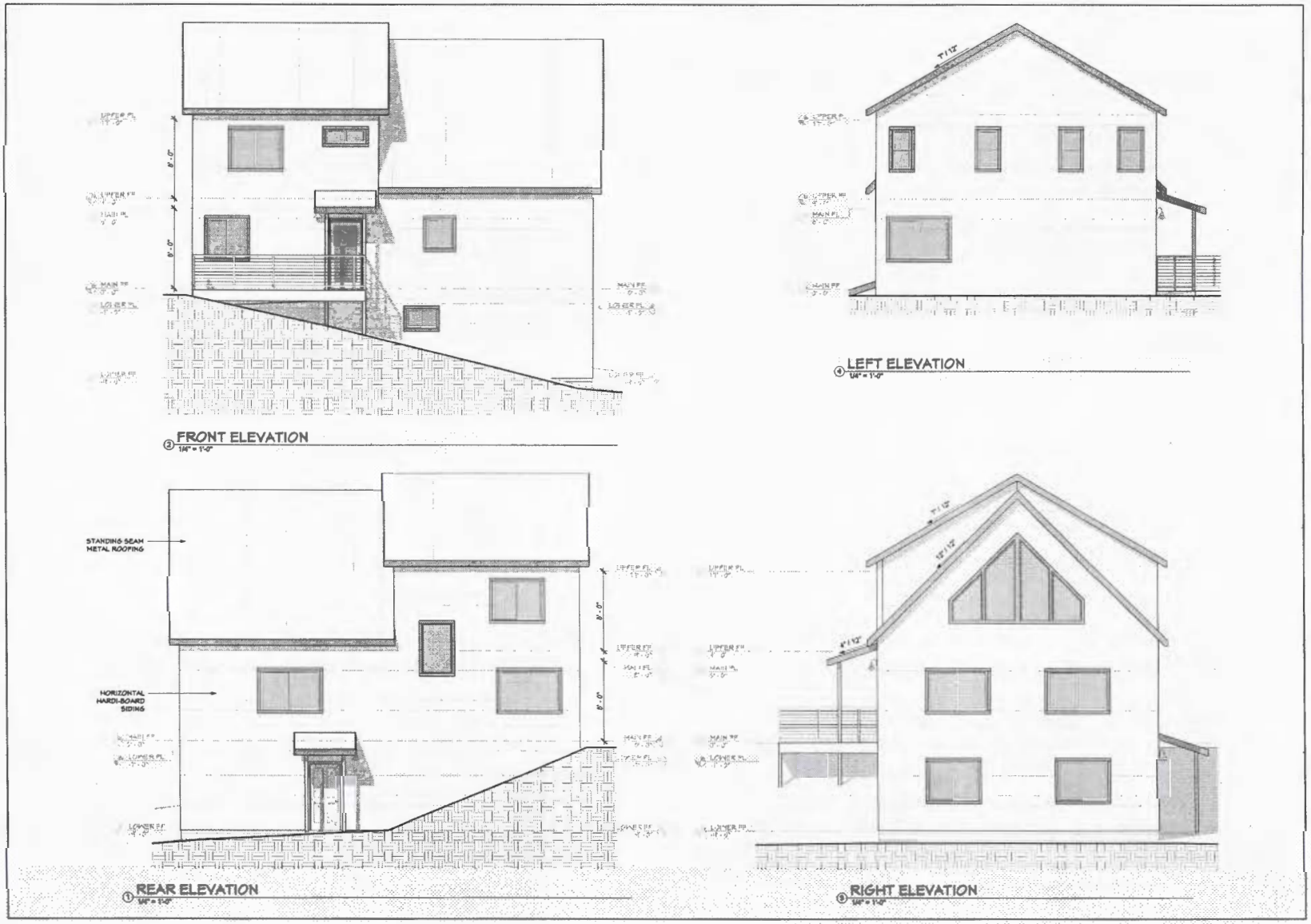


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ARCHITECTURAL FLOOR PLANS
KUHL RESIDENCE
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POLLOCK PINES, CA

REVISIONS

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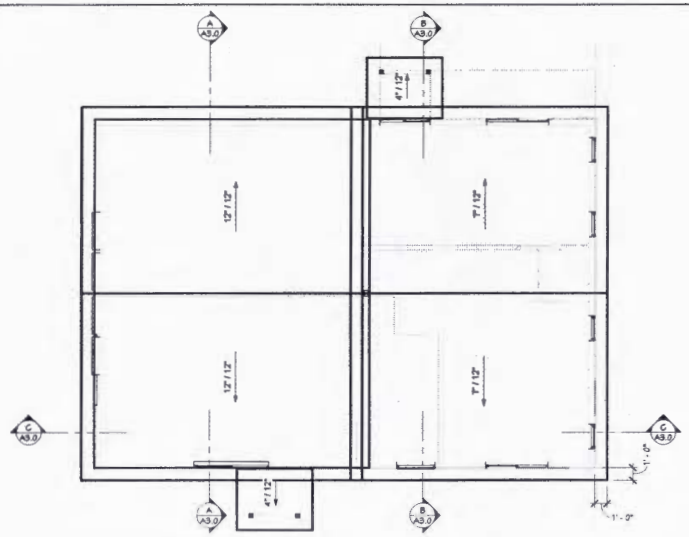


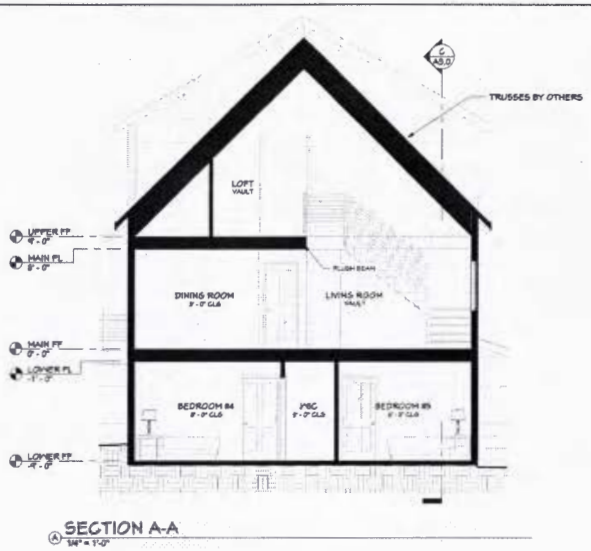
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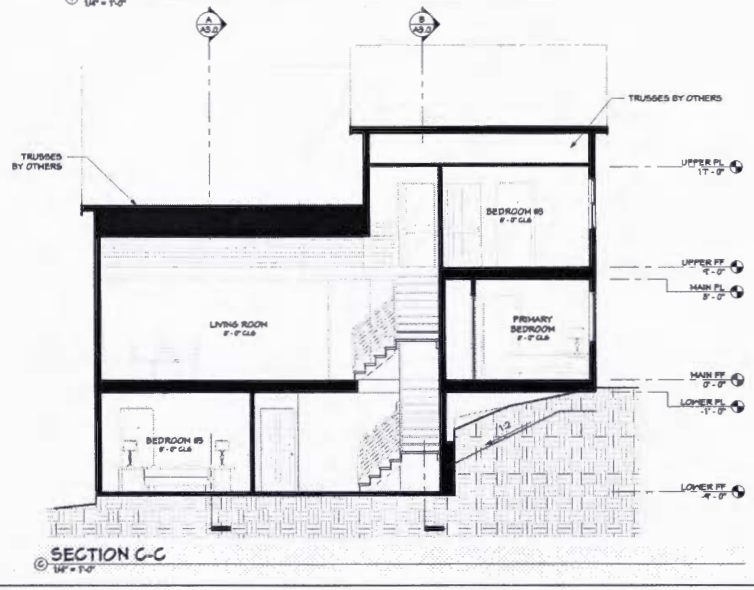
ELEVATIONS
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-030-058)
POLLOCK PINES, CA

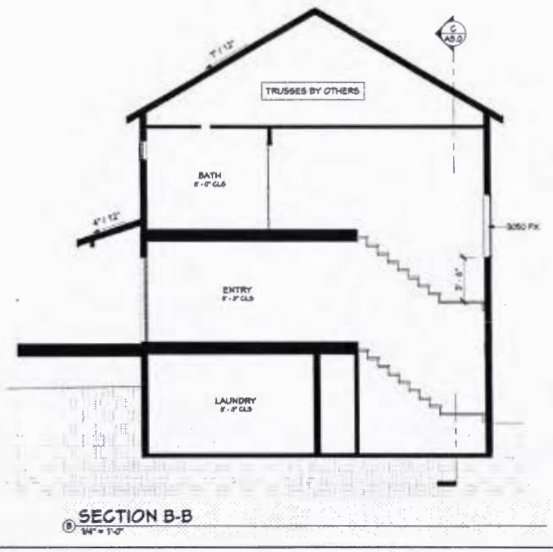
REVISIONS

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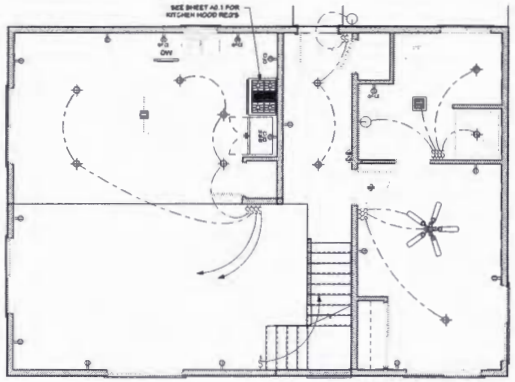


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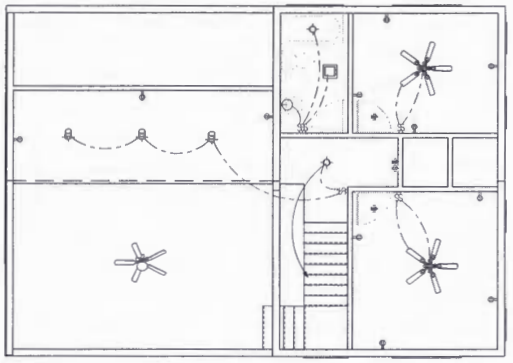
ARCHITECTURAL ROOF PLAN & SECTIONS
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-030-058)
POLLOCK PINES, CA

REVISIONS

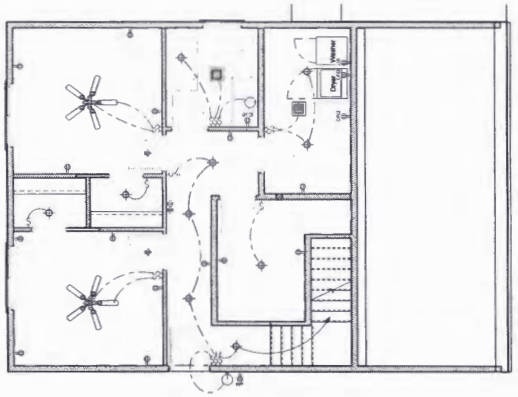
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② MAIN LEVEL ELECTRICAL PLAN
1/4" = 1'-0"



③ UPPER LEVEL ELECTRICAL PLAN
1/4" = 1'-0"



① LOWER LEVEL ELECTRICAL PLAN
1/4" = 1'-0"

ELECTRICAL LEGEND:

- DUPLEX RECEPTACLE
- WEATHERPROOF RECEPTACLE
- 220V RECEPTACLE
- GROUND FAULT CIRCUIT INTERRUPTER
- SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- CEILING MOUNTED LIGHT FIXTURE
- CEILING MOUNTED LIGHT FIXTURE
- CEILING MOUNTED FAN
- PENDANT LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- EXHAUST FAN
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR

LIGHTING REQUIREMENTS:

NOTE: ALL NEW LIGHTING TO BE LED, U.O.N.

1. ALL INSTALLED LUMINARIES SHALL BE HIGH-EFFICACY IN ACCORDANCE w/ TABLE 150.0-A.
2. ALL LUMINARIES REQUIRED TO HAVE LIGHT SOURCE COMPLIANT w/ REFERENCE JOINT APPENDIX JA8, EXCEPT HALLWAYS & CLOSETS OVER 70 sf, SHALL BE CONTROLLED BY DIMMERS OR VACANCY SENSORS. (THIS APPLIES TO ALL GU-24 LEDs AND RECESSED LUMINARIES.)
3. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINARY IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR.
4. OUTDOOR LIGHTING: ALL OUTDOOR LIGHTING SHALL BE CONTROLLED BY A MANUAL ON AND OFF SWITCH THAT DOES NOT OVERRIDE TO ON AND ONE OF THE FOLLOWING: CONTROLLED BY PHOTOCELL AND MOTION SENSOR, PHOTO CONTROL AND AUTOMATIC SWITCH CONTROL, ASTRONOMICAL TIME CLOCK, OR ENERGY MANAGEMENT CONTROL SYSTEM. 150.0(k).
5. LUMINARIES RECESSED INTO CEILING SHALL MEET ALL OF THE FOLLOWING PER 150.0 (k)1G: LISTED FOR ZERO CLEARANCE INSULATION, LABELED THAT CERTIFIES THE LUMINARY IS AIRTIGHT WITH A LEAKAGE LESS THAN 2.0CFM AT 75 PASCALS, SEALED WITH A GASKET OR CAULK, ALLOW REPLACEMENT AND MAINTENANCE TO BE READILY ACCESSIBLE FROM BELOW THE CEILING WITHOUT CUTTING HOLES IN THE CEILING, SHALL NOT CONTAIN SCREW BASE SOCKETS; AND SHALL CONTAIN LIGHT SOURCES THAT COMPLY WITH JA8.
6. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY THAN FROM OTHER LIGHTING SYSTEM. 150.0(k)2L.

ELECTRICAL NOTES:

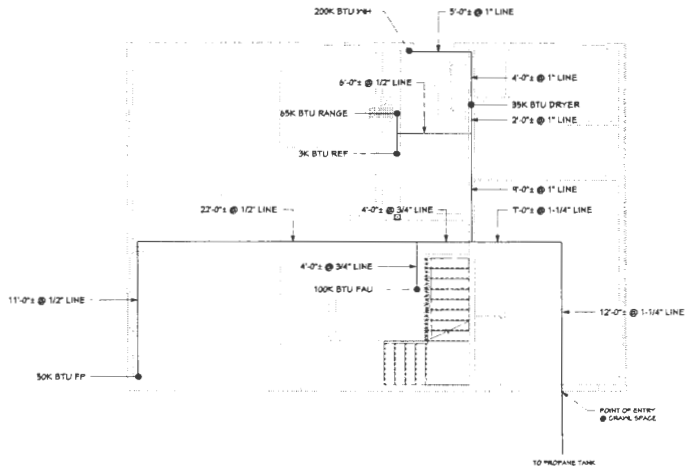
1. SMOKE DETECTORS / CARBON MONOXIDE DETECTORS PER R314 / R315 SHALL BE INTERCONNECTED, HARDWIRED AND WITH BATTERY BACK-UP. SMOKE DETECTORS TO BE LOCATED AT LEAST 24" FROM RETURN AIR REGISTERS AND AIR DUCTS. WALL MOUNTED UNITS TO BE WITHIN 12" OF CEILING AND LISTED BY THE STATE FIRE MARSHALL FOR WALL MOUNTING. PROVIDE ONE SMOKE DETECTOR IN EACH SLEEPING AREA.
2. CARBON MONOXIDE/SMOKE DETECTORS SHALL BE PROVIDED OUTSIDE EACH SLEEPING AREA AND AT EACH LEVEL OF DWELLING
3. PROVIDE SWITCHED LIGHT AND OUTLET AT ATTIC CRAWL
4. PROVIDE DISCONNECT FOR A/C UNIT
5. ALL 120-VOLT, SINGLE PHASE, 15 - & 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHEN, DINING ROOM, FAMILY ROOM, LIVING ROOM, PARLORS, LIBRARIES, DENS, BEDROOM, SUNROOMS, REC ROOMS, CLOSETS, LAUNDRY ROOMS, HALLWAYS AND SIMILAR ROOMS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.
6. AT LEAST ONE LUMINAIRE IN THE BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE CONTROLLED BY A VACANCY SENSOR.
7. CEILING FAN LOCATIONS USE ONLY CEC APPROVED ELECTRICAL BOXES RATED FOR SUPPORTING CEILING FANS.
8. PROVIDE 50 CFM FOR ALL BATHROOM FANS. FANS MUST BE 3 SONE OR LESS.
9. ALL NEW 125-VOLT, 15 AND 20 AMP RECEPTACLES IN THE DWELLING UNIT SHALL BE TAMPER RESISTANT.
10. ALL NEW HOT WATER SUPPLY PIPING FROM THE HEATING SOURCE TO THE KITCHEN FIXTURES SHALL BE INSULATED PER CEC SECTION 150.0 (j2 vi.
11. ALL 15 OR 20 AMP, 125 OR 250 VOLT RECEPTACLES INSTALLED OUTDOORS IN WET LOCATIONS MUST BE LISTED WEATHERPROOF TYPE WHEN THE PLUG IS OR IS NOT INSERTED.
12. BRANCH CIRCUITS SERVICING GARAGE RECEPTACLES SHALL NOT SERVE OUTLETS OUTSIDE OF THE GARAGE.
13. AT THE AC EQUIPMENT, ELECTRICAL DISCONNECTS FOR EQUIPMENT SHALL BE WITHIN SIGHT OF THE EQUIPMENT AND NOT OVER 50' FROM THE UNIT.
14. A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) IS REQUIRED FOR ALL 15 AND 20-AMP RECEPTACLES INSTALLED IN BATHROOMS, GARAGES, INCLUDING THE GARAGES, INCLUDING THE GARAGE DOOR OPENER RECEPTACLE, ACCESSORY BUILDINGS, OUTDOORS, IN UNFINISHED BASEMENTS, UNDER-FLOOR AREAS, LAUNDRY, UTILITY, AND KITCHEN COUNTER TOPS AND WITHIN 6' OF A BAR SINK.
15. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6' FROM A RECEPTACLE OUTLET. WALL SPACES GREATER THAN 2' IN WIDTH AND UNBROKEN ALONG THE FLOOR LINE BY OPENINGS OR FIREPLACES SHALL BE PROVIDED WITH A RECEPTACLE. THESE RECEPTACLES SHALL BE PROVIDED IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, DENS, BEDROOMS, OR SIMILAR ROOMS.
16. AT LEAST ONE 120-VOLT, 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOMS & LAUNDRY ROOM OUTLETS WHICH SHALL HAVE NO OTHER OUTLETS.
17. KITCHEN EXHAUST HOOD MUST CONFORM TO 2022 TITLE-24 BUILDING ENERGY EFFICIENCY STANDARDS SECTION 150.0(O)1.G., INCLUDING TABLES 150.0-G & 150.0-H, AND MERS TESTED TO MEET 2022 REFERENCE APPENDICES RA3.7.

BURNE ENGINEERING
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ELECTRICAL PLANS
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-030-056)
POLLOCK PINES, CA

REVISIONS

SHEET #
E1.0



1 GAS PIPING PLAN
1/4" = 1'-0"

WATER HEATER NOTES:

1. WATER HEATER SHALL HAVE ISOLATION VALVES ON BOTH THE COLD WATER SUPPLY AND THE HOT WATER PIPE LEAVING THE WATER HEATER, AND HOSE BIBS OR OTHER FITTINGS ON EACH VALVE FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED.
2. PROVIDE A WATER-TIGHT DRIP PAN OF CORROSION-RESISTANT MATERIALS BENEATH THE WATER HEATER w/ A 3/4" DRAIN TO AN APPROVED LOCATIO
3. A CONDENSATE DRAIN THAT IS A MAXIMUM OF 2' HIGHER THAN THE BASE OF THE INSTALLED WATER HEATER THAT ALLOWS NATURAL DRAIN WITHOUT PUMP ASSISTANCE SHALL BE INSTALLED.
4. A CATEGORY III, IV OR A TYPE B VENT WITH A STRAIGHT PIPE BETWEEN THE OUTSIDE TERMINAL AND THE SPACE WHERE THE WATER HEATER IS LOCATED SHALL BE INSTALLED.
5. TANK TYPE WATER HEATER REQUIRES 2 SEISMIC STRAPS. ONE TRAP WITHIN THE UPPER 1/3 AND THE OTHER WITHIN THE LOWER 1/3 OF THE WATER HEATER. THE LOWER STRAP SHALL NOT BE WITHIN 4" OF THE CONTROLS. CPC 507.2
6. STORAGE TYPE WATER HEATER SHALL BE PROVIDED WITHIN AN APPROVED, LISTED, ADEQUATELY SIZED COMBINATION PRESSURE AND TEMPERATURE RELIEF VALVE. WHERE A PRESSURE REGULATOR IS INSTALLED, AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVISE SHALL INSTALLED TO CONTROL INTERMITTENT THERMAL EXPANSION. CPC 605.2 & 605.3
7. WATER HEATERS INSTALLED IN THE GARAGE SHALL BE INSTALLED SO THAT ALL BURNERS AND BURNER-IGNITION DEVICES ARE LOCATED NOT LESS THAN 18" ABOVE THE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT. SUCH APPLIANCES SHALL BE PROTECTED FROM AUTO IMPACT. CPC507.13 & 507.13.1
8. WATER HEATERS AND OTHER BURNER & BURNER-IGNITION APPLIANCES THAT ARE INSTALLED IN THE GARAGE AND ADJACENT SPACES THAT OPEN TO THE GARAGE SHALL NOT BE LOCATED NOT LESS THAN 18 INCHES ABOVE THE FLOOR AND SHALL CONFORM WITH ONE OF THE BELOW (PER CMC 305.1.1):
   A. SHALL BE GUARDED AGAINST DAMAGE BY A PROTECTIVE BARRIER
   B. SHALL BE ELEVATED
   C. SHALL BE LOCATED OUT OF THE NORMAL PATH OF VEHICLES

GAS PIPING NOTES:

TOTAL DEVELOPED LENGTH OF PIPE= ±56'-0"
MOST REMOTE OUTLET = ±56.0'
PIPING MATERIAL = SCHEDULE 40 METALLIC PIPE
TOTAL BTU= 495K BTU

MAXIMUM CAPACITY OF PIPE IN THOUSANDS OF Btu PER HOUR FOR GAS PRESSURE OF 11 INCHES WATER COLUMN AND A PRESSURE DROP OF 0.5 INCH WATER COLUMN SIZING BETWEEN SINGLE OR SECOND STAGE (LOW PRESSURE REGULATOR) AND APPLIANCE (BASED ON A 1.60 SPECIFIC GRAVITY GAS)

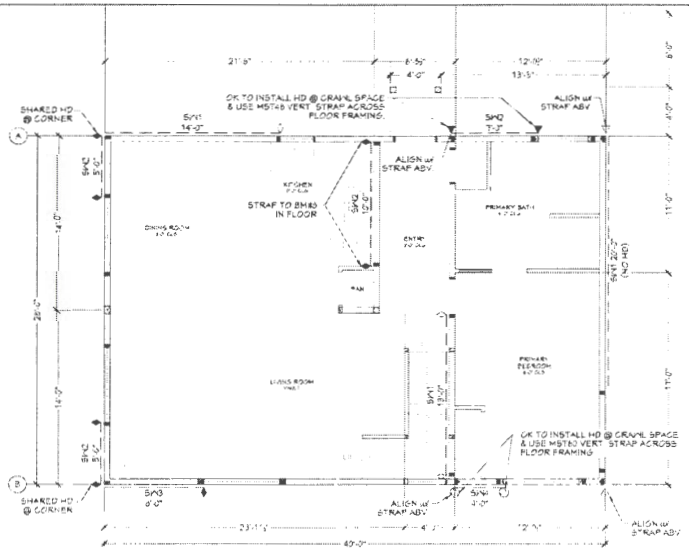
Pipe Length (Feet)	Nominal Pipe Size, Schedule 40								
	1/2" 0.622	3/4" 0.824	1" 1.049	1 1/4" 1.38	1 1/2" 1.61	2" 2.067	3" 3.068	3 1/2" 3.548	4" 4.026
10	291	608	1146	2352	3525	6789	19136	28906	39818
20	200	418	788	1617	2423	4666	13148	19250	26817
30	161	336	632	1299	1946	3747	10559	15458	21535
40	137	287	541	1111	1665	3207	9036	13230	18431
50	122	259	490	985	1478	2842	8009	11726	16337
60	110	231	435	892	1337	2573	7256	10625	14801
80	94	198	372	766	1144	2206	6211	9093	12668
100	84	175	330	677	1014	1954	5508	8065	11232
125	74	155	292	598	899	1731	4878	7141	9950
150	67	141	265	544	815	1569	4420	6472	9016
200	58	120	227	465	697	1343	3785	5539	7716
250	51	107	201	412	618	1190	3353	4909	6839
300	46	97	182	374	560	1078	3038	4445	6196
350	42	89	167	344	515	992	2795	4092	5701
400	40	83	156	320	479	923	2600	3807	5305

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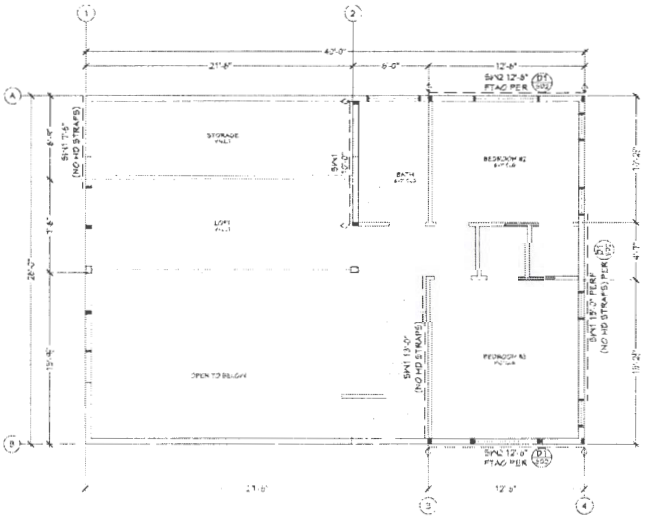
GAS PIPING PLAN
KUHL RESIDENCE
1 BULLARD PLACE (APN: 011-090-056)
POLLOCK PINES, CA

REVISIONS

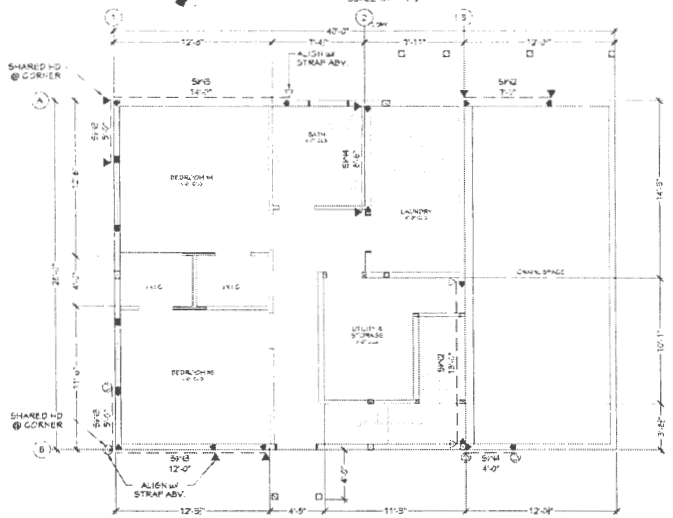
SHEET #
G1.0



MAIN LEVEL STRUCTURAL FLOOR PLAN
SCALE 1/4" = 1'-0"



UPPER LEVEL STRUCTURAL FLOOR PLAN
SCALE 1/4" = 1'-0"



LOWER LEVEL STRUCTURAL FLOOR PLAN
SCALE 1/4" = 1'-0"

NOTE:
FOR HOLDOWN / SHEARWALLS THAT INTERFERE WITH TRIMMERS @ OPENING, SEE DETAIL

CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING OR FABRICATING MATERIALS

SEE SHEET SN1 FOR SHEARWALL SCHEDULE, HOLDOWN LEGEND AND ALL OTHER STRUCTURAL SPECIFICATIONS

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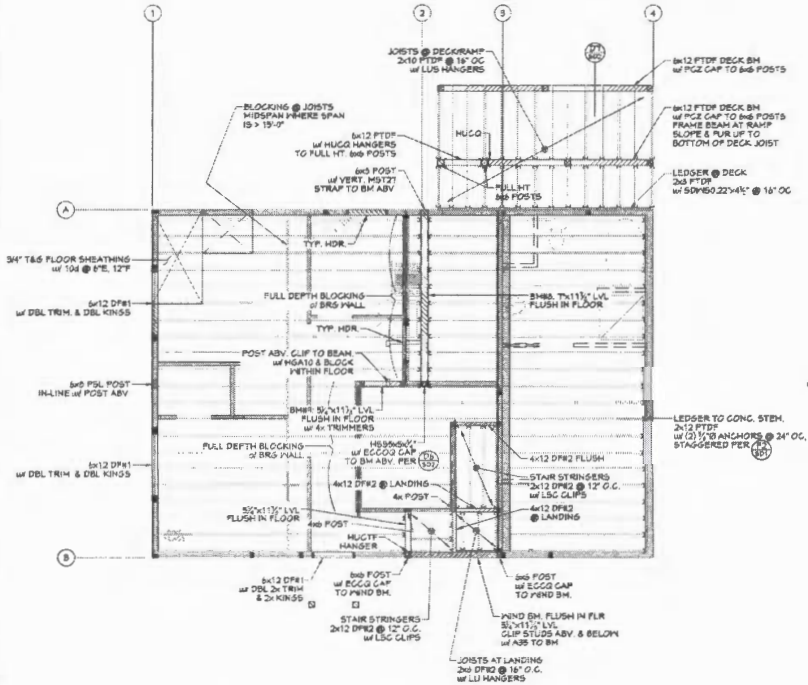
STRUCTURAL FLOOR PLANS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

REVISIONS

SHEET #:
S1.0

SEE SHEET SN1 FOR SHEARWALL SCHEDULE, HOLDOWN LEGEND AND ALL OTHER STRUCTURAL SPECIFICATIONS

CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING OR FABRICATING MATERIALS

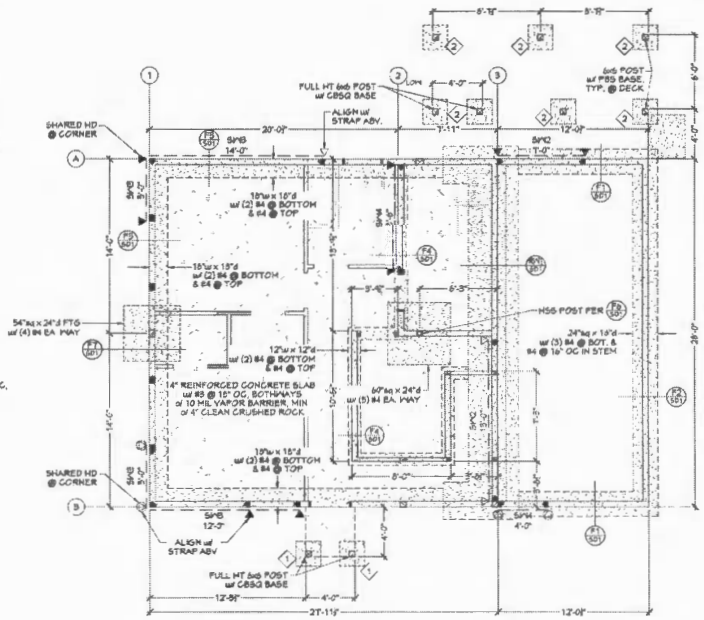


MAIN LEVEL FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"

WALL LEGEND
- MAIN LEVEL WALLS
- LOWER LEVEL WALLS

TYPICAL FLOOR JOISTS U.O.N.
11⅞" TJI360 @ 16" O.C.
w/ IUS HANGERS WHERE SHOWN.
OK TO USE TJI110s FOR SPANS < 15'-0"



FOUNDATION PLAN

SCALE 1/4" = 1'-0"

SPREAD FOOTING LEGEND
- ① 24"sq x 16"d w/ (3) #4 EA WAY
- ② 32"sq x 19"d w/ (3) #4 EA WAY

TYPICAL HEADER U.O.N.
6x10 DF#1 w/ 2x TRIMMERS.
USE DBL 2x TRIMMERS EA SIDE FOR HEADERS SPANNING > 5'-0"

NOTE:
FOR HOLDOWN / SHEARWALLS THAT INTERFERE WITH TRIMMERS @ OPENING, SEE DETAIL

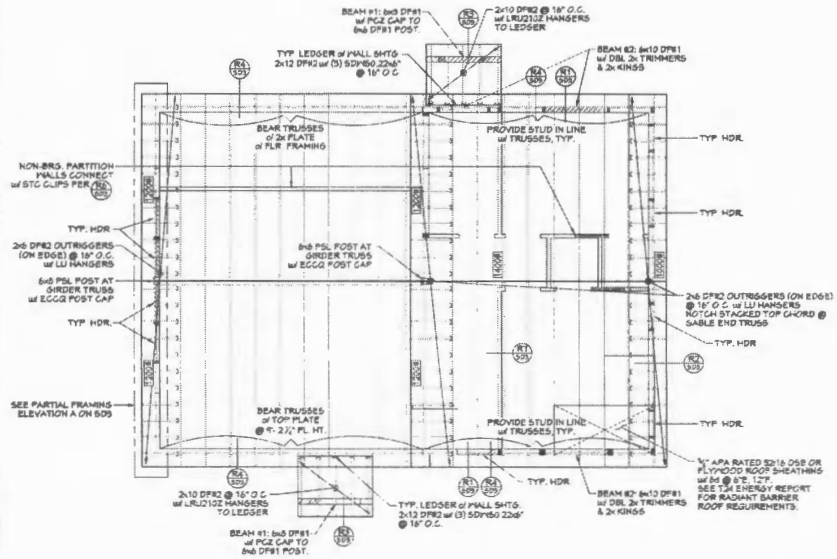
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FOUNDATION & MAIN FLOOR FRAMING PLANS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

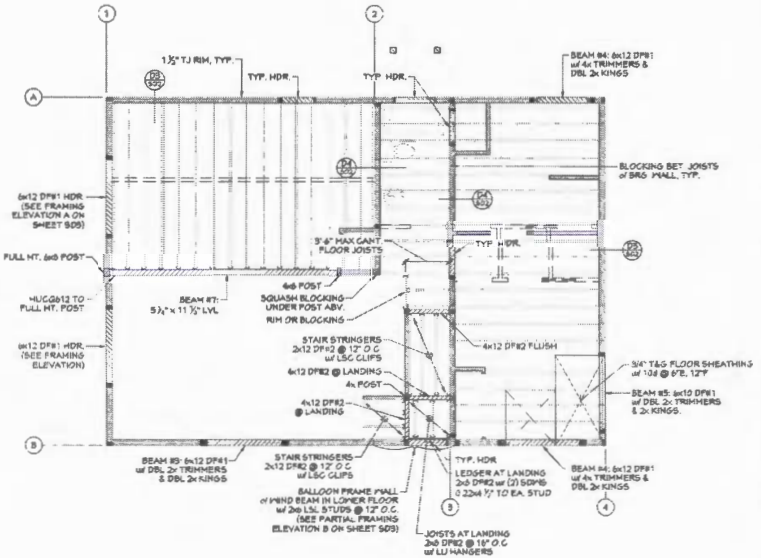
REVISIONS

SHEET #:
S2.0

CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING OR FABRICATING MATERIALS



ROOF FRAMING PLAN
SCALE 1/4" = 1'-0"



UPPER LEVEL FLOOR FRAMING PLAN
SCALE 1/4" = 1'-0"

ROOF FRAMING NOTES:
1. NAIL ROOF SHEATHING TO DRAG TRUSS w/ 8d @ 6" O.C.

TYPICAL ROOF FRAMING U.O.N.
MANUFACTURED TRUSSES DESIGNED BY OTHERS. SEE TRUSS SPECIFICATIONS FOR INFORMATION NOT SHOWN

TYPICAL HEADER U.O.N.
6x10 DF#1 w/ 2x TRIMMERS.
USE DBL 2x TRIMMERS EA SIDE FOR HEADERS SPANNING > 5'-0"

WALL LEGEND
MAIN LEVEL WALLS
UPPER LEVEL WALLS

TYPICAL HDR @ MAIN LEVEL U.O.N.
6x10 DF#1 w/ 2x TRIMMERS & 2x KINGS
USE DBL 2x TRIMMERS EA SIDE FOR HEADERS SPANNING > 5'-0"

TYPICAL FLOOR JOISTS U.O.N.
11⅞" TJI360 @ 16" O.C.
w/ IUS HANGERS WHERE SHOWN.
OK TO USE TJI110s FOR SPANS < 15'-0"

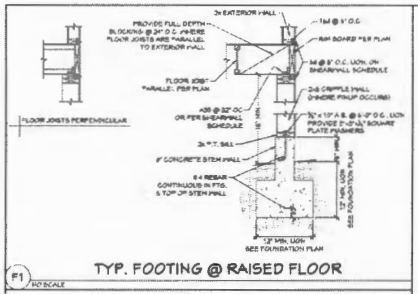
BURNE ENGINEERING
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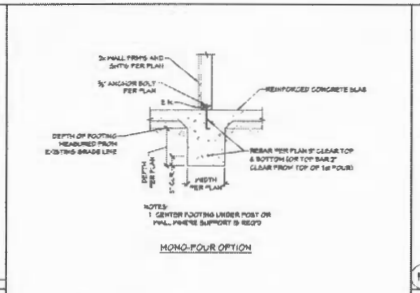
UPPER FLOOR & ROOF FRAMING PLANS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

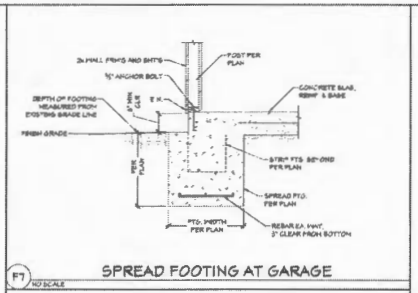
REVISIONS

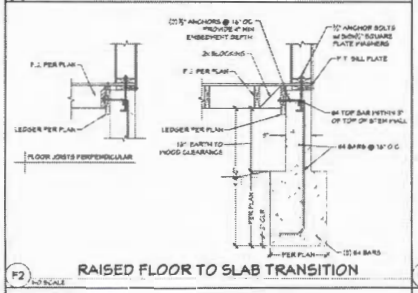
REGISTERED PROFESSIONAL ENGINEER
ADAM GIORGETTA
No. 7252
STRUCTURAL
STATE OF CALIFORNIA
25.10.24

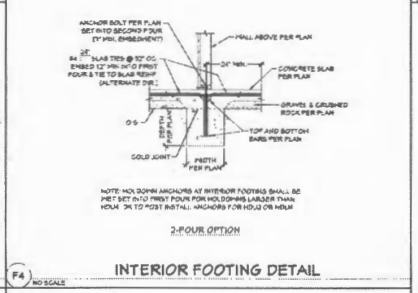
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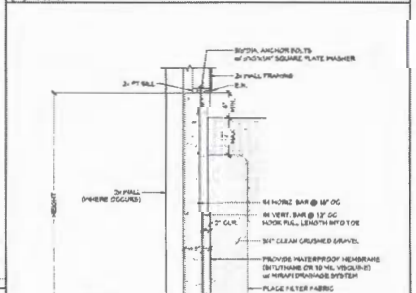


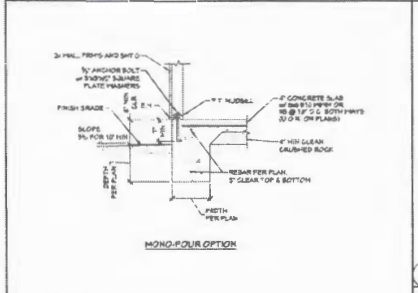


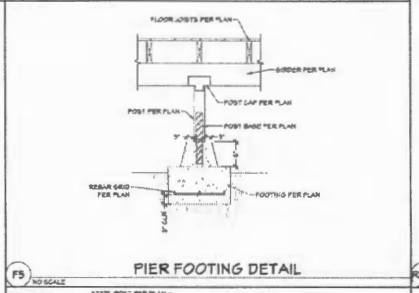


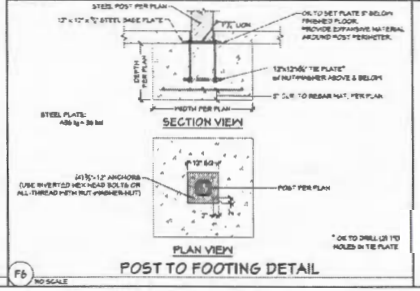










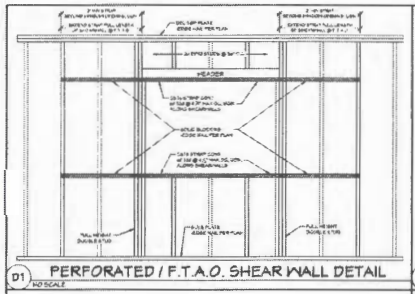


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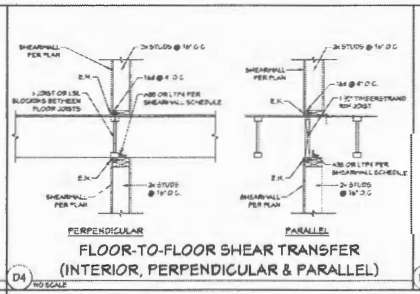
STRUCTURAL DETAILS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

REVISIONS

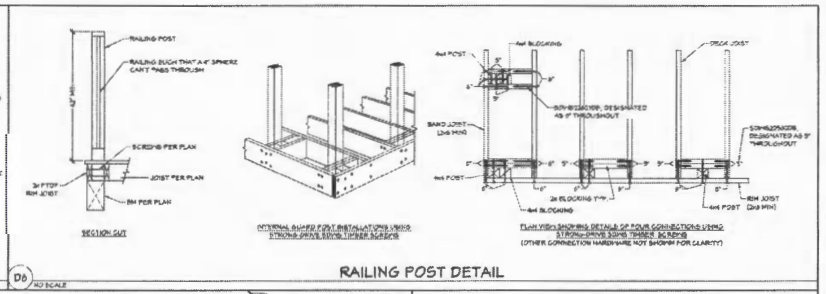
SHEET #:
SD1



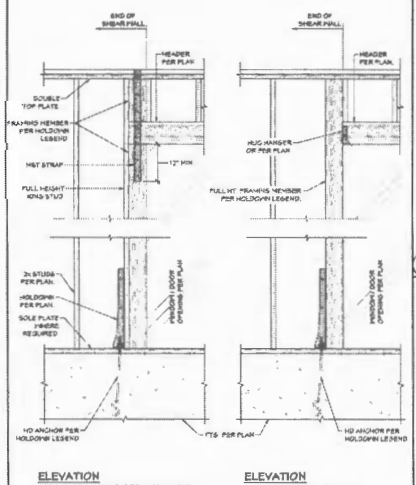
D1 PERFORATED / F.T.A.O. SHEAR WALL DETAIL
NO SCALE



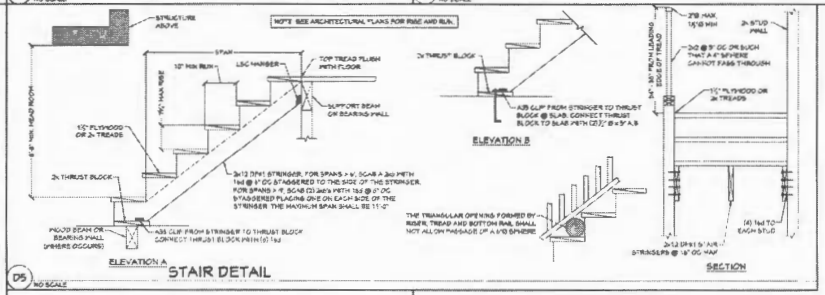
D4 FLOOR-TO-FLOOR SHEAR TRANSFER (INTERIOR, PERPENDICULAR & PARALLEL)
NO SCALE



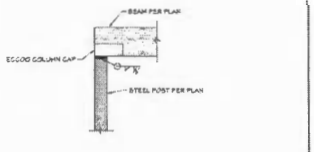
D8 RAILING POST DETAIL
NO SCALE



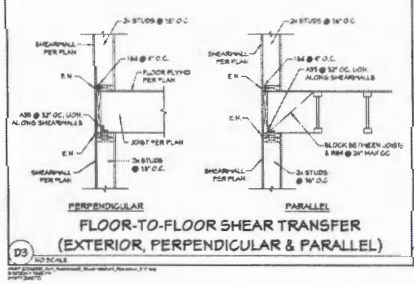
D2 SHEAR TRANSFER @ OPENINGS
NO SCALE



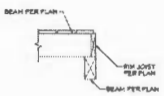
D5 STAIR DETAIL
NO SCALE



D6 ECCOQ COLUMN CAP TO STEEL POST DETAIL
NO SCALE



D3 FLOOR-TO-FLOOR SHEAR TRANSFER (EXTERIOR, PERPENDICULAR & PARALLEL)
NO SCALE



D7 JOIST TO GIRDER
NO SCALE

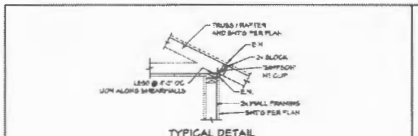
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STRUCTURAL DETAILS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

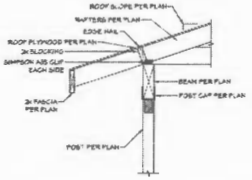
REVISIONS

ALAN G. BURNE No. 7252 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA
09.13.24

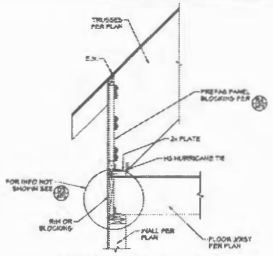
SHEET #:
SD2



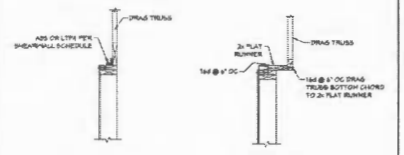
R1 EAVE FRAMING AT TRUSS / RAFTER ROOF
NO SCALE



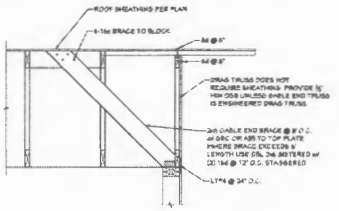
R3 RAFTER TO BEAM CONNECTION
NO SCALE



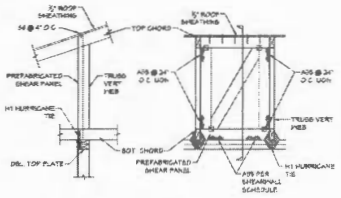
R5 FRAMING AT ATTIC
NO SCALE



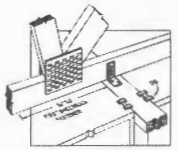
R7 DRAG TRUSS DETAIL
NO SCALE



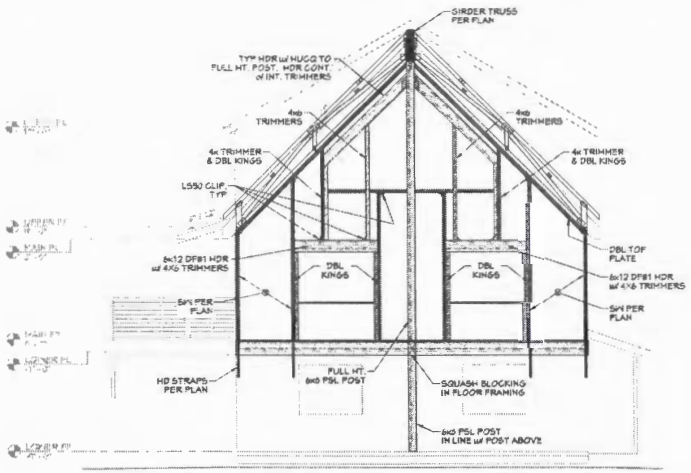
R2 GABLE END FRAMING DETAIL
NO SCALE



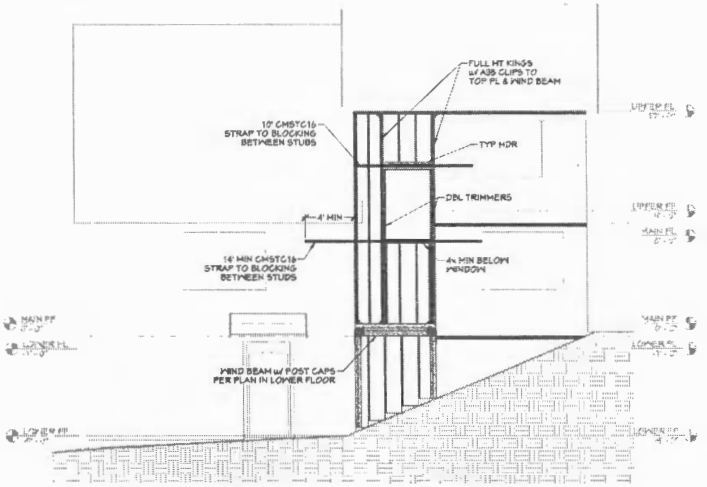
R4 PREFABRICATED SHEAR PANEL BLOCKING DETAIL
NO SCALE



R6 TYPICAL STC CLIP INSTALLATION
NO SCALE



FRAMING ELEVATION A
SCALE 1/4" = 1'-0"



FRAMING ELEVATION B
SCALE 1/4" = 1'-0"

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STRUCTURAL DETAILS
KUHL RESIDENCE
1 BULLARD PLACE
POLLOCK PINES, CA

REVISIONS



SHEET #:
SD3

GENERAL

1. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
2. SHOP DRAWING NOTE:
   A) SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF ELECTRONIC OR HARD COPIES OR EACH SHEET.
   B) THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE STRUCTURAL ENGINEER THAT THEY UNDERSTAND THE DESIGN CONCEPT BY INDICATING WHICH MATERIALS THEY INTEND TO FURNISH AND INSTALL, AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS THEY INTEND TO USE.
   C) PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW TO THE STRUCTURAL ENGINEER. SHOP DRAWING SUBMITTALS SHALL INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO STRUCTURAL STEEL, AND PRE-FABRICATED WOOD ROOF FRAMING ITEMS SUCH AS TRUSSES.
   D) PRIOR TO SUBMISSION THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SHALL STAMP SUBMITTALS AS BEING "REVIEWED FOR CONFORMANCE."
   E) SHOP DRAWING SUBMITTALS "PROCESSED BY THE STRUCTURAL ENGINEER ARE NOT CHANGE ORDERS.
   F) ANY DETAIL ON THE SHOP DRAWING THAT DEVIATES FROM THE CONTRACT DOCUMENTS SHALL CLEARLY BE MARKED WITH THE NOTE "THIS IS A CHANGE"
   G) SHOP DRAWINGS OR CALCULATIONS SUBMITTED FOR REVIEW THAT REQUIRE RESUBMITTAL FOR RE-REVIEW SHALL BE BILLED HOURLY FOR SUCH TIME TO THE GENERAL CONTRACTOR. RE-RE (RE?) WILL NOT PROCEED WITHOUT WRITTEN APPROVAL FROM THE GENERAL CONTRACTOR FOR ADDITIONAL ENGINEERING REVIEW SERVICES.
3. SAFETY NOTE:
   A) IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION AND ALL OSHA REQUIREMENTS.
   B) THE OWNER AND THE STRUCTURAL ENGINEER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
   C) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.
4. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER WHERE A CONFLICT OR A DISCREPANCY OCCURS BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS. SUCH NOTIFICATION SHALL BE GIVEN IN DUE TIME SO AS NOT TO AFFECT THE CONSTRUCTION SCHEDULE. IN CASE OF A CONFLICT BETWEEN STRUCTURAL DRAWINGS AND SPECIFICATIONS, THE MORE RESTRICTIVE SHALL GOVERN. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO COMMENCING ANY WORK.
5. WHERE NO SPECIFIC DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT. SHOULD THERE BE ANY QUESTION CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING.
6. WHEN CONSTRUCTION ATTACHES TO AN EXISTING BUILDING A COMPLETE SET OF DRAWINGS OF THE EXISTING BUILDING SHALL BE KEPT ON THE JOB SITE. CONTRACTOR TO OBTAIN THESE DRAWINGS FROM THE OWNER.
7. CONTRACTOR SHALL PROVIDER AN ALLOWANCE EQUAL TO 2% OF THE BID FOR STRUCTURAL STEEL, MISC IRON AND REINFORCING STEEL TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. UNUSED AMOUNT TO REVERT TO THE OWNER UPON COMPLETION OF THE JOB.
8. ANY SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE, OR DETAILS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER. SUCH REVIEW SHALL BE BILLED ON A TIME AND MATERIALS BASIS TO THE GENERAL CONTRACTOR WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED
9. DO NOT SCALE DRAWINGS. CONTACT THE ARCHITECT OR STRUCTURAL ENGINEER FOR ANY DIMENSIONS NOT SHOWN
10. THESE DRAWINGS ARE NOT COMPLETE UNTIL REVIEWED AND ACCEPTED BY LOCAL BUILDING OFFICIALS AND APPROVED BY THE OWNER
11. ALL DRAWINGS AND WRITTEN MATERIAL APPEARING HEREIN CONSTITUTES THE ORIGINAL AND UNPUBLISHED WORK OF THE STRUCTURAL ENGINEER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT WRITTEN CONSENT OF THE STRUCTURAL ENGINEER
12. THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM THE STABILITY OF THIS STRUCTURE DEPENDS ON THE BRACING AND THE BRACING MEMBERS SHOWN THE CONTRACTOR IS TO PROVIDE FOR THE DESIGN AND CONSTRUCTION OF SHORING FOR ALL EARTH FORMS, CONCRETE, STEEL, WOOD, AND MASONRY TO RESIST GRAVITY, EARTH AND WIND, SEISMIC AND CONSTRUCTION LOADS. SHORING SHALL REMAIN IN PLACE UNTIL ALL DIAPHRAGMS AND LATERAL RESISTING ELEMENTS ARE IN PLACE IN THE ENTIRETY.

DEMOLITION

1. SAFETY NOTES:
   A) IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION AND ALL OSHA REQUIREMENTS.
   B) THE STRUCTURAL ENGINEER AND OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS
2. SHORE OR BRACE TRUSSES, BEAMS GIRDERS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
3. ALL DIMENSIONS GIVEN TO AND OF THE EXISTING STRUCTURE ARE APPROXIMATE. VERIFY BY FIELD MEASUREMENTS THE DIMENSIONS OF THE EXISTING STRUCTURE WHERE ACTUAL CONDITIONS DEVIATE FROM THE DETAILS SHOWN ON THE DRAWINGS, NOTIFY THE STRUCTURAL ENGINEER FOR INSTRUCTIONS PRIOR TO PROCEEDING WITH WORK.
4. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION SHALL BE MADE IN SUCH A MANNER AS TO AVOID OR MINIMIZE DAMAGE TO ADJACENT CONSTRUCTION.
5. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND DETAILS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL CONSTRUCTION.

FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON 2022 CBC TABLE 1806.2.
2. FOUNDATION DEPTHS INDICATED ON PLANS ARE MINIMUMS.
3. WHEN STRUCTURAL OBSERVATION IS REQUIRED BY THE STRUCTURAL ENGINEER SHALL OBSERVE FOOTING REINFORCING STEEL PRIOR TO CONCRETE PLACEMENT. PROVIDE 48 HOUR NOTICE TO STRUCTURAL ENGINEER PRIOR TO CONCRETE PLACEMENT.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING BUT NOT LIMITED TO, LAGGING, SHORING AND PROTECTING OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
5. FOUNDATION TYPE: CONVENTIONAL SPREAD FOOTINGS
   DESIGN VALUES:

ALLOWABLE BEARING PRESSURE	
DL + LL	1000 psf (DEPTH = 12")
DL + LL	1500 psf (DEPTH ≥ 18")
LATERAL RESISTANCE	
PASSIVE PRESSURE	330 pcf PER FOOT OF DEPTH
COEFFICIENT OF FRICTION	0.30

CONCRETE

1. STRUCTURAL CONCRETE SHALL ATTAIN 28 DAY COMPRESSIVE STRENGTH AS REQUIRED IN NOTE #10
2. ALL CONCRETE MIX SHALL BE READY-MIX IN ACCORDANCE WITH ASTM C94
3. CEMENT SHALL CONFORM TO ASTM C-150 TYPE I OR II.
4. WATER SHALL BE CLEAN AND FREE FROM OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT
5. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.
6. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 FOR #5 AND LARGER, AND ASTM A615 GRADE 40 FOR #4 AND SMALLER. EXCEPT REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706
7. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
8. REINFORCING STEEL SHALL BE FABRICATED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION"
9. ALL PREHEATING AND WELDING OF REINFORCING BARS SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 LATEST EDITION. AND SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED TESTING LABORATORY CONTRACTOR SHALL FURNISH REBAR MILL CERTIFICATES TO THE TESTING LABORATORY
10. MINIMUM CLEAR CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CAST AGAINST EARTH = 3"	TILT UP PANELS CAST ON SLAB
CAST IN FORMS AND	EXPOSED TO WEATHER
EXPOSED TO EARTH OR WEATHER	#6 & SMALLER = 1½"
#6 & LARGER = 2"	#5 & LARGER = 2"
#5 & SMALLER = ½"	
NOT EXPOSED TO EARTH OR WEATHER	
SLAB, WALLS, JOISTS = ¾"	
BEAMS, COLUMNS, GIRDERS = 1½"	

11. ALL REINFORCEMENT SHALL BE CONTINUOUS, STAGGER SPLICES WHERE POSSIBLE. LAP SPLICES SHALL BE PER THE SPLICE LENGTHS UNLESS NOTED OTHERWISE.
12. PROVIDE CONSTRUCTION JOINTS AS INDICATED ON THE DRAWINGS. CONCRETE SURFACE AT CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND LAITANCE REMOVED. WHERE INDICATED ON DRAWINGS ROUGHEN CONCRETE SURFACE TO ¼" AMPLITUDE
13. PIPES AND ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE OR CONCRETE FILL OVER METAL DECKING EXCEPT WHERE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER
14. REINFORCING DOWELS, BOLTS, ANCHORS, SLEEVES, ETC., TO BE EMBEDDED IN CONCRETE SHALL BE RIGIDLY POSITIONED IN FORMS BEFORE PLACING CONCRETE
15. MAXIMUM FREE FALL OF CONCRETE SHALL BE 5'-0"
16. ALL CONCRETE AND "NON-METALLIC" GROUT SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS AND THOROUGHLY WORKED AROUND REINFORCEMENT, EMBEDDED ITEMS AND INTO CORNERS OF FORMS
17. PLACE NON-SHRINK GROUT UNDER BASE PLATES, BALL PLATES, ETC. AS INDICATED ON THE DRAWINGS NON-SHRINK GROUT SHALL BE MASTERFLOW 928 GROUT BY MASTER BUILDERS TECHNOLOGIES OR APPROVED EQUAL WITH A MINIMUM 28 DAY fc' OF 7ksi @ 28 DAYS.
18. CONCRETE STRENGTH:

CLASS	USE	f'c @ 28 DAYS	MAX AGGREGATE SIZE	WEIGHT	WATER TO CEMENT RATIO
A	FOUNDATIONS	2500 psi	¾"	NR	0.5-0.6

SHEARWALL SCHEDULE

SHEARWALL TYPE	PANEL LENGTH (MIN)	EDGE NAILING (ALL)	FIELD NAILING (ALL)	PLYWOOD/OSB SHEATHING (SIDE)	⅝" ANCHOR BOLT SPACING[1,2,3]	SOLE PLATE TO FRAMING MEMBER BELOW[4]	TOP PLATE TO TRUSS/RAFTER OR BLOCK ABOVE	FRAMING MEMBER AT PANEL JOINT[5]	BOLT PLATE[6]
SW07	7'0"	7d @ 3"	7d @ 12"	⅞" (SIDE)	32"	16d @ 15"	A35 @ 24"	3x MIN	3x MIN
SW10	10'0"	7d @ 3"	7d @ 12"	⅞"	48"	16d @ 9"	A35 @ 24"	3x MIN	3x MIN
SW13	13'0"	7d @ 3"	7d @ 12"	⅞"	64"	16d @ 6"	A35 @ 24"	3x MIN	3x MIN
SW15	15'0"	7d @ 3"	7d @ 12"	⅞"	72"	16d @ 6"	A35 @ 24"	3x MIN	3x MIN
SW16	16'0"	7d @ 3"	7d @ 12"	⅞"	72"	16d @ 6"	A35 @ 24"	3x MIN	3x MIN
SW18	18'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	A35 @ 24"	3x MIN	3x MIN
SW20	20'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW24	24'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW28	28'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW30	30'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW34	34'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW36	36'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW40	40'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW42	42'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW44	44'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW46	46'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW48	48'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW50	50'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW52	52'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW54	54'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW56	56'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW58	58'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN
SW60	60'0"	7d @ 3"	7d @ 12"	⅞" BOTH SIDES	72"	SDWS22 22"x6" @ 6" OC	LSTA21 @ 24"	3x MIN	3x MIN

NOTES
1. STUD SPACING IS 16" MAX O.C.
2. ALL NAILS INTO PRESSURE TREATED LUMBER SHALL BE HOT DIPPED, GALVANIZED
3. ALL NAILS INTO SHEATHING ARE COMMON NAILS AS FOLLOWS:
   8d = 2½"x0.131" DIAMETER
   10d = 3"x0.148" DIAMETER
   16d = 3½"x0.162" DIAMETER
4. ALL NAILS INTO SOLE PLATE ARE 8DN NAILS AS FOLLOWS:
   16d = 3½"x0.128 DIAMETER
5. SOLE PLATE NAILING SHALL BE STAGGERED ½" MIN ABOUT THE ℄ OF THE RIM WHERE BRACING IS LESS THAN 6"
6. HARDWARE SPECIFIED IS IN ADDITION TO HU TIES EACH TRUSS/RAFTER TO TOP PLATE LOCATION
7. ALL FRAMING LUMBER IS D.F.
8. ANCHOR BOLTS SHALL BE INSTALLED WITH EVENLY SPACED 3"X3" SQUARE PLATE WASHERS
9. INSTALL WASHER WITHIN ½" OF THE SHEATHED SIDE OF THE WOOD SILL.
10. ANCHOR BOLTS INTO EXISTING CONCRETE SHALL BE DRILLED AND EPOXIED 8" MIN WITH SET EPOXY
11. SHEAR WALLS WITH GYPSUM WALL BOARD ON 1 SIDE ONLY: USE 5 GOLDEN NAILS OR NO. 6x1¼" DRYWALL SCREWS @ 7" MAX O.C.

HOLDOWN LEGEND

SYMBOL	HOLDOWN ID	CAPACITY	MINIMUM FRAMING MEMBER[1]	ANCHOR BOLT AT NEW FOOTING[2,3,4]	MINIMUM EMBEDMENT[5,7]	ALL THREAD ANCHOR BOLT AT EXISTING FOOTING* (Gr. A36)			
						DIAMETER	MIN FOOTING WIDTH & DEPTH*	EMBEDMENT	EPOXY[6]
▽	HDU2-S	3075	DBL 2x	56"@22"	13"	½"	12"x24"	8"	SET-XP
▼	HDU4-S	4565	DBL 2x	56"@24"	21"	½"	12"x24"	8"	SET-XP
ⓣ	HDU5-S	5645	DBL 2x	56"@24"	18"	½"	12"x24"	10"	SET-XP
ⓓ	HDU8-S S	8453	6x	56"@24"	25"				
▯	HDU9-S	9610	TRIPLE 2x	56"@36"	29"		N/A		
▮	HDU11-S	11535	6x6	56"@36"	29"				
■	HDU14-S	14645	6x6	1"-A36"	42"				

NOTES
1. STITCH NAIL OF STUDS WITH ☐ RQMD OF 16d @ 12" O.C. (MIN 16 TOTAL) STAGGERED VERTICALLY
2. USE 1" DIAMETER OF SETS ANCHORS FOR TWO-FOUR FOUNDATIONS AND WHERE IN ALL PLATES IS USED
3. PROVIDE HORIZONTAL REBAR WITHIN 3"-0" FROM TOP OF FOOTING AT ALL ANCHOR BOLT LOCATIONS
4. PROVIDE 3" MIN CLEARANCE AT THE BOTTOM OF ANCHOR, WHEN FOOTING AS NEEDED
5. 1" ALL THREAD WITH NUT-WASHER-NUT ASSEMBLY EMBEDDED 12" MIN INTO 24"x24"x 12" DEEP MIN FOOTING. USE 3-1/2" x ½" THICK MIN PLATE
6. EMBEDMENT GIVEN IS INTO FIRST FOUR FOR TWO-FOUR CONDITION
7. AT CMU WALLS, ANCHORS SHALL BE EMBEDDED INTO THE FOOTINGS AND EXTENDED WITH ALL-THREAD BARS AND HIGH STRENGTH COUPLER NUT
8. FOOTING DEPTH INCLUDES 8" SLAB ON 8" STEM WALL
9. WHERE EXISTING FOOTING OR STEM WALL WIDTH IS NOT MET, DRILL 3 HOLES FROM ONE SIDE ONLY (8" MIN) AND BOXES INTO EXISTING FOOTING
10. SUBSTITUTE WITH AT-XP EPOXY AT GLUING TEMP. IS BELOW 50°F DURING FIRST WEEK OF CURING

*SPECIAL INSPECTION IS REQUIRED PRIOR TO AND DURING INSTALLATION OF ROUTINELY LESS TENSION ANCHORS. DRILL HOLE 2" LARGER THAN ANCHOR DIAMETER. HOLE MUST BE CLEANED, BRUSHED, AND BLOWN PRIOR TO INSTALLATION.

STRAP LEGEND

SYMBOL	STRAP ID	MINIMUM FRAMING MEMBER[1]	CAPACITY (lbs) AND TOTAL NUMBER OF FASTENERS[2] AT VARIOUS FLOOR DEPTHS			
			12"	18"	24"	
◇	MST37	DBL 2x	3,035# / 10-16d	4,550# / 15-16d	6,070# / 20-16d	
◆	MST48	DBL 2x	3,895# / 13-16d	5,840# / 19-16d	7,790# / 26-16d	N/A
○	MST60	DBL 2x	4,755# / 16-16d	7,130# / 24-16d	9,505# / 32-16d	
●	MST72	DBL 2x	5,615# / 19-16d	8,420# / 28-16d	11,230# / 38-16d	
			4x6	6x6	6x6	
			6,615# / 22-16d	9,920# / 33-16d	13,230# / 44-16d	

NOTES
1. STITCH NAIL OF STUDS WITH ☐ RQMD OF 16d @ 12" O.C. STAGGERED VERTICALLY
2. RAISED 16d x 2 ½" DIAMETER = 135" LONG
3. OK TO INSTALL STRAPS OVER SHEATHING

DESIGN CRITERIA

1. THESE CODES/STANDARDS APPLY

2022 CBC	2022 CRC	2022 CPC	
2022 CMC	2022 CEC	2022 CEBC 2022	
CBC	2022 CGBSC		

2022 CGBSC, EXCEPT PART 11, TITLE 24

2. DESIGN LIVE LOADS

AREA	LIVE LOAD
ROOF	15psf (SLOPED ROOF SNOW)
FLOOR	40 psf
DECK	60 psf

3. EARTHQUAKE DESIGN LOADS:
   SIMPLIFIED EQUIVALENT LATERAL FORCE PROCEDURE
   RISK CATEGORY II, SITE CLASS "D"

4. WIND DESIGN LOAD:
   SIMPLIFIED PROCEDURE
   V= 100 MPH
   EXPOSURE = C

5. DESIGN SNOW LOADS: 30# psf (GROUND SNOW)

S_s = 0.648g S_{DS} = 0.592g
S_1 = 0.261g S_{D1} = N/A1
SEISMIC DESIGN CATEGORY = D
I_e = 1.0
R= 6.5 (WOOD SHEATHED SHEAR WALLS)

WOOD

1. ALL SAWN LUMBER SHALL BE DOUGLAS FIR-LARCH NO.2 GRADED BY THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) IN ACCORDANCE WITH STANDARD GRADING RULES NO. 17 TYPICAL UNLESS NOTED OTHERWISE. ALL MEMBERS SHALL HAVE A MINIMUM GRADE OF NO.1 EXCEPT 2x & 4x MEMBERS MAY BE NO.2
2. ALL STRUCTURAL SHEATHING USED FOR SHEARWALLS AND ROOF SHEATHING SHALL BE MANUFACTURED IN ACCORDANCE WITH PRODUCT STANDARDS OF APA
3. ALL FOUNDATION PLATED OR SILLS ON CONCRETE SLAB FINISH ARE IN DIRECT CONTACT WITH EARTH, AND PLATES OR SILLS ON CONCRETE OR MASONRY FOUNDATIONS, SHALL BE PRESSURE TREATED
4. ALL FASTENERS INTO PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL
5. ALL WOOD SHALL HAVE A MOISTURE CONTENT OF NOT MORE THAN 19% WHEN SHEATHING IS APPLIED
6. 5" MINIMUM CLEARANCE SHALL BE MAINTAINED AT ALL EXTERIOR WALLS BETWEEN FINISH GRADE AND BOTTOM OF WOOD FRAMING
7. BEARING AND SHEARWALLS SHALL HAVE DOUBLE TOP PLATES LAPPED AT WALL CORNERS AND INTERSECTIONS AND PLATES SHALL BE INTERNALLED WITH 3-16d AT SUCH LOCATIONS. FOR PLATE SPLICE DETAILS, SEE DRAWINGS
8. SILL PLATE ANCHOR BOLTS SHALL BE INSTALLED WITH PLATE WASHERS BEING 2½" BETWEEN NUT AND PLATE.
9. PROVIDE SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS.
10. PROVIDE BLOCKING AT ALL CEILING LEVELS
11. JOISTS UNDER AND PARALLEL TO PARTITIONS SHALL BE DOUBLED AND NAILED TOGETHER
12. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS ⅛".
13. HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS:
    A) THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AND THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK.
    B) THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 40% TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION
14. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE THE SCREWS
15. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHEN BEAR ON WOOD. WASHERS ALSO TO INSERTED EXPANDING FASTENERS. RED HEAD, ETC.

BOLT DIAMETER	MIN WASHER	STEEL PLATE WASHER
½"	2 ½" dia x ¼"	2½" x 2½" x ¼"
⅝"	3" dia x ¼"	3" dia x 3" x ¼"
¾"	3" dia x ¼"	3" x 3" x ¼"
⅞"	3" dia x ¼"	3" x 3" x ¼"
1"	4" dia x ¼"	3½" x 3½" x ¼"

16. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED AT INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB
17. USE ALL STRUCTURAL SHEATHING ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORT UNLESS NOTED OTHERWISE. USE PLYCLIPS AT UNSUPPORTED SHEATHING EDGES
18. CONNECTOR HARDWARE MODEL NUMBER ARE THOSE FOR SIMPSON STRONG TIE COMPANY. ALL JOIST HANGERS SHALL BE SIMPSON U SERIES UNLESS NOTED OTHERWISE. SUBSTITUTE EQUIVALENT CONNECTORS WITH EC ACCEPTANCE MAY BE SUBMITTED FOR REVIEW AS AN ALTERNATE.
19. HANGER BOLTS SHALL BE EMBEDDED 3"MIN AND SPREAD AT 6" MAX OC, EXCEPT AS NOTED ALONG SHEARWALLS
20. EACH PIECE OF SILL PLATE REQUIRES A MINIMUM OF 2 BOLTS LOCATED 12" MAX AND 7 BOLT DIAMETERS MIN FROM EACH END OF THE SILL PLATE.

NAILING SCHEDULE

1. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES.

8d	0.131"Ø x 2½"
10d	0.148"Ø x 3"
16d SINKER	0.148"Ø x 3 ¼" PLUS THICKNESS OF SHTG
16d	0.162"Ø x 3½"
20d	0.192"Ø x 4"

2. PROVIDE NAILS AT CONNECTIONS AS INDICATED ON THE STRUCTURAL DRAWINGS. WHERE NAILS AT CONNECTIONS ARE NOT INDICATED NAIL PER NAILING SCHEDULE IN NOTE 3.
3. NAILING NOT NOTED IN SCHEDULE OR ON PLANS SHALL BE A MINIMUM OF TWO NAILS @ AT EACH CONTACT 8d NAILS FOR 1" MATERIAL AND 16d NAILS FOR 2" MATERIAL.
4. NOTED SHALL BE PER-DRILLED WHERE NECESSARY TO PREVENT SPLITTING.
5. NAILING SCHEDULE:

CONNECTION	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL	3-8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2-8d
3. 1"-4" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d
4. WIDER THAN 1"-4" SUBFLOOR TO EACH JOIST, FACE NAIL	3-16d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL, SOLE PLATE TO JOIST OR BLOCKING AT SHEARWALL PANELS	16d AT 16" OC, 8-16d PER 16'
7. TOP PLATE TO STUD, END NAIL	2-16d
8. STUD TO SOLE PLATE	4-8d, TOENAIL OR 2-16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" OC
10. DOUBLE TOP PLATES, TYPICAL FACE NAIL, DOUBLE TOP PLATES, LAP SPLICE	16d AT 16" OC, 8-16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
12. RIM JOIST TO TOP PLATE, TOENAIL	16d AT 6" OC
13. TOP PLATES, LAP AT INTERSECTIONS, FACE NAIL	2-16d
14. BUILT-UP HEADER, FACE NAIL	16d @ 16" O.C.
15. CEILING JOISTS TO PLATE, TOENAIL	3-8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
18. CEILING JOISTS TO PARALLEL PARTITIONS, FACE NAIL	3-16d
19. RAFTER TO PLATE, TOENAIL	3-10d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
21. 1"x 6" SHEATHING TO EACH BEARING, FACE NAIL	2-8d
22. WIDER THAN 1"x 6" SHEATHING TO EACH BEARING, FACE NAIL	3-8d
23. BUILT-UP CORNER STUDS, FACE NAIL	16d AT 24" o/c
24. BUILT-UP GIRDER AND BEAMS, FACE NAIL	20d AT 32"o/c AT TOP & BOTTOM STAGGERED 2-20d AT ENDS & AT EACH SPLICE

TEST AND SPECIAL INSPECTIONS

1. TESTS AND SPECIAL INSPECTIONS SHALL BE PROVIDED AS INDICATED ON THE TESTING & INSPECTION FORM APPROVED BY THE BUILDING DEPARTMENT WITH THE APPROVED CONSTRUCTION DOCUMENTS
2. ALL TEST AND SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR FROM AN ESTABLISHED TESTING & INSPECTION COMPANY, UNLESS NOTED OTHERWISE. JOBSITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE PERIODIC TESTING AND ARE NOT A SUBSTITUTE FOR SPECIAL INSPECTION
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK INDICATED FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. THE SPECI

1. MINIMUM CONSTRUCTION SITE STORM WATER MANAGEMENT PRACTICES

THE STORM WATER MANAGEMENT PRACTICES DESCRIBED BELOW ARE THE MINIMUM, REQUIRED WATER QUALITY PROTECTION MEASURES APPLICABLE TO ALL CONSTRUCTION SITES WITHIN WESTERN EL DORADO COUNTY. THIS LISTING DOES NOT INCLUDE THE VARIOUS INSPECTION, RECORD KEEPING, TRAINING AND REPORTING REQUIREMENTS. ADDITIONALLY, THERE WILL BE INSTANCES WHERE PROJECT AND SITE CONDITIONS REQUIRE SUPPLEMENTING OR DEVIATING FROM THESE MINIMUM PROTECTION REQUIREMENTS. THE CONTRACTOR IS EXPECTED TO DEPLOY MEASURES SUFFICIENT TO ACHIEVE COMPLIANCE WITH THE COUNTY'S GRADING ORDINANCE, AND, AS APPLICABLE (PROJECTS WHICH INVOLVE ONE ACRE OR MORE OF DISTURBED SOIL OR ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT ENCOMPASSES ONE ACRE OR MORE OF DISTURBED SOIL), WITH THE STATE WATER RESOURCES CONTROL BOARD'S (SWRCB) NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

A. SCHEDULING

CONSTRUCTION SHALL BE SCHEDULED TO MINIMIZE CONSTRUCTION ACTIVITIES IN "HIGH-RISK AREAS" AND THE AMOUNT OF ACTIVE DISTURBED SOIL AREAS, DURING THE RAINY SEASON (OCT. 15th TO MAY 1st). "HIGH-RISK AREAS" INCLUDE THOSE AREAS WITHIN 50 FEET OF USGS WATERCOURSES, 100-YEAR FLOOD PLAINS, REGULATED WETLANDS, AND WHERE SLOPES EXCEED 16%.

UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY'S ON-SITE REPRESENTATIVE, DURING THE RAINY SEASON THE CONTRACTOR SHALL NOT SCHEDULE CONSTRUCTION ACTIVITIES IN "HIGH RISK AREAS" OR SCHEDULE TO HAVE MORE THAN 5 ACRES OF ACTIVE DISTURBED SOIL AREA. WHERE PERMANENT STORM WATER TREATMENT DEVICES ARE TO BE CONSTRUCTED, THESE DEVICES SHOULD, WHENEVER FEASIBLE, BE CONSTRUCTED AS AN EARLY WORK ITEM.

B. PRESERVATION OF NATURAL FEATURES

PRIOR TO THE COMMENCEMENT OF SOIL-DISTURBING ACTIVITIES, AREAS OF EXISTING VEGETATION THAT ARE TO REMAIN AND ENVIRONMENTALLY SENSITIVE AREAS (I.E. WETLANDS, PROTECTED HABITATS, ETC) SHALL BE FENCED FOR PROTECTION. IN GENERAL, SITE DESIGNS SHALL PRESERVE EXISTING VEGETATION TO THE MAXIMUM EXTENT POSSIBLE; AND DURING CONSTRUCTION, EXISTING VEGETATION SHALL BE PRESERVED (AND PROTECTED BY FENCING) FOR AS LONG AS POSSIBLE IN THE WINTER SEASON.

C. STORM WATER RUN-ON AND CONCENTRATED FLOWS

EXISTING WATERCOURSES SHALL BE PROTECTED; AND IF DIVERTED, HANDLED IN A NON-ERODING FASHION, TO THE EXTENT FEASIBLE. ALL CONCENTRATED FLOWS SHALL BE CHANNELED AWAY FROM DISTURBED SOIL AREAS / STOCKPILES. CONCENTRATED WATER FLOWS SHALL BE CONVEYED IN A NON-ERODING FASHION.

D. STOCKPILE MANAGEMENT

STOCKPILES SHALL BE MANAGED AS FOLLOWS:

1. SOIL STOCKPILES
   RAINY SEASON:
   - COVERED, OR PROTECTED WITH SOIL STABILIZATION MEASURES & PERIMETER SEDIMENT BARRIERS.

   NON-RAINY SEASON
   - COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS.
2. CONCRETE / ASPHALT RUBBLE, ROCK AND AGGREGATE BASE / SUB-BASE
   - COVERED OR PROTECTED WITH PERIMETER SEDIMENT BARRIERS
3. "COLD MIX" ASPHALT
   - COVERED

E. SEDIMENT TRACKING CONTROL

APPROPRIATE MEASURES SHALL BE DEPLOYED TO MINIMIZE THE TRACKING OF SEDIMENT OFF-SITE BY VEHICLES AND/OR EQUIPMENT. THESE MEASURES INCLUDE STABILIZED CONSTRUCTION ENTRANCES/EXITS & ROADWAYS, AND TIRE WASHING, WHERE TRACKING OCCURS. STREETS SHALL BE SWEPT USING A PICK-UP SWEEPER WITH WATER SUPPLY.

F. NON-STORM WATER MANAGEMENT

NON-STORM WATER DISCHARGES SHALL BE MINIMIZED TO THE EXTENT FEASIBLE. SEDIMENT-LADEN NON-STORM WATER IS REQUIRED TO BE FILTERED (OR EQUIVALENT TREATMENT) PRIOR TO DISCHARGING. MEASURES REQUIRED TO MANAGE NON-STORM WATER DISCHARGES INCLUDE: WATER CONSERVATION PRACTICES, DUST CONTROL, MATERIAL STORAGE PRACTICES, VEHICLE/EQUIPMENT OPERATION AND MAINTENANCE REQUIREMENTS, WASTE MANAGEMENT PRACTICES, AND SPILL PREVENTION / CONTROL MEASURES.

G. DISTURBED SOIL AREA MANAGEMENT

DISTURBED SOIL AREAS (DSA) SHALL BE PROTECTED WITH AN "EFFECTIVE COMBINATION" OF MEASURES INCLUDING SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. THERE MAY BE SITUATIONS WHERE "SEDIMENT BASINS" OR "TREATMENT" ARE ABLE TO SUBSTITUTE AS ALTERNATIVE CONTROL MEASURES TO THE NORMALLY REQUIRED "EFFECTIVE COMBINATION" OF SOIL STABILIZATION, SEDIMENT BARRIERS AND BASINS / TRAPS. HOWEVER, WHEN SUBSTITUTING THESE MEASURES, THE CONTRACTOR MUST BE PREPARED TO DEMONSTRATE THAT THE SEDIMENT LOAD WITHIN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE DOES NOT EXCEED NATURAL OR PRE-CONSTRUCTION LEVELS.

1. SOIL STABILIZATION MEASURES INCLUDE:
   - HYDRAULIC MULCH (REF. CASQA BMP # EC-3)
   - HYDROSEEDING (REF. CASQA BMP # EC-4)
   - SUITABLY STABILIZED, NON-POLLUTING STRAW / WOOD / ORGANIC MULCH (REF CASQA BMP #'s EC-6 & EC-8)
   - GEOTEXTILES, MATS, PLASTIC COVERS AND EROSION CONTROL BLANKETS (REF. CASQA BMP # EC-7)
   - STABILIZED CONSTRUCTION ROADWAYS (REF. CASQA BMP # TC-2)
2. SEDIMENT BARRIERS INCLUDE:
   - SILT FENCES (REF. CASQA BMP # SE-1)
   - SAND / GRAVEL BAG BARRIERS (REF. CASQA BMP #'S SE-6 & SE-8)
   - STRAW BALE BARRIERS (REF. CASQA BMP # SE-9)
   - FIBER ROLLS (REF. CASQA BMP # SE-5)
3. BASIN / TRAPS INCLUDE:
   - DESILTING BASINS (REF. CALTRANS BMPS)
   - SEDIMENT TRAPS (REF. CALTRANS BMPS)
4. ON DSAs WITH SLOPE LENGTHS GREATER THAN 10 FEET, THE FOLLOWING MEASURES SHALL BE DEPLOYED:
5. RAINY SEASON (OCT. 15TH TO MAY 1ST):
   - NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES EQUAL TO OR FLATTER THAN 1:20 (V/H), SOIL STABILIZATION
   * ON SLOPES STEEPER THAN 1:20 (V/H), SOIL STABILIZATION AND SEDIMENT BARRIERS
   - ACTIVE AREAS
   * ON SLOPES STEEPER THAN 1:20 (V/H), SEDIMENT BARRIERS
   * ON SLOPES STEEPER THAN 1:2 (V/H) WITH SLOPE LENGTHS GREATER THAN 50 FEET: SOIL STABILIZATION, SEDIMENT BARRIERS, AND WHERE FEASIBLE, BASINS / TRAPS
6. NON-RAINY SEASON:
   - NON-ACTIVE AREAS (NO SOIL DISTURBING ACTIVITIES FOR 21 OR MORE DAYS)
   * ON SLOPES STEEPER THAN 1:2 (V/H), SEDIMENT BARRIERS.
7. GENERAL:
   PROTECTION SHALL BE DEPLOYED ON NON-ACTIVE DSAs WITHIN 14 DAYS FROM THE CESSATION OF SOIL-DISTURBING ACTIVITIES OR ONE DAY PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION, WHICHEVER OCCURS FIRST. PROTECTION SHALL BE DEPLOYED ON ACTIVE DSAs PRIOR TO THE PREDICTED (40% OR MORE CHANCE) ONSET OF SIGNIFICANT PRECIPITATION.

   "TERRACES" FOR CUT SLOPES UP TO 80 FEET IN HEIGHT, TERRACES AT LEAST 6 FEET (2.4 METERS) IN WIDTH SHALL BE ESTABLISHED AT MOT MORE THAN 30-FOOT (9.1 METERS) VERTICAL INTERVALS ON ALL CUT SLOPES TO CONTROL SURFACE DRAINAGE AND DEBRIS EXCEPT THAT WHERE ONLY ONE TERRACE IS REQUIRED, IT SHALL BE AT MIDHEIGHT. FOR CUT SLOPES GREATER THAN 80 FEET (18 METERS) AND UP TO 120 FEET (37 METERS) IN VERTICAL HEIGHT, ONE ADDITIONAL TERRACE AT APPROXIMATELY MIDHEIGHT SHALL BE 12 FEET (3.6 METERS) IN WIDTH. TERRACES SHALL SLOPE A MINIMUM OF 5 PERCENT GRADIENT TOWARD THE HILLSIDE. TERRACE WIDTHS AND SPACING FOR CUT SLOPES GREATER THAN 120 FEET (36 METERS) IN HEIGHT SHALL BE DESIGNED BY THE CIVIL ENGINEER AND APPROVED BY THE DIRECTOR. SUITABLE ACCESS SHALL BE PROVIDED TO PERMIT PROPER CLEANING AND MAINTENANCE.

   "SEDIMENT BASIN:" A BASIN WITH A CAPACITY EQUIVALENT TO AT LEAST 3600 CUBIC FEET OF STORAGE (AS MEASURED FROM THE BOTTOM OF THE BASIN TO THE PRINCIPAL OUTLET) PER ACRE DRAINING INTO THE BASIN. THE LENGTH OF THE BASIN SHALL BE MORE THAN TWICE THE BASIN'S WIDTH (LENGTH IS DETERMINED BY MEASURING THE DISTANCE BETWEEN THE INLET AND THE OUTLET). THE DEPTH OF THE BASIN MUST NOT BE LESS THAN THREE FEET NOR GREATER THAN FIVE FEET.

   "TREATMENT": A COMBINATION OF BASIN AND TREATMENT ENGINEERED TO REMOVE AND TREAT (TO REMOVE 0.01 MM SIZED PARTICLES AND LARGER) THE 10-YEAR, 1-HOUR RAIN EVENT USING RAIN WHERE C=0.5 AND I RANGES FROM 0.288 (EL DORADO HILLS) TO 0.500 (SLY PARK).

GENERAL REFERENCE: EL DORADO COUNTY "STORM WATER MANAGEMENT PLAN", OCTOBER 2004. AVAILABLE ON-LINE AT: <HTTP://WWW.CO.EL-DORADO.CA.US/EMD/SOLIDWASTE/STORM.HTML>

DETAILED REFERENCES:

1. CALIFORNIA STORM WATER QUALITY ASSOCIATION (CASQA) "CONSTRUCTION HANDBOOK", JANUARY 2003. DRAFT# SEPTEMBER 2006. AVAILABLE ON-LINE AT<HTTP://WWW.CABMPHANDBOOKS.COM/>
2. CALTRANS "STATEWIDE STORM WATER QUALITY PRACTICE GUIDELINES", APRIL 2003. AVAILABLE ON-LINE AT: HTTP://WWW.DOT.CA.GOV/HQ/ENV/STORMWATER/SPECIAL/NEWSETUP/INDEX.HTM
3. HIGH SIERRA RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL "VEGETATION ESTABLISHMENT GUIDELINES FOR THE SIERRA NEVADA FOOTHILLS AND MOUNTAINS," AVAILABLE ON-LINE AT: HTTP://WWW.CO.EL-DORADO.CA.US/EMD/SOLIDWASTE/STORMWATER/HYDROSEEDVEGETATIONGUIDELINES SEEDMIX&TODOS.PDF

CRITICAL AREA PLANTING CONSTRUCTION SPECIFICATIONS (JANUARY 2006)

A. SCOPE
ESTABLISHING VEGETATION ON SEVERELY ERODING AREAS OR AREAS WITH AN EROSION POTENTIAL. ITS PURPOSE IS TO STABILIZE THE SOIL, MINIMIZE OR PREVENT DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS, PROTECT WILDLIFE HABITAT, AND MAINTAIN AESTHETIC QUALITIES.

B. AREAS TO BE SEEDED, TIMING OF SEEDING
COMPLETE REVEGETATION AND STABILIZATION OF ALL DISTURBED SOILS, BOTH WITHIN AND OUTSIDE COUNTY RIGHT-OF-WAY, WILL BE ACCOMPLISHED WITH SPECIFIED AMOUNTS AND TYPES OF VEGETATIVE SPECIES, MULCH, AND FERTILIZER MATERIAL. SEE MAJOR LAND RESOURCE AREA EXHIBITS MLRA 18 OR 22.

ALL EROSION AND SEDIMENT CONTROL PRACTICES PERFORMED AFTER OCTOBER 15, SHALL FOLLOW "RAINY SEASON" SPECIFICATION CONTAINED IN THE STORM WATER MANAGEMENT PRACTICES.

C. MATERIAL

1. SEED – ALL SEED SHALL BE DELIVERED TO THE SITE TAGGED AND LABELED IN ACCORDANCE WITH THE CALIFORNIA AGRICULTURAL CODE AND SHALL BE ACCEPTABLE TO THE COUNTY AGRICULTURAL COMMISSIONER.

SEED SHALL BE OF A QUALITY WHICH HAS A MINIMUM PURE LIVE SEED CONTENT OF 80% (% PURITY X % GERMINATION) AND WEED SEED SHALL NOT EXCEED 0.5% OF THE AGGREGATE OF PURE LIVE SEED AND OTHER MATERIALS. LEGUME SEED SHALL BE INOCULATED WITH INOCULATE SPECIFIC TO ITS NEEDS WITHIN TWO HOURS PRIOR TO SEEDING. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER OR AS OTHERWISE SPECIFIED. ALL INOCULATED SEED SHALL BE LABELED TO SHOW WEIGHT OF SEED, THE DATE OF INOCULATION, AND THE WEIGHT AND SOURCE OF INOCULANT MATERIALS.

2. FERTILIZER – A COMMERCIAL FERTILIZER SHALL BE AMMONIUM PHOSPHATE AND CONTAIN A MINIMUM OF 16% NITROGEN, 20% PHOSPHORUS, AND OR POTASH, UNIFORM IN COMPOSITION, DRY AND FREE FLOWING, PELLETED OR GRANULAR.

ALL FERTILIZER SHALL BE DELIVERED IN UNBROKEN OR UNOPENED CONTAINERS, LABELED IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS AND BEARING THE WARRANTY OF THE PRODUCER FOR THE GRADE FURNISHED.

3. MULCH – MULCH SHALL BE ONE OF THE FOLLOWING MATERIALS AS APPROVED BY THE GOVERNMENT REPRESENTATIVE.

4. STRAW – STRAW SHALL BE NEW STRAW DERIVED FROM RICE, WHEAT, OATS, OR BARLEY, AND BE FREE OF WEED AND NOXIOUS WEED SEED. STRAW SHALL BE FURNISHED IN AIR DRY BALES. EVIDENCE SHALL BE FURNISHED THAT CLEARANCE HAS BEEN OBTAINED FROM THE COUNTY AGRICULTURAL COMMISSIONER, AS REQUIRED BY LAW, BEFORE STRAW OBTAINED FROM OUTSIDE THE COUNTY IN WHICH IT IS TO BE USED IS DELIVERED TO THE SITE OF THE WORK.

5. WOOD FIBER MULCH – WOOD FIBER MULCH IS A WOOD CELLULOSE FIBER THAT CONTAINS NO GERMINATION OR GROWTH INHIBITING FACTORS. IT IS COLORED WITH A NON-TOXIC, WATER SOLUBLE, GREEN DYE TO PROVIDE A PROPER GAUGE FOR METERING OVER GROUND SURFACES. IT HAS THE PROPERTY TO BE EVENLY DISPERSED AND SUSPENDED WHEN AGITATED IN WATER.

D. SEEDING REQUIREMENTS

1. GENERAL – ALL SEEDING, FERTILIZER AND MULCHING OPERATIONS SHALL BEGIN WHEN APPROVAL IS GIVEN BY THE APPROPRIATE COUNTY ENGINEER OR CONSERVATION DISTRICT REPRESENTATIVE.

2. SEEDBED PREPARATION – THE ENTIRE AREA TO BE SEEDED SHALL BE REASONABLY SMOOTH AND CONFORM TO THE DESIRED SHAPE BEFORE ACTUAL SEEDBED PREPARATION IS BEGUN. ANY DEBRIS WHICH WOULD INTERFERE WITH SEEDING OPERATIONS GROWTH OR MAINTENANCE OF THE VEGETATIVE COVER WILL BE REMOVED. THE AREA TO BE SEEDED SHALL HAVE A FIRM SEEDBED WHICH HAS PREVIOUSLY BEEN ROUGHENED BY SCARIFYING, DISCING, HARROWING, CHISELING, OR OTHERWISE WORKED TO A DEPTH OF TWO TO FOUR INCHES (2" – 4"). NO IMPLEMENT SHALL BE USED THAT WILL CREATE AN EXCESSIVE AMOUNT OF DOWNWARD MOVEMENT OF SOIL OR CLODS OF SLOPING AREAS. SEEDBED MAY BE PREPARED AT TIME OF COMPLETION OF EARTH-MOVING WORK.

3. FERTILIZING – FERTILIZER SHALL BE DISTRIBUTED UNIFORMLY OVER THE SEEDBED AT THE RATE OF 300 POUNDS PER ACRE, AND SHALL BE IN SUCH PHYSICAL CONDITION TO INSURE UNIFORM APPLICATION OVER THE AREA TO BE FERTILIZED. FERTILIZER MAY BE APPLIED IN ANY WAY THAT WILL RESULT IN UNIFORM DISTRIBUTION. THE FERTILIZER SHALL BE INCORPORATED INTO THE SOIL.

4. SEEDING – SEED SHALL BE BROADCAST BY HAND, MECHANICAL HAND SEEDER, POWER OPERATED SEEDER, HYDROSEEDER OR OTHER APPROVED EQUIPMENT. SEED SHALL HAVE A SOIL COVER OF NOT MORE THAN ONE-HALF INCH. SEEDING WILL BE CARRIED OUT USING EITHER OF THE FOLLOWING METHODS:

METHOD 1: THE SEED MAY BE DRILLED, NOT TO EXCEED ONE-HALF (1/2) INCH DEEP AND CULTIPACKED OR ROLLED ONCE OVER WITH A CORRUGATED ROLLER ON ALL AREAS WHERE EQUIPMENT CAN BE OPERATED SAFELY. SEED OPERATIONS WILL BE ACROSS THE SLOPE.

METHOD 2: THE SEED MAY BE APPLIED IN A SLURRY MIX OF WOOD CELLULOSE FIBER DISTRIBUTED UNIFORMLY AT THE PRESCRIBED RATE. THE APPLICATION UNIT USED FOR "HYDRO MULCH" SHALL BE EQUIPPED WITH AN AGITATOR TO MAINTAIN THE SEED AND MULCH IN SUSPENSION WITHIN THE UNIT'S TANK PRIOR TO AND DURING APPLICATION.

METHOD 3: WHERE EMERGENCY TREATMENT OF EXPOSED SOILS EXTENDS BEYOND OCTOBER 15, EMERGENCY MULCHING WITHOUT SEED WILL BE PRESCRIBED IN ACCORDANCE WITH "SOIL STABILIZATION MEASURES" DESCRIBED PREVIOUSLY.

SPECIAL NOTE: A MINIMUM 70% SEED GERMINATION WITH AT LEAST 1" GROWTH MUST BE OBTAINED BY DECEMBER 1ST, OR AREA MUST BE COVERED WITH STRAW MULCH.

Fugitive Dust Prevention/Control and Asbestos Hazard Dust Mitigation Notes

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 10, "DUST CONTROL" OF THE STANDARD SPECIFICATIONS, COUNTY OF EL DORADO AIR POLLUTION CONTROL DISTRICT (APCD) RULE 223, AND COUNTY OF EL DORADO ORDINANCE 4548. COPIES OF APCD RULE 223 AND ORDINANCE 4548 MAY BE OBTAINED FROM THE COUNTY OF EL DORADO DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, 2850 FAIRLANE COURT, PLACERVILLE, CA 95667.

2. THE CONTRACTOR SHALL KEEP A COPY OF THE FUGITIVE DUST PLAN AND THE ASBESTOS MITIGATION PLAN (IF ISSUED) AT THE CONSTRUCTION SITE AT ALL TIMES DURING THE CONSTRUCTION PERIOD.

MLRA 22

FOR SEEDING PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
KIND OF SEED AND AMOUNT (HYDROSEEDED OR BROADCASTED)

POTOMAC ORCHARD GRASS	24 LBS/ACRE	0.55 LBS/1000 SqFt
OR		
LUNA PUBESCENT WHEAT GRASS	36 LBS/ACRE	0.80 LBS/1000 SqFt
OR		
TOPAR PUBESCENT WHEAT GRASS	36 LBS/ACRE	0.80 LBS/1000 SqFt
AND		
WHIMMERA '82' RYE GRASS	6 LBS/ACRE	.15 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

FOR SEEDING NOT PERFORMED BETWEEN SEPTEMBER 15 AND OCTOBER 15
HYDROSEEDED OR BROADCASTED

POTOMAC ORCHARD GRASS	48 LBS/ACRE	1.10 LBS/1000 SqFt
OR		
LUNA PUBESCENT WHEAT GRASS	72 LBS/ACRE	1.60 LBS/1000 SqFt
OR		
TOPAR PUBESCENT WHEAT GRASS	72 LBS/ACRE	1.60 LBS/1000 SqFt
AND		
WHIMMERA '82' RYE GRASS	12 LBS/ACRE	.3 LBS/1000 SqFt

A STRAW MULCH COVERING SHALL BE APPLIED OVER THE SURFACE OF THE SEEDED AREA. MULCHING SHALL FOLLOW IMMEDIATELY AFTER SEEDING UNLESS OTHERWISE DIRECTED. STRAW WILL BE REQUIRED FOR MULCH MATERIAL. IF PROJECT IS BROADCAST SEEDED, DRILL SEEDED, OR HYDROSEEDED, STRAW MULCH WILL STILL BE REQUIRED.

Notes – SITE CONSULTING, INC

1. THE CONTRACTOR SHALL PROCURE AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC.; NOT ALREADY OBTAINED BY THE OWNER AS MAY BE NECESSARY TO COMPLY WITH FEDERAL, STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK.

2. EXISTING UTILITIES ARE INDICATED ON THE PLANS WHERE SUCH UTILITIES ARE KNOWN. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE, PROTECT AND MAINTAIN ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT, (USA) 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. (TELEPHONE 1-800-642-2444) ALSO NOTIFY THE EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION WORK.

3. PERIODIC INSPECTION AND REPAIR WILL BE REQUIRED BY THE OWNER TO KEEP DRAINAGE IMPROVEMENTS OPERABLE. REMOVAL OF SEDIMENT DEPOSITS AND VEGETATIVE MATERIALS IN PIPES, INLET STRUCTURES AND DRAINAGE INVERTS SHALL BE PERFORMED AT A REGULAR MAINTENANCE INTERVAL TO PREVENT ACCUMULATION AND OBSTRUCTION OF DRAINAGE IMPROVEMENT OPERATION.

4. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER, OWNER AND THE COUNTY OF EL DORADO AT LEAST 24 HOURS PRIOR TO ANY GRADING.

5. ALL GRADING IS TO BE DONE IN ACCORDANCE WITH THE COUNTY OF EL DORADO REQUIREMENTS AND THE SOILS ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES SHOWN ON THE EROSION CONTROL PLAN. ALL SUCH MEASURES SHALL CONFORM TO THE COUNTY OF EL DORADO GRADING, EROSION AND SEDIMENT CONTROL ORDINANCE TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGH THE DURATION OF THE PROJECT. IF GRADING ACTIVITIES ARE NOT COMPLETED BY OCTOBER 15, THE OWNER SHALL IMPLEMENT THE TEMPORARY EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. ALL AREAS GRADED DURING THE RAINY SEASON (OCTOBER 15 – MAY 15) SHALL BE RE-VEGETATED WITHIN 15 DAYS UPON COMPLETION.

7. EARTHWORK ESTIMATES ARE TO BE USED FOR ESTIMATING PURPOSES ONLY AND NO GUARANTEE IS MADE AS TO THE ACCURACY OF THIS INFORMATION. THE CONTRACTOR ACKNOWLEDGES THAT HE IS SATISFIED AS TO THE CHARACTER, QUALITY, AND QUANTITY OF THE SURFACE AND SUBSURFACE MATERIALS TO BE ENCOUNTERED AND WILL BE RESPONSIBLE FOR PROPERLY ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK.

CUBIC YARDS – EXCAVATION: 800± CUBIC YARDS – EXPORT: 0

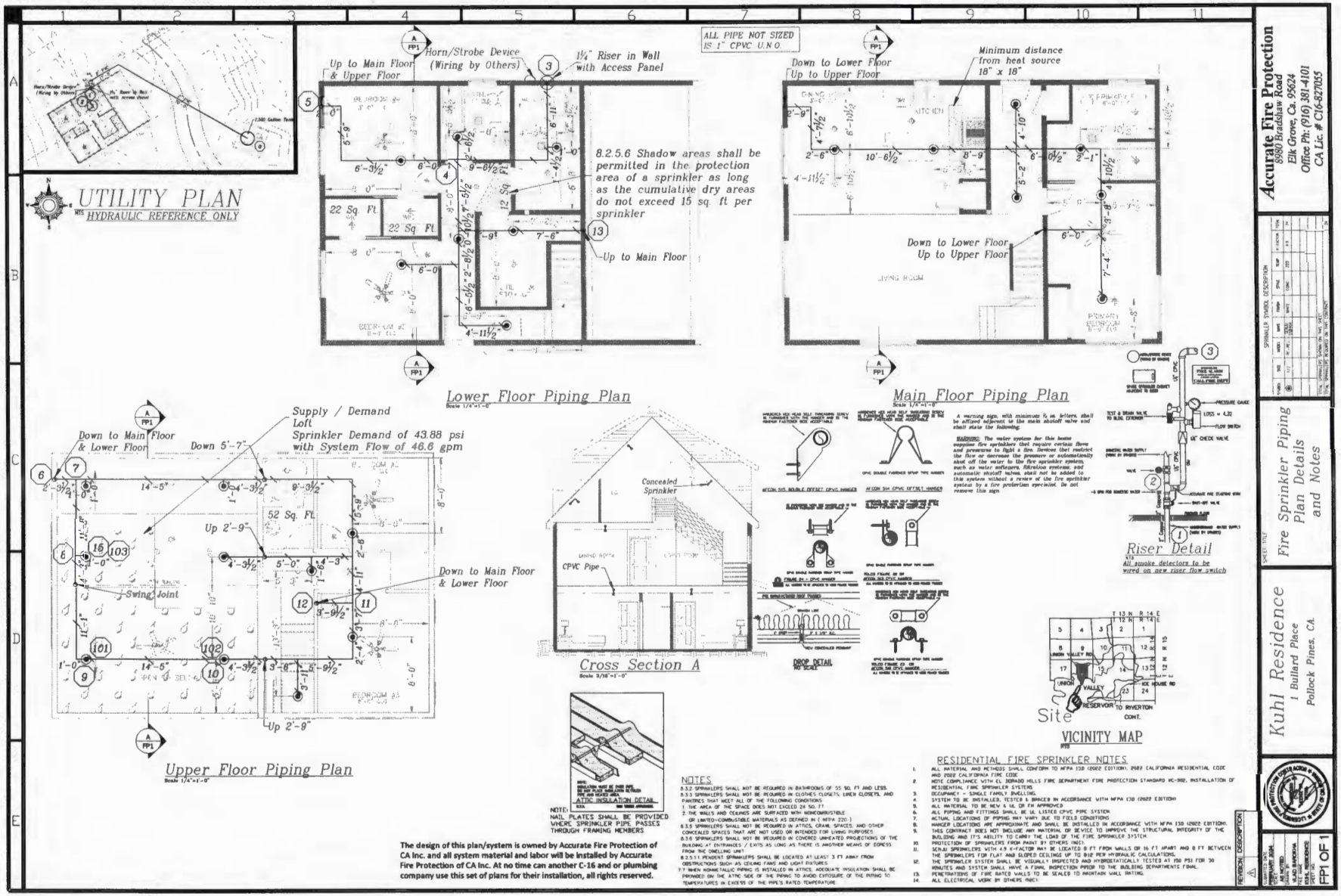
CUBIC YARDS – EMBANKMENT: 800± CUBIC YARDS – IMPORT: 0

8. IT IS THE APPLICANT AND CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL THE STATE AND FEDERAL LAWS AND REGULATIONS INCLUDING THE FEDERAL AND STATE ENDANGERED SPECIES ACT AND THE CLEAN WATER ACT FOR ALL ON-SITE IMPACTS. THE COUNTY GRADING PERMIT DOES NOT AUTHORIZE THE CONTRACTOR TO CONDUCT ACTIVITIES NOT PERMITTED BY APPLICABLE STATE AND FEDERAL AGENCIES IN AREAS SUBJECT TO STATE AND FEDERAL JURISDICTION.

9. THE AREA OF DISTURBANCE IS APPROXIMATELY 0.4 ACRES.

Standard General Notes Grading and Drainage Notes

1. MATERIALS, CONSTRUCTION QUALITY, AND METHODS FOR IMPS PROJECT ARE SUBJECT TO THE COUNTY OF EL DORADO DESIGN AND IMPROVEMENT STANDARD PLANS, AND THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND STANDARD SPECIFICATIONS.
2. ALL WORK SHALL BE ACCOMPLISHED TO THE SATISFACTION OF THE COUNTY OF EL DORADO, AUTHORIZED REPRESENTATIVE.
3. ALL REFERENCE TO COUNTY SHALL MEAN THE COUNTY OF EL DORADO OR AUTHORIZED REPRESENTATIVE.
4. ALL REFERENCE TO THE STANDARD SPECIFICATIONS SHALL MEAN THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED JULY 2006.
5. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO SHALL HAVE FULL AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR ON SITE AT ALL TIMES DURING WORKING HOURS.
6. THE CONTRACTOR SHALL NOTIFY COUNTY AND RCD 48 HOURS IN ADVANCE OF COMMENCING WORK TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE AND INSPECTION WITH THE ENGINEER AND COUNTY. NO WORK SHALL BEGIN UNTIL AFTER THE PRE-CONSTRUCTION CONFERENCE AND INSPECTION HAVE BEEN COMPLETED.
7. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 7, "LEGAL RELATIONS AND RESPONSIBILITY" OF THE STANDARD SPECIFICATIONS.
8. RIGHTS TO ENTER AND CONSTRUCT SHALL BE OBTAINED PRIOR TO CONSTRUCTING ANY OFF-SITE WORK SHOWN IN THESE PLANS. COPIES OF SUCH DOCUMENTS SHALL BE KEPT ON-SITE AT ALL TIMES DURING THE PERFORMANCE OF OFF-SITE WORK.
9. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) 811 OR 1-800-227-2600 PRIOR TO PERFORMING ANY EXCAVATION ON THE PROJECT SITE. THE OWNER(S) OF IDENTIFIED EXISTING UNDERGROUND FACILITIES SHALL ALSO BE CONTACTED PRIOR TO CONSTRUCTION.
10. STAKING MAY BE REQUIRED BY COUNTY DUE TO THE NATURE AND/OR COMPLEXITY OF THE WORK. LOST OR DAMAGED STAKES SHALL BE REPLACED TO THE SATISFACTION OF COUNTY WHETHER RESULTING FROM CONSTRUCTION PROCEDURES, VANDALISM, OR ANY OTHER CAUSE.
11. CONSTRUCTION HOURS SHALL BE LIMITED FROM MONDAY THROUGH SATURDAY, 7:00 A.M. TO 7:00 P.M. DURING WEEKDAYS AND 8 A.M. TO 5 P.M. ON SATURDAY. ALL HEAVY EQUIPMENT AND ANY INTERNAL COMBUSTION ENGINES SHALL BE FITTED WITH ADEQUATE MUFFLERS.
12. THE CONTRACTOR SHALL PROVIDE, PLACE AND MAINTAIN ALL LIGHTS, SIGNS, DELINEATORS, BARRICADES, TEMPORARY TRAFFIC STRIPING, FLAGMEN, DETOURS OR OTHER DEVICES NECESSARY TO PROVIDE FOR THE SAFE AND CONVENIENT PASSAGE OF PUBLIC VEHICLE AND PEDESTRIAN TRAFFIC THROUGH THE CONSTRUCTION SITE.
13. THE CONTRACTOR SHALL OBTAIN THE EXPRESS WRITTEN CONSENT OF COUNTY PRIOR TO IMPLEMENTING ANY LANE CLOSURE OR DETOUR ON A COUNTY MAINTAINED STREET OR HIGHWAY. ALL LANE CLOSURES OR DETOURS SHALL CONFORM TO CHAPTER 5, "TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TRAFFIC MANUAL (LATEST EDITION).
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING CONSTRUCTION. AT LEAST ONE WATER TRUCK SHALL BE ON SITE AT ALL TIMES. ADDITIONAL EQUIPMENT MAY BE REQUIRED AS DETERMINED BY COUNTY.
15. IF THE PRESENCE OF SERPENTINE ROCK (SAF) IS DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, CITY AND THE EL DORADO COUNTY DEPARTMENT OF ENVIRONMENTAL MANAGEMENT THAT SERPENTINE ROCK IS PRESENT ON THE SITE.
16. UPON JOB COMPLETION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE INFORMATION TO SITE CONSULTING, INC. (ENGINEER), REGARDING ANY MATERIAL CHANGES MADE DURING CONSTRUCTION AS WELL AS ANY OTHER INFORMATION REQUIRED TO BE SHOWN ON THE RECORD DRAWINGS BY COUNTY.
17. CLEARING AND GRUBBING SHALL CONFORM TO THE PROVISIONS OF SECTION 16, "CLEARING AND GRUBBING" OF THE STANDARD SPECIFICATIONS. ROOTS, STUMPS, TREES, ROCKS OR OTHER DELETERIOUS SUBSTANCES SHALL BE DISPOSED OF OFF-SITE AND IN A LAWFUL MANNER.
18. EARTHWORK SHALL CONFORM TO THE PROVISIONS OF SECTION 19, "EARTHWORK" OF THE STANDARD SPECIFICATIONS. WIDENING OF EMBANKMENTS AND FLATTENING OF SLOPES, WHICH RESULT IN AN INCREASED AREA OF GRADING, WILL NOT BE PERMITTED WITHOUT EXPRESS WRITTEN APPROVAL OF COUNTY.
19. AGGREGATE BASE SHALL CONFORM TO THE PROVISIONS OF SECTION 26, "AGGREGATE BASE" OF THE STANDARD SPECIFICATIONS FOR CLASS 2 AGGREGATE BASE, 3/4" MAXIMUM GRADATION. AGGREGATE BASE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY COUNTY.
20. ASPHALT CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 39, "ASPHALT CONCRETE" OF THE STANDARD SPECIFICATIONS FOR TYPE B ASPHALT CONCRETE. ASPHALT BINDER SHALL BE PERFORMANCE GRADE 64-16. AGGREGATE FOR THE TOP LIFT SHALL BE 1/2" MAXIMUM, MEDIUM GRADATION. AGGREGATE FOR LOWER LIFTS SHALL BE 3/4" MAXIMUM, MEDIUM GRADATION. LIFT THICKNESS SHALL CONFORM TO THE PROVISIONS OF SECTION 39-6, "SPREADING AND COMPACTION" OF THE STANDARD SPECIFICATIONS. ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL THE PRIOR GRADING PLANE HAS BEEN APPROVED BY CITY, AND ALL UTILITIES WITHIN THE PAVED AREA HAVE BEEN PLACED, TESTED, AND APPROVED.
21. PRECAST CONCRETE STRUCTURES SHALL CONFORM TO SECTION 70-1.02H "PRECAST CONCRETE STRUCTURES" OF THE STANDARD SPECIFICATIONS.
22. IF BLASTING ACTIVITIES ARE



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