CITY OF THOUSAND OAKS
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
ENVIRONMENTAL CHECKLIST FORM

This form and the descriptive information in the application package constitute the contents of the Initial Study pursuant to Section 15063 of the State CEQA Guidelines.

PROJECT LABEL:

APN(s): 690-0-010-105, 690-0-010-015

Applicant: Tricia Ferruzza

Staff: Justine Kendall, Senior Planner

Rep Elevated Entitlements LLC

Proposal: The Project includes the construction of a single-family residence, garage, , swimming pool & spa, a Fire Department turnaround, utilities, landscape, other infrastructure, and a 100-foot fuel modification zone.

USGS Quad: Thousand Oaks, California

Lat/Long: 34.17632, -118.82327

Zoning: Residential Planned Developments (RPD)-1.5U-SP

PROJECT CONTACT INFORMATION:

Lead agency: City of Thousand Oaks Planning Division
2100 Thousand Oaks Blvd, Thousand Oaks, CA 91362

Contact person: Justine Kendall
Phone No: 805-449-2509
E-mail: jkendall@toaks.org

PROJECT DESCRIPTION:

Summary

The proposed Project includes the construction of a single-family residence, garage, swimming pool and spa, new driveway, a hammerhead turnaround, utilities, landscape, hardscape, and a 100-foot fuel modification zone. The Project is sited mostly within a previously graded pad at the property located at 3948 Skelton Canyon. The development footprint, not including the driveway and hammerhead turnaround, is approximately 7,186 square feet (0.17 acres) and the project site is approximately 15.88 acres. The 15.88 acres is divided into two parcels, although the property is one legal lot. The development is to occur on the 9.11-acre parcel, the 6.76-acre parcel will remain open space and will not be impacted by the proposed development.

Surrounding Land Uses and Setting

Land uses on the Project site and surrounding parcels are governed by the City of Thousand Oaks General Plan and Municipal Code. The following table lists the existing land uses and zoning designations. The subject site is zoned RPD-1.5U-SP (Residential Planned Development, 1.5 minimum units to the acre, within the North Ranch Specific Plan). The properties to the northeast and west are also zoned RPD-1.5U. In addition, the land to the south is zoned OS (Open Space).

Existing Land Use and Land Use Zoning Districts		
Location	**Existing Land Use**	**Land Use Zoning District**
Project Site	Vacant Land	RPD (Residential Planned Development)
North	Residential land	RPD (Residential Planned Development)
South	Vacant Land	OS (Open Space)
East	Residential Land	RPD (Residential Planned Development)
West	Residential Land	RPD (Residential Planned Development)

Project Site Location, Existing Site Land Uses, and Conditions

The proposed Project is located at 3948 Skelton Canyon Circle in the City of Thousand Oaks. The 15.88-acre parcel is zoned RPD-1.5U. According to a desktop analysis completed by Elevated Entitlements, the Project site has varying topography with slopes ranging from 5 – 37.3%. The Project site is currently vacant and falls within a residential neighborhood.

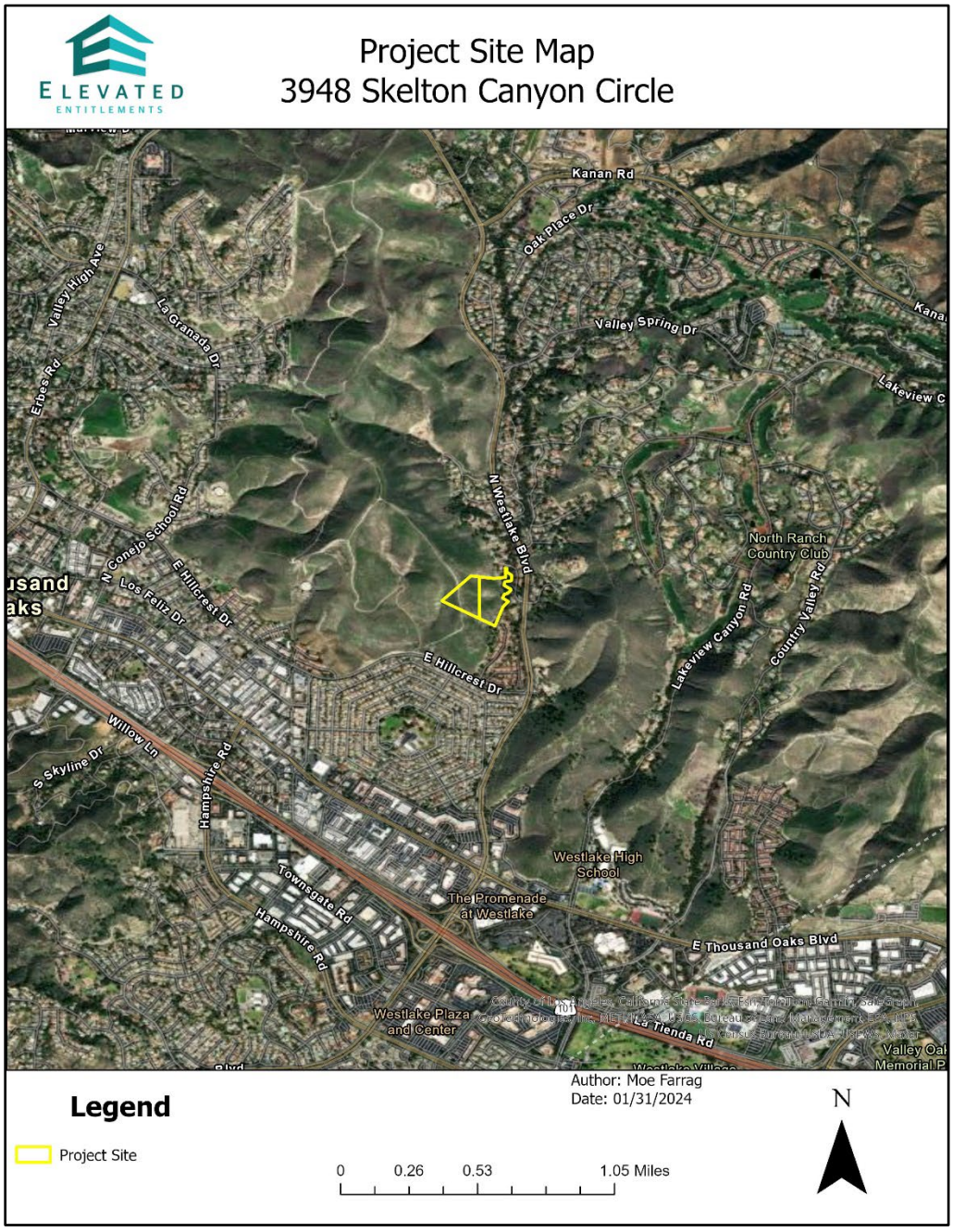

Figure 1: Project Site

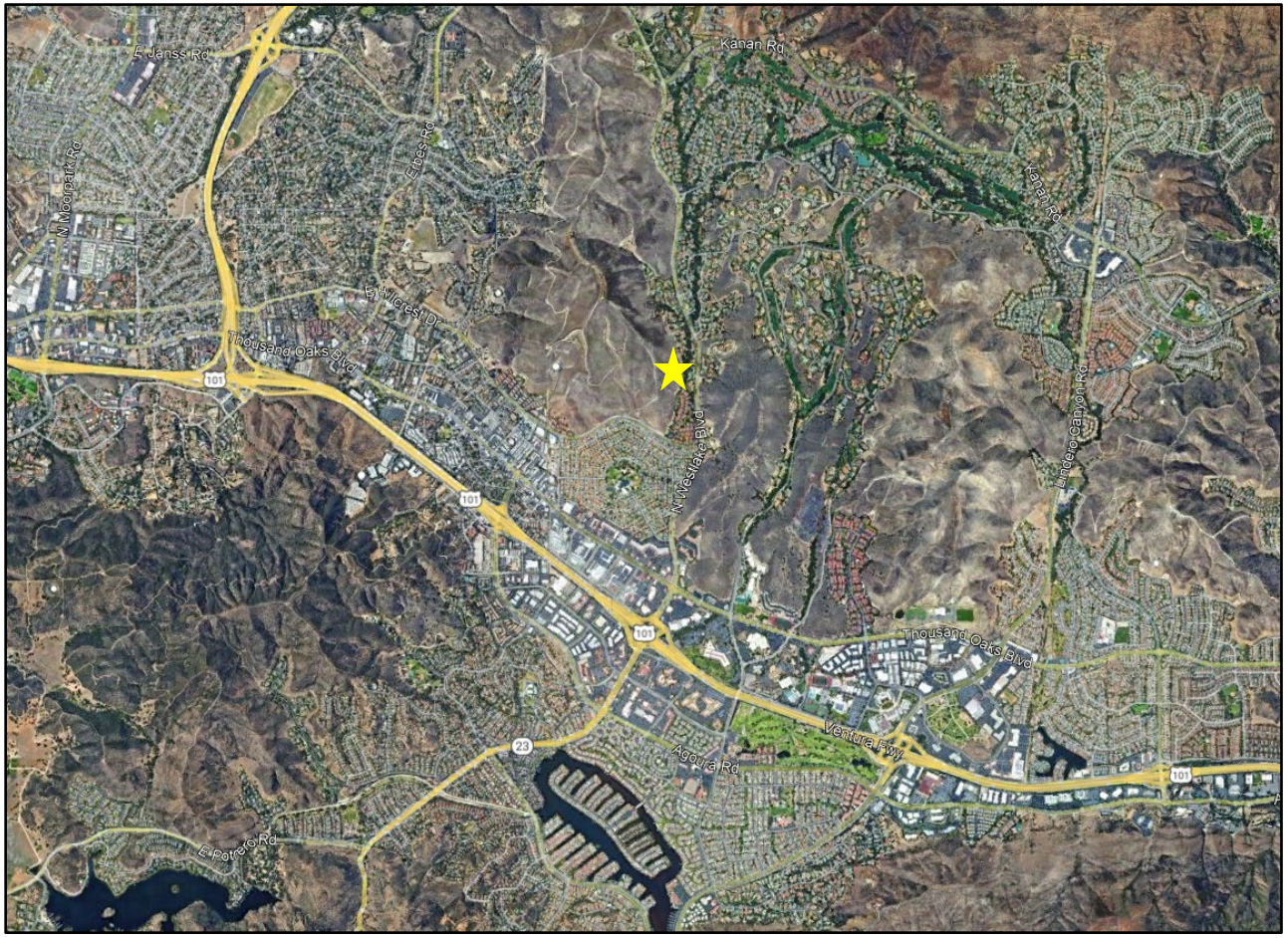

Figure 2: Project Site – Regional Location

Site Photographs

Figure 3: Project Site View South

Figure 4: Project site view from the northwest

Figure 5: Project Site View South from the edge of the proposed development

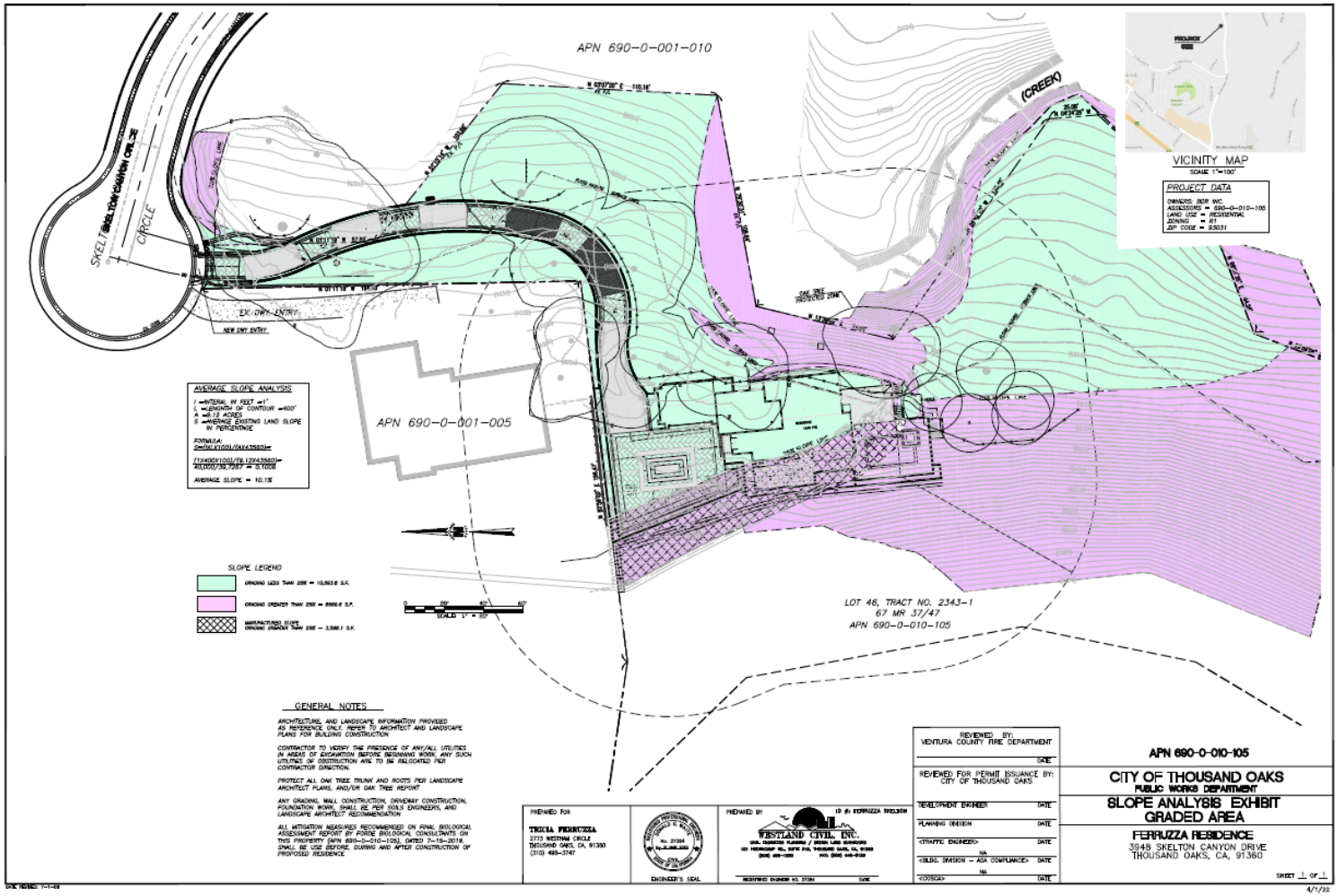

Figure 6 Proposed Site Plan

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ADDITIONAL APPROVAL REQUIRED BY OTHER PUBLIC AGENCIES

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

- State of California: California Fish & Wildlife, Air Quality Management District (VCAPCD)
- County of Ventura: Fire
- City of Thousand Oaks: Building and Safety, Public Works

CONSULTATION WITH CALIFORNIA NATIVE AMERICAN TRIBES

The City of Thousand Oaks has notified local tribes pursuant to AB 52. No California Native American tribes have requested additional consultation.

EVALUATION FORMAT

This Initial Study is prepared in compliance with the California Environmental Quality Act (CEQA) pursuant to Public Resources Code Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. The format of this Initial Study is presented as follows.

The Project is evaluated based on its potential effect on 20 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the Project on each element of the overall factor. The Initial Study checklist provides a formatted analysis that provides a determination of the effect of the Project on the factor and its elements. The effect of the Project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant	No Impact

Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors.

1. **No Impact**: No impacts are identified or anticipated, and no mitigation measures are required.
2. **Less than Significant Impact**: No significant adverse impacts are identified or anticipated, and no mitigation measures are required.
3. **Less than Significant Impact with Mitigation**: Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of Project approval to reduce these impacts to a level below significant. The required mitigation measures are:
4. **Potentially Significant Impact**: Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts.

At the end of the analysis, the required mitigation measures are restated and categorized as being either self-monitoring or requiring a Mitigation Monitoring and Reporting Program.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☐	Cultural Resources	☐	Energy
☐	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☒	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

Based on this initial evaluation, the following finding is made:

☐	The proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION shall be prepared.
☒	Although the proposed Project could have a significant effect on the environment, there shall not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION shall be prepared.
☐	The proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	The proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	Although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, ` further is required.

_____ _____

Signature: (prepared by Justine Kendall, Senior Planner) Date

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
I.	**AESTHETICS** – Except as provided in Public Resources Code Section 21099, would the Project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d)	Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?	☐	☐	☒	☐

SUBSTANTIATION: ☐ *(Check if Project is located within the view shed of any Scenic Route listed in the General Plan):* ***City of Thousand Oaks General Plan 1997, Scenic Highways Element (1974)***

a) **Less than Significant.** According to the City of Thousand Oaks General Plan, Scenic Highways Element (1974), Hillcrest Drive, and Westlake Boulevard are listed as scenic highways. Robust vegetation and single-family residences block the viewshed of the proposed development, and fire clearance areas from Westlake Boulevard. A 700 ft slope behind the property obstructs any possible view from Hillcrest Drive. Given the nature of the Project's location and the proximity to other developed lots and the gentle slopes in the surrounding area, there would be minimal obstruction to the surrounding views in the immediate area. See Appendix I for visual impact analysis. Therefore, the Project would be a less than significant visual impact.

b) **No Impact.** The subject site is not adjacent to a state scenic highway. There are no protected rock outcroppings or historic buildings on the Project site. According to the Protected Tree Report by James Dean (2023) most of the oak trees on site are within a forest providing constant shade upon the natural soil profile. The ground beneath the trees has been protected against excessive evapotranspiration as a result. This explains why the stand of trees has survived the radical loss of a water supply during the extended drought. There are 30 Oak trees in the project area. Fourteen of the 30 trees in the project area will experience encroachment from the residential development. However, only four of the 30 Oak trees onsite are recommended for removal or transplantation. All other trees will be protected. Overall, the proposed

Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings. Therefore, no impacts would occur.

c) **No Impact.** The proposed Project is in an urbanized area. The proposed Project would not substantially degrade the existing visual character of the site and its surroundings. The proposed Project is not in conflict with the RPD zoning. Furthermore, the conditions of approval would include requirements for the development to comply with all City development standards and ordinances. Therefore, the proposed Project would have no impact on the existing visual character and quality of the site and its surroundings.

d) **Less Than Significant Impact.** All proposed Project lighting will be shielded from surrounding uses and will be limited to walkways and security lighting. The proposed Project will comply with the City of Thousand Oaks Municipal Code to include limitation of light trespassing onto abutting residential properties, shielding, direction, and type. Adherence to these requirements and any other conditions of approval requested by the City would result in a less than significant impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
II.	**AGRICULTURE AND FORESTRY RESOURCES** - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned	☐	☐	☐	☒

	Timberland Production (as defined by Government Code section 51104(g))?				
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if Project is located in the Important Farmlands Overlay):* ***City of Thousand Oaks General Plan 1997*; *California Department of Conservation Farmland Mapping and Monitoring Program; Submitted Project Materials***

a) **No Impact**. The proposed Project is not located on any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) designated on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The proposed Project is in a residential area and is not near any agricultural resources. Therefore, no impacts would occur.

b) **No Impact**. The proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract since it is in an urbanized area zoned as Residential Planned Development. The proposed Project area is not under a Williamson Act contract. Therefore, no impacts would occur.

c) **No Impact**. The proposed Project would not conflict with the existing RPD zoning designation, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production. Therefore, no impacts would occur.

d) **No Impact**. The proposed Project is zoned for residential use, within an existing residential subdivision and would not result in the loss of forest land or conversion of forest land to non-forest use. According to the Protected Tree Report from James Dean (2023) Most of the oak trees upon this site are within a forest providing constant shade upon the natural soil profile below. The ground beneath the trees has been protected against excessive evapotranspiration as a result. This explains why the stand of trees has survived from the radical loss of a water supply during the extended drought. With the years of success of oak tree preservation in the North Ranch, under similar conditions, this work can generally be accomplished with controlled impact to the trees. Other than the listed recommendation for removal, root perturbation or pruning will not be lethal to any tree listed herein. The proposed Project will produce any prolonged change upon the resource. Nor will the longevity of any tree be shortened, as demonstrated with the Ben Johnson Impact Study, conducted in the North Ranch, and published in 1979 by the USDA Department of Agriculture. With protection to this tree forest, the stand of oaks can be preserved as a natural asset to the community. Therefore, no impacts would occur.

e) **No Impact.** The proposed Project would not involve other changes in the existing environment, which due to their location or nature, could result in conversion of

Farmland to non-agricultural use. The proposed Project site does not contain forested lands nor lands designated as farmland. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
III.	**AIR QUALITY -** Where available, the significance criteria established by the applicable air quality management or air pollution control district might be relied upon to make the following determinations. Would the Project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION: *(Discuss conformity with the South Coast Air Quality Management Plan, if applicable):* ***California Emissions Estimator Model (CalEEMod; Version 2020.4.0); Ventura County Air Quality Management District 2022 (VCAPCD); City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) **Less than Significant Impact.** Emissions with regional effects during Project construction, calculated with the California Emissions Model (CalEEMod); Version2022.1.1.22, would not exceed criteria pollutant thresholds established by the VCAPCD shown in Table 2 and 3 below. The only criteria pollutants with significance thresholds for the VCAPCD are VOC and NOx.

Compliance with VCAPCD Rules and Regulations during construction would reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Construction emissions for the proposed Project would not exceed operation thresholds.

Pollutant emissions from Project operation, also calculated with CalEEMod, would not exceed the VCAPCD criteria pollutant thresholds. Historical air quality data illustrates that existing carbon monoxide (CO) levels for the Project area and the general vicinity do not exceed either federal or State ambient air quality standards. The proposed Project would not result in substantial increases in CO concentrations at intersections in the Project vicinity that would result in the exceedance of federal or State CO concentration standards.

The proposed Project is consistent with the City's Zoning designation and General Plan Land Use designation for the Project site and its surrounding area. The City's General Plan is consistent with the Southern California Association of Governments (SCAG) Regional Comprehensive Plan Guidelines and the VCAPCD Air Quality Management Plan (AQMP). According to the 2020 Connect SoCal (2020) demographics forecast, the City of Thousand Oaks' population is predicted to increase by 15,200 residents by 2045. This project is anticipated to only house 3 residents, a minimal population impact to the already growing City. Thus, the proposed Project would be consistent with the Ventura County 2022 Air Quality Management Plan. Therefore, the impacts would be less than significant.

b) **Less Than Significant Impact**. VCAPCD has established daily emissions thresholds for the operation of projects in the South Central Coast Air Basin. Because the VCAPCD does not have construction emissions thresholds, it is advised that construction emissions be compared with operation emission thresholds. If construction emissions supersede operation thresholds, the VCAPCD encourages projects to implement Best Management Practices for construction-based emissions. Because the concentration standards were set at a level that protects public health within an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Construction and Operation emissions are compared to operation emissions thresholds according the VCAPCD in Table 1 below:

Emissions Source	**Table 1: Pollutant Emissions (lbs./day)**					
	VOC	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Construction Emissions	0.54	4.89	5.30	0.01	0.19	0.01
Operation Emissions	0.04	0.01	0.05	-	-	<.005
Operative Thresholds	25	25	N/A	N/A	N/A	N/A
Significant	No	No	No	No	No	No

Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under VCAPCD guidelines. These thresholds, which VCAPCD developed and that apply throughout the

Basin, apply as both Project and cumulative thresholds. The Project construction and operation emissions do not exceed these thresholds as shown in Table 2 and 3 below.

c) **Less than Significant Impact**. The California Air Quality Management District recommends that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. VCAPCD operation thresholds represent the maximum emissions from a Project site that are not expected to result in an exceedance of the National Ambient Air Quality Standards (NAAQS) or the California Ambient Air Quality Standards (CAAQS) for CO, NO2, PM10 and PM2.5, as shown in Table 2. Thresholds are based on the ambient concentrations of the pollutant within the Project Source Receptor Area and the distance to the nearest sensitive receptor. For this Project, the appropriate Source Receptor Area is Ventura County. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The Project site is in a suburban neighborhood within proximity to multiple single-family residences.

Construction of the proposed Project will include periodic watering for dust suppression. Fugitive dust emissions in Ventura County are known to transmit San Joaquin Valley Fever (formally known as Coccidioidomycosis). Valley Fever is an infectious disease caused by the fungus Coccidioides immitis. Infection is caused by inhalation of Coccidioides immitis spores that have become airborne when dry, dusty soil or dirt is disturbed by wind, construction, farming, or other activities. Valley Fever fungus tends to be found at the base of hillsides, in undisturbed soil and is found in the southwestern United States. In its primary form, symptoms appear as a mild upper respiratory infection, acute bronchitis, or pneumonia. The most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches, although 60 percent of people infected are asymptomatic and do not seek medical attention. For the remaining 40 percent, symptoms range from mild to severe. There is no recommended threshold for a significant San Joaquin Valley Fever impact. However, the following factors may indicate a project's potential to create significant Valley Fever impacts:

- Disturbance of the topsoil of undeveloped land (to a depth of about 12 inches).
- Dry, alkaline, sandy soils.

- Virgin, undisturbed, non-urban areas.
- Windy areas.

With compliance with Ventura County Air Pollution Control District (VCAPCD) Rules which limit fugitive dust during earth moving activities, the Project would have less than significant impact with the adherence to VCAPCD standard permit review.

Overall, the Project site is currently vacant undeveloped land. There is no risk of asbestos exposure as the Project will not require any demolition of existing structures. When possible, the construction team will replace diesel powered equipment with electric to reduce toxic particulate matter.

Emissions Source	Table 2: Pollutant Emissions (lbs./day)					
	VOC	NOx	CO	PM10	PM2.5	SOx
Construction Emissions	0.54	4.89	5.30	0.01	0.19	0.01
Operation Emissions	0.04	0.01	0.05	-	-	<.005
Operative Thresholds	25	25	N/A	N/A	N/A	N/A
Significant	No	No	No	No	No	No

(Elevated Entitlements GHG Analysis CalEEMod; Version 2022.1.1.22)

d) **Less than Significant Impact.**

Construction: Heavy-duty equipment in the Project area during construction would emit odors, primarily from the equipment exhaust. However, the construction activity would cease to occur after construction is completed. No other sources of objectionable odors have been identified for the proposed Project, and no mitigation measures are required. VCAPCD Rule 402 regarding nuisances states: "*A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property*." The proposed use is not anticipated to emit any objectionable odors during construction since all construction equipment will be required to meet City construction activity standards pursuant to Section 8-11.01 of the Municipal Code. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed Project.

Operation and Maintenance: The single-family residence will be operated and maintained by the homeowner with minimal impact to air quality thresholds.

Overall, emissions during construction and operation are less than significant and do not exceed local thresholds. Therefore, the impacts would be less than significant.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
IV.	**BIOLOGICAL RESOURCES -** Would the Project:				
a)	Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands as (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☐	☒

SUBSTANTIATION:	*(Check if Project is located in the Biological Resources Overlay or contains habitat for any species listed in the*

California Natural Diversity Database ☒*)*: ***City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) **Less than Significant Impact with Mitigation Incorporated.** A biological assessment was conducted by Forde Biological Consultants in June 2022. This assessment concluded that potential adverse effects, either directly or through habitat modifications, for sensitive or special status species were less than significant. The proposed Project has the potential to impact a special status species through habitat removal during the required fuel modification zone clearance and maintenance. The removal of coastal sage scrub communities will result in the loss of habitat that could support the Southern California legless lizard, San Diegan tiger whiptail, coast patch-nosed snake, San Diego Mountain kingsnake, south coast garter snake, coast range newt, and the San Diego desert woodrat. Although these species are not protected, mitigating potential impacts to their habitat shall be taken into consideration through the incorporation of mitigation measures BIO-1 through BIO-11. Furthermore, the driveway and house will encroach on several protected Oak Trees throughout the property. Mitigation measures BIO-1 through BIO-11 shall be required to reduce potential impacts to be less than significant.

b) **Less Than Significant with Mitigation Incorporated.** According to the Biological Assessment prepared by Forde Biological Consultants (2022), the Arroyo Conejo is an ephemeral tributary to Conejo Creek, which runs along the eastern portion of the Project site. The Project footprint avoids impact to the ephemeral streambed by maintaining a setback of 37.5 feet from the upland vegetation area at the top of the streambed bank. The bed and bank of the stream and surrounding riparian vegetation will not be affected nor encroached upon by the proposed Project. Furthermore, the biologist who surveyed the site did not observe any features, depressions, swales, hydrophytic vegetation, or any evidence to hydric soils that would suggest the presence of other streams or isolated wetlands within the Project footprint. Nonetheless, the Project's coordination with CDFW proposes the implementation of a Lake and Streambed Alteration Agreement (LSA). Therefore, mitigation measures BIO-1 through BIO-11 shall be implemented to reduce potential impacts to a less than significant level.

c) **Less Than Significant with Mitigation Incorporated.** The Project would be located approximately 37.5 feet from the top of Arroyo Conejo Creek's western bank. According to Forde Biological Consultants' Biological Assessment completed in June 2022, the Project will not directly alter or affect the creek. However, the Project could have an indirect impact through introduction of sediments due to increased erosion during construction activities, fuel modification, or hardscape pollutants. Therefore, mitigation measures BIO-1, BIO-7 and BIO-11 shall be implemented to reduce the potential for erosion and introduction of sediments and pollutants to the Arroyo Conejo to ensure any introductions are less than significant.

d) **Less Than Significant Impact with Mitigation Incorporated.** Due to the potential of sensitive biological species as described in the biological report prepared by Forde Biological Consultants, the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, because there are no such corridors or nursery sites within or near the Project site. The subject site is located within a suburban area developed along a hillside and may serve as a wildlife movement corridor. The subject parcel abuts the Conejo Open Space

Conservation Agency (COSCA) open space and a hiking trail that is directly bordered by other single-family developments. The region is not a part of a landscape linkage even though the Arroyo Conejo is sandwiched between the existing single-family residences. The surrounding habitats provide water, forage, and cover for wildlife movement along its length. Therefore, the Project will not prohibit any wildlife movement from occurring or cause any interruptions and less than significant impacts would occur. Nonetheless, BIO-3, BIO-4, BIO-5, BIO-6, and BIO-9 shall be implanted to protect woodrat habitat. Thus, less than significant impacts would occur with mitigation.

e) **Less Than Significant Impact with Mitigation Incorporated.** Existing vegetation is distributed throughout the subject site and the Project does conflict with the local Oak Tree Ordinance. Overall, there are 14 Oak trees that have a planned encroachment, and only 3 are recommended for removal and 1 for transplant. With the implementation of BIO-2, BIO-8, BIO-9 and BIO-11 mitigation measures, impacts would be less than significant.

f) **No Impact.** The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plan has been adopted in the Project site. Therefore, no impacts would occur.

Mitigation:

BIO-1 Design Considerations:

The Project proponent shall include biofilters (vegetated gravel filed planters and filter strips) as required by the City of Thousand Oaks Public Works Department. Discharge of water from the swimming pool shall also be conveyed through a filter before discharge or stored for irrigation. The owner shall use an Ozone generator or a salt chlorinator rather than use a system that requires the addition of chlorine and other harsh chemicals. These measures will reduce potential for erosion and reduce the potential for introducing sediments and other pollutants into the Arroyo Conejo.

The Project proponent shall use fire resistant materials as required by the City of Thousand Oaks Building Safety Division and/or Ventura County Fire Department, such as a 2-hour wall assembly exterior facing property line, utilize designs that will reduce the potential for structures to catch fire, equip structures with an indoor and outdoor sprinkler system (under eave or sidewall sprinkler heads as a part of the interior sprinkler system) and install irrigation adequate for fire suppression. The swimming pool shall also be equipped with a pump and fire hose attachment so that its water can be used for fire suppression during emergencies.

Exterior lighting shall be minimized and restricted to low intensity features that do not exceed 60 watts, or the equivalent. Exterior lighting should be shielded so that light is not cast outward beyond the limits of the development envelope. Pathway, driveway, and parking area lights should be limited to fixtures that are directed downward and do not exceed two feet in height. This measure will reduce the potential for adverse effects upon local movement of wildlife up and down the Arroyo Conejo.

BIO-2 LANDSCAPE PLAN CHECK AND FUEL MANAGEMENT PLAN:

Prior to or concurrent with the submittal of grading plans, the project proponent shall submit a Fuel Modification Plan as part of a formal Landscape Plan Check application, which identifies the composition of defensible space within the Project site and details specific methods of protecting in place habitat capable of supporting SSC. Fuel modification activities within areas dominated by Quercus agrifolia Woodland Alliance or within the coastal sage scrub community shall be limited to the removal of non-native species and trimming of oak branches as required by the Ventura County Fire Department. The Landscape and Fuel Modification Plans must demonstrate at least a 2:1 in-kind replacement ratio in the undisturbed areas of the Project site that is outside of the development footprint and fuel modification zone or provide some other method of reparation acceptable to CDFW. Both the Landscape Plan Check and Fuel Modification Plan must receive City, VCFD, COSCA, and CDFW approval (to be coordinated by the City) prior to the issuance of grading permits.

BIO-3 SOUTHERN CALIFORNIA LEGLESS LIZARD PROTECTION PLAN

Southern California legless lizard undoubtedly has low potential to occur at the property. Although the CDFW considers the species to have special status, they have not developed guidelines or protocols to survey for it. The species lives mostly underground, which makes it very difficult to conduct surveys for it. The method that has proven to be most successful in locating legless lizard is raking but the technique is only suitable for use in sandy soils and leaf litter. In other habitats, boards are typically placed on the ground and checked periodically; however, this method does not appear to have any great success. Decision makers should assume the presence of this species.

A qualified biologist shall rake through the leaf litter within the proposed development footprint and fuel modification zone in an attempt to locate individuals. If legless lizards are found, a qualified biologist with proper handling permits may relocate the species to another area of the property well beyond the proposed development footprint and fuel modification zones. Fuel modification brush clearance shall maintain root structure to protect legless lizard habitat.

The qualified biologist must hold a CDFW Scientific Collectors Permit and Memorandum of Understanding authorizing capture and handling of this species. The qualified biologist shall prepare a species- specific list (or plan) of proper handling and passive relocation protocols. The list (or plan) of protocols shall be implemented during Project construction and activities/biological construction monitoring. The City/qualified biologist may consult with CDFW to prepare species-specific protocols for proper handling and passive relocation procedures. A passive relocation plan shall be submitted to CDFW for review and comment prior to implementing Project-related ground-disturbing activities.

BIO-4 WOODRAT AVOIDANCE & RELOCATION PLAN

The biologist observed at least two woodrat houses on the property. It is likely that the houses belong to big eared woodrat; however, San Diego woodrat cannot be ruled out. A qualified

biologist with the proper handling permits shall survey suitable habitat for woodrats within the proposed development footprint and fuel modification zone, within 14 days prior to the initiation of Project activities. If the qualified biologist does not find any woodrat nests, then no further action is required. If woodrat nests are identified, a fence shall be erected with a 50-foot buffer around the nest site. Adequate space should be provided for sufficient foraging habitat at the discretion of the qualified biologist in consultation with CDFW. If young are present, no work shall occur within the fenced area until young have left the nest.
If woodrat nests cannot be left in place, the qualified biologist shall prepare a plan of proper handling and relocation protocols. The plan of protocols shall be implemented during Project activities and biological construction monitoring. The City/qualified biologist may consult with CDFW to prepare species-specific protocols for proper handling and relocation procedures. A relocation plan shall be submitted to CDFW for review and comment prior to implementing Project-related ground- disturbing activities.

BIO-5 BAT AVOIDANCE & PROTECTION PLAN

Prior to any tree disturbing activities, a qualified bat specialist shall conduct bat surveys within the Project site that has suitable habitat (plus a 100-foot buffer as access allows). These surveys shall identify potential habitat that could provide daytime and/or nighttime roost sites, and any maternity roosts. Acoustic recognition technology shall be utilized to maximize detection of bats. If bats are not detected, but the bat specialist determines that roosting bats may be present, the qualified bat biologist shall be present and shall monitor the removal of the branches. The arborist removing the branches shall inspect all cavities and ensure that they are bat free (and free of bird nests) before they are removed. If branches with any cavities are removed, they shall be placed within the oak woodland, beyond any fuel modification zones. This will allow bats to escape, if they haven't done so during removal, and will provide refugia for other wildlife.

If bats are using any of the cavities as a maternal site, work shall be scheduled between October 1 and February 28, outside of the maternity roosting season when young bats are present but are ready to fly out of the roost (March 1 to September 30). Work shall not occur within 100 feet of or directly under or adjacent to an active roost and work shall not occur between 30 minutes before sunset and 30 minutes after sunrise. If bats are present but the cavity is not being used as a maternal site, the biologist shall consult with CDFW prior to any steps to passively exclude them before any removal of branches or limbs occurs. The qualified biologist shall prepare a bat avoidance and exclusion plan of proper handling of branches and exclusionary protocols. The plan shall be implemented during Project activities and submitted to CDFW for review and comment prior to implementing Project-related ground- disturbing activities. The qualified biologist must hold a CDFW Scientific Collectors Permit and Memorandum of Understanding authorizing capture and handling.

BIO-6 NESTING BIRD SURVEY, AVOIDANCE & PROTECTION PLAN

Initial grubbing, grading, and construction should be scheduled to occur outside the nesting season of birds (January 1 through September 15), if feasible. Regardless of timing, a qualified biologist shall conduct a nest survey or surveys where suitable habitat exists throughout the Project site before any activities are scheduled to occur.

a) The biologist must be familiar with nesting ecology of southern California avian species, must have a proven track record of finding nests, and must be approved by CDFW and/or preferably holds permits that allow them to survey for nests including those of rare, threatened, and endangered species.

b) If initial vegetation clearance, grubbing, grading, and construction activities are scheduled to occur outside the CDFW defined nesting season, the biologist shall conduct a survey 7 days and again 3 days before the activities are scheduled to begin. The biologist shall survey within a 500-foot radius of the proposed development footprint to determine if there are active raptor nests nearby.

c) If initial vegetation clearance, grubbing, grading, and construction activities are scheduled to occur within the CDFW defined nesting season, the biologist shall conduct a series of surveys, which shall begin 31 days before any scheduled activities, and be conducted one week a part with the final survey being conducted 3 days before schedule activities begin.

d) The biologist shall prepare a brief report summarizing the results of the surveys and submit it to the City of Thousand Oaks.

e) If the biologist determines that there are active nests within or adjacent to these areas, they shall establish a 100 -foot buffer for passerine nests and a 500-foot buffer for raptor nests.

f) The biologist shall clearly delineate the buffer area around every active nest within the Project site.

g) No work shall occur within a nest buffer under any circumstance until the fledglings are no longer dependent on the nest, or until the biologist determines that the nest is inactive.

h) The driveway shall remain open even if the buffers of nests extend across it; however, there shall be no stopping within these buffers and under no circumstance can large vehicles or equipment pass within 10 feet of a nest without the presence of the biologist.

i) If the biologist determines that a buffer reduction is feasible, without affecting the outcome of a nest, they shall prepare and submit a letter requesting a reduction to CDFW along with any necessary information and a statement of justification so that CDFW can make an informed decision to allow the reduction or not. CDFW buffer reduction approvals must be

provided to the City of Thousand Oaks.

j) In circumstances when activities are scheduled to occur between an original buffer and a reduced buffer, a qualified biologist shall monitor the nest before, during, and after the activities, to determine if it's being affected.

k) The only activities that shall be allowed between the original buffer and the reduced buffer are those that generate noise levels less than 60 dBA as measured at the resource.

l) The biologist shall record nosise levels every hour and must have the authority to stop any activities that exceed 60 dBA if they determine that it is affecting or has the potential to affect the outcome of a nest.

m) The biologist shall send weekly monitoring reports to the CDFW and the City of Thousand Oaks documenting the status of monitored nests and others as necessary. Both shall be notified immediately if any of the Project activities result in take.

n) This plan shall also be implemented before any fuel modification activities occur. Fuel modification activities shall only occur after the construction phase of the Project has been completed or as otherwise directed by the Fire Department.

BIO-7 DRAINAGE PROTECTION PLAN

The intent of this measure is to protect the Arroyo Conejo and its associated wildlife including Southern western pond turtle, two-striped garter snake, south coast garter snake, and Coast Range newt. As required by law, the Project proponent shall submit to the City of Thousand Oaks, an Erosion Control and Best Management Practices Plan, prepared by a qualified, licensed professional. The plan shall certify that it is in conformance with the City's requirements. The plan will include track plates at ingress and egress, silt fence, straw waddles, and sandbags to ensure that runoff during the construction phase of the Project is not directly discharged into the creek. This measure will reduce the potential for adverse effects upon the water quality of the Arroyo Conejo. In particular, orange construction fence and silt fence shall be used to protect the Arroyo Conejo during the construction phase of the Project. The fencing will prevent accidental discharge of materials from entering it and discharge of sediments during storm events.

a) Laborers shall install orange construction fence between the creek and the outside edge of the disturbance limits.
b) Laborers shall then attach silt fence to the base of the construction fence and bury it at its base in a manner that will prevent accidental discharge from entering the Arroyo Conejo. The silt fence shall be consistent with practices outlined in the Erosion Control Plans and Best Management Practices.
c) Signs shall be placed on the fence, that will declare - Sensitive Habitat Area - No Entry Allowed - If Accidental Discharge Occurs You Must Call the Project Biologist Immediately.

The signs shall include the phone number of the Project Biologist.

d) A biologist shall review the installation of the fence and signs.
e) The Project proponent or their contractor will inform the City of Thousand Oaks when construction is scheduled to begin and invite them to inspect the fence and signs.
f) The fence and signs shall remain in place and be maintained by the Projects contractor throughout the duration of construction.

BIO-8 OAK TREE PROTECTION PLAN

Protective fencing shall be placed at the outermost limits of the protected zones of the oak trees or groups of trees that occur on the property and for encroachments, at the limits of disturbance. The protected zone is 5 feet from the canopy or 15 feet from the trunk; whichever is greater. Please refer to the James Dean Oak Tree Report, provided separately, for additional protective measures.

A. The fencing shall be in place before vegetation clearance, grubbing, grading, or construction activities begin.

B. No grading, construction, staging of equipment, or storage of materials shall be allowed within the protected zones of the trees.

C. No construction personnel shall enter the protected zones of the trees.

D. Signs should be attached to the fence, which declare: NO ENTRY, PARKING, OR STORAGE ALLOWED WITHIN 5 FEET OF OAK TREES.

E. After the fencing and the signs have been installed, the Project proponent's contractor shall inform the City of Thousand Oaks when construction is scheduled to begin and invite them to inspect the protective fencing and signs.

F. The fence shall remain in place and be maintained by the Projects contractor throughout the duration of construction.

BIO-9 SPECIAL STATUS SPECIES PROTECTION PLAN

The intent of this measure is protecting special-status species during Project activities and outline compensatory mitigation for impacts to SSC. A qualified biologist shall conduct a pre-construction survey 3 days prior to Project activities. If special status species or any other wildlife is located, they shall be ushered out of harm's way to an area of the property that is not affected by the proposed development or fuel modification zone.

For habitat that supports Species of Special Concern (SSC) which have been confirmed by the Forde Biological Assessment or found during pre-construction surveys prior to issuance of a grading permit within the Project site, the project proponent must provide Compensatory Mitigation at no less than a 2:1 in kind replacement ratio in the undisturbed areas of the Project site that is outside of the development footprint and Fuel Modification zone, or provide some other method of reparation acceptable to CDFW. Mitigation for temporary and permanent loss

of a habitat supporting SSC shall provide appropriate habitat, refugia, and habitat structures that supports that species as defined by CDFW (e.g., woody material, rocks, brush piles, pools, burrows). Any proposed mitigation area/plan shall include a discussion on the territory size; nesting, breeding, foraging, and refuge locations; invasive, non-native plant and wildlife species present; food availability; and how all life cycle functions will be mitigated. Any mitigation plan for SSC shall be distributed and approved by CDFW prior to issuance of a grading permit and may require a conservation easement dedicated to a local land conservancy or other appropriate entity with an appropriate endowment to provide for the long-term management of mitigation lands as approved by CDFW.

BIO-10 FUEL MODIFICATION

The site shall only be fuel-modified after the construction phase of the proposed Project is completed.

A.A qualified biologist shall implement the Nesting Bird Survey & Protection Plan before fuel modification occurs.

B.A qualified biologist present during initial fuel modification activities so that special status species such as Coast Horned Lizard and San Diegan Tiger Whiptail can be avoided and allowed to move passively or ushered out of harm's way.

C.Fuel modification should not occur within the defined nesting season of birds under any circumstance as it could easily be scheduled to avoid it; however, it should be conducted in accordance with fire department regulations in future years after occupation of the single-family residence.

D.Fuel modification shall be conducted using hand-held tools and be done under the supervision of a biologist. If any individuals are observed, which is highly unlikely, they will be avoided and left in place. Non-native vegetation dominates the understory of the woodland. Fuel modification activities within the woodland shall be limited to removal of non-native plant species. Leaf litter shall not be removed.

BIO-11 LSA Agreement

The Project proponent shall notify CDFW pursuant to Fish and Game Code 1602 and obtain a Lake and Streambed Alteration (LSA) Agreement from CDFW prior to obtaining a grading permit. The LSA Notification shall include a hydrology report to evaluate whether altering streams within the Project site may impact hydrologic activity. The hydrology report shall also include a hydrological evaluation of any potential scour or erosion at the Project site due to a 100, 50, 25, 10, 5, and 2-year frequency storm event for existing and proposed conditions. The Project proponent shall comply with the mitigation measures detailed in an LSA Agreement issued by CDFW. The Project proponent shall also provide compensatory mitigation at no less than 2:1 for any impacted stream and associated natural community, or at a ratio acceptable to CDFW. Please

visit CDFW's Lake and Streambed Alteration Program webpage for more information (CDFW 2024a).

With the implementation of these mitigation measures impacts would be less than significant.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
V.	**CULTURAL RESOURCES** - Would the Project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c)	Disturb any human remains, including those outside of formal cemeteries?	☐	☐	☒	☐

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials

a) **No Impact**. BioCultural LLC at the request of Elevated Entitlements conducted an in-person records search with the South-Central Coast Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University (CSU), Fullerton in the City of Fullerton, California to assess potential presence of cultural resources within the proposed Project area and its surrounding 0.25-mile circular buffer area. The purpose of the record search was to identify if any prehistoric and/or historic-period cultural resources and studies had been previously documented in the Project area and/or its surrounding 0.25-mile radius to better understand the archaeological sensitivity of the areas. The in-person CHRIS records search of the project area and its 0.25-mile radius was conducted at the SCCIC on November 1, 2022. The results indicated no previously recorded cultural resources were found on file within the project area and its 0.25-mile radius. The results also indicated that one previously conducted cultural resources study has been completed within the project area and seven previously conducted cultural resources studies have been completed within the 0.25-mile radius of the project area. Since no historical resources were found on site there can be no changes in the significance of a historical resource. As such, no impacts will occur

b) **No Impact.** The in-person CHRIS records search of the Project area and its 0.25-mile radius was conducted at the SCCIC on November 1, 2022. The results indicated no previously recorded cultural resources were found on file within the Project area and its 0.25-mile radius. The results also indicated that one (1) previously conducted cultural resources study has been completed within the Project area and seven previously

conducted cultural resources studies have been completed within the 0.25-mile radius of the Project area. Therefore, the proposed Project would have no impacts.

c) **Less than Significant Impact.** There is always a possibility that buried archaeological deposits could be found during construction and earth disturbing activities. If cultural resources are encountered during construction activities, all work must stop, and a qualified archaeologist shall be contacted immediately. Further, if human remains are encountered during construction, State Health and Safety Code Section 7050.5 requires that no further work shall continue at the location of the find until the County Coroner has made all the necessary findings as to the origin and distribution of such remains pursuant to Public Code Resources Code Section 5097.98.

If the inadvertent discovery of human remains is encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner shall be notified of the find immediately. If the remains are determined to be Native American, the County Coroner shall notify the NAHC, which would determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD would have the opportunity to offer recommendations for the disposition of the remains.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VI.	**ENERGY** – Would the Project:				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

SUBSTANTIATION: ***City of Thousand Oaks, General Plan 1997; Renewable Energy and Conservation Element of the General Plan 2017; California Energy Commission Title 24***

a) **Less than Significant Impact**. The proposed Project would be conditioned to comply with Greenhouse Gas (GHG) operational standards during temporary construction. The ambient Air Quality Standards are in the table listed below. Adherence would ensure that there would not be a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation. Therefore, the impacts would be less than significant.

AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [1]	National Standards [2]	
		Concentration [3]	Primary [3,4]	Secondary [3,5]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	0.12 ppm (235 µg/m³) [6]	Same as Primary Standard
	8 Hour	-----	0.08 ppm (157 µg/m³) [6]	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard	65 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³ *	15 µg/m³	
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³ *	50 µg/m³	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	None
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	-----	0.053 ppm (100 µg/m³)	Same as Primary Standard
	1 Hour	0.25 ppm (470 µg/m³)	-----	
Lead	30 Day Average	1.5 µg/m³	-----	-----
	Calendar Quarter	-----	1.5 µg/m³	Same as Primary Standard
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	-----	0.030 ppm (80 µg/m³)	-----
	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)	-----
	3 Hour	-----	-----	0.5 ppm (1300 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	-----	-----
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.	No National Standards	
Sulfates	24 Hour	25 µg/m³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)		

* On June 20, 2002, the Air Resources Board approved staff's recommendation to revise the PM_{10} annual average standard to 20 µg/m³ and to establish an annual average standard for $PM_{2.5}$ of 12 µg/m³. These standards took effect on July 5, 2003. Information regarding these revisions can be found at http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm.

b) **Less than Significant Impact.** The proposed Project would be required to meet Title 24 Energy Efficiency requirements. Adherence would ensure that the proposed Project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VII.	**GEOLOGY AND SOILS** - Would the Project:				
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map Issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii. Strong seismic ground shaking?	☐	☐	☒	☐
	iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv. Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

SUBSTANTIATION: ***City of Thousand Oaks*** General Plan 1997***; United States Department of Agriculture Web Soil Survey, https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx Submitted Project Materials; California Building Code; Public Resources Code.***

a) i) **Less than Significant Impact.** The subject site is not located within the State of California Alquist Priolo Earthquake Fault Zone. The nearest fault is the Boney Mountain Fault, which is located south of the 101 freeway and is not within 5 miles of the project site. Therefore, a Fault Line Study would not be required, and the proposed project would have a less than significant impact.

ii) **Less than Significant Impact.** The site has been subjected to past ground shaking by faults that traverse through the region. Strong seismic shaking from nearby active faults is expected to produce strong seismic shaking during the design life of the proposed Project. The site modified peak ground acceleration is estimated to be 0.712g. Adherence to California Building Code Seismic Design Standards, Chapter 16: *Structural Design* would help to assure a less than significant impact.

iii) **Less than Significant Impact.** The Project site is not located in an area of high liquefaction susceptibility. Based on the depth to groundwater in the Project vicinity, risks associated with liquefaction are considered "negligible." However, adherence to California Building Code Seismic Design Standards, Chapter 16: *Structural Design* would further assure a less than significant impact due to liquefaction. Therefore, less than significant impacts would occur.

iv) **Less than Significant Impact.** The Project site is near a hillside, and foothills that could have the potential to slide during a ground disturbing event such as an earthquake. According to the California Department of Conservation, Geologic Hazards Map the location is not near any faults or areas susceptible to liquefaction, so there is nothing likely to induce a landslide directly. Indirect effects from rain and or ground shaking might cause the hillside to become unstable, but it is not likely with the implementation of retaining walls and recompaction/grading of the Project site. Therefore, less then significant impacts would occur.

b) **Less than Significant Impact.** The Project site is located on a hillside with slopes ranging from 5-37.3%. A grading plan and drainage plan will be implemented during construction in accordance with a city-mandated Storm Water Prevention Control Plan (SWPCP), which would include best management practices (BMPs) to control wind and water erosion. The SWPCP would be completed in accordance with the Ventura Countywide Stormwater Quality Management Program, NPDES, and the California Stormwater Quality Association, Stormwater Best Management Practice Handbook for Construction as required by the City Public Works Department. As a result, the Project would not result in substantial soil erosion or the loss of topsoil. Impacts would be less than significant.

c) **Less than Significant Impact.** The proposed Project is not identified as being located on a geologic unit or soil that has been identified as being unstable or having the potential to result in on- or off- site landslide, lateral spreading, subsidence, liquefaction, or collapse based on the Project location and USGS public Land Slide Inventory. Therefore, impacts would be less than significant.

d) **Less than Significant Impact.** According to the United States Department of Agriculture Web Soil Survey web application, the Project site is not located in an area of expansive soils. The project site contains Rincon Silty Clay and Calleguas Channery Loam, which are non-expansive soils. Therefore, the current geological conditions

would not create a substantial direct or indirect risk to life or property. Therefore, impacts would be less than significant.

e) **No Impact.** The project will not involve the use of a septic tank on site. The need for the soil to support a septic system is not necessary. Therefore, no impacts would occur.

No significant impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
VIII.	**GREENHOUSE GAS EMISSIONS –** Would the Project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

SUBSTANTIATION: ***California Emissions Estimator Model (CalEEMod; Version 2020.4.0); Ventura County Air Pollution Control District 2007 (VCAPCD); City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) Less than Significant Impact. Construction and operation of the proposed Project would generate minimal Greenhouse Gas (GHG) emissions, with most of the energy consumption (and associated generation of GHG emissions) occurring during the Project's construction.

Construction Activities: During construction of the Project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO2, CH4, and N2O). Furthermore, Methane (CH4) is emitted during the fueling of heavy equipment.

Solid Waste Disposal: Solid waste generated by the proposed Project would contribute to minimal GHG emissions during temporary construction of the facility. During operation, the residence would require proper disposal of solid waste from the local trash purveyor, including recycling, organic waste disposal and landfill. Proper disposal of recyclables and organic waste reduces landfill and energy consumption. The local trash purveyor in the City of Thousand Oaks is Athens trash services. The average American home produces 5 lbs. of trash per day (United States Environmental Protection Agency, National Overview: Facts and Figures on Materials, Wastes and Recycling, 2023). The proposed residence will likely produce a total of 6,568 lbs. of waste per year based on the United States Environmental Protection Agency, National Overview: Facts and Figures on Materials, Wastes and Recycling, 2023. Therefore, the proposed Project will have a negligible impact on trash services due to the minimal trash disposal from the single-family construction and use. Therefore, the impacts would be less than significant.

GHG emissions related to temporary construction activities are detailed in Table 4 below:

Construction Phase	**Table 4: GHG Emissions: Total Construction Emissions (MT/year)**			**Total GHG Emissions per Phase (MT CO_2e/year)**
	CO_2	CH_4	N_2O	
Site Preparation	2.01	<.005	<.005	0.30
Grading	39.4	<.010	<.005	6.26
Home Construction	143	<.010	<.005	0.73
Paving	0.57	<.005	<.005	0.58
Total Emissions for Entire Construction Process				7.87
Total Construction Emissions Amortized over 30 years				**0.26**

(Elevated Entitlements GHG Analysis CalEEMod; Version 2022.1.1.22)

Operational Activities: Mobile source emissions of GHGs would include Project-generated vehicle trips associated with on-site single-family use and visitors to the Project site. Area source emissions would be associated with activities including landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary source emissions would also occur at off-site utility providers because of demand for electricity, natural gas, and water by the proposed Project. As shown in Table 5, the Project would result in GHG emissions of 14.24 $MTCO_2e$/yr. Although there are no annual significance thresholds stated in the Ventura County Air Quality Assessment Guidelines (2003) the project GHG emissions are below the neighboring SCAQMD's threshold of 3,000 $MTCO_2e$/yr.

Long-term operational Greenhouse Gas Emissions are represented in Table 5 below:

Source	**Table 5: Pollutant Emissions (MT/yr.)**					
	Bio-CO_2	**NBio-CO_2**	**Total CO_2**	**CH_4**	**N_2O**	**CO_2e**
Area	0	0.01	0.01	0.01	<.005	0.01
Energy	-	3.83	3.83	<.005	<.005	3.85
Mobile	-	9.62	9.62	<.005	<.005	9.78
Waste	0.07	0	0.07	0.01	0	0.25
Water	0.01	0.30	0.31	<.005	<.005	0.35
Total Project Emissions	**0.08**	**13.76**	**13.84**	**0.035**	**0.020**	**14.24**

b) **No Impact.** The County of Ventura adopted the Ventura County Air Quality Management Plan in November of 2022. The County of Ventura does not have any construction or operation GHG emission thresholds. As shown in Table 5, the Project would result in GHG emissions of 14.24 $MTCO_2e$/yr. Although there are no annual significance thresholds stated in the Ventura County Air Quality Assessment Guidelines (2003) the project GHG emissions are below the neighboring SCAQMD's threshold of 3,000 $MTCO_2e$/yr. Therefore, through consistency with a local plan, the proposed Project would generate minimal GHG emissions that would have a less significant impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
IX.	**HAZARDS AND HAZARDOUS MATERIALS –** Would the Project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the Project result in a safety hazard for people residing or working in the Project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Hazards Policy Maps;

a) **No Impact.** The proposed Project would not store or release any hazardous materials onsite. The proposed project is a single-family home which would only contain household cleaning items that would have a less than significant impact on the surrounding environment. Therefore, no impacts would occur.

b) **Less Than Significant Impact.** The proposed Project would not store or release any hazardous materials onsite. The use and storage of all hazardous materials is subject to permit and inspection by the Hazardous Materials Division of the County Fire Department. Therefore, less than significant impacts would occur.

c) **No Impact.** Emissions and handling of hazardous or acutely hazardous materials, or substances, would have a less than significant impact on any existing or proposed schools that are within a quarter mile from the Project site. The nearest school is located to the southwest and more than 1-mile away. Therefore, no impacts would occur.

d) **No Impact.** The Project site is not included on any list of hazardous materials sites compiled pursuant to Government Code 65962.5. Therefore, the Project would not create a significant hazard to the public or environment.

e) **No Impact.** The Project site is located more than 20-miles to the east of Camarillo Airport and is not located within an Airport Land Use Plan or within two miles of a public use airport. Therefore, the proposed Project would not result in a safety hazard for people residing or working in the Project area. As a result, no impacts would occur.

f) **No Impact.** The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, because the Project has adequate access and has accommodated an emergency vehicle turn around area. Therefore, no impacts would occur.

g) **No Impact.** The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Due to it being in an area that is already developed with single family structures, the addition of one more house to the neighborhood would not increase the risk of impacts to the surrounding properties. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
X.	**HYDROLOGY AND WATER QUALITY -** Would the Project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☒	☐
	iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff; or	☐	☐	☒	☐
	iv. impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

SUBSTANTIATION: ***City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) **No Impact.** The proposed Project would not violate any water quality standards or waste discharge requirements. Running water will be provided from the local main water line. In addition, the Project will also tap into the local sewage line. Therefore, no impacts would occur.

b) **No Impact**. The Project would not substantially deplete groundwater supplies nor interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level, because the

proposed Project will not be using a well to supply running water. In addition, the North Ranch Specific Plan analyzed the water will serve for this project area and has determined that there is sufficient water capacity and delivery for this specific community. Overall, the Project will not increase water consumption in the city to a significant level and meets the goals and policies of the Hill Canyon Treatment Plant's Master Plan. Therefore, no impacts would occur.

c) **Less than Significant Impact.** The Project site will not impact any US federally listed blue line streams. However, the Project is near an ephemeral stream that runs north to south from the project site. The proposed grading for the single-family residence will include approximately 15,137 sq ft. of grading limit. This grading limit will be outside the boundary of the ephemeral stream. The Project will include 197 cubic yards of grading above a 25% slope. This substantial grading will affect the drainage patterns of the hillside but will be designed to meet local Low Impact Design (LID) standards. The project will include approximately 3,598 sq ft. of manufactured slopes. These manufactured slopes will be designed to meet engineering standards to prevent erosion from a large storm event. Therefore, the impacts would be less than significant.

d) **No Impact.** Based on existing site conditions, and proposed Project activities the Project would not substantially alter any existing drainage pattern of the site or area, which includes through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on or off-site. Therefore, no impacts would occur.

e) **No Impact.** The proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems. There would be adequate capacity in the local and regional drainage systems, so that downstream properties are not negatively impacted by any increases or changes in volume, velocity or direction of storm water flows originating from or altered by the Project. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XI.	**LAND USE AND PLANNING** - Would the Project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

SUBSTANTIATION: ***City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) **No Impact.** The proposed Project would not physically divide an established community, because the Project is in a neighborhood of single-family residential developments. Therefore, no impacts would occur.

b) **No Impact**. The Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect because the Project is consistent with the City General Plan, North Ranch Specific Plan, and local municipal code. In addition, the Project will comply with all applicable hazard protection, resource preservation, and land-use-modifying Overlay District regulations. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
XII.	**MINERAL RESOURCES** - Would the Project:				
a)	Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if Project is located within the Mineral Resource Zone Overlay):* ***City of Thousand Oaks General Plan, Resource Protection Map; Submitted Project Materials; California Department of Conservation: Mineral Land Classification Maps***

a) **No Impact.** According to the Resource Protection Map in the City of Thousand Oaks General Plan, the Project site is not located within a Mineral Resources Zone within the

City of Thousand Oaks. The proposed Project would not interfere with current mining operations. Therefore, no impacts would occur.

b) **No Impact.** The proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIII.	**NOISE** - Would the Project result in:				
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b)	Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☒
c)	For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION: *(Check if the Project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):* ***City of Thousand Oaks, General Plan 1997; Submitted Project Materials***

a) **No Impact**. The Project site consists of one single family home. Overall, the proposed Project would not generate ambient noise levels in the area that would violate the City Municipal Code, or General Plan Noise Element. Therefore, no impacts would occur.

b) **No Impact.** The proposed Project would not create exposure of persons to, or generation of excessive ground borne vibration or ground borne noise levels. The proposed Project is required to comply with the vibration standards of the Municipal Code. No vibration exceeding these standards is anticipated to be generated by the proposed uses. Therefore, no impacts would occur.

c) **No Impact**. The proposed Project is not within an Airport Safety Review Area. The Project is located over 20 miles from the nearest airport, Camarillo Airport. Thus, the Project would not cause a significant impact to aircraft utilizing the airstrips in terms of glint or glare. In addition, the proposed Project is not within two miles of a public or public use airport. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIV.	**POPULATION AND HOUSING** - Would the Project:				
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials.

a) **No Impact.** The proposed Project would not induce substantial population growth in an area either directly or indirectly, as this area is already zoned for a single-family home located in the Very Low-Density Residential Zone according to the City of Thousand Oaks General Plan. The City of Thousand Oaks General Plan designates the property as a Very Low Residential Zone which stipulates the development of no greater than 0-2 du/net acre. Therefore, the Project is not expected to induce population growth to a degree that could negatively impact the City of Thousand Oaks or the development of new homes or roads. Therefore, no impacts would occur.

b) **No Impact.** The proposed Project would not displace any housing units, necessitating the construction of replacement housing because no housing units are proposed to be demolished because of this proposal. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XV.	**PUBLIC SERVICES**				
a)	Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire Protection?	☐	☐	☐	☒

Police Protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials

a) **No Impact.** The proposed Project is a single-family home that is serviced by existing local facilities including utilities on Skelton Canyon, road infrastructure, and contains a fire department turnaround as part of the home's design (Page A-6, Site Plan). Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVI.	**RECREATION**				
a)	Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☒	☐
b)	Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials

a) **Less than Significant Impact.** The proposed Project would not increase the use of existing neighborhood and regional parks nor other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, less than significant impacts would occur.

b) **No Impact.** The proposed Project does not include or require the construction of recreational facilities and would not result in an increased demand for recreational facilities due to the negligible increase in population from a single-family home. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVII.	**TRANSPORTATION** – Would the Project:				
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b)	Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials

a) **Less than Significant Impact.** As a small-scale Project within only one single family home, the proposed Project would not cause an increase in traffic. Local roads would only be impacted during temporary construction. Therefore, impacts would be less than significant.

b) **Less than Significant Impact.** As a small-scale Project, the proposed Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b). The scheduled maintenance activities would result in a negligible increase in vehicle miles traveled (VMT). Therefore, impacts would be less than significant.

c) **No Impact.** The proposed Project would not substantially increase hazards due to a design feature or incompatible uses because the Project site is adjacent to an established road that is accessed at points with good site distance and properly controlled intersections. There are no incompatible uses proposed by the Project that would impact surrounding land uses. Therefore, no impacts would occur.

d) **No Impact.** The site incorporates an access road with adequate emergency vehicle turn around during a possible emergency event. Adequate access to ingress and egress points including turnaround areas are of adequate width and preliminary approved by County Fire during their review of the Project. Therefore, no impacts would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES				
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

SUBSTANTIATION: ***City of Thousand Oaks, General Plan 1997; Cultural Historical Resources Information System (CHRIS), South Central Coast Information Center, California State University, Fullerton; Submitted Project Materials***

Assembly Bill (AB) 52 took effect on July 1, 2015. AB 52 requires a lead agency to make its best efforts to avoid, preserve, and protect tribal cultural resources.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and Project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Public Resources Code section 21082.3(c) also contains provisions specific to confidentiality.

Prior to the release of the CEQA document for a Project, AB 52 requires the lead agency to initiate consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed Project if: (1) the California Native American tribe requested the lead agency, in writing, to be informed by the lead agency through formal notification of proposed Project in the geographic area that is traditionally and through formal notification of proposed Projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

a) **Less than Significant Impact with Mitigation.** The South-Central Coastal Information Center received a records search request for the Project area. Records search for the Project area and a 1-mile radius were provided and included a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (SPHI), the California Historical Landmarks (SHL), the California Register of Historical Resources (CAL REG), the National Register of Historic Places (NRHP), and the California State Historic Properties Directory (HPD) listings were reviewed for the Project site and a 1-mile radius.

A portion of the Project site has been surveyed previously. While there are no recorded archaeological sites within the Project area, buried resources could potentially be unearthed during Project activities. Therefore, customary caution and a halt-work condition shall be in place for all ground-disturbing activities. If any evidence of cultural resources is discovered, all work within the vicinity of the find shall stop until a qualified archaeological consultant can assess the find and make recommendations. Excavation of cultural resources shall not be attempted by Project personnel. It is also recommended that the Native American Heritage Commission (NAHC) be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area. The NAHC may also refer the Project proponent to local tribes with knowledge of potential sensitivity.

b) **Less than Significant Impact with Mitigation.** The Project proponent shall consider the significance of any possible resource to a California Native American tribe. With required mitigation and monitoring requested by tribes with ancestral interest in the Project area, the impact would be reduced to a less than significant level.

Mitigation Measures

TCR-1: Treatment of Tribal Cultural Resources

If a pre-contact cultural resource is discovered during Project implementation, ground disturbing activities shall be suspended 60 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. A research design shall be developed by the archaeologist that shall include a plan to evaluate the resource for significance under CEQA criteria. Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), and avoidance (or other appropriate treatment) of the discovered resource.

Should any significant resource and/or TCR not be a candidate for avoidance or preservation in place, and the removal of the resource(s) is necessary to mitigate impacts, the research design shall include a comprehensive discussion of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe. All plans for analysis shall be reviewed and approved by the applicant and Tribe prior to implementation, and all removed material shall be temporarily curated on-site. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and

submitted to the Lead Agency and Tribe for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the Lead Agency, and Tribe.

TCR-2: Inadvertent Discoveries of Human Remains/Funerary Objects

In the event that any human remains are discovered within the Project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately notify the Tribe, the applicant/developer, and the Lead Agency. The Lead Agency and the applicant/developer shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity.

The MLD, Lead Agency, and landowner agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98. Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances.

The applicant/developer/landowner should accommodate on-site reburial in a location mutually agreed upon by the Parties. It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The coroner, parties, and Lead Agencies would be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XIX.	**UTILITIES AND SERVICE SYSTEMS -** Would the Project:				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water	☐	☐	☒	☐

	drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				
b)	Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c)	Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Submitted Project Materials

a) **Less Than Significant Impact.** The proposed Project would not require new or expanded water, wastewater treatment or storm water drainage which could cause significant environmental effects. The Project site will connect to the existing water and sewer lines and, due to the size of the Project there would be negligible environmental impacts. Therefore, the impacts would be less than significant.

b-c) **No Impact.** The proposed Project would not require or result in the construction of new water or wastewater treatment facilities. The proposed Project would increase the intensity of uses on the Project Site and would result in increased water use over the previous use given the net increase of 7,186 square feet of new building space. California Water Services has given the project a water will-serve letter stating availability of water resources for the proposed development. Therefore, no impacts would occur.

d) **No Impact.** The proposed Project would not generate excess waste nor impact the capacity of local infrastructure. The proposed Project includes one single family home and would not create excessive waste. Therefore, no impacts would occur.

e) **Less than Significant Impact.** The Project developer shall provide adequate space and storage bins for both refuse and recycling materials. This requirement is to assist the City in compliance with the recycling requirements of Assembly Bill (AB) 2176. A Construction Waste Management Plan would be prepared in two parts to show adequate handling of waste materials; disposal, reuse, or recycling as required by the City Department of Public Works. Therefore, the impacts would be less than significant.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XX.	**WILDFIRE:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

SUBSTANTIATION: City of Thousand Oaks, General Plan 1997; Hazards Policy Map HZ-5 Fire Hazard Severity Zones; Submitted Project Materials

a) **No Impact.** The proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, no impacts would occur.

b) **Less than Significant Impact.** The Project site is in the City of Thousand Oaks in the Conejo Valley. Although a suburban area, Thousand Oaks has extensive areas of land that are fire hazard areas. The region's climate, periods of drought, extreme fire weather, vegetative fuel composition, and steep and varied terrain make it susceptible to wildland fires. The shrub- and scrub-dominated plant communities (e.g., coastal sage scrub, chapparal) occurring throughout the Project area are adapted to seasonal fires and provide a natural source of vegetative fuel. Weather throughout Southern California is influenced by the Pacific Ocean; wet winters and dry summers with mild seasonal changes characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds. Santa Ana winds bring hot, dry desert air from the east into the region during late summer and fall, which increases wildland fire hazards during these seasons. Dry vegetation, low humidity, and high air temperature can combine to produce large-scale fire events. According to the Cal Fire, Fire Hazard Severity Viewer the Project falls within a Very High Fire Hazard zone. the subject parcel is within a

populated area surrounded by hillsides and other single-family homes. Implementation of a 100 ft brush clearance and review of the Project by the County of Ventura Fire Department would reduce any potential impacts to less than significant.

c) **No Impact.** The proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities). The proposed Project is not expected to exacerbate fire risk that may result in temporary or ongoing impacts to the environment. Therefore, no impacts would occur.

d) **No Impact.** The proposed Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impacts would occur.

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
XXI.	**MANDATORY FINDINGS OF SIGNIFICANCE:**				
a)	Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?	☐	☐	☒	☐
c)	Does the Project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) **Less than Significant Impact with Mitigation.** According to the biological assessment conducted by Forde Biological Consultants in June 2022, the proposed Project will potentially impact a special status species though habitat removal by construction on the fuel modification zone. The removal of coastal sage scrub communities will result in the loss of habitat that could support the southern California legless lizard, San Diegan tiger whiptail, coast patch-nosed snake, San Diego Mountain

kingsnake, south coast garter snake, coast range newt, and the San Diego desert woodrat. Although these species are not protected, they are considered special status by the California Department of Fish and Wildlife (CDFW). The southern California legless lizard is expected to occur at the property. However, the species has a low potential to occur within the area of the property that was graded between 1967 and 1980 along the proposed driveway due to the existing dirt road being used for access for decades with compact soil. The graded area is where the proposed single-family residence is to be constructed. The proposed single-family residence and driveway would also be located within an area that is fuel-modified on an annual basis for adjacent single-family residences.

Furthermore, the driveway and house will encroach on 12 protected Coast Live Oak Trees and 1 Valley Oak throughout the property. Additionally, 1 Oak tree and 1 California Sycamore are located off-site but will be affected by this development and will need cleanup pruning. Mitigation measures BIO-1 through BIO-11 shall be required to reduce potential impacts to less than significant.

There are no identified historic or prehistoric resources identified on this site based on field surveys. No archaeological or paleontological resources have been identified in the Project area. Impacts to Cultural or Tribal Cultural Resources due to inadvertent discoveries during Project development would be reduced to a less than significant level with the implementation of mitigation measures recommended in the Tribal Cultural Resources (TCR-1) and (TCR-2).

b) **No Impact.** The proposed Project does not have impacts that are individually limited, but cumulatively considerable. The sites of Projects in the area to which this Project would add cumulative impacts have either planned or existing infrastructure that is sufficient for all planned uses.

c) **No Impact.** The proposed Project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, as there are no such impacts identified by the studies conducted for this Project or identified by review of other sources or by other agencies.

All potential impacts have been thoroughly evaluated and have been deemed to be neither individually significant nor cumulatively considerable in terms of any adverse effects upon the region, the local community, or its inhabitants. At a minimum, the Project would be required to meet the conditions of approval for the Project to be implemented. It is anticipated that all such conditions of approval would further ensure that no potential for adverse impacts would be introduced by construction activities, initial or future land uses authorized by the Project approval.

GENERAL REFERENCES

California Department of Conservation, California Geological Survey, Mineral Resources and Mineral Hazards

California Department of Conservation, Geologic Hazards Map

City of Thousand Oaks Municipal Code

Federal Emergency Management Agency Flood Insurance Rate Map and Flood Boundary Map.

City of Thousand Oaks, General Plan 1997

Ventura County Air Pollution Control District (VCAPCD), CEQA Air Quality Handbook, November 1993.

U.S. Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. Available at http://websoilsurvey.nrcs.usda.gov/

United States Environmental Protection Agency, National Overview: Facts and Figures on Materials, Wastes and Recycling, 2023

PROJECT-SPECIFIC REFERENCES

Addendum to Biological Assessment 3948 Skelton Canyon Circle (APN 6900-001-010) Thousand Oaks Ventura County, California, 91360 by Forde Biological Consultants. May 29, 2024

Biological Assessment 3948 Skelton Canyon Circle (APN 6900-001-010) Thousand Oaks Ventura County, California, 91360 by Forde Biological Consultants. Jun 14,2022

Skelton Canyon CalEEMod Detailed Report April 08, 2024.

Cultural Resources Record Search Results for the Ferruzza Residence Project, City of Thousand Oaks, Ventura County, California.

Fire Protection Plan, 3948 Skelton Canyon Circle Thousand Oaks, CA 91362, APN #: 690-0-010-105, County of Ventura by Firewise 2000 LLC. May 28, 2024.

Protected Tree Report for 3948 Skelton Canyon Westlake Village, CA 91362 by James Dean, RLA. March 28, 2024

Appendices

Appendix 1: Visual Impact Analysis

Appendix 2: Addendum to Biological Assessment 3948 Skelton Canyon Circle

Appendix 3: Biological Assessment 3948 Skelton Canyon Circle

Appendix 4: Skelton Canyon CaleeMod Detailed Report

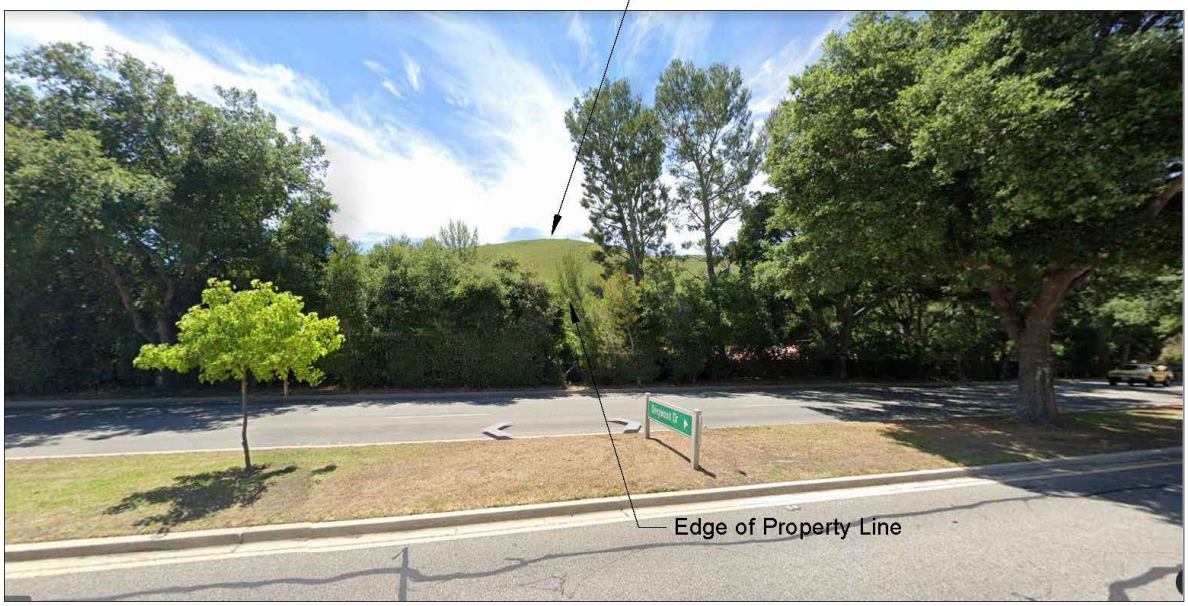
Appendix 5: Cultural Resources Record Search Results

Appendix 6: Fire Protection Plan, 3948 Skelton Canyon Circle

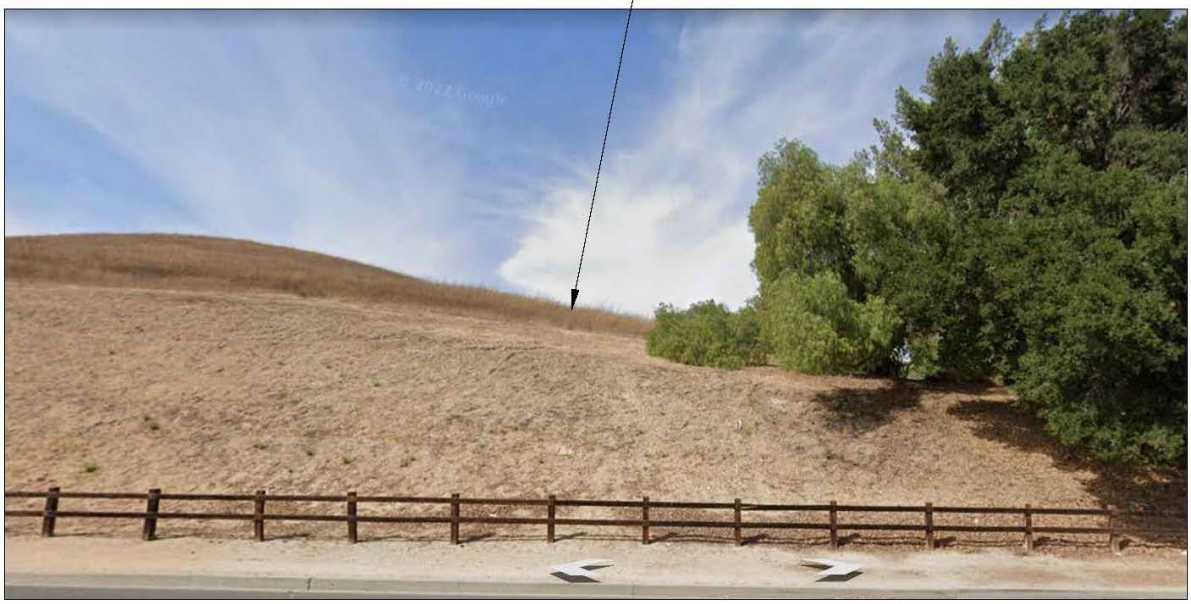
Appendix 7: Protected Tree Report for 3948 Skelton Canyon Circle

Appendix I

Visual Impact Analysis

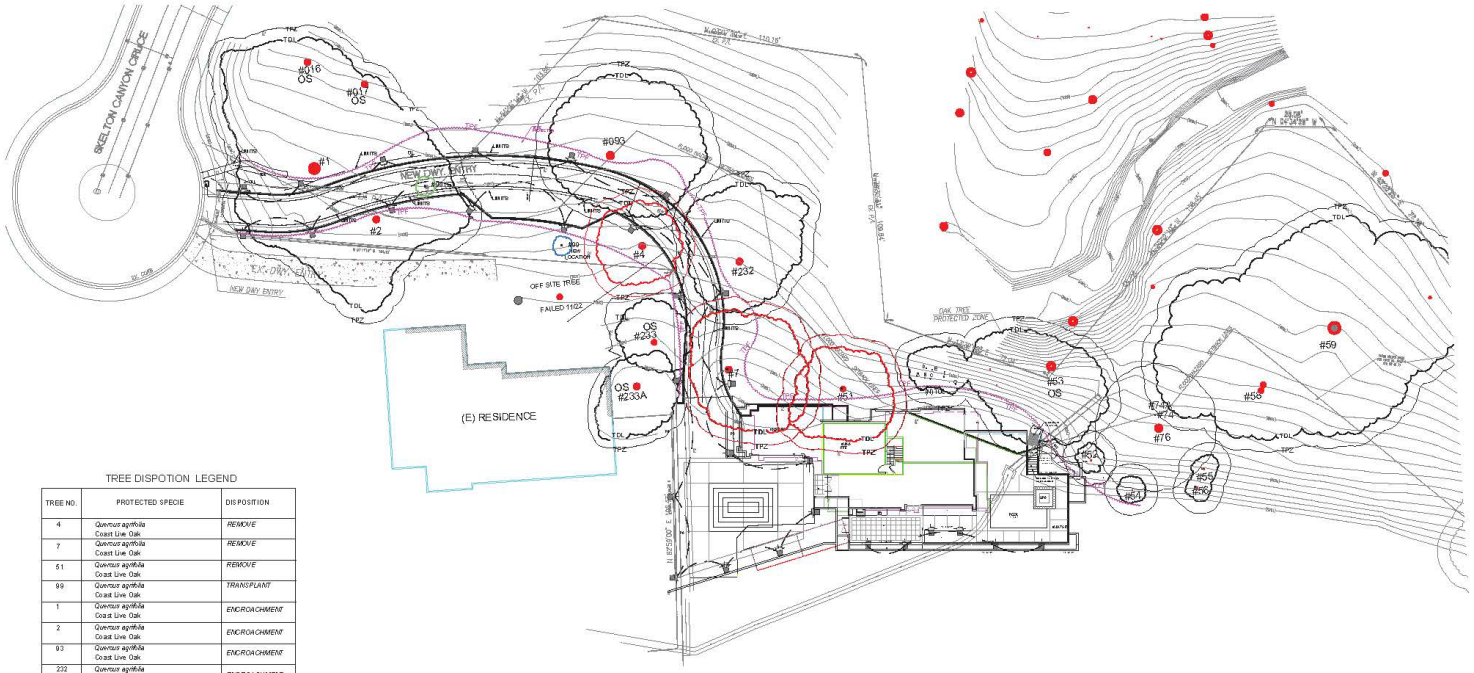


View from Westlake Boulevard



View from Hillcrest Drive

Tree Location Map



TREE DISPOTION LEGEND

TREE NO.	PROTECTED SPECIE	DISPOSITION
4	*Quercus agrifolia* Coast Live Oak	*REMOVE*
7	*Quercus agrifolia* Coast Live Oak	*REMOVE*
51	*Quercus agrifolia* Coast Live Oak	*REMOVE*
99	*Quercus agrifolia* Coast Live Oak	*TRANSPLANT*
1	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
2	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
63	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
232	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
233	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
233A	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51a	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51b	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51c	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51g	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
53	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
52	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*

PROTECTED TREE SPECIES

	PROTECTED SPECIE	TOTALS BY SPECIES	NUMBER TO REMAIN	NUMBER TO BE REMOVED	NUMBER TO BE RELOCATED
ON-SITE	*Quercus agrifolia* Coast Live Oak	23	19	3	1
ON-SITE	*Quercus lobata* Valley Oak	1	1	0	0
OFF-SITE	*Quercus agrifolia* Coast Live Oak	4	4	0	0
OFF-SITE	*Platanus racemosa* California Sycamore	1	1	0	0

LEGEND OF SYMBOLS

EXISTING LOCATION OF TREE #99

POSITION OF RELOCATED TREE #99

PROTECTED TREE TO BE REMOVED

ABBREVIATIONS:
TPZ - Tree Protection Zone
TDL - Tree Dripline
TPF - Tree Protective Fencing
OS - Off-Site

JAMES DEAN
LANDSCAPE ARCHITECTURE PLANNING URBAN DESIGN

PROTECTED TREE LOCATION MAP
FERRUZZA RESIDENCE
3948 SKELTON CANYON
WESTLAKE VILLAGE, CA

SCALE: 1/16"=1'-0"
DATE
01-25-2024

PROTECTED TREE LOCATION MAP

Appendix 2

Forde
BIOLOGICAL CONSULTANTS

10664 PRESILLA RD | SANTA ROSA VALLEY, CA 93012
PHONE: (805) 302-7165 | FAX: (805) 552-9196
WWW.FORDEBIO.COM | EMAIL: INFO@FORDEBIO.COM

Patricia Ferruzza
2773 Westham Circle
Thousand Oaks, CA 91362

May 29, 2024

RE - 3948 Skelton Canyon Circle (APN - 6900-010-105), Los Angeles County, California

Introduction

Forde Biological Consultants (Forde) prepared a Biological Assessment (BA) for the property commonly known as 3948 Skelton Canyon Circle, Thousand Oaks, Los Angeles County, California, dated March 19, 2017. The location of the property is depicted in Exhibit A.

Project Description

The project includes construction of a single-family residence (SFR), garage/guesthouse, swimming pool and spa, driveway, a Fire Department turnaround, utilities, landscape, hardscape, other infrastructure; all of which is sited within a previous cut and fill area. The development footprint, not including driveway and Fire Department turnaround, is 7,186 square feet (0.17 acres). The fuel modification zone extends 100 feet from the proposed SFR; but is reduced to the east so that fuel modification activities don't occur on the adjacent parcel. This effectively excludes Arroyo Conejo from fuel modification. The site plan is included as Exhibit B.

Background

The botanical surveys described in the report were conducted by Forde during a period of extreme drought. The California Water Resources Agency described the drought as moderate in 2012, severe in 2013, extreme in 2014 and exceptional in 2015 and 2016. The BA recommended additional botanical surveys. The Woolsey Fire burned through the property November 2018. Forde conducted the additional botanical surveys in May and June 2019 and updated the BA (dated July 15, 2019). Forde visited the property again May 13, 2022, to document current condition of the property. Forde found no significant changes and updated the BA (dated May 28, 2022). The BA was updated again on May 17, 2023, to address concerns of the City of Thousand Oaks.

Based on the BA and other findings, the City of Thousand Oaks determined via their Initial Study/Mitigated Negative Declaration Environmental Checklist Form that a Mitigated Negative Declaration (MND) would be required (January 2024). Elevated Entitlements prepared the checklist and prepared an MND. The MND was provided to the California Department of Fish and Wildlife (CDFW) for review and comment. The CDFW provided comments in a letter dated March 4, 2024. Some of the comments are addressed below.

Arroyo Conejo

The Arroyo Conejo is ephemeral and tributary to Conejo Creek, which is tributary to the Pacific Ocean. Ricardo Montijo delineated Ordinary High-Water Marks (US Army Corp of Engineers jurisdiction), Tops of Banks and included any contiguous riparian vegetation (CDFW jurisdiction) on May 14, 2019. The arroyo was flowing during the site visit and on May 24 and June 11, 2019. The biologist determined that the average distance between the Ordinary High-Water Marks is 12 feet and between the Tops of Banks, 22 feet. *Quercus agrifolia* Woodland Alliance dominates areas along the length of the arroyo. The delineation is included as Exhibit C.

The BA documented that the fuel modification zone that would extend 100 feet from the proposed single-family residence would extend across Arroyo Conejo. The BA recommended that the Arroyo Conejo be exempt on Fire Department approved Fuel Modification Plan (FMP). The draft FMP prepared for the project on May 29, 2024, depicts the limits of fuel modification. The limits of fuel modification are 100 feet or the property boundary, it does not extend across the Arroyo Conejo. The limits of fuel modification are depicted in Exhibit D.

The BA concludes that the Arroyo Conejo is the only jurisdictional feature on the property. There is also a minor drainage on the property. The drainage lacks definable banks and a definable bed, does not support riparian vegetation or aquatic or semi-aquatic species, and terminates at a v-ditch, which was constructed before 1980. The v-ditch is designed to capture run-off and convey it to a flat part of the property. The new v-ditch and dispersal system does the same. The v-ditch does not connect to Arroyo Conejo. Run-off from driveway and Fire Department turnaround will be captured in a separate system and treated before discharge. It will not discharge into Arroyo Conejo. The drainage systems are depicted in Exhibit E.

Special-Status Plants

The BA concluded that special-status plants are not expected to occur within an area of the property dominated by *Quercus agrifolia* Woodland Alliance, its understory lacks native plants and dominated by the non-native species or within the *rassica nigra* Herbaceous Semi-Natural Alliance. The BA concluded that based on desktop review, that a handful special-status plants had moderate to high potential to occur within the area dominated by the various coastal sage scrub alliances; however, the biologists did not observe special-status species during the botanical surveys or any other site visits. The BA ultimately concluded, after site-specific study, that the proposed project would not affect special-status plants.

Special-Status Wildlife

The BA concluded that Southern California legless lizard (*Aneniella stebbensi*) is expected to occur throughout the property. It should have stated that it has low potential to occur within the area of the property that was graded between 1967 and 1980 and low potential along the proposed driveway because the existing dirt road has been used for access and the soils are compact. The graded area is where the proposed SFR is to be constructed. These areas are also fuel-modified on an annual basis for the adjacent SFR's. The BA also concluded that San Diegan tiger whiptail (*Aspidoscelis*

tigris stejnegeri), coast horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), and San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) have moderate potential to occur. It also concluded that long-eared owl (*Asio otis*) has moderate potential to occur and could nest within the area dominated by the *Quercus agrifolia* Woodland Alliance and that short-eared owl (*Asio flammeus*) could occur during winter. It concluded that pallid bat (*Antrozous pallidus*) has moderate potential to use the hollows and cavities of some of the mature oak trees. It concluded that San Diego desert woodrat (*Neotoma lepida intermedia*) has a high potential to occur. In fact, the biologists observed woodrat (*Neotoma* sp.) houses during the site visits. It is likely that the woodrat houses were built by big-eared woodrat (*Neotoma macrotis*); however, San Diego desert woodrat cannot be ruled out. The BA also concluded that southwestern pond turtle (*Actinemys pallida*), two-striped garter snake (*Thamnophis hammondii*), south coast garter snake (*Thamnophis sirtalis ssp.*), and Coast Range newt (*Taricha torosa torosa*) have moderate to high potential to occur in and adjacent the Arroyo Conejo.

Southwestern Pond Turtle

This species is associated with permanent or nearly permanent water bodies. They may be active year-round and are most often observed basking above the water line. While pond turtle may occur within Arroyo Conejo, its deeply incised, and its steep banks likely act as a barrier to movement beyond the banks at least where it occurs on and adjacent the property. To ensure that the project avoids impacts to the species, a silt fence should be installed between the arroyo and construction limit, under supervision of a biologist, in manner that prevents their movement into construction zones. If the biologist observes any individuals within the construction limits, they will be allowed to move back toward the creek before the fence is installed. These avoidance measure should be a condition of the proposed project if approved. No mitigation required.

Coast Horned Lizard

The species occurs in foothills and coastal plains from Los Angeles area to northern Baja California in areas with open vegetation such as chaparral or coastal sage scrub. The BA concluded that the species had moderate potential to occur [within the area dominated by the various coastal sage scrub alliances]. These alliances recovered after the drought, burned during the Woolsey Fore, November 2018, and have since recovered. The vegetation associated with the alliances is now dense with no open spaces between shrubs. Given current condition, the species has low potential to occur within these alliances. If present, direct impacts can be avoided, by having a biologist present during initial fuel modification activities so that they can be avoided and allowed to move passively or ushered out of harm's way. These avoidance measures should be a condition of the proposed project if approved. No mitigation required.

San Diegan Tiger Whiptail

This species occurs in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chaparral, desert scrub, desert wash, alkali scrub, and annual grassland. It has potential to occur throughout the property. If present, direct impacts can be avoided, by having a biologist present during initial construction and fuel

modification activities so that they can be avoided and allowed to move passively or ushered out of harm's way. These avoidance measures should be condition as part of the proposed project. No mitigation required.

Southern California Legless Lizard

Polygons representing known locations of Southern California legless lizard occur within 2 miles of the property. The species occurs in sparsely vegetated areas of dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks in loose soil and leaf litter. They can also be found in leaf litter and sandy soils of orchards adjacent such habitats (Pers. Obs.). They live mostly underground and are not readily detectable.

The BA concluded Southern California legless lizard is expected to occur throughout the property. It should have stated that the species has low potential to occur within the area of the property that was graded between 1967 and 1980 and along the proposed driveway due the existing dirt road being used for access for decades and soils are compact. The graded area is where the proposed SFR is to be constructed, if approved. The proposed SFR and driveway would also be located within and area that is fuel-modified on an annual basis for adjacent SFR's.

The species is expected to occur within the coastal sage scrub alliances and the *Quercus agrifolia* Woodland Alliance. Fuel modification extends across the coastal sage scrub alliances and the *Quercus agrifolia* Woodland Alliance. It is unlikely that fuel modification activities will directly impact individuals due the fact that they live mostly underground and fuel modification is typically done using hand-held tools. Although unlikely, if individuals are unearthed during construction activities within the graded area and along the existing dirt road, they will immediately attempt to bury themselves. They will not move out of harm's way.

To ensure there are no direct impacts to individuals of the species, fuel modification shall be conducted using hand-held tools and be done under the supervision of a biologist. If any individuals are observed, which is highly unlikely, they will be avoided and left in place. Non-native vegetation dominates the understory of the woodland. Fuel modification activities within the woodland shall be limited to removal of non-native plant species. Leaf litter shall not be removed. A biologist should also be present during initial grading and grubbing activities so that if individuals are uncovered, they can relocate them to an area of the property not encompassed within a fuel modification zone. These avoidance measures should be condition as part of the proposed project. No mitigation required.

Coast Patch-Nosed Snake

Occurs from San Luis Obispo County, south through the coastal zone, south and west of the deserts, into coastal northern Baja California in semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. To ensure there are no direct impacts to individuals of the species, fuel modification shall be conducted using hand-held tools and be done under the supervision of a biologist. If any individuals are observed, they will be avoided and left in place to move

out of harm's way on their own accord. These avoidance measures should be condition as part of the proposed project. No mitigation required.

San Diego Mountain Kingsnake

Common in the vicinity of rocks or boulders near streams or lakeshores and may seek cover under rotting logs and dense shrubs. To ensure that the project avoids impacts to the species, a silt fence should be installed between the arroyo and construction limit, under supervision of a biologist, in manner that prevents their movement into construction zones. If the biologist observes any individuals within the construction limits, they will be allowed to move back toward the creek before the fence is installed. These avoidance measure should be a condition of the proposed project if approved. No mitigation required.

Two-Striped Garter Snake

This species is primarily aquatic and generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest. To ensure that the project avoids impacts to the species, a silt fence should be installed between the arroyo and construction limit, under supervision of a biologist, in manner that prevents their movement into construction zones. If the biologist observes any individuals within the construction limits, they will be allowed to move back toward the creek before the fence is installed. These avoidance measure should be a condition of the proposed project if approved. No mitigation required.

South Coast Garter Snake

This species is associated with permanent or semi-permanent bodies of water. To ensure that the project avoids impacts to the species, a silt fence should be installed between the arroyo and construction limit, under supervision of a biologist, in manner that prevents their movement into construction zones. If the biologist observes any individuals within the construction limits, they will be allowed to move back toward the creek before the fence is installed. These avoidance measure should be a condition of the proposed project if approved. No mitigation required.

Coast Range Newt

This species occurs in wet valley-foothill hardwood, hardwood-conifer, mixed conifer, oak woodlands, coastal scrub, chaparral, and annual grasslands. They summer in moist habitats under woody debris, or in rock crevices and animal burrows. Adults migrate in large numbers from terrestrial locations to ponds, reservoirs, and sluggish pools in streams to breed. There is potential for this species to occur within the woodland and the Arroyo Conejo is probably suitable for breeding. To ensure that the project avoids impacts to the species, a silt fence should be installed between the arroyo and construction limit, under supervision of a biologist, in manner that prevents their movement into construction zones. If the biologist observes any individuals within the construction limits, they will be allowed to move back toward the creek before the fence is installed. These avoidance measure should be a condition of the proposed project if approved. No mitigation required.

Long-Eared Owl

This species occurs in riparian habitats dominated by live oak thickets and other dense stands of trees. It breeds from February through July. Initial grading, grubbing, and construction should be scheduled to occur outside the nesting season of birds as defined by the CDFW, if feasible. Regardless of timing, a qualified biologist shall conduct a nest survey or surveys before any activities are scheduled to occur. This will reduce the potential for the project to adversely affect nesting birds including long-eared owl should it occur. These avoidance measures and others included in the BA should be a condition of the proposed project if approved. No mitigation required.

Short-Eared Owl

This species is rare winter resident found in open areas with few trees, such as annual and non-native grasslands, irrigated pasture, and both estuarine and freshwater emergent wetlands. The project does not have the potential to result in death or injury or have a significant effect on individuals that may use the property during winter.

Pallid Bat

This species forages in grassland, shrubland, woodland, and conifer forests habitats and roosts in caves, crevices, mines, under bridges, bird boxes, bat boxes, buildings, and occasionally hollow trees. They are most common in open, dry habitats with rocky areas. They give birth to pups in late June, nursing continues into August. The BA concluded that it has moderate potential to use hollows and cavities of some of the mature oak trees within the woodland alliance. The oak trees that are to be removed lack suitable hollows and cavities. The oak tree branches that extend across the driveway that are to be removed to provide Fire Department clearance also lack suitable cavities.

To ensure there are no direct impacts to individuals of the species and bats in general, a biologist should be present during tree removal and branch trimming. If branches with any cavities are removed, they shall be placed within the oak woodland, beyond any fuel modification zones. This will allow bats to escape, if they haven't done so during removal, and will provide refugia for other wildlife. These avoidance measures and others included in the BA should be condition as part of the proposed project. No mitigation required.

San Diego desert woodrat

Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats with rocky outcrops and substrates. Houses are constructed with twigs, sticks, cactus parts, and rocks, and are used for nesting, food caching, and predator escape. Forde observed woodrat (*Neotoma* sp.) houses during the site visits within the proposed fuel modification zone. The biologists did not observe any woodrat houses were built by big-eared woodrat (*Neotoma macrotis*); however, San Diego desert woodrat cannot be ruled out. Forde did not observe woodrat houses within the existing graded area or along the access road. To ensure there are no direct impacts to individuals of the species, fuel modification shall be conducted using hand-held tools and be done under the supervision of a biologist. Their houses will be avoided and left in place. These avoidance measures and others included in the BA should be condition as part of the proposed project. No mitigation required.

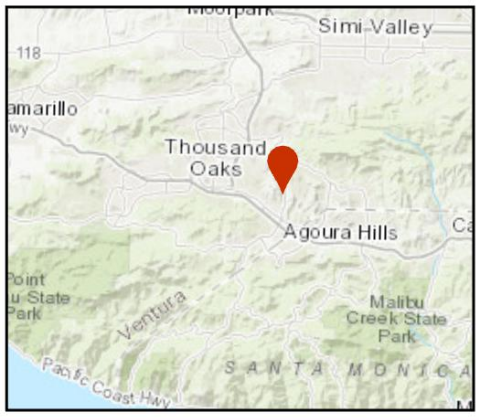
If you have any questions or comments regarding this Letter, please feel free to contact Andrew Forde at andrew@fordebio.com.

Sincerely

Andrew Forde
Principal Biologist
Forde Biological Consultants

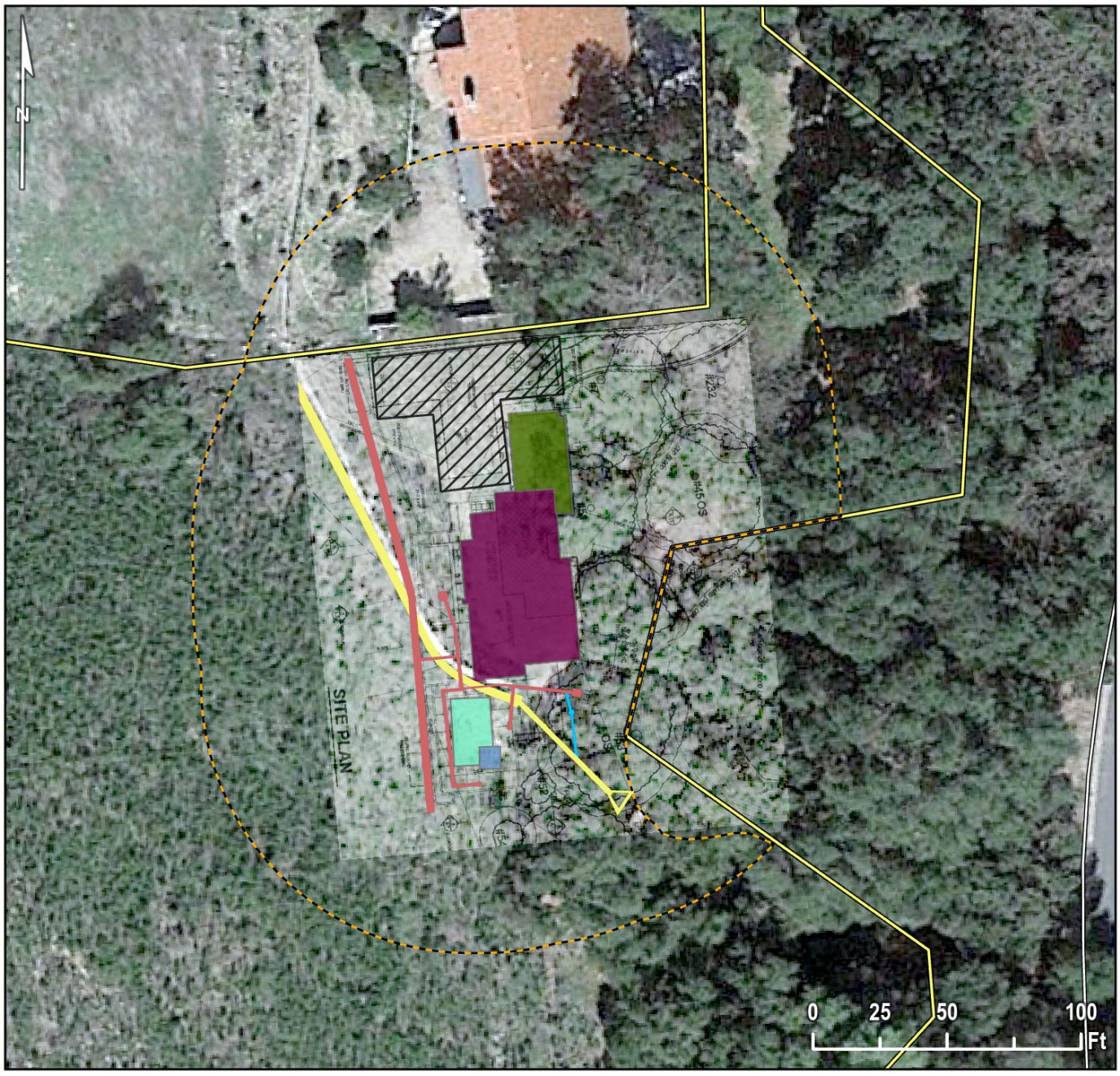
Project Parcel

Ventura County Parcels



Forde
Biological Consultants

Exhibit A - Project Location



Project Parcel

Ventura County Parcels

Proposed Structures

Residence

Garage

Pool

Spa

Fire Department Turnaround

Drainage System

Proposed Fuel Modification

Zone B (100ft)*

Forde
Biological Consultants

Exhibit B - Site Plan

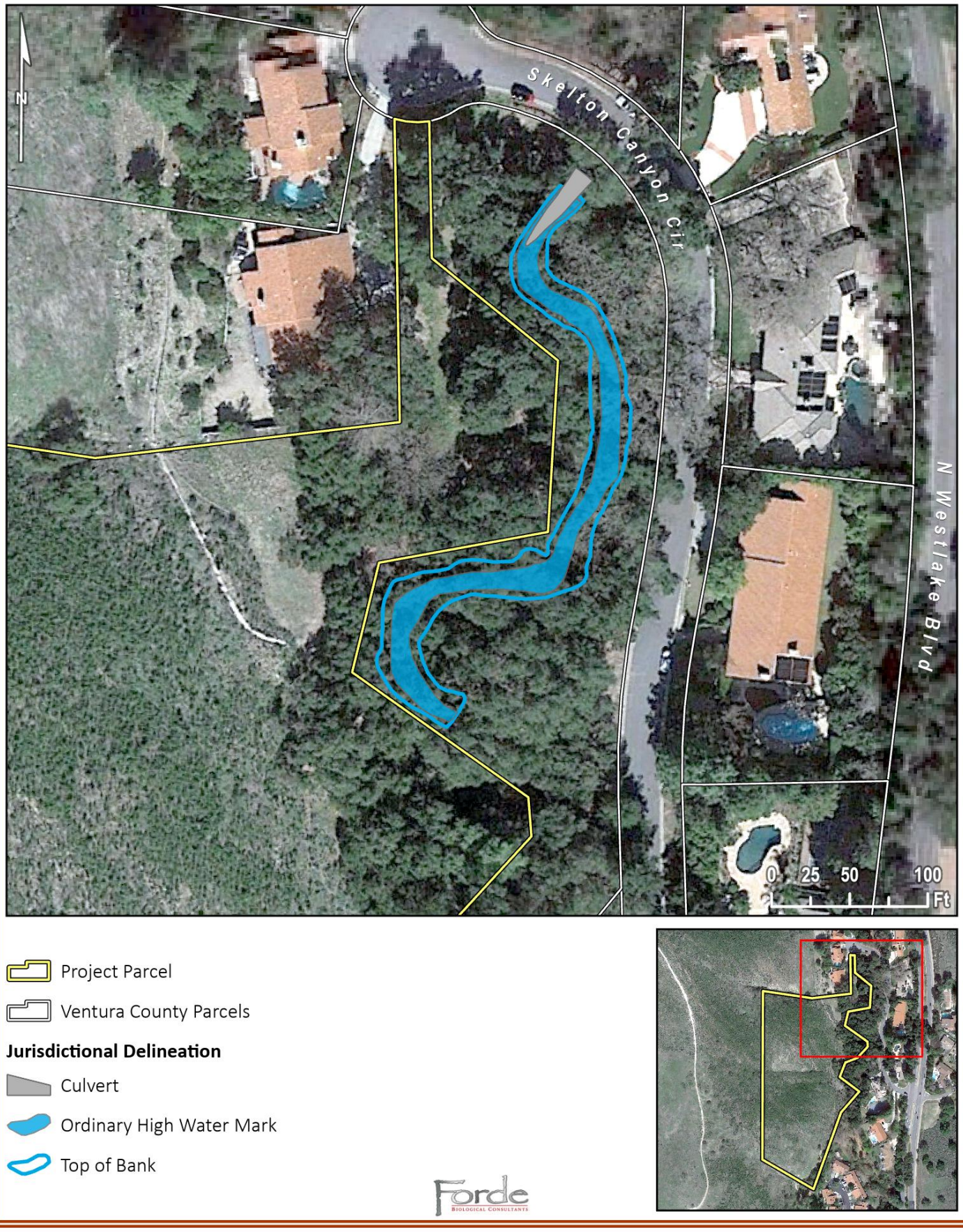
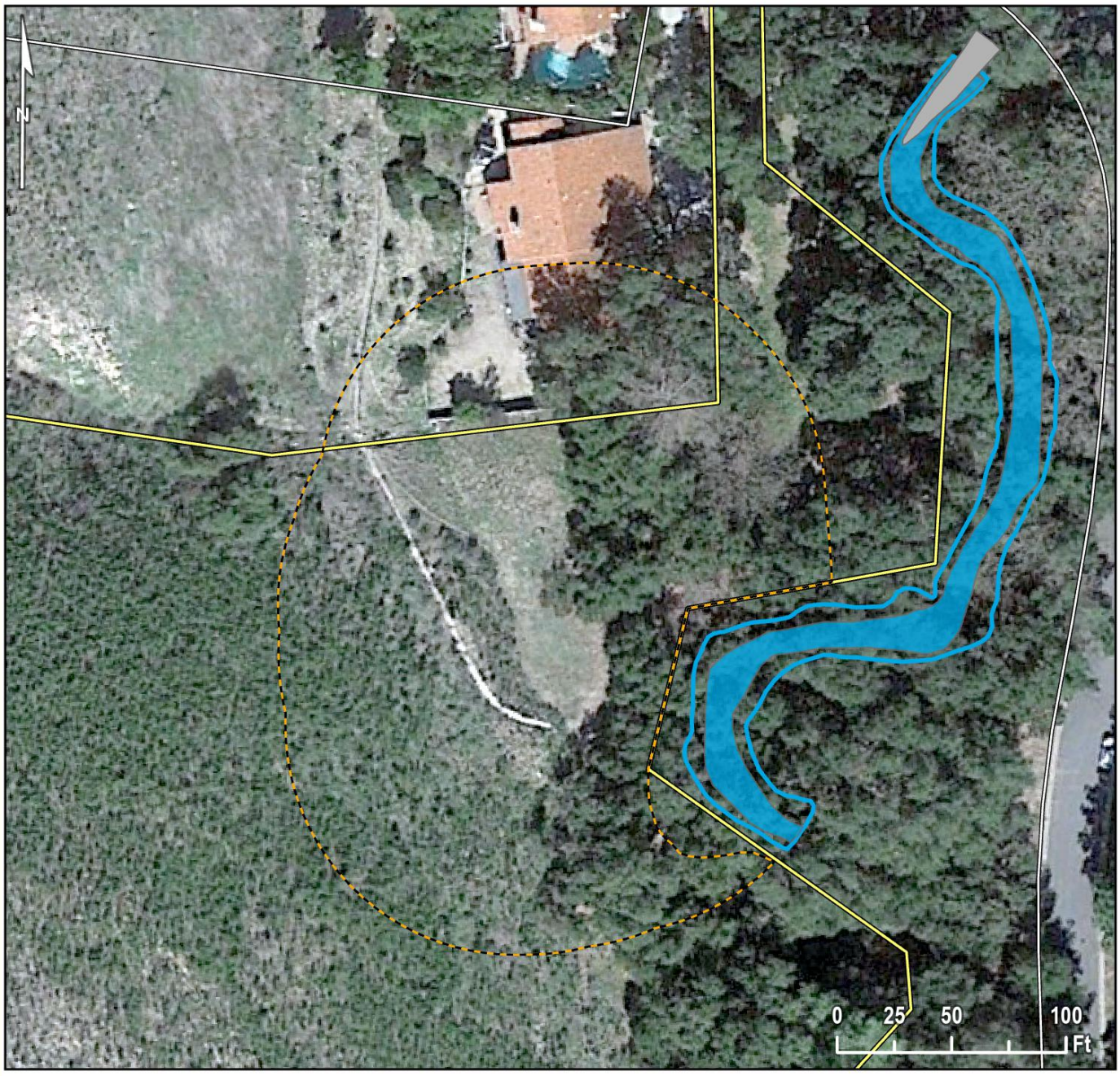


Exhibit C - Jurisdictional Delineation



Project Parcel

Ventura County Parcels

Proposed Fuel Modification

Zone B (100ft)*

Jurisdictional Delineation

Culvert

Ordinary High Water Mark

Top of Bank

Forde
Biological Consultants

*Creek exemption applied

Exhibit D - Fuel Modification Limits

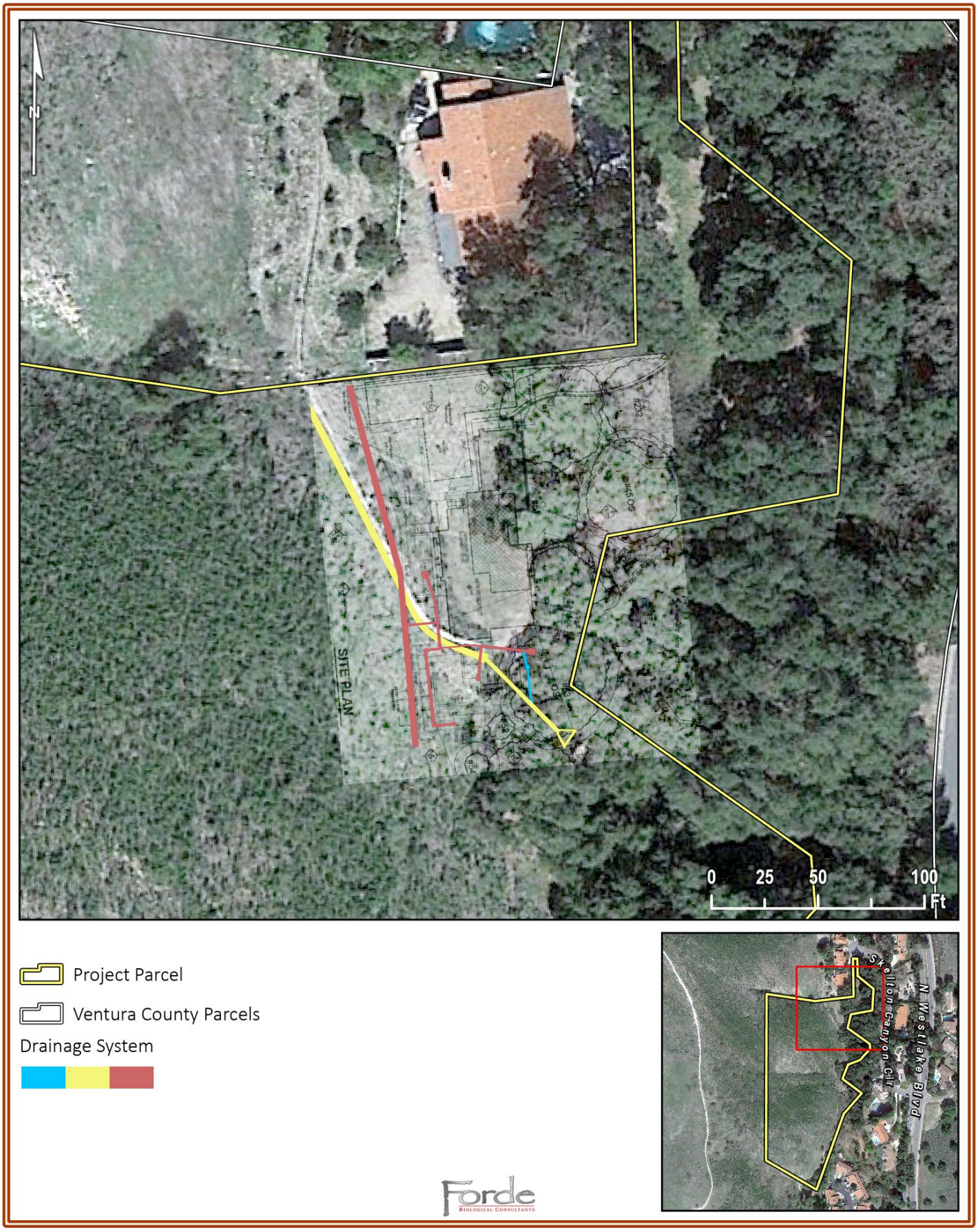


Exhibit E - Drainage Systems

Appendix 3

Biological Assessment

3948 Skelton Canyon Circle (APN 6900-001-010)
Thousand Oaks
Ventura County, California, 91360

Prepared by:

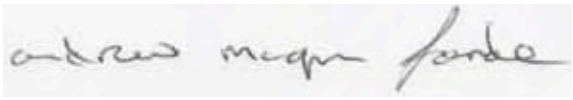
Forde Biological Consultants
10664 Presilla Road, Santa Rosa Valley, California, 93012
Tel: 805.302.7165
Email: info@fordebio.com

Prepared for: Matt

Lang, BDR
P.O. Box 410
Agoura Hills, CA 91376

July 15, 2019
Updated: May 19, 2023

This report is a true and accurate statement regarding biological and other natural resources located on the property commonly known as 3948 Skelton Canyon Circle (APN 6900-001-010), City of Thousand Oaks, Ventura County, California, 91360.



Signature

May 19, 2023

Date

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Appendices

LOCATION

The property commonly known as 3948 Skelton Canyon Circle (APN 6900-001-010) is located in the City of Thousand Oaks, Ventura County, California, on the southern flank of the Simi Hills within the area covered by the U.S. Geological Survey's 7.5-minute Thousand Oaks Quadrangle. It is approximately 1.2 miles (~1,931 meters) north of Highway 101 and about 350 feet (~107 meters) west of Westlake Boulevard. There are single-family residencies to the north, east, and open space to the west. The location of the property is depicted in Exhibit A. There is a concrete v-ditch and a sub-surface 24-inch (~61 centimeters) pipe on the property. The v-ditch appears in aerial photographs dated 1980 onwards (see Hisoticaerials.com and Google Earth). A small part of the property appears to have been Rare find filled. The cut and fill appears to have occurred between 1967 and 1980 as evidenced in aerial photographs. The property burned in the 2019 Woolsey fire.

PROJECT

The project includes construction of a single-family residence, garage/guesthouse, swimming pool & spa, driveway, a Fire Department turnaround, utilities, landscape, hardscape, other infrastructure, and a 100-foot fuel modification zone; all of which is sited within a previous cut and fill area. The project design was revised in 2022 in order to cluster the garage against the main residence and mimimze impacts to surrouding vegetation communities. The development footprint, not including driveway and Fire Department turnaround, is now 7,186 square feet (0.17 acres).

DESKTOP REVIEW

Biologist Andrew McGinn Forde reviewed maps, documents, and a number of other resources including -

2. The U.S. Department of Agriculture Soil Conservation Service's Web Soil Survey,

3. The US. Fish and Wildlife Services (USFWS), National Wetlands Inventory,[1]

4. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants (IREP),[2]

5. The California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), Rare find 5, and the Biogeographic and Observation System (BIOS),[3] and the

6. The CDFW "Special Animals",[4] "Fully Protected Animals",[5] "State and Federally Endangered and Threatened Animals of California",[6] "Special Vascular Plants, Bryophytes, and Lichens",[7] "State and Federally Listed Endangered, Threatened, and Rare Plants of California" lists.[8]

1 http://www.fws.gov/wetlands/Data/Mapper.html, Accessed July 11, 2019
2 California Native Plant Society, Inventory of Rare and Endangered Plants, Accessed May 27, 2022
3 CAL. Fish & Wildlife, Wildlife & Habitat Data Analysis Branch, California Natural Diversity, Accessed May 27, 2022
4 CAL. Fish & Wildlife, Special Animals, November 2018
5 CAL. Fish & Wildlife, Fully Protected Animals, May 2003
6 CAL. Fish & Wildlife, State & Federally Endangered & Threatened Animals of California, April 2019
7 CAL. Fish & Wildlife, Special Vascular Plants, Bryophytes, & Lichens, March 2019
8 CAL. Fish & Wildlife, State & Federally Listed Endangered, Threatened, & Rare Plants of California, April 2019

The CNPS IREP tracks the status of hundreds of plant species and includes information on the distribution, ecology, and conservation status of California's rare, threatened, and endangered plants. The CNPS data are widely accepted as the standard for information on the status of the flora of California. The CNPS recognizes more than 1600 plant taxa (species, subspecies and varieties) as rare, threatened, or endangered in California, more than 500 additional species that have limited distribution, and approximately 55 additional species for which the CNPS needs more information. The IREP also contains information on approximately 25 species presumed to have become extinct in California in the last 100 years. The CNDDB is part of a nationwide network overseen by NatureServe. The CNDDB includes Rare find 5 and BIOS, which include locations and natural history information on special status plants and animals and natural communities throughout California. The data help drive conservation decisions, aid in the environmental review of projects and land use changes, and provide baseline data helpful in recovering rare, threatened, and endangered species. The goal of the CNDDB is to provide the most current information available on the state's most imperiled elements of natural diversity and to provide tools to analyze these data. The species on the CDFW lists are considered those of greatest conservation need and are commonly referred to as special-status species. Special-status species include those protected by the State Endangered Species Act,[9] the Federal Endangered Species Act,[10] the California Fish and Game Code,[11] as well as all other species that appear on the lists. Because the CDFW considers the species on these lists to be those of greatest conservation need, the biologist includes an analysis of the species on these lists that are known to occur in the region. The biologist conducted the CNDDB, Rare find 5, BIOS, and IREP reviews by searching the U.S. Geological Service's 7.5-minute Thousand Oaks Quadrangle and those that surround it and relied on the CDFW lists and the USFWS system for current species designations.

SURVEY METHODOLOGY

Biologist Andrew McGinn Forde visited the property on August 29, 2016. At the property, the biologist compiled a plant inventory, mapped plant communities, mapped streams and wetlands, and locations of special-status species and any resources that could potentially be used by them, if present. Dense vegetation on the western part of the property prevented foot access; however, the biologist was able to walk through the proposed development area and its associated fuel modification zone attaining 100% visual coverage. The biologist also looked under rocks, wood, and other surface debris and searched in and around trees and shrubs for wildlife, signs of wildlife, woodrat houses, burrows, dens, cavities, and bird nests. The site visit occurred during a period of extreme drought (2012 - 2016). The California Water Resource agency defines the drought as historical. In 2012, it is described as a moderate drought, in 2013 a severe drought, in 2014, an extreme drought, and in 2015 and 2016 an exceptional drought. This made the identification of plants particularly difficult. Furthermore, the site visits occurred outside the typical spring-early-summer period, when plants are more readily identifiable (under normal circumstances). Due to these facts, the biologist recommended additional botanical surveys in the original biological assessment dated March 19, 2017. The biologist also visited the property on March 14, 2017 to verify distance of the proposed structures from the nearby Arroyo Conejo. Ricardo Montijo visited the property on May 14, 2019, May 24, 2019, and June 11, 2019 to compile a complete botanical inventory and map plant communities. An additional reconnaissance-level survey was completed by Monica Velasco on May 13, 2022 to inspect for any changes to site conditions since the 2019 surveys.

9 CAL. Fish & Game Code §§ 2050-2097
10 16 U.S.C. §§ 1531-1544
11 CAL. Fish & Game Code §§ 3511, 4700, 5050, & 5515

STREAMS & WETLANDS

The ACOE regulates "dredge" and "fill" in waters of the U.S. including adjacent wetlands under the authority of Section 404 of the Clean Water Act.[12] The Act makes it unlawful to discharge dredged materials or fill in waters of the U.S. including adjacent wetlands without a public interest review period and a permit from the ACOE. The Code of Federal Regulations defines "waters of the U.S." as intrastate lakes, rivers, streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds.[13] The code defines wetlands as "areas that are inundated or saturated by surface water 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." The 1987 Wetland Delineation Manual provides technical guidance and procedures for identifying and delineating wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act.[14]

In the arid west, the ACOE uses the *"Interim regional supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region."* The regional supplement is designed for use with the 1987 Wetland Delineation Manual. Where differences in the two documents occur, the regional supplement takes precedence. The regional supplement presents wetland indicators, guidance, and other information that is specific to the Arid West Region.[15] The manual and supplement recommend use of the "National List of Plant Species that Occur in Wetlands" for hydrophytic classification of plants[16] and refer to the Natural Resources Conservation Service (NRCS) for hydric soil classifications. The methodology set out in the manual and the supplement is a three-parameter test that defines wetlands by the presence of hydrophytic vegetation, hydric soils, and hydrology. In the absence of wetlands, ACOE jurisdiction in non-tidal waters extends between the ordinary high water marks.[17] Section 401 of the Clean Water Act requires that all federal agencies ensure that their actions do not violate water quality standards. Section 401 of the Clean Water Act requires all federal agencies protect physical, biological, and chemical integrity of its waters and ensure that their actions do not violate water quality standards. Under Section 401, the State of California has the authority to review any federal permits that may result in a discharge to wetlands and other waters under state jurisdiction. This is to ensure that the actions are consistent with the state's water quality requirements. In California, the RWQCB has been delegated as the state agency with the authority to regulate the quality of state waters, including discharge of dredged or fill materials, and thus provides a Section 401 certification to the ACOE.[18]

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under the authority of the California Fish and Game Code.[19] The CDFW regulates alteration of these resources through its Lake and Streambed Alteration Program, which requires execution of an agreement before any alteration of the natural flow of any river, stream, or lake.[20] The CDFW have adopted the U.S. Fish and Wildlife Service (USFWS) definition and classification system of wetlands.

12 Clean Water Act of 1972 § 404. See also 33 U.S.C. § 1341
13 33 C.F.R. §§ 320 – 330
14 Environmental Lab., 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS
15 U.S. Army Corps of Engineers, 2006. Interim Regional Supplement to Corp of Engineers Wetland Delineation Manual: Arid West Region. Vicksburg, MS
16 Reed, P. B. 1988. National List of Plant Species that Occur in Wetlands: 1988 National Summary, Biological Report 88(24), U.S. Fish and Wildlife Service, Washington, DC
17 33 C.F.R. § 328.3
18 Clean Water Act of 1972 § 401. See also 33 U.S.C. § 1341
19 CA. Fish & Game Code §§ 1600 – 1616
20 Cal. Fish and Game Code § 1602

The USFWS defines wetlands as "lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports hydrophytes, (2) the substrate is predominantly non-drained hydric soil; and (3) the substrate is saturated with water or covered by shallow water at some time during the growing season of each year." The definition includes swamps; freshwater, brackish water, and saltwater marshes; bogs; vernal pools, periodically inundated salt flats; intertidal mudflats; wet meadows; wet pastures; springs and seeps; portions of lakes, ponds, rivers and streams; and all other areas which are periodically or permanently covered by shallow water, or dominated by hydrophytic vegetation, or in which the soils are predominantly hydric. The Code of Regulations defines a stream as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish and other aquatic life including watercourses having a surface or sub surface flow that supports or has supported riparian vegetation."[21] This applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. CDFW jurisdiction extends between the top of each bank and to the outer edge of contiguous riparian (= hydrophytic) vegetation. Riparian vegetation includes species listed on the "*National List of Plant Species that Occur in Wetlands*" that are defined as OBL, FACW, or FAC. CDFW jurisdiction extends between the top of each bank and to the outer edge of contiguous riparian vegetation and in some cases floodplains. "Bank" is defined as the "slope or elevation of land that bounds the bed of the stream in a permanent or long standing way, and that confines the stream water up to its highest level."[22]

The National Wetlands Inventory (NWI) depicts the Arroyo Conejo meandering across the east boundary of the property. The NWI map is included as Exhibit B. Biologist, Andrew McGinn Forde, visited the property on March 14, 2017 at the request of the City of Thousand Oaks to determine the distance of the proposed single-family residence from the creeks top of bank and any associated riparian vegetation and to determine if additional permits would be required. The location of the single-family residence and the property boundary were staked at the time of the site visit. The biologist determined that the creek meanders on and off the property and that the single-family residence would be located approximately 37.50 feet from its west bank.

The Arroyo Conejo is ephemeral and tributary to Conejo Creek, which is tributary to the Pacific Ocean. Ricardo Montijo delineated Ordinary High Water Marks and Tops of Banks on May 14, 2019 and included any contiguous riparian vegetation. The creek was flowing during the site visit and during visits on May 24 and June 11, 2019. The biologist determined that the average distance between the Ordinary High Water Marks is 12 feet and between the Tops of Banks, 22 feet. *Quercus agrifolia* Woodland Alliance dominates areas along the length of the creek. The extents of the Ordinary High Water Marks (OHWM), the tops of bank (TOB), and the woodland are depicted in Exhibit C. The creek falls under the jurisdiction of the CDFW, ACOE, and RWQCB. The biologists did not observe any other features, depressions or swales, hydrophytic vegetation, or any evidence of hydric soils that would suggest the presence of other streams or isolated wetlands on the property.

21 14 C.C. R. § 1.72
22 People v. Osborn, 116 Cal. App. 4th 764, 11 Cal. Rptr. 3d 14 (2004)

PLANT COMMUNITIES

Quercus agrifolia Woodland Alliance, *Malacothamnus fasciculatus* Shrubland Alliance, *Salvia leucophylla* Shrubland Alliance, and *Brassica nigra* Herbaceous Semi-Natural Alliance (previously mapped as *Avena-Bromus* Semi-Natural Herbaceous Stand) occur on the property. Maps depicting the pre- and post-Woolsey Fire plant communities are included as Exhibit C. Photographs depicting the communities are included as Exhibit D. A complete plant inventory is included in Exhibit E. The summaries below describe post-fire conditions, and as such, a modifier of "disturbed" has been added to several of them. Based on the 2019 and 2022 surveys, the distribution of native and non-native communities were essentially the same as before the fire, though composition was altered in some cases.

***Quercus agrifolia* Woodland Alliance: disturbed**

On and immediately adjacent the property, *Quercus agrifolia* Woodland Alliance dominates areas above the deeply incised banks of the Arroyo Conejo. Valley oak (*Quercus lobata*) and California sycamore (*Platanus racemosa*) also occur within the alliance. Arroyo willow (*Salix lasiolepis*) occurs but it is mostly limited to the area below the creeks tops of banks. The woodland understory includes various grasses (*Avena*, *Bromus*, *Hordeum* spp.), Geraldton carnation weed (*Euphorbia terracina*), horehound (*Marrubium vulgare*), mustards (*Brassica nigra*, *Hirschfeldia incana*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), common bedstraw (*Galium aparine*), and buttercup (*Ranunculus muricatus*). The woodland is concentrated around the stream and a steep drainage to the west. Individual trees still show evidence of fire damage, particularly along the steep gully to the west.

***Malacothamnus fasciculatus* Shrubland Alliance: disturbed**

Malacothamnus fasciculatus Shrubland Alliance occurs on southwest and southeast facing slopes at elevations below 500 meters. The dominant species, chaparral mallow (*Malacothamnus fasciculatus*), is a rhizomatous, short-lived shrub that often follows fire. This alliance occurs at the southwestern corner of the property, where it forms somewhat dense stands with natives including coastal lotus (*Acmispon maritimus*), arroyo lupine (*Lupinus succulentus*), whispering bells (*Emmenanthe penduliflora*), and non-native invasive species including common bindweed (*Convolvulus arvensis*). Other classification systems include this community within the Coastal Sage Scrub definition.

***Salvia leucophylla* Shrubland Alliance: disturbed**

Salvia leucophylla Shrubland Alliance occurs on slopes of variable aspect at elevations normally below 620 meters. Within the property, this alliance is co-dominated by purple sage and chaparral mallow in the shrub layer, while the herbaceous layer is composed of both native species including coastal lotus and cliff aster (*Malacothrix saxatilis*) and non-native grasses and herbs including Geraldton carnation weed and ripgut brome (*Bromus diandrus*). Higher relative cover of chaparral mallow was observed following fire disturbance; however, the community may eventually mature back to pre-fire composition. Other classification systems include this community within the Coastal Sage Scrub definition.

***Artemisia californica - Salvia mellifera* Shrubland Alliance**

At higher elevations, California sagebrush (*Artemisia californica*) and black sage (*Salvia mellifera*) replace purple sage as coastal sage scrub dominants. The dominant plants in this community are low growing, summer deciduous shrubs on steeper slopes. Trees are infrequent, but elderberry (*Sambucus mexicanus*) grows in this vegetation type west of the property. The herbaceous layer is diverse and includes cliff aster, deerweed (*Acmispon glaber*), morning glory (*Calystegia macrostegia*), and giant rye grass (*Elymus condensatus*). Ripgut brome, black mustard, tocalote (*Centaurea melitensis*), Shortpod mustard (*Hirschfeldia incana*), and red brome (*Bromus madritensis* ssp. *rubens*) also occur within the community.

Higher relative cover of chaparral mallow was observed following fire disturbance; however, the community may eventually mature back to pre-fire composition. Other classification systems include this community within the Coastal Sage Scrub definition.

Brassica nigra Herbaceous Semi-Natural Alliance

This alliance dominates areas of the property that have been historically disturbed and/or fuel modified. Black mustard (*Brassica nigra*) dominates. Short-pod mustard (*Hirschfeldia incana*) also occurs along with other non-native species including Geraldton carnation weed, horehound, and grasses. For the purpose of this report, this alliance is referred to as ruderal; a term used to describe weedy grasses and forbs that are commonly the first to colonize disturbed areas.

OAK TREE PROTECTION POLICY

Oak (*Quercus* spp.) trees are an integral part of the character of the City of Thousand Oaks. Oaks provide environmental benefits such as cooler summer temperatures, pollution filtration, sustaining wildlife habitat and preventing soil erosion. To promote healthy oak trees, there is a protected zone for any oak tree having a trunk diameter of two inches or greater. The protected zone is defined as the area beneath the canopy of the tree plus five feet beyond the drip line. Oaks are especially sensitive to disturbance in this protected zone and therefore activities with this zone require special attention. There are eight coast live oaks and one valley oak located on the property and a number of other oak trees immediately adjacent it. James Dean (Landscape Architecture, Planning, Urban Design) mapped the trees and prepared an oak tree report. The trunk locations and the canopies of the oak trees that occur on the property are depicted in Exhibit F. The report is provided separately and is summarized later in this report.

COMMON WILDLIFE

The biologist observed or otherwise detected 2 reptiles, 1 amphibian, 32 birds, and 5 mammals on the property including a red-tailed hawk (*Buteo jamaicensis*) flying over the property. The biologist also observed woodrat houses (*Neotoma* sp.) and a number of the oak trees have basal hollows, cavities, fissures, cracks, and peeling bark, which could be utilized by reptiles, amphibians, birds, and mammals; particularly nesting birds (including raptors) and roosting bats. It is likely that big brown bat (*Eptesicus fuscus*), canyon bat (*Parastrellus hesperus*), free-tailed bat (*Tadarida brasiliensis*), and other species roost in the mature trees. A complete wildlife inventory is included as Exhibit G.

SPECIAL-STATUS SPECIES

The review of the CDFW CNDDB and the CNPS IREP also revealed that a number of special-status species have been recorded within the area covered by the quadrangles used in this assessment but none actually occur on the property. A non-specific polygon representing an occurrence of California orcutt grass (*Orcuttia californica*), which is a federal and state endangered species, overlaps the property. There are non-specific polygons representing occurrences of Braunton's milkvetch (*Astragalus brauntonii*) within the general region of the property, which is a federally listed endangered species. The nearest occurrence is 1.5 miles northeast. There are non-specific polygons representing occurrences of Santa Susana tarplant (*Deinandra minthornii*) within the general region of the property. Santa Susana tarplant is recognized by the state as a rare species. The nearest occurrence is 2 miles northeast of the property. There are non-specific polygons representing occurrences of chaparral nolina (*Nolina cismontana*) approximately 1.8 miles northeast of the property and another smaller polygon representing the occurrence of Plummer's mariposa lily (*Calochortus lummerae*) approximately 1.2 miles north; both watchlist species. There are also two polygons to the east representing the occurrence of Southern California legless lizard (Aneniella stebbensi).

The databases rely on individuals reporting occurrences of special-status species. It is likely that occurrences of some special-status species are not reported to these databases. Furthermore, because the databases are based on positive information, other special-status species could occur within the area covered by the quadrangles but are yet undiscovered. In consideration of this, the biologist considered it prudent to include other special-status species that are known to occur in the Simi Hills and the Santa Monica Mountains in this assessment. Exhibit H includes all the special-status species returned by the databases, their legal status, listing date, a brief description of habitat associations and requirements, and a statement regarding potential for occurrence based on known habitat associations and other factors. Transient and vagrant species are not addressed.[23] The May 2022 BA update included an updated CNDDB query which did not result in changes to special-status species potential of occurrence or anticipated impacts.

Special-Status Plants

Important factors to consider when evaluating potential for special-status plant species to occur are geographic location, elevation, vegetation type and structure, microhabitats, and fire history. Another important factor is soil type and soil chemistry. The U.S. Department of Agriculture Soil Conservation Service produces and publishes soil maps and reports for most areas within the U.S. including the Santa Monica Mountains National Recreation Area.

According to the Soil Survey, the dominant soil types that occur on the property are Calleguas shaly loam (30% to 50% slopes), Diablo clay (9% to 15% slopes), and Rincon silty clay loam (9% to 30% slopes). Calleguas shaly loam is described as channery loam (H1 - 0 to 9 inches) and very channery loam (H2 - 9 to 18 inches), which overlies weathered bedrock (H3 - 18 to 59 inches). It has a maximum of 5% calcium carbonate in its profile. It is well drained, and the H1 and H2 horizons are slightly alkaline (pH 8). Parent material is residuum derived from weathered sedimentary rock. Minor components include Arnold, Gullied land, Linne, and Sedimentary rock land. Diablo clay is described as clay (H1 - 0 to 28 inches), and clay loam (H2 - 28 to 40 inches), overlying weathered bedrock (H3 - 40 to 59 inches). It has a maximum of 5% calcium carbonate in its profile. It is well drained. The H1 horizon can range from slightly acidic to slightly alkaline (pH 8). The H2 horizon is also slightly alkaline (pH 8). Parent material is residuum weathered from calcareous shale. Minor components include San benito, Nacimiento, and Gazos. Rincon silty clay loam is described as silty clay loam (H1 - 0 to 4 inches), sandy clay (H2 - 4 to 19 inches), and stratified sandy loam to sandy clay loam (H3 - 19 to 60 inches). It is well drained. The H1 horizon can range from slightly acidic (pH 6.5) to slightly alkaline (pH 8). The H2 horizon is typically neutral (pH 7) and the H3 horizon is typically alkaline (~pH 8). Parent material is alluvium derived from sedimentary rock. Minor components include Azule, Huerhuero, Soper, and San Benito. The soil map and other data are included as Exhibit J.

As stated previously, a polygon representing the occurrence of California orcutt grass overlaps the property and there are polygons representing the occurrences of Braunton's milkvetch, Santa Susana tarplant, chaparral nolina, and Plummer's mariposa lily all occur within 2 miles of the property. California orcutt grass is associated with vernal pools. There are no vernal pools on the property. The species is not expected to occur at or within 300 feet of the property. Braunton's milkvetch occurs in closed-cone coniferous forest, chaparral, coastal sage, valley and foothill grasslands, and recent burn or disturbed areas usually in association with sandstone outcrops with carbonate layers or at down-wash sites.

23 Transients are species that pass through a geographical area and vagrants are species t hat are recognized as being outside their normal range.

There are no sandstone outcrops on the property. The species is not expected to occur at or within 300 feet of the property. Santa Susana tarplant occurs in chaparral and coastal scrub habitats in association with sandstone outcroppings and rocky areas. The property lacks sandstone outcrops and rocky areas. The species is identifiable year round. The biologists did not observe it during the site visits. The species is not expected to occur at or within 300 feet of the property. Chaparral nolina is found in coastal sage scrub and chaparral habitats on sandstone and gabbro substrates. The property lacks sandstone and gabbro substrates. The species is identifiable year round. The biologists did not observe this species during the site visits. The species is not expected to occur at or within 300 feet of the property. Plummer's mariposa lilies occur in chaparral, cismontane woodlands, coastal scrub, lower coniferous forests, and grasslands, and are typically associated with granitic soils. The property lacks granitic soils. The species is not expected to occur at or within 300 feet of the property. In fact, the majority of the special-status species considered in this assessment are not expected to occur or only have low potential to occur.

Special-status plants with moderate to high potential to occur within the area dominated by the *Malacothamnus fasciculatus* and the *Salvia leucophylla* shrubland alliances include Coulter's saltbush (*Atriplex coulteri*), which blooms March - October, Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), blooms April - October, many-stemmed dudleya (*Dudleya multicaulis*), blooms April - July, and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), which blooms January - July. The biologists did not observe these species during any of the site visits. *Atriplex* and *Dudleya* may not be identifiable to species throughout the year; however, the genera typically are. The biologists did not observe any *Atriplex* or *Dudleya* during the site visits. Special-status plant species are not expected to occur in the areas dominated by the *Quercus agrifolia* Woodland Alliance or the *Brassica nigra* Herbaceous Semi-Natural Alliance because they have been routinely disturbed through fuel-modification practices for numerous years.

Special-Status Wildlife

Polygons representing the occurrences of Southern California legless lizard occur within 2 miles of the property. The Southern California legless lizard occurs in sparsely vegetated areas of dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks in loose soil and leaf litter. They can also be found in leaf litter and sandy soils of orchards adjacent such habitats (Pers. Obs.). They live mostly underground and are not readily detectable. This species is expected to occur throughout the property. San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), coast horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), and San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) have moderate potential to occur. Southern Western pond turtle (*Actinemys pallida*), two-striped garter snake (*Thamnophis hammondii*), south coast garter snake (*Thamnophis sirtalis ssp.*), and Coast Range newt (*Taricha torosa torosa*) have moderate to high potential to occur in and adjacent the Arroyo Conejo. Long-eared owl (*Asio otis*) has moderate potential to occur and to nest within the area dominated by the *Quercus agrifolia* Woodland Alliance and short-eared owl (*Asio flammeus*) could occur during winter. Pallid bat (*Antrozous pallidus*) has moderate potential to use the hollows and cavities of some of the mature oak trees. San Diego desert woodrat (*Neotoma lepida intermedia*) has a high potential to occur based on observed woodrat (*Neotoma* sp.) houses. While it is possible that the houses were created by more common species, San Diego desert woodrat cannot be ruled out based on suitable habitat.

NESTING BIRDS

The Migratory Bird Treaty Act protects the majority of migratory birds breeding in the US. The Act specifically states that it is illegal "… for anyone to take … any migratory bird … nests, or eggs."[24] "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.[25] The California Fish & Game Code protects the nest or eggs of all birds and specifically states, "that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird."[26] The Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."[27]

The plant communities located on the property provide suitable habitat for a variety of birds in which to build their nests and rear their young. The mature oak trees associated with the woodland alliance have cavities, cracks, exfoliating bark, horizontal and vertical branches, crotches, and other structures, which a nest can be constructed in, on, or dangled from. Because of the water flow in the Arroyo Conejo, the associated woodland alliance and the other alliances on the property can be considered prime nesting habitat for both passerines and raptors.

The CDFW recognizes the breeding season in southern California as occurring between February and September; however, a number of species can nest outside this timeframe.[28] For example, Anna's hummingbird nests mid-December to mid-August, barn owl (*Tyto alba*) nests from January through November, great-horned owl (*Bubo virginianus*) nests mid-January through June, and mourning dove typically nests February to September but can nest year round.[29] The biologist observed these species at the property or they are expected to occur. Given the above facts, the potential for birds to nest at the property throughout much of the year is relatively high. Other raptors that could potentially nest on the property include American kestrel (*Falco sparvarius*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*).

CONNECTIVITY - LINKAGES & CORRIDORS

The National Park Service, CDFW, and the Santa Monica Mountains Conservancy have expressed concerns about the adverse effects of urbanization on wildlife, particularly fragmentation of habitat, which prevents freedom of movement that species need. Preservation of linkages between large blocks of core habitat is of the utmost importance in the region and preservation through linkages is a major concern. In general, a linkage is a feature that connects at least two blocks of habitat.[30] The assumed function of a linkage is to facilitate dispersal of individuals between blocks of habitat, allowing for long-term genetic interchange and for re-colonization of blocks of habitat from which populations have been locally extirpated.[31] Major landscape linkages have been identified in southern California. The property is not part of a landscape linkage; however, despite the fact that that the Arroyo Conejo is somewhat relatively sandwiched between existing single-family residencies, its associated habitats provide water, forage, and cover for wildlife moving along its length.

24 16 U.S.C. §§ 703-712, Migratory Bird Treaty Act of 1918 as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989
25 50 C.F.R. § 10.12
26 CAL. Fish & Game Code § 3503
27 CAL. Fish & Game Code § 86
28 CAL. Fish & Wildlife, Personal Communication, 2012
29 CAL. Fish & Game, Wildlife & Habitat Data Analysis Branch, California's Wildlife, Volume II: Birds, 1988 – 1990, Paul J. Baicich and J. O. Harrison. A Guide to the Nests, Eggs, and Nestlings of North American Birds, 1997. Harrison, H. A Field Guide to Western Birds' Nests, 1979
30 Hobbs, R. J., 1992. The Role of Corridors in Conservation: Solution or Bandwagon? Trends in Evolutionary Ecology 7(11):389-392
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IMPACT ANALYSIS

The project includes construction of a single-family residence, garage/guesthouse, swimming pool/spa, driveway, Fire Department turnaround, utilities, landscape, hardscape, and a 100-foot fuel modification zone. This section describes potential impacts on aquatic resources, plant communities, protected trees, special-status species, and nesting birds (refer to Exhibit K - Impact Analysis).

Aquatic Resources

The driveway and residence would be located approximately 33.2 and 37.5 feet from the top of Arroyo Conejo Creek's western bank, respectively. The setback distances are similar to those of other single-family residences along the length of the creek. The setbacks of the adjacent single-family residences and that of the proposed are depicted Exhibit L. The proposed project will not directly alter or affect the creek; however, it could have an indirect impact through introduction of sediments due to increased erosion potential during construction activities, through fuel modification, or by pollutants from hardscape. Measures are included below that will reduce the potential for erosion and introduction of sediments and pollutants to the Arroyo Conejo and will ensure any introductions are less than significant.

A 100-foot fuel modification zone will extend across parts of the Arroyo Conejo. Fuel modification of the Arroyo Conejo could have a significant affect upon it, if native trees or shrubs were removed as it would increase the potential for erosion and loss of cover for nesting birds and wildlife movement; however, fuel modification across the creek and within the woodland alliance shall be limited to the removal of non-native species. The removal of non-native species is not in itself considered significant. The project does not require alteration of the bed or banks of the Arroyo Conejo (or any other stream or wetland). Permitting from CDFW, USACE, and RWQCB are not required for stream alteration; however, oftentimes CDFW will take jurisdiction over adjacent woodlands that provide riparian functions.

Plant Communities

The biologist mapped plant communities pre-Woolsey fire and remapped them, post- Woolsey Fire. Construction will result in the loss of approximately 0.05-acre of both ruderal vegetation (*Brassica nigra* Herbaceous Semi-Natural Alliance) and *Salvia leucophylla* Shrubland Alliance; however, impacts to ruderal vegetation are not considered significant. It will also encroach on approximately 0.05-acre of *Quercus agrifolia* Woodland Alliance.

In addition, fuel modification will result in the loss of another 0.01-acres of ruderal vegetation and 0.32-acre of the *Salvia leucophylla Shrubland* Alliance. It will also encroach upon approximately 0.39-acre of the *Quercus agrifolia* Woodland Alliance through the removal of understory; however, the understory is dominated by the non-native species, and as such, the impact is not considered significant.

The proposed driveway is to be located within the area dominated by the *Quercus agrifolia* Woodland Alliance. The Fire Department requires driveways be clear to 13 feet, which in this case will require removal of some large oak tree branches. It is the landscape architect's (License No. 1146) opinion that this isn't expected to have a significant affect on the health of the trees or on the current functionality of the woodland. In total, the driveway will encroach upon approximately 0.25- acre of the Quercus agrifolia Woodland Alliance. It is has been designed to meander in such a way that that no tree removal would be necessary (Exhibit C - A map depicting plant communities, post-Woolsey fire, are included in Exhibit C).

Special-Status Plants

The biologists did not observe special-status plants during any of the site visits. Impacts to special-status plant species are not expected.

Special-Status Wildlife

The removal of Coastal Sage Scrub communities will result in the loss of approximately 0.37-acre of habitat that could support southern California legless lizard, San Diegan tiger whiptail, coast patch-nosed snake, San Diego mountain kingsnake, south coast garter snake, Coast Range newt, and San Diego desert woodrat. These species are not state or federally listed but they are considered special-status species. Construction and fuel modification could affect these species through direct removal of hibernacula and by incidental harm that could result in death. The loss of hibernacula, individuals, or even a population of these species on the property would not be considered significant. Regardless of significance, avoidance measures are included below that will ensure the potential for affecting these species is minimized.

Removal of the Coastal Sage Scrub communities would also reduce the amount of forage available for nesting long-eared owl and roosting pallid bats, if present; however, the loss of foraging habitat would is not considered significant. The encroachment of the woodland could also affect long-eared owl and pallid bat due construction noise and removal of branches could directly affect them. The loss of habitat in itself is not considered significant; however, the loss of an active long-eared owl nest or a pallid bat roost site would be considered significant; however, adverse impacts to these species can be avoided. Avoidance measures are outlined below that will ensure that direct and indirect impacts to these species are minimized. Fuel modification within the woodland and run-off from hardscape could also affect could also indirectly affect southern western pond turtle, two-striped garter snake, south coast garter snake, and Coast Range newt due increased sediment load and introduction of pollutants. Recommendations are included below that will minimize the potential for sediment and pollutants to enter the Arroyo Conejo and ensure that any impacts are less than significant.

Nesting Birds

The project has potential to affect active bird nests. Loss of active nests, incidental or otherwise, is considered significant; however, the potential for incidental take can be reduced to a minimum by avoiding the main breeding season and by conducting pre-construction nesting bird surveys. Avoidance measures are included below that will ensure any impacts to nesting birds and their nests are less than significant.

Connectivity - Linkages & Corridors

The property is not part of a landscape linkage; however, wildlife undoubtedly moves up and down the Arroyo Conejo despite it being located between existing single-family residencies. The proposed single-family residence will be about 37.5 feet from the creek, consistent with some of the other nearby single-family residences. It is unlikely that the proposed project would have a significant affect upon local movement given current conditions. Glare from the single-family residence is also unlikely to have a significant affect on local movement. Regardless, recommendations are included below that will minimize the potential for adverse affects through light glare.

Protected Trees

The proposed driveway is to be located within the fuel modification zones of the adjacent single-family residencies. It will encroach on a number of protected oak trees that are part of the *Quercus agrifolia* Woodland Alliance. Fire Department access also necessitates the need to remove of branches from several of them. The encroachment and removal of branches is not considered significant in itself and it is unlikely that the action would significantly compromise the current functionality of the oak woodland given the locations of existing single-family residences and their associated fuel modification zones.

Fuel modification will extend 100 feet from the single-family residence into the *Quercus agrifolia* Woodland Alliance; however, it shall be limited to the removal of non-native species (mostly grasses and mustards). The removal of the non-native grasses and mustards will not compromise the current functionality of the woodland. It is the biologists opinion that the wildlife that currently use the creek and its associated habitat, will continue you to use it after the proposed actions have occurred. Recommendations are included below that will protect the oak trees during the construction phase of the project and will reduce any adverse affects associated with encroachment, removal of branches, and the functionality of the woodland.

MITIGATION MEASURES, AVOIDANCE STRATEGIES, & RECOMMENDATIONS

This section includes mitigation measures, avoidance strategies, and recommendations that will reduce the potential for the project to affect special-status species, nesting birds, oak trees, and the Arroyo Conejo.

1. **DESIGN CONSIDERATIONS (Mitigation Measure 1)**
    i. The project proponent should include designs that will capture and convey hardscape run-off through bio-filters (vegetated gravel filed planters and filter strips) before discharge to the Arroyo Conejo or to a storage system for use as landscape irrigation during dry spells. Discharge of water from the swimming pool should also be conveyed through a filter before discharge or stored for irrigation. The owner shall use an Ozone generator or a salt chlorinator rather than use a system that requires the addition of chlorine and other harsh chemicals. These measures will reduce potential for erosion and reduce the potential for introducing sediments and other pollutants into the Arroyo Conejo.

ii. The project proponent shall use fire resistant materials where feasible, utilize designs that will reduce the potential for structures to catch fire, equip structures with an indoor and outdoor sprinkler system, and install irrigation adequate for fire suppression. The swimming pool shall also be equipped with a pump and fire hose attachment so that its water can be used for fire suppression during emergency. These measures will reduce potential for erosion and reduce the potential for introducing sediments and other pollutants into the Arroyo Conejo.

iii. Exterior lighting shall be minimized and restricted to low intensity features that do not exceed 60 watts, or the equivalent. Exterior lighting should be shielded so that light is not cast outward beyond the limits of the development envelope. Pathway, driveway, and parking area lights should be limited to fixtures that are directed downward and do not exceed two feet in height. This measure will reduce the potential for adverse affects upon local movement of wildlife up and down the Arroyo Conejo.

2. EROSION CONTROL PLAN (Mitigation Measure 2)

The project proponent shall submit to the City of Thousand Oaks, an Erosion Control and Best Management Practices Plan, prepared by a qualified, licensed professional. The plan shall certify that it is in conformance with the City's requirements. The plan will include track plates at ingress and egress, silt fence, straw waddles, and sand bags to ensure that runoff during the construction phase of the project is not directly discharged into the creek. This measure will reduce the potential for adverse affects upon water quality of the Arroyo Conejo.

3. FUEL MODIFICATION PLAN (Mitigation Measure 3)

A typical 100-foot fuel modification zone will extend across the Arroyo Conejo. Fuel modification of the between the tops of the banks of the Arroyo Conejo shall be prohibited. Fuel modification within the area dominated by *Quercus agrifolia* Woodland Alliance, shall be limited to the removal of non-native species and trimming of oak branches in the area above the driveway. Oak trees shall not be removed.

4. SOUTHERN CALIFORNIA LEGLESS LIZARD PROTECTION PLAN (Mitigation Measure 4)

Southern California legless lizard undoubtedly occurs at the property. Although the CDFW considers the species to be special-status, they have not developed guidelines or protocols to survey for it. The species lives mostly underground, which makes it very difficult to conduct surveys for it. The method that has proven to be most successful in locating legless lizard is raking but the technique is only suitable for use in sandy soils and leaf litter. In other habitats, boards are typically placed on the ground and checked periodically; however, this method does not appear to have any great success. Decision makers should assume presence of this species.

Lacking specific guidelines and protocols, the following measures are based on previous experiences and life history of the species. A qualified biologist shall rake through the leaf litter within the proposed development area, including the driveway, in an attempt to locate individuals. If legless lizards are found, they shall be relocated to another area of the property well beyond the proposed development area and fuel modification

zones. All leaf litter shall then be raked from the development area and spread elsewhere within the oak woodland but beyond fuel modification zones. The qualified biologist must hold a CDFW Scientific Collectors Permit and Memorandum of Understanding authorizing capture and handling of this species. The Southern California Legless Lizard Protection Plan shall be implemented 3 - 5 days before any clearing, grubbing, or grading activities occur.

5. WOODRAT AVOIDANCE & RELOCATION PLAN (Mitigation Measure 5)

The biologist observed at least two woodrat houses on the property. It is likely that the houses belong to big-eared woodrat; however, San Diego woodrat cannot be ruled out. The woodrat houses and vegetation within 10 feet of them shall therefore be left in place if feasible. If they cannot be left in place, they shall be dismantled and the sticks of each placed in a pile beyond the proposed development area and fuel modification zones. This will reduce the potential for direct mortality upon woodrat including San Diego desert woodrat should the species occur. It will also provide them a chance to escape and a source of sticks that they could potentially use to rebuild their houses. The Woodrat Avoidance & Relocation Plan shall be implemented 3 - 5 days before any clearing, grubbing, or grading activities occur.

6. BAT AVOIDANCE & PROTECTION PLAN (Mitigation Measure 6)

The Fire Department will require the removal of large oak tree branches particularly along the driveway. A qualified bat biologist shall be present and shall monitor the removal of the branches. The Bat Avoidance & Protection Plan will reduce the potential for the project to adversely affect bats, including pallid bat, should they occur. The arborist removing the branches shall inspect all cavities and ensure that they are bat free (and free of bird nests) before they are removed.

If bats are discovered in any of the cavities, the qualified biologist will make an attempt to identify the species and determine if they are using any of the cavities as a maternal site or not. If visual identification is not possible, the qualified biologist shall conduct an acoustical survey to determine species. If bats are using any of the cavities as a maternal site, the branch with the cavity will be left in place until the biologist determines that the pups are independent of the adults. If bats are present but the cavity is not being used as a maternal site, the biologist shall take steps to passively exclude them before any removal of branches or limbs occur. If the biologist identifies special-status bats, they shall consult the CDFW before any exclusion occurs. The qualified biologist must hold a CDFW Scientific Collectors Permit and Memorandum of Understanding authorizing capture and handling. The Bat Avoidance & Protection Plan can be implemented any time after the project is approved but before any clearing, grubbing, or grading activities occur; however, it is best to implement it late fall.

7. NESTING BIRD SURVEY, AVOIDANCE & PROTECTION PLAN (Mitigation Measure 7)

Initial grubbing, grading, and construction should be scheduled to occur outside the nesting season of birds as defined by the CDFW, if feasible. Regardless of timing, a qualified biologist shall conduct a nest survey or surveys before any activities are scheduled to occur. This will reduce the potential for the project to adversely affect nesting birds including long-eared owl should it occur.

a. The biologist must be familiar with nesting ecology of southern California species, must have a proven track record of actually finding nests, and must be approved by CDFW and/or preferably holds permits that allow them to survey for nests including those of rare, threatened, and endangered species.

b. If initial vegetation clearance, grubbing, grading, and construction activities are scheduled to occur outside the CDFW defined nesting season, the biologist should conduct a survey 7 days and again 3 days before the activities are scheduled to begin. The biologist should focus their effort within the proposed development envelope and areas within 50 feet it. The biologist should also survey 300 feet beyond the development areas to determine if there are active raptor nests nearby.

c. If initial vegetation clearance, grubbing, grading, and construction activities are scheduled to occur within the CDFW defined nesting season, the biologist should conduct a series of surveys, which should begin 31 days before any scheduled activities, and be conducted one week a part with the final survey being conducted 3 days before schedule activities begin.

d. The biologist shall prepare a brief report summarizing the results of the surveys and submit it to the City of Thousand Oaks.

e. If the biologist determines that there are active nests within or adjacent these areas, they should establish a 50-foot buffer for passerine nests and a 100 to 300-foot buffers for raptor nests.

f. The biologist should clearly mark the buffer area in the field in areas where it overlaps the proposed grading limits/development area.

g. No work will occur within a nest buffer under any circumstance unless authorized in writing by the CDFW, or until the fledglings are no longer dependent on the nest, or until the biologist otherwise determines that the nest is inactive.

h. The driveway shall remain open even if the buffers of nests extend across it; however, there shall be no stopping within these buffers and under no circumstance can large vehicles or equipment pass within 10 feet of a nest without the presence of the biologist or a statement from the biologist that their presence is not necessary and why.

i. If the biologist determines that a buffer reduction is feasible, without affecting the outcome of a nest, they shall prepare and submit a letter requesting a reduction to the CDFW along with any necessary information and a statement of justification so that the CDFW can make an informed decision to allow the reduction or not.[32] CDFW buffer reduction approvals must be provided to the City of Thousand Oaks.

i. In circumstances when activities are scheduled to occur between an original buffer and a reduced buffer, a qualified biologist should monitor the nest before, during, and after the activities, to determine if it's being affected.

ii. The only activities that shall be allowed between the original buffer and the reduced buffer are those that generate noise levels less than 60 dBA as measured at the resource.

iii. The biologist shall record noise levels every hour and must have the authority to stop any activities that exceed 60 dBA if they determine that it is affecting, or has the potential to affect the outcome of a nest.

iv. The biologist shall send weekly monitoring reports to the CDFW and the City of Thousand Oaks documenting the status of monitored nests and others as necessary. Both shall be notified immediately if any of the project activities result in take.

v. This plan shall also be implemented before any fuel modification activities occur. Fuel modification activities should only occur after the construction phase of the project has been completed or as otherwise directed by the Fire Department.

8. DRAINAGE PROTECTION PLAN (Mitigation Measure 8)

The intent of this measure is to protect the Arroyo Conejo and its associated wildlife including Southern western pond turtle, two-striped garter snake, south coast garter snake, and Coast Range newt. Orange construction fence and silt fence shall be used to protect the Arroyo Conejo during the construction phase of the project. The fencing will prevent accidental discharge of materials from entering into it and discharge of sediments during storm events.

a. Laborers shall install orange construction fence between the creek and the outside edge of the disturbance limits.

b. Laborers shall then attach silt fence to the base of the construction fence and bury it at its base in a manner that will prevent accidental discharge from entering the Arroyo Conejo. The silt fence shall be consistent with practices outlined in the Erosion Control Plans and Best Management Practices.

32 Buffer reduction may be appropriate depending on the species involved, ambient levels of human activity/disturbance, presence of visual and noise barriers, and other factors.

c. Signs shall be placed on the fence, that will declare -

Sensitive Habitat Area - No Entry Allowed - If Accidental Discharge Occurs You Must Call the Project Biologist Immediately

The signs shall include the phone number of the Project Biologist.

d. A biologist shall monitor installation of the fence and signs.

e. The project proponent or their contractor will inform the City of Thousand Oaks when construction is scheduled to begin and invite them to inspect the fence and signs.

f. The fence and signs shall remain in place and be maintained by the projects contractor throughout the duration of construction.

9. OAK TREE PROTECTION PLAN (Mitigation Measure 9)

Protective fencing shall be placed at the outermost limits of the protected zones of the oak trees or groups of trees that occur on the property and for encroachments, at the limits of disturbance. The protected zone is 5 feet from the canopy or 15 feet from the trunk; whichever is greater. Please refer to the Oak Tree Report, provided separately, for additional protective measures.

a. The fencing shall be in place before vegetation clearance, grubbing, grading, or construction activities begin.

b. No grading, construction, staging of equipment, or storage of materials shall be allowed within the protected zones of the trees.

c. No construction personnel shall enter the protected zones of the trees.

d. Signs should be attached to the fence, which declare:

NO ENTRY, PARKING, OR STORAGE ALLOWED WITHIN 5 FEET OF OAK TREES

e. After the fencing and the signs have been installed, the project proponent's contractor will inform the City of Thousand Oaks when construction is scheduled to begin and invite them to inspect the protective fencing and signs.

f. The fence shall remain in place and be maintained by the projects contractor throughout the duration of construction.

10. SPECIAL STATUS SPECIES PROTECTION PLAN (Mitigation Measure 10)

The intent of this measure is protect special-status species including Southern California legless lizard, San Diegan tiger whiptail, coast patch-nosed snake, and San Diego mountain kingsnake during construction. A qualified biologist shall conduct a pre-construction survey 1 day before activities are scheduled to occur and will monitor clearing of vegetation, grubbing, and initial grading activities. If special-status species or any other wildlife is located, they shall be ushered out of harms way or captured and relocated to an area of the property that is not affected by the proposed development or fuel modification zone. The qualified biologist must hold a CDFW Scientific Collectors Permit and Memorandum of Understanding authorizing capture and handling of the special-status species that are most likely to occur.

11. INITIAL FUEL MODIFICATION (Mitigation Measure 11)

The site shall only be fuel-modified after the construction phase of the proposed project is completed.

a. A qualified biologist shall implement the Nesting Bird Survey & Protection Plan before fuel modification occurs.

b. Initial fuel modification should not occur within the defined nesting season of birds under any circumstance as it could easily be scheduled to avoid it; however, it should be conducted in accordance with fire department regulations in future years after occupation of the single-family residence.

c. This measure is only applicable for initial fuel modification. Fuel modification mandated by the Fire Department in future years shall not be subject to this measure; however, it is the property owners responsibility to ensure that it is properly fuel modified on an annual basis and that nesting birds are not directly affected by the activity.

ADDITIONAL REQUIREMENTS

The applicant shall submit a Streambed Alteration Package to the CDFW to determine if their jurisdiction includes the *Quercus agrifolia* Woodland Alliance.

AWARENESS

The permittee shall provide a copy of this Biological Assessment to all its contractors and ensure that they understand and implement the recommendations outlined above. The Biological Assessment shall also be provided to all owners/occupants of the single-family residence so that they are aware of the properties biological resources and the measures in place to protect them.

Project Parcel

Ventura County Parcels

Existing Footprint

Proposed Fuel Modification Zone (100')

Existing Fuel Modification Zone (100')

Proposed Structures

Residence (r) - 2,444 sq.ft

Garage (g) - 648 sq. ft. Pool

(p) - 306 sq. ft.

Spa (s) - 56 sq. ft. Driveway

(d) - 3959 sq. ft.

Fire Department Turnaround (f) - 2,286 sq. ft.

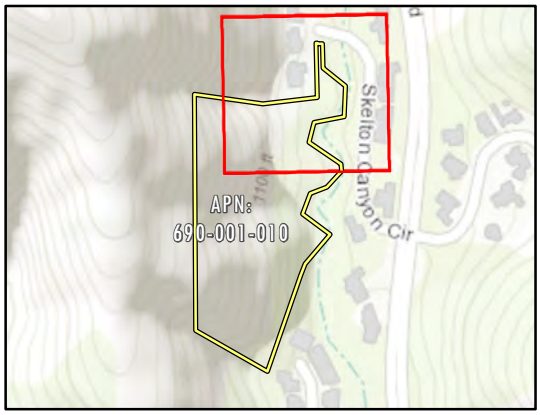

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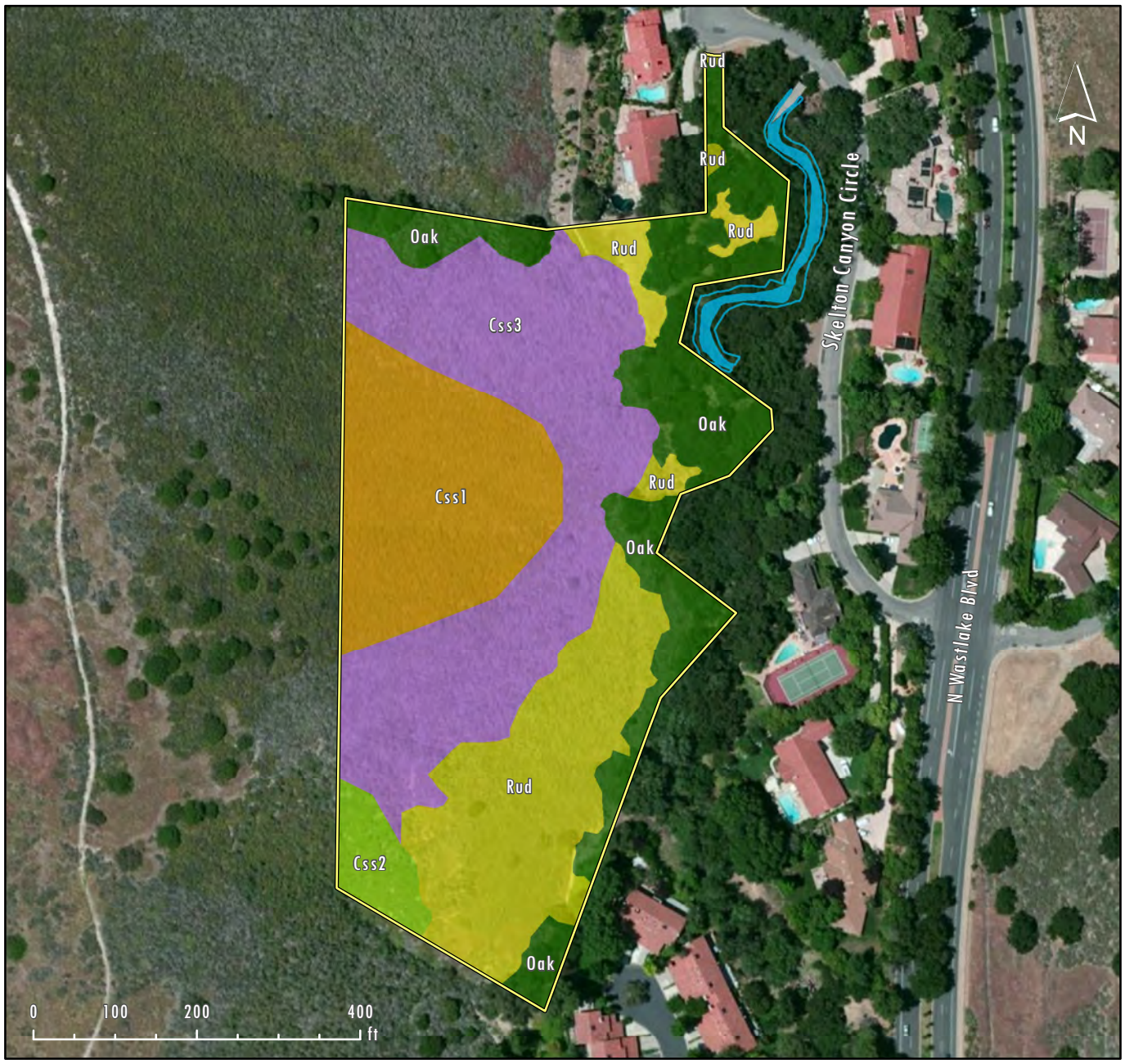
Exhibit A - Site Plan

Exhibit B - National Wetlands Inventory

Exhibit C - Natural Resources (Pre-Woolsey Fire)



Project Parcel

Jurisdictional Delineation

- Culvert
- Ordinary High Water Mark
- Top of Bank

Vegetation Communities

- Coastal Sage Scrub (Artemisia cal. - Salvia mel. Shrubland Alliance) - Css1 1.73 acres
- Coastal Sage Scrub (Malacothamnus fasciculatus Shrubland Alliance) - Css2 0.29 acres
- Coastal Sage Scrub (Salvia leucophylla Shrubland Alliance) - Css3 2.93 acre
- Ruderal (Brassica nigra Herbaceous Semi-Natural Alliance) - Rud 2.05 acres
- Oak Woodland (Quercus agrifolia Woodland Alliance) - Oak 1.83 acres

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Exhibit C - Natural Resources (Post-Woolsey Fire)

Photo 1

Description: Pre-fire conditions
Quercus agrifolia Woodland Alliance with non-native understory (pre-fire conditions).

The proposed driveway is to be located between the oak trees (between the stakes).

View: South from the terminus of Skelton Canyon Circle.

Photo 2

Description: Pre-fire conditions
Foreground - *Avena-Bromus* Semi-Natural Herbaceous Stand
Background - *Salvia leucophylla - Artemisia californica* Shrubland Alliance
Left - *Quercus agrifolia* Woodland Alliance

The proposed development area is the area dominated by the *Avena-Bromus* Semi-Natural Herbaceous Stand. Fuel modification will extend into the non-native understory of the *Quercus agrifolia* Woodland Alliance and upslope approximately 100 feet into the *Salvia leucophylla - Artemisia californica* Shrubland Alliance

View: South from the edge of the proposed development area

Photo 3
Description: Pre-fire conditions
Salvia leucophylla - Artemisia californica Shrubland Alliance. Some of the vegetation in this area must be fuel modified to accommodate Fire Department.

View: West

Photo 4
Description: Pre-fire conditions
Foreground - *Avena-Bromus* Semi-Natural Herbaceous Stand
Background - *Quercus agrifolia* Woodland Alliance

The proposed development area is the area dominated by the *Avena-Bromus* Semi-Natural Herbaceous Stand. Fuel modification will extend into the non-native understory of the *Quercus agrifolia* Woodland Alliance. Some of the trees will be encroached, requiring the removal of some branches but none of the trees are to be removed.

View: Northwest

Photo 5
Description: Pre-fire conditions
Woodrat (*Neotoma* sp.) at base of toyon (*Heteromeles arbutifolia*) adjacent the Arroyo Conejo.

Photo 6

Description: Pre-fire conditions
A number of the oak trees have cavities suitable for nesting birds and roosting bats, some of which must be removed to accommodate the driveway.

Photo 7
Description: Post-fire conditions with proposed development area. Ruderal vegetation shown in previously cleared pad at center with Coastal Sage Scrub to the right and Oak Woodland to the left.

View: Center of proposed development area facing southeast.

Photo 8
Description: Post-fire conditions showing intact Oak Woodland with understory dominated by annual brome and non-native forbs.

View: Within mapped Oak Woodland, adjacent to stream channel and facing south southeast.

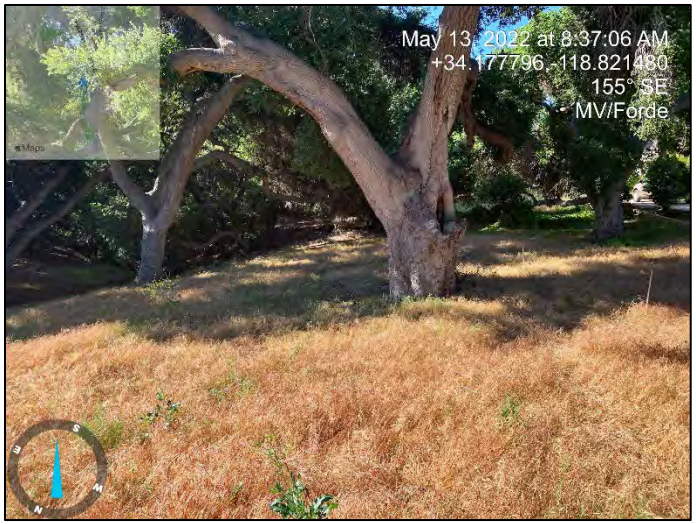


Photo 9
Description: Post-fire conditions with stream channel at center and adjacent Oak Woodland.

View: Taken from western top of bank facing south southeast.

Photo 10
Description: Post-fire conditions with increased relative cover of chaparral mallow within Coastal Sage Scrub communities.

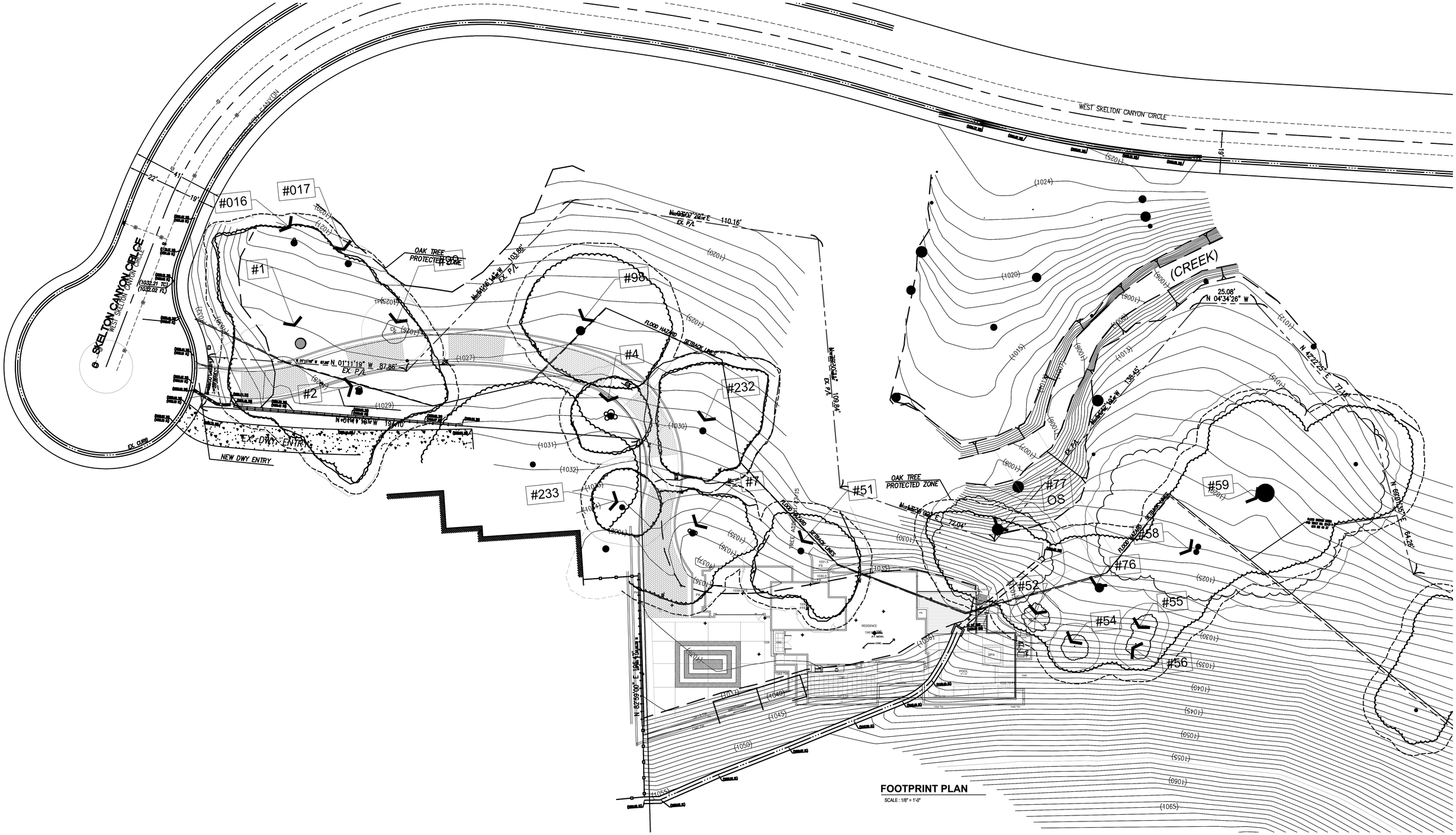
View: Taken from western edge of proposed development area facing west.

Latin Name	Common Name
DICOTYLEDONS	**FLOWERING PLANTS**
Amaranthaceae	**Amaranthus Family**
*Amaranthus retroflexus** L	Rough Pigweed
Anacardiaceae	**Sumac Family**
Malosma laurina (Nutt.) Abrams	Laurel Sumac
Toxicodendron diversilobum (Torrey & A. Gray) E. Greene	Poison Oak
Asteraceae	**Sunflower Family**
Artemisia californica Less.	California Sagebrush
Baccharis pilularis DC.	Coyote Brush
Centaurea melitensis L.*	Tocalote
Deinandra fasciculata (DC.) Greene	Fascicled Tarweed
Emmenanthe penduliflora Benth.	Whispering Bells
Encelia californica Nutt.	Coast Sunflower
Hazardia squarrosa (Hook. & Arn.) Greene var. *grindelioides* (DC.) W. D. Clark	Saw-toothed Goldenbush
Heterotheca grandiflora Nutt.	Telegraph Weed
Lactuca serriola L.*	Prickly Lettuce
Malacothrix saxatilis (Nutt.) Torr. & A. Gray	Cliff Aster
Sonchus oleraceus L.*	Common Sow Thistle
Boraginaceae	**Borage Family**
Eucrypta chrysanthemifolia (Benth.) Greene	Spotted Eucrypta
Phacelia cicutaria Greene	Caterpillar Phacelia
Phacelia parryi Torr.	Parry's Phacelia
Brassicaceae	**Mustard Family**
Brassica nigra (L.) W. D. J. Koch	Black Mustard
Hirschfeldia incana (L.) Lagr.-Fossat*	Short-pod Mustard
Convolvulaceae	**Morning Glory Family**
Convolvulus arvensis L.*	Field Bindweed
Euphorbiaceae	**Spurge Family**
Euphorbia terracina L.*	Geraldton Carnation Weed
Chenopodiaceae	**Goosefoot Family**
Chenopodium murale L. *	Nettleleaf Goosefoot
Cucurbitaceae	**Gourd Family**
Marah macrocarpa (Greene) Greene	Wild Cucumber
Fabaceae	**Legume Family**
Acmispon glaber (Vogel) Brouillet	Deerweed
Acmispon maritimus (Torr. & A. Gray) D.D. Sokoloff	Coastal Lotus
Acmispon strigosus (Nutt.) Brouillet	Strigose Lotus
Astragalus trichopodus (Nutt.) A. Gray	Santa Barbara Milkvetch
Lupinus succulentus Douglas ex K. Koch	Arroyo Lupine
Melilotus indicus (L.) All.*	Annual Yellow Sweetclover
Oxalis pes-caprae L.	Bermuda Buttercup
Fagaceae	**Oak Family**
Quercus agrifolia Nee	California Live Oak
Quercus lobata Nee	Valley Oak
Geraniaceae	**Geranium Family**

Erodium cicutarium (L.) L'Her.*	Red-stemmed Filaree
Lamiaceae	**Mint Family**
Salvia leucophylla E. Greene	Purple Sage
Salvia apiana Jepson	White Sage
Marrubium vulgare L.*	Horehound
Malvaceae	**Mallow Family**
Malacothamnus fasciculatus (Nutt. ex Torr. & A. Gray) Greene	Chaparral Mallow
Moraceae	**Mulberry Family**
Ficus carica L. *	Edible Fig
Nyctaginaceae	**Four-O'Clock Family**
Mirabilis laevis (Benth.) Curran var. *crassifolia* (Choisy) Spellenb.	California Wishbone Bush
Onagraceae	**Evening Primrose Family**
Eulobus californicus Torr. & A. Gray	California Primrose
Platanaceae	**Sycamore Family**
Platanus racemosa Nutt.	California Sycamore
Ranunculaceae	**Buttercup Family**
Ranunculus muricatus L.	Buttercup
Rosaceae	**Rose Family**
Heteromeles arbutifolia (Lindley) Roemer	Toyon
Rubiaceae	**Coffee Family**
Galium aparine L.	Common Bedstraw
Salicaceae	**Willow Family**
Salix lasiolepis Benth.	Arroyo Willow
Scrophulariaceae	**Figwort Family**
Castilleja affinis Hook. & Arn.	Indian Paintbrush
MONOCOTYLEDONS	**GRASSES & ALLIES**
Liliaceae	**Lily Family**
Calochortus clavatus var. *pallidus* (Hoover) P.L. Fiedl. & Zebell	Pale Yellow Mariposa Lily
Poaceae	**Grass Family**
Avena fatua L.*	Wild Oats
Bromus diandrus Roth*	Ripgut Brome
Bromus madritensis L. ssp. *rubens* (L.) Husn.*	Red Brome
Hordeum murinum L. *	Foxtail Barley
Leymus condensatus	Giant Wild Rye
Poa secunda J. Presl ssp. *secunda*	One-sided Bluegrass
Stipa pulchra Hitchc.	Purple Needlegrass

*Non-native species

The plant inventory was compiled on August 29, 2016 during a period of exceptional drought and outside the typical spring - early summer period when plants are more readily identifiable (under normal circumstances). A qualified botanist shall conduct a botanical survey, per CDFW and CNPS guidelines (see recommendation in text of report).



FOOTPRINT PLAN

SCALE : 1/8" = 1'-0"

JAMES DEAN
LANDSCAPE ARCHITECTURE PLANNING URBAN DESIGN
3533 Old Conejo Rd, Suite 113 Newbury Park, CA 91320 805.498.9922

Exhibit F - Oak Tree Map and Site Plan Overlay

FERRUZZA RESIDENCE

WESTLAKE VILLAGE, CA

SCALE: 1/16"=1'-0"

DATE
10-20-2021

SITE PLAN | L-1

REPTILES		
Phrynosomatidae	*Uta stansburiana elegans*	Western side-blotched lizard
	Sceloporus occidentalis longipes	Great Basin fence lizard
AMPHIBIANS	--	--
BIRDS		
Accipitridae	*Buteo jamaicensis*	Red-tailed hawk*
Odontophoridae	*Callipepla californica*	California quail
Cathartidae	*Cathartes aura*	Turkey vulture*
Columbidae	*Zenaida macroura*	Mourning dove
Trochilidae	*Selasphorus sasin*	Allen's hummingbird
	Calypte anna	Anna's hummingbird
Picidae	*Colaptes auratus*	Northern flicker
	Melanerpes formicivorus	Acorn woodpecker
Tyrannidae	*Sayornis nigricans*	Black phoebe
	Tyrannus vociferans	Cassin's kingbird
Corvidae	*Aphelocoma californica*	California scrub-jay
	Corvus corax	Common raven
Hirundinidae	*Tachycineta bicolor*	Tree swallow
Paridae	*Baeolophus inornatus*	Oak titmouse
Aegithalidae	*Psaltriparus minimus*	Bushtit
Timaliidae	*Chamaea fasciata*	Wrentit
Troglodytidae	*Thryomanes bewickii*	Bewick's wren
Turidae	*Sialia mexicana*	Western bluebird
Mimidae	*Mimus polyglottos*	Northern mockingbird
	Toxostoma redivivum	California thrasher
Ptilogonatidae	*Phainopepla nitens*	Phainopepla
Parulidae	*Setophaga coronata*	Yellow-rumped warbler
Emberizidae	*Melozone crissalis*	California towhee
	Pipilo maculatus	Spotted towhee
	Zonotrichia leucophrys	White-crowned sparrow
	Junco hyemalis	Dark-eyed junco
	Melospiza melodia	Song sparrow
Cardinalidae	*Pheucticus melanocephalus*	Black-headed grosbeak
Icteridae	*Icterus bullockii*	Bullock's oriole
Fringillidae	*Carpodacus mexicanus*	House finch
	Spinus psaltria	Lesser goldfinch
Passeridae	*Passer domesticus***	House sparrow**
MAMMALS		
Leporidae	*Sylvilagus audubonii*	Audubon's cottontail***
Canidae	*Canis latrans*	Coyote***
Cricetidae	*Neotoma sp.*	Woodrat****
Geomyidae	*Thomomys bottae*	Valley pocket gopher****
Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

* = Flyovers (species observed flying over property or within the immediate vicinity)
** = Non-Native Species
*** = Scat Detections
**** = Mound, hole, burrow, den, stick house, (as appropriate to species)

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2022)** **Federal Status**	**State Status**	**CNPS Global Rank/ State Rank**	**ELEVATION, LIFE FORM, & FLOWERING PERIOD**	**OCCURRENCE POTENTIAL** **(See notes at end of table for sources of information)**
Astragalus brauntonii Parish Braunton's milk-vetch	FE January 1997	--	1B.1 G2/S2	4 m - 640 m Perennial Herb January - August	NOT EXPECTED Occurs in closed-cone coniferous forest, chaparral, coastal sage, valley and foothill grasslands, and recent burn or disturbed areas usually in association with sandstone with carbonate layers or down-wash sites (into which the seeds have drifted). Carbonate outcrops are extremely rare within its current range, and as a result, is naturally rare. It is known from thirty-four occurrences (27 extant, 6 possibly extirpated, 3 extirpated). The property appears to lack sandstone outcrops.
Astragalus pycnostachyus Gray var. *lanosissimus* (Rydb.) Munz & McBurn. Ventura marsh milk-vetch	FE May 2001	SE April 2000	1B.1 G2T12/S1	1 m - 35 m Perennial Herb June - October	NOT EXPECTED Rediscovered near Oxnard in 1997 and known from only one natural occurrence composed of 30-50 reproductive plants. This species occurs in coastal dunes and edges of salt or brackish marshes and swamps. There are no coastal dunes, salt or brackish marshes or swamps on the property.
Astragalus tener Gray var. *titi* (Eastw.) Barneby Coastal dunes milk-vetch	FE August 1998	SE February 1982	1B.1 G2T1/S1	1 m - 50 m Annual Herb March - May	NOT EXPECTED This species is found in coastal bluff scrub with sandy soils, coastal dune, and mesic coastal prairie habitats. It is known from only six occurrences (3 extant, 3 possibly extirpated). The property lacks coastal bluff scrub, coastal dune, and mesic coastal prairie habitats.

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Atriplex coulteri (Moq.) D. Dietr. Coulter's saltbush	--	--	1B.2 G2/S2	3 m - 460 m Perennial Herb March - October	MODERATE POTENTIAL This species is associated with coastal dune, coastal scrub, coastal bluff scrub, and valley and foothill grassland habitats with alkaline or clay soils. It is known from seventy-five occurrences (73 extant, 1 possibly extirpated, 1 extirpated). The property consists of coastal scrub growing on alkaline soils. Atriplex are identifiable all year round. The biologist did not observe any atriplex within the proposed development area but it could occur farther upslope within the proposed fuel modification zone.
Atriplex parishii Wats. Parish's brittlescale	--	--	1B.1 G1G2/S1	25 m - 1900 m Annual Herb June - October	NOT EXPECTED This species is associated with chenopod scrub, playas, and vernal pool habitats on alkaline substrates. It is known from 16 occurrences (14 extant, 1 possibly extirpated, 1 extirpated). The property lacks chenopod scrub, playas, and vernal pool habitats.
Atriplex serenana A. Nels. var. *davidsonii* (Standl.) Munz Davidson's saltscale	--	--	1B.2 G5T1/S1	10 m - 200 m Annual Herb April - October	MODERATE POTENTIAL Associated with coastal bluff scrub and coastal scrub on alkaline substrates. The property consists of coastal scrub growing on alkaline soils. Atriplex are identifiable all year round. The biologist did not observe any atriplex within the proposed development area but it could occur farther upslope within the proposed fuel modification zone.

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Baccharis malibuensis Beauchamp & Henrickson Malibu baccharis	--	--	1B.1 G1/S1	150 m - 305 m Perennial Shrub (Deciduous) August	NOT EXPECTED Associated with coastal scrub, chaparral, cismontane woodland, and riparian woodland on Conejo Volcanic exposures.[1] Known from seven occurrences (7 extant) in the upper Malibu Creek watershed. The property lacks rock exposures.
California macrophylla (Hook.&Arn.) Aldas, Navarro, Vargas, Saez & Aedo Round-leaved filaree	--	--	1B.1 G2/S2	10 m - 1220 m Annual Herb March - May	NOT EXPECTED This species is associated with clay soils in cismontane woodland and grassland. Grass cover is generally low. It is known from more than 155 occurrences (144 extant, 10 possibly extirpated, 1 extirpated). The understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.
Calochortus clavatus S. Watson var. *gracilis* Ownbey Slender mariposa lily	--	--	1B.2 G4T2T3/S2S3	320 m - 1000 m Perennial Herb (Bulbiferous) March - June	NOT EXPECTED This species occurs in shaded canyons and grassy slopes in chaparral and oak woodlands habitats, often associated with serpentinite soils. It is known from only seventy-six occurrences (75 extant, 1 extirpated). The understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover. The property is also well below its known elevation range and lacks serpentinite soils.

[1] Conejo Volcanics occur in western Simi Valley from Big Mountain south through Mountclef Ridge in Santa Rosa Valley, the Conejo Hills, and the western Santa Monica Mountains to the ocean and west through the Malibu Creek watershed and upper Topanga Creek watershed. Skeletal limestone occurs as interbeds and neptunian dikes within the sequence of submarine andesitic / basaltic flows and hyalobreccias of the Conejo Volcanics. The Calabasas Formation, which overlies it, is made up of alternating layers of clayey to silty sandstone and silty shale with some areas having layers of breccia and lenses of chert in the shale.

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Centromadia parryi (Greene) Greene ssp. *australis* (Keck) B.G. Baldwin Southern tarplant	--	--	1B.1 G3T2/S2	0 m - 425 m Annual Herb May - November	NOT EXPECTED This species occurs along margins of salt marsh and swamps, vernal pools, and vernally mesic valley and foothill grasslands. It is known from 78 occurrences (69 extant, 3 possibly extirpated, 6 extirpated). The property lacks salt marshes and swamps, vernal pools, and vernally mesic valley and foothill grasslands.
Chaenactis glabriuscula DC var. *orcuttiana* (Greene) H.M. Hall Orcutt's pincushion	--	--	1B.1 G5T1/S1	< 100 m Annual Herb January - August	NOT EXPECTED This species occurs on coastal dunes and in sandy coastal bluff scrub. The property lacks coastal dune and coastal bluff scrub habitats.
Chloropyron maritimum (Benth.) A. Heller ssp. *maritimum* Salt marsh bird's-beak	FE September 1978	SE July 1979	1B.2 G4?T1/S1	0 m - 30 m Annual Herb (Hemiparasitic) May - October	NOT EXPECTED This taxon occurs in coastal dunes, salt marshes and swamps. It is known from 27 occurrences (17 extant, 8 possibly extirpated, 2 extirpated). The property lacks coastal dunes, salt marshes, and swamps.
Chorizanthe parryi Wats. var. *fernandina* (Wats.) Jeps. San Fernando Valley spineflower	FC May 2004	SE August 2001	1B.1 G2T1/S3	150 m - 1035 m Annual Herb April - June	NOT EXPECTED This species occurs in open coastal scrub and grassland on sandy soil. It is known from 21 occurrences (12 extant, 9 possibly extirpated). The property consists of coastal scrub; however, the soils are described as loams and clays.

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Chorizanthe parryi S. Watson var. *parryi* Parry's spineflower	--	--	1B.1 G3T3/S3	Wide Elevation Range Annual Herb May - June	NOT EXPECTED This species occurs on dry slopes and flats in sandy soil, typically in coastal scrub, chaparral, grassland, and oak woodland or in edges between these habitats. Coastal sage scrub and oak woodland dominate the property; however, the soils are described as loams and clays. Furthermore, the understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.
Deinandra minthornii (Jeps.) B.G. Baldwin Santa Susana tarplant	--	SR November 1978	1B.2 G2/S2	280 m - 760 m Shrub (Deciduous) July - October	NOT EXPECTED This species occurs in chaparral and coastal scrub habitats in association with sandstone outcroppings and rocky areas. It is known from only thirty-five occurrences (35 extant). The nearest known location is less than 0.5 mile east of the property. The property lacks sandstone outcroppings and rock areas. The biologist did not observe this species during the site visit.
Didymodon norrisii Norris' beard moss	--	--	2.2	600 m - 1973 m Bryophyte	NOT EXPECTED Occurs in seasonally wet sheet drainages within cismontane woodland and lower montane coniferous forest. The property lacks wet sheet drainages.
Dodecahema leptoceras (Gray) Rev. & Hardham Slender-horned spineflower	FE	CE	1B.1	200 m - 760 m Annual Herb April – June	NOT EXPECTED This species occurs in chaparral and coastal scrub (alluvian fan). The property lacks chaparral and coastal scrub habitats on alluvial fans.

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Delphinium parryi Gray ssp. *blochmaniae* (Greene) Lewis & Epl. Dune larkspur	--	--	1B.2 G4T2/S2	0 m - 200 m Perennial Herb April - May	NOT EXPECTED This taxon is associated with maritime chaparral and coastal dune habitats. It is known from only sixteen occurrences (16 extant). The property lacks maritime chaparral and coastal dune habitats.
Dithyrea maritima A. Davids. Beach spectaclepod	--	ST February 1990	1B.1 G2/S1	3 m - 50 m Perennial Herb (Rhizomatous) March - May	NOT EXPECTED This species is found in coastal dune and coastal scrub habitats with sandy soils. It is known from only twenty-eight occurrences (25 extant, 3 extirpated), none of which are in the project region. Coastal sage scrub dominates part of the property; however, the soils are described as loams and clays.
Dudleya blochmaniae (Eastw.) Moran ssp. *blochmaniae* Blochman's dudleya	--	--	1B.1 G2T2/S2	5 m - 450 m Perennial Herb April - June	NOT EXPECTED Known from fewer than twenty occurrences in California. It mostly occurs in coastal bluff scrub, coastal outside and grasslands on open, rocky slopes in shallow clays derived from ultramafic rocks, over serpentinite. It is known from forty-one occurrences. Coastal sage scrub dominates part of the property; however, openings are very limited and the slopes do not appear rocky. The biologist did not observe and Dudley during the site visits.
Dudleya cymosa (Lemaire) Britton & Rose ssp. *agourensis* K. Nakai Agoura Hills dudleya	FT January 1997	--	1B.2 G5T1/S2	200 m - 500 m Perennial Herb May - June	NOT EXPECTED This species is restricted to a band of late Pleistocene dissected gravels at road level, east of Kanan Rd, which climbs in elevation west to ~405 meters near Reyes Adobe Rd in an area dominated by chaparral and cismontane woodland habitat. It is known from only eight occurrences (8 extant). The property lacks late Pleistocene dissected gravels.

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Dudleya cymosa (Lem.) Britt. & Rose ssp. *marcescens* Moran Marcescent dudleya	FT January 1997	SR November 1978	1B.2 G5T2/S2	150 m - 520 m Perennial Herb April - July	NOT EXPECTED Associated with chaparral on lower reaches of sheer volcanic rock surfaces and canyon walls adjacent perennial streams dominated by live oak woodland, often with California Bay. In most locations, topographic relief has prevented deep soil formation; therefore, this dudleya may be the only flowering plant occurring in microhabitat otherwise dominated by mosses, lichens, and ferns. It is known from only nine occurrences (9 extant). The property lacks sheer volcanic surfaces.
Dudleya cymosa (Lem.) Britt. & Rose ssp. *ovatifolia* (Britt.) Moran Santa Monica Mountains dudleya	FT January 1997	--	1B.2 G5T1/S1	150 m - 1675 m Perennial Herb March - June	NOT EXPECTED Occurs on shaded slopes and canyon bottoms on volcanic and sedimentary conglomerate rock on exposed north-facing slopes from near Westlake Village to Agoura Hills and deep canyon bottoms along lower Malibu Creek and Topanga Creek. Known from four occurrences (4 extant). The property lacks volcanic and sedimentary conglomerate rock.
Dudleya multicaulis (Rose) Moran Many-stemmed dudleya	--	--	1B.2 G2/S2	15 m - 790 m Perennial Herb April - July	MODERATE POTENTIAL Associated with clay soils in chaparral, coastal scrub, and valley and foothill grassland habitats. It is known from one hundred and sixteen occurrences (103 extant, 5 possibly extirpated, 6 extirpated). Coastal sage scrub dominates part of the property and some of the soils are described as clays. The biologist did not observe any dudleya within the proposed development area during the site visit but the could occur upslope within the proposed fuel modification zone.

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Dudleya parva Rose & Davids. Conejo dudleya	FT January 1997	--	1B.2 G2/S2	60 m - 450 m Perennial Herb May - June	NOT EXPECTED Found in coastal scrub and valley and foothill grassland habitats, most commonly in cactus-dominated coastal sage scrub in association with rocky, gravelly, clay, and volcanic substrates derived from the Conejo volcanics and has a limited, discontinuous distribution from the western Simi Hills, along the Mountclef Ridge north to the Conejo Grade, a distance of about 10 miles. It has not been found south of Highway 101. It is known from thirteen occurrences (13 extant). The property lacks volcanic exposures and substrates and is well outside the species known range.
Dudleya verityi K. Nakai Verity's dudleya	FT January 1997	--	1B.1 G1/S1	60 m - 120 m Perennial Herb May - June	NOT EXPECTED This species is found on exposures of Conejo Volcanics in chaparral, cismontane woodland, and coastal scrub. In the database search area its known distribution is confined to Conejo Mountain. The property lacks exposures of Conejo volcanics and is well outside the species known range.
Eriogonum crocatum A. Davids. Conejo buckwheat	--	SR September 1979	1B.2 G1/S1	50 m - 580 m Perennial Herb April - July	NOT EXPECTED The known distribution of this species is limited to the Conejo Valley and surrounding regions in Ventura County where it is found in openings in chaparral, coastal scrub, and valley and grassland habitats on exposures of Conejo Volcanics. The property lacks exposures of Conejo volcanics and is well outside the species known range.

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Horkelia cuneata Lindl. var. *puberula* (Rydb.) Ertter & Reveal Mesa horkelia	--	--	1B.1 G4T1/S1	70 m - 810 m Perennial Herb February - September	NOT EXPECTED This species is found in maritime chaparral, cismontane woodland, and coastal scrub habitats with sandy or gravelly soils. It is known from only 58 occurrences (30 extant, 15 possibly extirpated, 13 extirpated). Coastal sage scrub and oak woodland dominate the property; however, the soils are described as loams and clays. Furthermore, the understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.
Isocoma menziesii (H. & A.) G. Nesom var. *decumbens* (Greene) G. Nesom Decumbent goldenbush	--	--	1B.2 G3G5T2T3/S2	10 m - 135 m Shrub April - November	LOW POTENTIAL This taxon is associated with openings in chaparral and coastal scrub with sandy soils and in disturbed areas. It is known from sixty-three occurrences (62 extant, 1 possibly extirpated). Coastal sage scrub dominates the property at almost 100% cover and the soils are described as loams and clays. Furthermore, the understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.
Lasthenia glabrata Lindl. ssp. *coulteri* (Gray) Ornduff Coulter's goldfields	--	--	1B.1 G4T2/S2	1 m - 1220 m Annual Herb February - June	NOT EXPECTED This species is found in coastal salt marshes and swamps, playas, grasslands, and vernal pools, usually on alkaline soils. It is known from eighty-nine occurrences (74 extant, 14 possibly extirpated, 1 extirpated). The property lacks coastal salt marshes, swamps, playas, grasslands, and vernal pool habitats.

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Lepidium virginicum L. var. *robinsonii* (Thell.) Hitchc. Robinson's pepper-grass	--	--	1B.2 G5T3/S3	1 m - 885 m Annual Herb January - July	MODERATE POTENTIAL Chaparral and coastal scrub. The part of the property dominated by coastal sage scrub appears suitable for this species. The biologist did not observe the species within the proposed development area but it could occur upslope within the proposed fuel modification zone.
Monardella hypoleuca A. Gray ssp. *hypoleuca* White-veined monardella	--	--	1B.3 G4T2T3/S2S3	50 m - 1525 m Herb April - December	NOT EXPECTED This species occurs in chaparral and cismontane woodland in rich soil of shady canyon bottoms often growing with *Lonicera subspicata*, *Baccharis plummerae*, and *Artemisia douglasiana*. It is known from 29 extant occurrences. The understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.
Monardella sinuata Elvin & A.C. Sanders ssp. *sinuata* Southern curly-leaved monardella	--	--	1B.2 G3T2/S2	< 300 m Annual Herb April - September	LOW POTENTIAL This species occurs on sandy soil in chaparral, cismontane woodland, coastal dunes, and openings in coastal scrub. Coastal sage scrub dominates the property at almost 100% cover and the soils are described as loams and clays. Furthermore, the understory of the area dominated by *Quercus agrifolia* Woodland Alliance appears to be routinely fuel-modified and dominated by grass at almost 100% cover.

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Nama stenocarpum Gray Mud nama	--	--	2B.2 G4G5/S1S2	5 m - 500 m Annual/Perennial Herb January - July	NOT EXPECTED This species is found in muddy margins of freshwater marshes, swamps, lakes, and rivers. It is known from only 22 occurrences (19 extant, 2 possibly extirpated, 1 extirpated). The property lacks muddy margins of freshwater marshes, swamps, lakes, and rivers.
Navarretia ojaiensis Elvin, J.M. Porter & L.M. Johnson Ojai navarretia	--	--	1B.1 G1/S1	275 m - 620 m Annual Herb May - July	NOT EXPECTED IN RUDERAL AREA (DEVELOPMENT ENVELOPE) NOT EXPECTED IN SOUTHERN COAST LIVE OAK RIPARIAN FOREST This species is associated with openings in chaparral and coastal scrub, and in valley and foothill grassland habitats. It is known from eleven occurrences (9 extant, 2 extirpated). Coastal sage scrub dominates the property at almost 100% cover and the property is well below the species known elevation range.
Nolina cismontana Dice Chaparral nolina	--	--	1B.2 G2/S2	140 m - 1275 m Perennial Shrub (Evergreen) March - July	NOT EXPECTED This species is found in coastal sage scrub and chaparral habitats on sandstone and gabbro substrates. It is known from only twenty-six occurrences (25 extant, 1 possibly extirpated). The property lacks sandstone and gabbro substrates. The biologist did not observe this species during the site visit.
Orcuttia californica Vasey California Orcutt grass	FE August 1993	SE September 1979	1B.1 G1/S1	15 m - 660 m Annual Herb April - August	NOT EXPECTED This species is found in vernal pools. It is known from only thirty-seven occurrences (31 extant, 2 possibly extirpated, 4 extirpated). The property lacks vernal pools.

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Pentachaeta lyonii Gray Lyon's pentachaeta	FE January 1997	SE January 1990	1B.1 G2/S2	30 m - 630 m Annual Herb March - August	NOT EXPECTED Occurs mostly in pocket grassland in chaparral, coastal sage scrub, road/trail edges and sites transitional to shrublands with rocky and clay soils of volcanic origin. It occurs in the central Santa Monica Mountains along the northern slopes, through Thousand Oaks, around the western edge of the Simi Hills to the western edge of City of Simi Valley. It is known from only forty-one occurrences (35 extant, 5 possibly extirpated, 1 extirpated). The property lacks pocket grasslands and suitable substrate. The biologist did not observe the species during the site visit on March 14.
Quercus dumosa Nutt. Nuttall's scrub oak	--	--	1B.1 G3/S3	15 m - 400 m Shrub February - August	NOT EXPECTED This species is found on sandy soil and clay loam in closed-cone coniferous forest, chaparral, and coastal scrub. The biologist and arborist did not observe this species on the property.
Senecio aphanactis Greene Chaparral ragwort	--	--	2B.2 G3?/S2	15 m - 800 m Annual Herb January - April	NOT EXPECTED This species is found on drying alkaline flats within woodland, chaparral, and coastal scrub habitats. It is known from only 47 occurrences (43 extant, 4 possibly extirpated). The property lacks drying alkaline flats.
Sidalcea neomexicana Gray Salt spring checkerbloom	--	--	2B.2 G4?/S2S3	15 m - 1530 m Perennial Herb March - June	LOW POTENTIAL This species is associated with mesic chaparral, coastal scrub, low montane coniferous forest, Mojavean desert scrub, and playas on alkaline substrates. It is known from 15 occurrences (14 extant, 1 possibly extirpated). Alkaline soils occur on the property; however, the coastal sage scrub is at almost 100% cover.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2022)** **Federal Status**	**State Status**	**CNPS Global Rank/ State Rank**	**ELEVATION, LIFE FORM, & FLOWERING PERIOD**	**OCCURRENCE POTENTIAL** **(See notes at end of table for sources of information)**
Suaeda esteroa Ferren & Whitmore Estuary seablite	--	--	1B.2 G3/S2	0 m - 5 m Perennial Herb May - January	NOT EXPECTED This species occurs in coastal salt marshes and swamps. It is known from only twenty-three occurrences (23 extant). The property lacks coastal salt marshes and swamps.
Thelypteris puberula (Baker) C. Morton var. *sonorensis* A.R. Smith Sonoran maiden fern	--	--	2B.2 G5T3/S2	50 m - 610 m Perennial Herb (Rhizomatous) N/A	NOT EXPECTED This species is associated with meadows and seeps. It is known from 21 extant occurrences. The property lacks meadows and seeps.
Tortula californica Bartr. California screw moss	--	--	1B.2 G2?/S2	10 m - 1460 m Moss N/A	NOT EXPECTED This species is associated with sandy soil in chenopod scrub and native grassland. The property lacks chenopod scrub and native grassland habitats.

STATUS KEY:

Federal		State		
FE:	Federally Endangered	SE:	State Endangered	CNPS California Rare Plant Rank
FT:	Federally Threatened	ST:	State Threatened	
FC:	Federal Candidate Species	SR:	State Rare	Rank 1A: Plants Presumed Extinct in California
		SC:	State Candidate	Rank 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
				Rank 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
				Rank 3: Plants About Which We Need More Information - A Review List
				Rank 4: Plants of Limited Distribution - A Watch List

.1-Seriously threatened in California (over 80% of occdependentthreatened / high degree and immediacy of threat)
.2-Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Potential for Occurrence is based on professional experience, what is known about habitat associations and requirements of the species, and known occurrences in the region. Sources of information consisted of the California Natural Diversity Database and California Native Plant Society Inventory of Rare and Endangered Plants.

Present = Detected during site visit, known to occur, or recently reported to occur
Expected = Suitable habitat is present and species known to occur in the immediate vicinity
High Potential = Suitable habitat is present and species is known to occur frequently in the region
Moderate Potential = Suitable habitat is limited and species occurs in the region infrequently
Low Potential = Species-specific survey negative or marginal habitat is present or temporary in nature and species known to occur in the immediate vicinity (potential for occurrence cannot be ruled out)
Not Expected = Suitable habitat and substrate absent and/or area of interest is located outside known geographical and elevation ranges.

Global Rank (G Rank) is a reflection of the overall status of an element throughout its global range. Both Global and State ranks represent a letter and number score that reflects a combination of Rarity, Threat, and Trend factors, with weighting being heavier on Rarity than the other two. Taxa that are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies.

GQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
GX = Presumed Extinct - Species not located despite intensive searches and virtually no likelihood of rediscovery. Ecological community or system eliminated throughout its range, with no restoration potential.
GH = Possibly Extinct - Known from only historical occurrences but some hope of rediscovery. Evidence exists that species may be extinct or ecosystem eliminated throughout its range, but not enough to state this with certainty.
G1 = Critically Imperiled - At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled - At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable - At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure - Common; widespread and abundant.
G? = Inexact Numeric Rank
GU = Unrankable
GNR = Unranked
GNA = Not Applicable
C = Captive or Cultivated Only

State Rank (S Rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

SQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
SX = Presumed Extirpated
SH = Possibly Extirpated
S1 = Critically Imperiled - Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = Imperiled - Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = Vulnerable - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer) recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = Apparently Secure - Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 = Secure- Common, widespread, and abundant in the state.
S? = Inexact Numeric Rank
SU = Unrankable
SNR = Unranked
SNA = Not Applicable

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [1]
INVERTEBRATES				
Streptocephalus woottoni Riverside fairy shrimp	FE August 1993	--	-- G1G2/S1S2	NOT EXPECTED This species is only found in deep, cool lowland vernal pools that retain water through the warmer weather of late spring and in ditches and road ruts. The biologist held a USFWS permit and CDFW MOU authorizing surveys for this species for more than 10 years. The property lacks vernal pools.
Danaus plexippus Monarch butterfly (Overwintering Population)	--	--	-- G5/S3	NOT EXPECTED Critical features of winter sites are conifer and eucalyptus groves. The property lacks conifer and eucalyptus groves.
Euphydryas editha quino Quino checkerspot butterfly	FE January 1997	--	-- G5T1T2/S1	NOT EXPECTED Now restricted to western Riverside County and San Diego County. Occurs in coastal sage scrub, chaparral, and valley grasslands. Adults typically fly late February into April, sometimes May. The biologist held a USFWS permit and CDFW MOU authorizing surveys for this species for more than 12 years. The property is well outside the specie sknown range.

[1] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [2]
FISH				
Oncorhynchus mykiss irideus Southern steelhead	FE August 1997	--	SSC G5T3Q/S2	NOT EXPECTED Young hatch and typically remain in fresh water for 1 - 3 years then swim to the ocean, staying 1 - 2 years before returning to their native streams. The Arroyo Conejo is ephemeral; it is not suitable for this species.
Gila orcutti Arroyo chub	--	--	SSC G2/S2	NOT EXPECTED Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita rivers, and Malibu and San Juan creeks and introduced to other rivers and creeks. The Arroyo Conejo is ephemeral; it is not suitable for this species.
Eucyclogobius newberryi Tidewater goby	FE February 1994	--	SSC G3/S2S3	NOT EXPECTED Occurs in cool brackish water of lagoons; favoring salinities less than 10 ppt. Favorable habitat includes shallow open water with emergent vegetation. The Arroyo Conejo is ephemeral; it is not suitable for this species.

[2] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [3]
REPTILES				
Actinemys pallida Southern Western pond turtle	--	--	SSC G3G4/S3	HIGH POTENTIAL TO OCCUR IN ARROYO CONEJO Associated with permanent or nearly permanent water bodies. May be active year-round. Most often seen basking above the water line. The Arroyo Conejo appears suitable for this species and individuals are known to occur several miles down stream of the property.
Phrynosoma blainvillii Coast horned lizard	--	--	SSC G3G4/S3S4	MODERATE POTENTIAL The species occurs throughout the foothills and coastal plains from Los Angeles area to northern Baja California. It frequents areas with open vegetation such as chaparral or coastal sage scrub. Coastal sage scrub dominates part of the property; however, cover is almost 100%.
Aspidoscelis tigris stejnegeri San Diegan tiger whiptail	--	--	-- G5T3T4/S2S3	MODERATE POTENTIAL Occurs in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chaparral, desert scrub, desert wash, alkali scrub, and annual grassland. The area dominated by coastal sage scrub is suitable for this species.
Anniella stebbensi Southern California legless lizard	--	--	SSC G3G4T3T4Q/S3	EXPECTED Occurs in sparsely vegetated areas of dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks in loose soil and leaf litter. Lives mostly underground. Most active during the morning and evening. This species is expected to occur throughout the entire property.

[3] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [3]
Salvadora hexalepis virgultea Coast patch-nosed snake	--	--	SSC G5T4/S2S3	EXPECTED Occurs from San Luis Obispo County, south through the dependent zone, south and west of the into coastal northern Baja California in semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. The part of the property dominated by coastal sage scrub is suitable for this species.
Lampropeltis zonata pulchra San Diego mountain kingsnake	--	--	SSC G4G5/S1S2	HIGH POTENTIAL TO OCCUR Common in the vicinity of rocks or boulders near streams or lakeshores. May also utilize rotting logs and seek cover under dense shrubs. The property consits of suitable habitat elements.
Thamnophis hammondii Two-striped garter snake	--	--	SSC G4/S3S4	HIGH POTETIAL TO OCCUR IN & ADJACENT THE ARROYO CONEJO Occurs from Monterey County west of the Coast Ranges south through the Transverse and Peninsular ranges into Mexico. Primarily aquatic; however, the biologist has observed it some distance from water in the Simi Valley area. The Arroyo Conejo is suitable.
Thamnophis sirtalis ssp. South coast garter snake	--	--	SSC (From Ventura to San Diego) G5T1T2/S1S2	HIGH POTENTIAL Absent only from Alpine Co. southward (east of the Sierra crest), the southern desert regions, and coastally from northern San Diego Co. south to the Mexican border. Associated with permanent or semi-permanent bodies of water. The Arroyo Conejo is suitable.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [4]
AMPHIBIANS				
Anaxyrus californicus Arroyo toad	FE August 1995	--	SSC G2G3/S2S3	NOT EXPECTED Occurs in washes, arroyos and riparian areas with willows, sycamores, oaks, and cottonwoods along exposed sandy substrates. Tadpoles sift fine sediments for food and are extremely dependent on this specialized habitat. The Arroyo Conejo is not suitable for this species; there are no deep ponds, which are required for breeding or fine sediments that are required by tadpoles.
Rana aurora draytonii California red-legged frog	FT May 1996	--	SSC G2G3/S2S3	NOT EXPECTED Occurs in a variety of habitat types, including aquatic, riparian, and upland habitats. They prefer slow moving or deep standing ponds, pools, and streams. They are active all year but will in dry years estivate in moist refuges until the late fall rains. The Arroyo Conejo is not suitable for this species; there are no deep ponds, which are required for breeding.
Taricha torosa torosa Coast Range newt	--	--	SSC (Monterey County to South) G4/S4	HIGH POTENTIAL Occurs in wet valley-foothill hardwood, hardwood-conifer, mixed conifer, oak woodlands, coastal scrub, chaparral, and annual grasslands. They summer in moist habitats under woody debris, or in rock crevices and animal burrows. Adults migrate in large numbers from terrestrial locations to ponds, reservoirs, and sluggish pools in streams to breed. The property consists of suitable habitat elements.

[4] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season/Region) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [4]
Spea hammondii Western spadefoot	--	--	SSC G3/S3	NOT EXPECTED Occurs in grasslands, chaparral, and pine-oak woodlands preferring open areas with sandy or gravelly soils. Species requires vernal or pools of intermittent streams for breeding. They are typically active October to May. Breeding occurs January - May, 1 - 2 days after heavy rains. The property lacks vernal pools. The Arroyo Conejo lacks pools.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [5]
BIRDS				
Gymnigyps californianus California condor	FE March 1967	SE June 1971	FP G1/S1	NOT EXPECTED Permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara Co. south to Los Angeles Co., the Transverse Ranges, Tehachapi Mts., and southern Sierra Nevada. Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags. The property lacks suitable habitat elements.
Elanus leucurus White-tailed kite	--	--	FP (Nesting) G5/S3	NOT EXPECTED Inhabits grassland, pastures and other herbaceous habitat mostly in cismontane California. For breeding, requires dense clumps of trees or tall shrubs, surrounded by grassland and other open habitats. The property lacks suitable habitat elements.
Aquila chrysaetos Golden eagle	--	--	FP/WL (Nesting) G5/S3	NOT EXPECTED Rolling foothills, mountain areas, sage-juniper flats, and desert habitats with secluded cliffs and overhanging ledges and large trees used for cover. The property lacks suitable habitat elements.

[5] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2022)** **Federal Status**	**State Status**	**CDFW (Season) Global/State Ranks**	**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [5]
Haliaeetus leucocephalus Bald eagle	Delisted August 2007 FT (Rev.) August 1995 FE (Rev.) March 1978 FE March 1967	SE (Rev.) October 1980 SE June 1971	FP (Nesting & Wintering) G5/S2	NOT EXPECTED Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. About half of the wintering population is in the Klamath Basin. More common at lower elevations; not found in the high Sierra Nevada. Fairly common as a local winter migrant at a few favored inland waters in southern California. Largest numbers occur at Big Bear Lake, Cachuma Lake, Lake Mathews, Nacimiento Reservoir, San Antonio Reservoir, and along the Colorado River. The property lacks suitable habitat elements.
Circus cyaneus Northern harrier	--	--	SSC (Nesting) G5/S3	NOT EXPECTED Frequents meadows, grasslands, open rangelands, desert sinks, and both fresh and saltwater wetlands. More widespread in winter, foraging in sparse scrub and agricultural areas including fallow fields. The property lacks suitable habitat elements.
Buteo swainsoni Swainson's hawk	--	ST April 1983	-- (Nesting) G5/S3	MAY FLY OVER PROPERTY DURING MIGRATION Breeds in isolated stands of trees in juniper-sage flats, riparian areas, and in oak savannah, forages in grasslands, suitable grain fields, alfalfa fields, and livestock pastures. The only known nest sites in southern California are within the Antelope Valley. The property lacks suitable habitat elements.
Buteo regalis Ferruginous hawk	--	--	WL (Wintering) G4/S3S4	MAY FLY OVER PROPERTY DURING MIGRATION & WINTER A winter resident; it does not nest in southern California. Frequents grasslands and agricultural areas. The property lacks suitable habitat elements.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2022)** **Federal Status**	**State Status**	**CDFW (Season) Global/State Ranks**	**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [5]
Falco peregrinus anatum Peregrine falcon	Delisted August 1999 FE June 1970	Delisted November 2009 SE June 1971	FP (Nesting) G4T4/S3S4	NOT EXPECTED Breeds mostly in woodland, forest, and coastal habitats. Migrants occur along the coast in spring and fall. The property lacks suitable habitat elements.
Laterallus jamaicensis coturniculus California black rail	--	ST June 1971	FP G3G4T1/S1	NOT EXPECTED It occurs in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass. The property lacks suitable habitat elements.
Rallus longirostris obsoletus California clapper rail	FE October 1970	SE June 1971	-- G5T1/S1	NOT EXPECTED Locally common yearlong in coastal wetlands and brackish areas around San Francisco, Monterey, and Morro bays. Prefers emergent wetland dominated by pickleweed and cordgrass, and brackish emergent wetland dominated by bulrush. Requires shallow water and mudflats for foraging, with adjacent higher property for cover during high water. The property lacks suitable habitat elements.
Rallus longirostris levipes Light-footed clapper rail	FE October 1970	SE June 1971	FP G5T1T2/S1	NOT EXPECTED Requires emergent or brackish emergent wetlands and tidal sloughs dominated by pickleweed, cord grass and bulrush. The property lacks suitable habitat elements.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [5]
Rallus longirostris yumanensis Yuma clapper rail	FE March 1967	ST February 1978 SE June 1971	-- G5T3/S1	NOT EXPECTED In coastal saline emergent wetlands along southern California from Santa Barbara Co. to San Diego Co. Prefers emergent wetland dominated by pickleweed and cordgrass, and brackish emergent wetland dominated by bulrush. Requires shallow water and mudflats for foraging, with adjacent higher vegetation for cover during high water. The property lacks suitable habitat elements.
Charadrius alexandrinus nivosus Western snowy plover	FT April 1993	--	SSC (Nesting) G3T3/S2	NOT EXPECTED Primarily occurs and nests on coastal beaches, sand spits, dune-backed beaches, sparse dunes, beaches at creek and river mouths, saltpans at lagoons and estuaries. Less commonly, on bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. The property lacks suitable habitat elements.
Rynchops niger Black skimmer			SSC (Nesting Colony) G5/S2	NOT EXPECTED A fairly common summer resident at the Salton property arrives by late April and departs by October, breeding in most recent years. Increasingly frequent visitor to coastal estuaries and river mouths of southern California, and accidental at a few other interior locations. The property lacks suitable habitat elements.
Sterna antillarum browni California least tern	FE October 1970	SE June 1971	FP (Nesting Colony) G4T2T3Q/S2S3	NOT EXPECTED A summer resident, it arrives at breeding grounds along marine and estuarine shores late April in southern California. Feeds in shallow estuaries or lagoons where small fish are abundant. The property lacks suitable habitat elements.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2022)** **Federal Status**	**State Status**	**CDFW (Season) Global/State Ranks**	**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [5]
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT November 2014	SE March 1988 ST June 1971	-- (Nesting) G5T3Q/S1	NOT EXPECTED Nearly extirpated in southern California, now a rare summer resident of extensive valley, foothill and desert riparian habitats along river bottoms. Requires densely foliaged deciduous trees and shrubs, especially willows, for nesting and mature cottonwoods for foraging. The property lacks suitable habitat elements.
Asio otis Long-eared owl	--	--	SSC (Nesting) G5/S3?	MODERATE POTENTIAL Occurs in the state year round, although seasonal status varies regionally; breeds from February through July. Uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor. Riparian habitat required; also uses live oak thickets and other dense stands of trees. It occurs along the Santa Clara River (Pers. Obs.) and presumed to breed there. Also known to nest in Big Tujunga Wash. The property consists of suitable habitat elements.
Asio flammeus Short-eared owl	--	--	SSC (Nesting) G5/S3	MODERATE POTENTIAL (WINTER) A rare winter resident found in open areas with few trees, such as annual and non-native grasslands, irrigated pasture, and both estuarine and freshwater emergent wetlands. Known to occur at Ballona Wetlands and the Santa Clara River (Pers. Obs.) during winter. Does not nest in Southern California. May occur during winter within the area dominated by oak woodland.
Athene cunicularia hypugea Western burrowing owl	--	--	SSC (Burrow Sites & Winter Sites) G4/S3	NOT EXPECTED Year-round resident throughout much of the state in open dry grassland and desert habitats, and in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Breeding season is March to August, but can begin February and extend into December. Usually nests in mammal burrows that they modify. The biologist did not observe this species during the site visit, or any owl-modified burrows, or other sign suggesting presence. The property is not suitable.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [5]
Chaetura vauxi Vaux's swift	--	--	SSC (Nesting) G5/S2S3 --	MAY FORAGE OVER PROPERTY DURING MIGRATION A summer resident of northern California. Breeds fairly commonly in the Coast Ranges from Sonoma Co. north, and very locally south to Santa Cruz Co.; in the Sierra Nevada; and possibly in the Cascade Range. Prefers redwood and Douglas fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs. Fairly common migrant throughout most of the state in April and May, and August and September. A few winter irregularly in southern coastal lowlands. The property lacks suitable habitat elements.
Empidonax traillii extimus Southwestern willow flycatcher	FE March 1995	SE January 1991	SSC (Nesting) G5T1T2/S1	NOT EXPECTED Summer resident. Breeds in dense riparian vegetation near surface water or saturated soil. Riparian patches individuals in size and shape, and may be a relatively dense, linear contiguous stand or an irregularly shaped mosaic with open areas. The property lacks suitable habitat elements. The biologist has held a USFWS permit and CDFW MOU authorizing surveys for this species for the past 15 years.
Lanius ludovicianus Loggerhead shrike	--	--	SSC (Nesting) G4/S4	MODERATE POTENTIAL Found in arid grassland, open savannah, agricultural areas, and both coastal and desert scrub, often near areas of barren soil, including overgrazed land. Requires scattered thorny shrubs for nest placement and for hanging prey. The property consists of suitable habitat elements.
Vireo bellii pusillus Least Bell's vireo	FE May 1986	SE October 1980	SSC (Nesting) G5T2/S2	NOT EXPECTED Frequents riparian habitats and require dense thickets of willow and other low shrubs for nesting. The dense riparian thickets they occupy are usually impenetrable, with ground cover in the shrub layer being nearly 100%. The property lacks suitable habitat elements. The biologist has held a USFWS permit and CDFW MOU authorizing surveys for this species for the past 14 years.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [5]
Riparia riparia Bank swallow	--	SE June 1989	-- (Nesting) G5/S2S3	MAY FORAGE OVER PROPERTY DURING MIGRATION Restricted to riparian habitats during summer and open habitats during migration. Requires vertical banks, bluffs, or cliffs with fine-textured or sandy soils for nesting. It nests along a small section of the Sacramento and Feather rivers and other isolated areas. Species not known to nest in the region.
Polioptila californica California gnatcatcher	FT March 1993	--	SSC G3T2/S2	LOW POTENTIAL Obligate resident of arid coastal scrub. California buckwheat, coastal sage, and patches of prickly pear cactus are favored. Species nests within the vicinity of California State University Channel Islands. The property consists of suitable habitat elements; however, nearest known location is about 7 miles to the northwest at the end of Ranch Conejo Boulevard at Hill Canyon. The biologist did not hear any individuals during any of the site visits and has held a USFWS permit and CDFW MOU authorizing surveys for this species for the past 14 years.
Setophaga petechia Yellow warbler	--	--	SSC G5/S3S4	NOT EXPECTED Occurs as a migrant and summer resident from late March through early October; breeds from April to late July in riparian woodlands from coastal and desert lowlands up to 2500 m in Sierra Nevada. Also breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. The Arroyo Conejo does not appear suitable for this species. May occur during migration.
Icteria virens Yellow-breasted chat	--	--	SSC G5/S3	NOT EXPECTED Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland. In migration, may be found in lower elevations of mountains in riparian habitat. Breeds late April through early August. The Arroyo Conejo lacks suitable habitat elements.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [5]
Pooecetes gramineus affinis Vesper sparrow			SSC (Wintering) G5T3?/S3?	NOT EXPECTED Winters in open grasslands and sparse shrublands in the valley and desert regions of Los Angeles County. The property lacks suitable habitat elements.
Passerculus sandwichensis beldingi Belding's savannah sparrow	--	SE January 1974	-- G5T3/S3	NOT EXPECTED Occurs year-round in salt marsh usually in the upper littoral zone. It nests in dense pickleweed. The property lacks suitable habitat elements.
Ammodramus savannarum Grasshopper sparrow	--	--	SSC (Nesting) G5/S2	NOT EXPECTED Occurs nearly year-round in extensive, dense grasslands, especially those with a variety of grasses and tall forbs and scattered low shrubs for singing perches. The property lacks suitable habitat elements.
Agelaius tricolor Tricolored blackbird	--	SE Emergency December 2013 Expired December 2014	SSC (Nesting Colony) G2G3/S1S2	NOT EXPECTED Feeds in grassland and cropland habitats and breeds near fresh water in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs March through November. The property lacks suitable habitat elements.
Xanthocephalus xanthocephalus Yellow-headed blackbird	--	--	SSC (Nesting) G5/S3	NOT EXPECTED Nests in fresh emergent wetland with dense vegetation and deep water, often along borders of lakes or ponds. Forages in emergent wetland and moist, open areas, especially cropland and muddy shores of lacustrine habitat. The property lacks suitable habitat elements.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [6]
MAMMALS				
Sorex ornatus salicornicus Southern California saltmarsh shrew	--	--	SSC G5T1?/S1	NOT EXPECTED The Southern California salt marsh shrew is confined to coastal salt marshes in Los Angeles, Orange, and Ventura counties. The property lacks suitable habitat elements.
Macrotus californicus California leaf-nosed bat	--	--	SSC G4/S2S3	NOT EXPECTED Preferred habitats are caves, mines, and rock shelters, mostly in Sonoran desert scrub. It does not hibernate. Winter roosts are geothermically heated. Mating takes place in the fall. Pups born June. The property lacks suitable habitat elements. Specifically it lacks potential roost sites. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.
Antrozous pallidus Pallid bat	--	--	SSC G5/S3	MODERATE POTENTIAL Throughout California except high Sierra Nevada. Habitat includes grassland, shrubland, woodland, and conifer forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, under bridges, bird and bat boxes, and occasionally hollow trees and buildings. Non-migratory. Birth occurs late June, nursing continues into August. The hollows and cavities of the mature oak trees could be used by this species for roosting. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.

[6] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [6]
Euderma maculatum Spotted bat	--	--	SSC G4/S2S3	NOT EXPECTED Occupied habitats include arid deserts, grasslands, and mixed conifer forests. Prefers sites with adequate roosting habitat, such as cliffs. Feeds over water and along washes. Pups are born late May to early June, nursing continues into August. The property lacks suitable habitat elements. Specifically, it lacks potential roost sites. The biologist holds a CDFW MOU that authorizes capture of authorizes variety of techniques including hand-held nets, mist nets, and harp traps.
Lasiurus blossevillii Western red bat	--	--	SSC G5/S3?	LOW POTENTIAL Occurs from Shasta Co. south to Mexico, west of Sierra Nevada/Cascade crest and deserts. Feeds over scrublands, grasslands, open woodlands, and croplands. Roosts in foliage of forest and woodland trees. Pups born June. Nursing into August. Migrates to south of range to hibernate. The foliage of the mature oak trees could be used by this species for roosting but unlikely due actual structure of the canopies. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.
Corynorhinus townsendii Townsend's big-eared bat	--	SC December 2013	SSC G3G4/S2S3	NOT EXPECTED Found throughout California except subalpine and alpine habitats. Roosts in caves, mines, tunnels, buildings, and other human-made structures. Prefers mesic habitats where it gleans vegetation or captures moths and beetles in flight. Pups are born in May or June, nursing continues into August. The property lacks suitable habitat elements. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [6]
Eumops perotis californicus Greater bonneted bat	--	--	SSC G5T4/S3?	LOW POTENTIAL Prefers open arid areas. Crevices, high buildings, trees, and tunnels required for roosting and maternal sites. Pups are born late June through September, nursing continues into early November. Does not migrate or hibernate. The hollows and cavities of the mature oak trees could be used by this species for roosting. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.
Nyctinomops femorosaccus Pocketed free-tailed bat	--	--	SSC G4/S3	NOT EXPECTED Rare in California. Prefers rocky desert areas with high cliffs or rock outcrops. Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Prefers rock crevices in cliffs as roosting sites. Maternity sites include rock crevices, caverns, or buildings. Pup usually born early July. The property lacks suitable habitat elements. The biologist holds a CDFW MOU that authorizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps.
Bassariscus astutus Ringtail	--	--	FP G5/S3S4	LOW POTENTIAL Ideal habitat consists a mix of forest and shrub land associated with rocky or riparian habitats. Its principal habitat requirements seem to be den sites among boulders or in hollows of trees with sufficient food in the form of rodents and other small animals. The property consists of suitable habitat; however, its proximity to existing single-family residence to the oak woodland probably precludes use of oak hollows in this particular area.
Taxidea taxus American badger	--	--	SSC G5/S4	NOT EXPECTED Prefers dry open stages of most shrub, forest, and herbaceous habitats, with friable soils. Coastal sage scrub dominates the majority of the property at almost 100% cover. The biologist did not observe any dens on the property during the site visits.

SCIENTIFIC NAME COMMON NAME	STATUS (May 2022) Federal Status	State Status	CDFW (Season) Global/State Ranks	POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY [6]
Neotoma lepida intermedia San Diego desert woodrat	--	--	SSC G5T3?/S3?	HIGH POTENTIAL Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats with rocky outcrops and substrates. Houses are constructed with twigs, sticks, cactus parts, and rocks, and are used for nesting, food caching, and predator escape. The biologist observed woodrat houses within the area dominated by coastal sage scrub and by oak woodland.
Microtus californicus stephensi South coast marsh vole	--	--	SSC G5T1T2/S1S2	NOT EXPECTED This subspecies occurs from Santa Barbara County south to Orange County in coastal salt marshes dominated by pickleweed. The property lacks suitable habitat elements.
Lepus californicus bennetti San Diego black-tailed jackrabbit	--	--	SSC G5T3?/S3? --	NOT EXPECTED Abundant at lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats. Coastal sage scrub dominates the majority of the property at almost 100% cover. The biologist did not observe any individuals on the property during the site visits.

Status Key:

Federal		State		California Department of Fish and Wildlife	
FE:	Federally Endangered	SE:	State Endangered	FP:	Fully Protected
FT:	Federally Threatened	ST:	State Threatened	SSC:	Species of Special Concern
FC:	Federal Candidate	SC:	State Candidate	WL:	Watch List

Potential for Occurrence: Based on professional experience, knowledge of habitat associations, and known occurrences in the region.

Present = Detected during site visit, known to occur, or recently reported to occur
Expected = Suitable habitat is present and species known to occur in the immediate vicinity
High Potential = Suitable habitat is present and species is known to occurs frequently in the region
Moderate Potential = Suitable habitat is limited and species occurs in the region infrequently
Low Potential = Species-specific survey negative or marginal habitat is present or temporary in nature and species known to occur in the immediate vicinity (potential for occurrence cannot be ruled out)
Not Expected = Suitable habitat is absent or species is not expected to occur during the "season of concern"

The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11. The official state Endangered and Threatened animals list is contained in the California Code of Regulations, Title 14, Section 670.5. A state candidate species is one that the Fish and Game commission had formally noticed as being under review by the Department for addition to the State list. A federal candidate species is one for which a proposed regulation has been published in the Federal Register.

Fully Protected: This classification was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal and ringtail cat are not. The Fish and Game Code sections dealing with Fully Protected species state that these species "may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003 the code sections dealing with fully protected species were amended to allow the Department to authorize take resulting from recovery activities for state-listed species. More information on Fully Protected species and the take provisions can be found in the Fish and Game Code, (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515). Additional information on Fully Protected fish can be found in the California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 2, Article 4, §5.93. The category of Protected Amphibians and Reptiles in Title 14 has been repealed.

California Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all "Species of Special Concern" have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a "Threatened" or "Endangered" species under the State and/or Federal Endangered Species Acts.

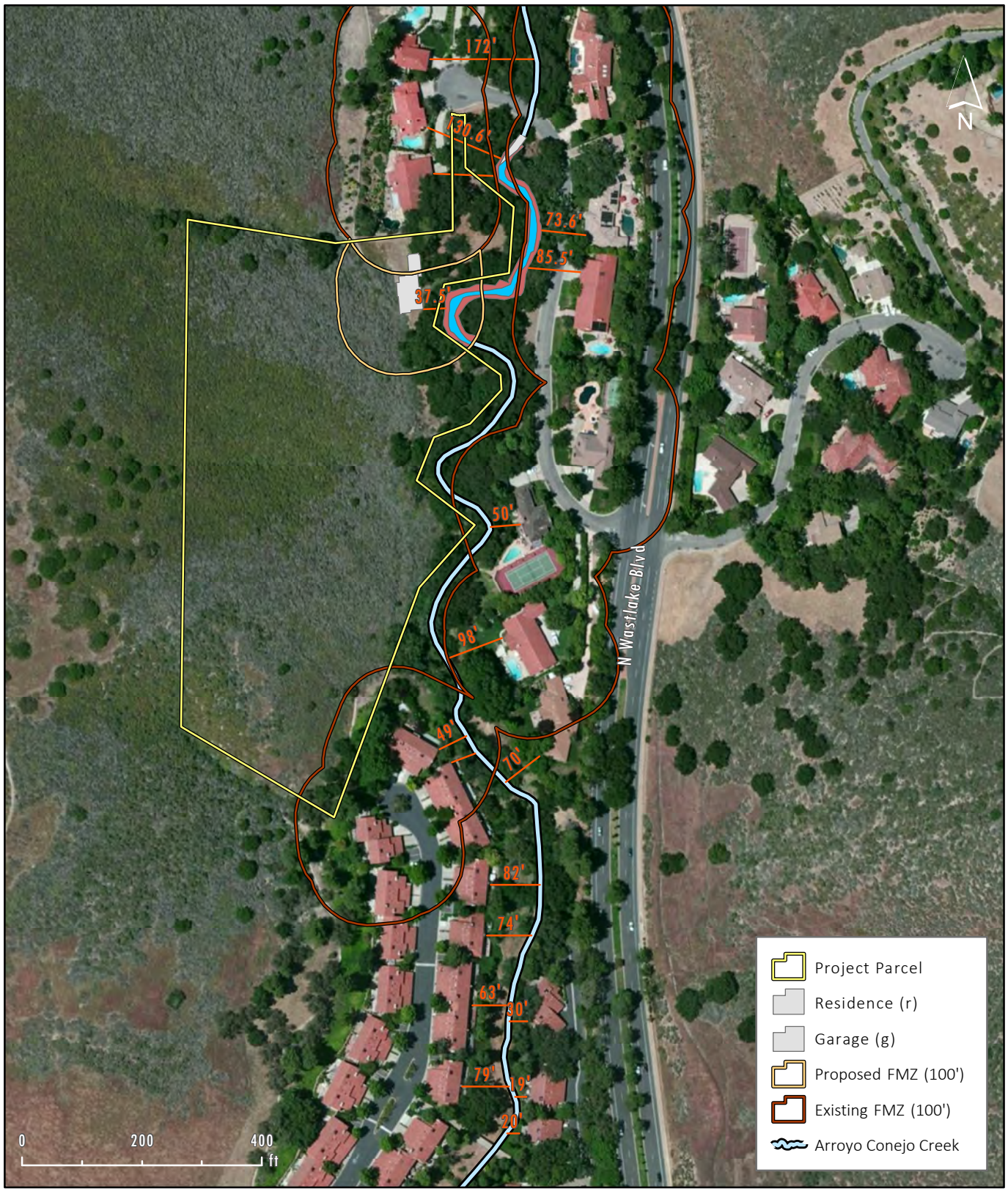
Global Rank (G Rank) is a reflection of the overall status of an element throughout its global range. Both Global and State ranks represent a letter and number score that reflects a combination of Rarity, Threat, and Trend factors, with weighting being heavier on Rarity than the other two. Taxa that are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies.

GQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
GX = Presumed Extinct - Species not located despite intensive searches and virtually no likelihood of rediscovery. Ecological community or system eliminated throughout its range, with no restoration potential.
GH = Possibly Extinct - Known from only historical occurrences but some hope of rediscovery. Evidence exists that species may be extinct or ecosystem eliminated throughout its range, but not enough to state this with certainty.
G1 = Critically Imperiled - At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled - At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable - At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure - Common; widespread and abundant.

G? = Inexact Numeric Rank
GU = Unrankable
GNR = Unranked
GNA = Not Applicable
C = Captive or Cultivated Only

State Rank (S Rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

SQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
SX = Presumed Extirpated
SH = Possibly Extirpated
S1 = Critically Imperiled - Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = Imperiled - Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = Vulnerable - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer) recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = Apparently Secure - Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 = Secure- Common, widespread, and abundant in the state.
S? = Inexact Numeric Rank
SU = Unrankable
SNR = Unranked
SNA = Not Applicable



The setback distance from the proposed single-family residence and from four adjacent residences is measured from the Top of Bank. The setback distances for the single-family residences to the north and south of the area delineated by Forde Biological Consultants is measured from centerline.

Exhibit I - Setback Distances of Existing Single-Family Residences

Project Parcel

Web Soil Survey Data

Calleguas very channery loam, 30 to 50 percent slopes (CaF)

Diablo clay, 9 to 15 percent slopes, warm MAAT (DbD)

Rincon silty clay loam, 9 to 30 percent slopes, severely eroded (RcE3)

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Exhibit J - NRCS - Web Soil Survey

CaF - Calleguas shaly loam, 30 to 50 percent slopes

Map Unit Setting
- *Mean annual precipitation:* 12 to 20 inches
- *Mean annual air temperature:* 61 to 63 degrees F
- *Frost-free period:* 250 to 300 days
- *Farmland classification:* Not prime farmland

Map Unit Composition
- *Calleguas and similar soils:* 85 percent
- *Minor components:* 15 percent

Description of Calleguas

Setting
- *Landform:* Hills, mountains
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Mountainflank, side slope
- *Down-slope shape:* Concave, convex
- *Across-slope shape:* Concave, convex
- *Parent material:* Residuum weathered from sedimentary rock

Typical profile
- *H1 - 0 to 9 inches:* channery loam
- *H2 - 9 to 18 inches:* very channery loam
- *H3 - 18 to 59 inches:* weathered bedrock

Properties and qualities
- *Slope:* 30 to 50 percent
- *Depth to restrictive feature:* 8 to 20 inches to paralithic bedrock
- *Natural drainage class:* Well drained
- *Runoff class:* High
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 5 percent
- *Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- *Available water storage in profile:* Very low (about 1.5 inches)

Minor Components
Arnold
- *Percent of map unit:* 4 percent
- *Hydric soil rating:* No

Gullied land
- *Percent of map unit:* 4 percent
- *Hydric soil rating:* No

Linne
- *Percent of map unit:* 4 percent
- *Hydric soil rating:* No

Sedimentary rock land
- *Percent of map unit:* 3 percent

Hydric soil rating: No

DbD - Diablo clay, 9 to 15 percent slopes

Map Unit Setting
- *Elevation:* 30 to 3,000 feet
- *Mean annual precipitation:* 12 to 35 inches
- *Mean annual air temperature:* 57 to 61 degrees F
- *Frost-free period:* 200 to 320 days
- *Farmland classification:* Farmland of statewide importance

Map Unit Composition
- *Diablo and similar soils:* 85 percent
- *Minor components:* 15 percent

Description of Diablo

Setting
- *Landform:* Hills
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Side slope
- *Down-slope shape:* Concave
- *Across-slope shape:* Convex
- *Parent material:* Residuum weathered from calcareous shale

Typical profile
- *H1 - 0 to 28 inches:* clay
- *H2 - 28 to 40 inches:* clay loam
- *H3 - 40 to 59 inches:* weathered bedrock

Properties and qualities
- *Slope:* 15 to 30 percent
- *Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock
- *Natural drainage class:* Well drained
- *Runoff class:* Very high
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 5 percent
- *Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
- *Available water storage in profile:* Moderate (about 6.0 inches)

Minor Components
San benito
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Nacimiento
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Gazos
- *Percent of map unit:* 3 percent
- *Hydric soil rating:* No

Unnamed
- *Percent of map unit:* 2 percent

Hydric soil rating: No

RcE3 - Rincon silty clay loam, 9 to 30 percent slopes, severely eroded

Map Unit Setting
- *Elevation:* 20 to 2,000 feet
- *Mean annual precipitation:* 12 to 20 inches
- *Mean annual air temperature:* 59 to 61 degrees F
- *Frost-free period:* 250 to 300 days
- *Farmland classification:* Not prime farmland

Map Unit Composition
- *Rincon and similar soils:* 85 percent
- *Minor components:* 15 percent

Description of Rincon

Setting
- *Landform:* Alluvial fans, terraces, fan remnants
- *Landform position (two-dimensional):* Backslope
- *Landform position (three-dimensional):* Side slope, tread
- *Down-slope shape:* Concave
- *Across-slope shape:* Concave
- *Parent material:* Alluvium derived from sedimentary rock

Typical profile
- *H1 - 0 to 4 inches:* silty clay loam
- *H2 - 4 to 19 inches:* sandy clay
- *H3 - 19 to 60 inches:* stratified sandy loam to sandy clay loam

Properties and qualities
- *Slope:* 9 to 30 percent
- *Depth to restrictive feature:* More than 80 inches
- *Natural drainage class:* Well drained
- *Runoff class:* Very high
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- *Available water storage in profile:* High (about 9.2 inches)

Minor Components
Azule
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Huerhuero
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Soper
- *Percent of map unit:* 3 percent
- *Hydric soil rating:* No

San benito
- *Percent of map unit:* 2 percent

Hydric soil rating: No

SaC - Salinas clay loam, 2 to 9 percent slopes

Map Unit Setting
- *Elevation:* 2,000 feet
- *Mean annual precipitation:* 12 to 20 inches
- *Mean annual air temperature:* 61 to 64 degrees F
- *Frost-free period:* 300 to 350 days
- *Farmland classification:* Prime farmland if irrigated

Map Unit Composition
- *Salinas and similar soils:* 85 percent
- *Minor components:* 15 percent

Description of Salinas

Setting
- *Landform:* Alluvial fans
- *Landform position (two-dimensional):* Backslope, shoulder
- *Landform position (three-dimensional):* Tread
- *Down-slope shape:* Linear
- *Across-slope shape:* Linear
- *Parent material:* Alluvium derived from sedimentary rock

Typical profile
- *H1 - 0 to 26 inches:* clay loam
- *H2 - 26 to 45 inches:* silty clay loam
- *H3 - 45 to 60 inches:* silt loam

Properties and qualities
- *Slope:* 2 to 9 percent
- *Depth to restrictive feature:* More than 80 inches
- *Natural drainage class:* Well drained
- *Runoff class:* High
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Calcium carbonate, maximum in profile:* 10 percent
- *Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- *Available water storage in profile:* High (about 10.9 inches)

Minor Components
Garretson
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Mocho
- *Percent of map unit:* 5 percent
- *Hydric soil rating:* No

Cropley
- *Percent of map unit:* 3 percent
- *Hydric soil rating:* No

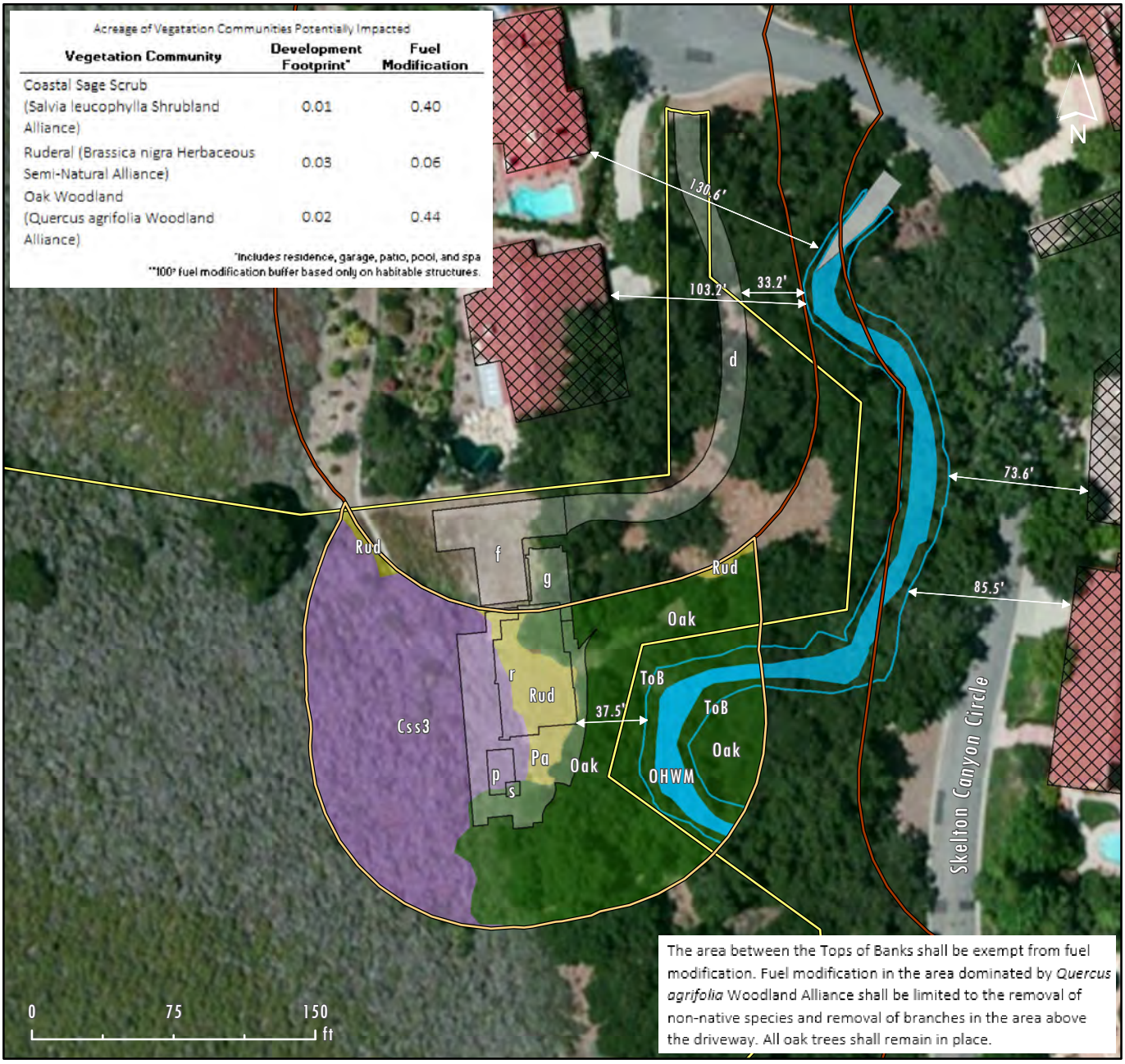
Cropley variant, calcareous
- *Percent of map unit:* 2 percent

Hydric soil rating: No

Acreage of Vegetation Communities Potentially Impacted

Vegetation Community	Development Footprint*	Fuel Modification
Coastal Sage Scrub (Salvia leucophylla Shrubland Alliance)	0.01	0.40
Ruderal (Brassica nigra Herbaceous Semi-Natural Alliance)	0.03	0.06
Oak Woodland (Quercus agrifolia Woodland Alliance)	0.02	0.44

*Includes residence, garage, patio, pool, and spa
**100' fuel modification buffer based only on habitable structures.



The area between the Tops of Banks shall be exempt from fuel modification. Fuel modification in the area dominated by *Quercus agrifolia* Woodland Alliance shall be limited to the removal of non-native species and removal of branches in the area above the driveway. All oak trees shall remain in place.

Project Parcel

Proposed Structures:
Residence (r), Garage (g), Patio (Pa)
Pool (p), Spa (s), Driveway (d)
Fire Dept. Turnaround (f)

Existing Fuel Modification Zone (100')

Proposed Fuel Modification Zone (100')

Vegetation Communities

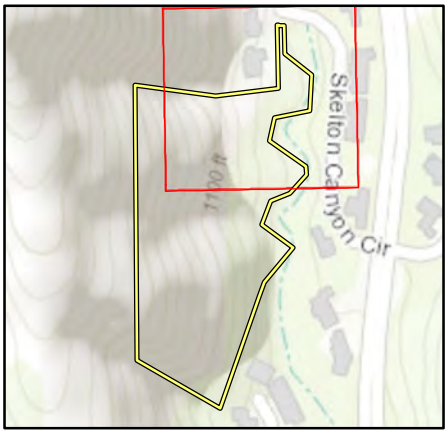
Coastal Sage Scrub (Salvia leucophylla Shrubland Alliance) - Css3

Ruderal (Brassica nigra Herbaceous Semi-Natural Alliance) - Rud

Oak Woodland (Quercus agrifolia Woodland Alliance) - Oak

Ordinary High Water Mark - OHWM

Top of Bank - ToB



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Appendix 4

Skelton Cyn Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Skelton Cyn
Construction Start Date	1/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	1.80
Location	34.17711147485832, -118.82164431344026
County	Ventura
City	Thousand Oaks
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3542
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Single Family Housing	1.00	Dwelling Unit	15.9	4,710	11,713	—	3.00	Residential home

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.94	1.59	7.05	7.64	0.02	0.28	0.07	0.29	0.26	0.02	0.26	—	1,593	1,593	0.06	0.01	0.25	1,598
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.61	1.35	12.3	12.9	0.03	0.51	0.83	1.34	0.47	0.12	0.59	—	3,337	3,337	0.13	0.08	0.03	3,363
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.65	0.54	4.89	5.30	0.01	0.20	0.07	0.27	0.18	0.01	0.19	—	1,155	1,155	0.05	0.01	0.05	1,160
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.10	0.89	0.97	< 0.005	0.04	0.01	0.05	0.03	< 0.005	0.03	—	191	191	0.01	< 0.005	0.01	192

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.94	0.78	7.05	7.64	0.02	0.28	0.01	0.29	0.26	< 0.005	0.26	—	1,593	1,593	0.06	0.01	0.03	1,598
2026	0.90	1.59	6.70	7.58	0.02	0.25	0.07	0.26	0.23	0.02	0.23	—	1,592	1,592	0.06	0.01	0.25	1,598
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.61	1.35	12.3	12.9	0.03	0.51	0.83	1.34	0.47	0.12	0.59	—	3,337	3,337	0.13	0.08	0.03	3,363
2026	0.90	0.75	6.70	7.58	0.02	0.25	0.01	0.26	0.23	< 0.005	0.23	—	1,592	1,592	0.06	0.01	< 0.005	1,598
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.65	0.54	4.89	5.30	0.01	0.20	0.07	0.27	0.18	0.01	0.19	—	1,155	1,155	0.05	0.01	0.05	1,160
2026	0.26	0.30	1.92	2.20	< 0.005	0.07	0.01	0.08	0.07	< 0.005	0.07	—	456	456	0.02	< 0.005	0.01	458
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	0.89	0.97	< 0.005	0.04	0.01	0.05	0.03	< 0.005	0.03	—	191	191	0.01	< 0.005	0.01	192
2026	0.05	0.05	0.35	0.40	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	75.6	75.6	< 0.005	< 0.005	< 0.005	75.8

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.94	0.78	7.05	7.64	0.02	0.28	0.01	0.29	0.26	< 0.005	0.26	—	1,593	1,593	0.06	0.01	0.03	1,598
2026	0.90	1.59	6.70	7.58	0.02	0.25	0.07	0.26	0.23	0.02	0.23	—	1,592	1,592	0.06	0.01	0.25	1,598
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	1.61	1.35	12.3	12.9	0.03	0.51	0.83	1.34	0.47	0.12	0.59	—	3,337	3,337	0.13	0.08	0.03	3,363
2026	0.90	0.75	6.70	7.58	0.02	0.25	0.01	0.26	0.23	< 0.005	0.23	—	1,592	1,592	0.06	0.01	< 0.005	1,598
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.65	0.54	4.89	5.30	0.01	0.20	0.07	0.27	0.18	0.01	0.19	—	1,155	1,155	0.05	0.01	0.05	1,160
2026	0.26	0.30	1.92	2.20	< 0.005	0.07	0.01	0.08	0.07	< 0.005	0.07	—	456	456	0.02	< 0.005	0.01	458
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.10	0.89	0.97	< 0.005	0.04	0.01	0.05	0.03	< 0.005	0.03	—	191	191	0.01	< 0.005	0.01	192
2026	0.05	0.05	0.35	0.40	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	75.6	75.6	< 0.005	< 0.005	< 0.005	75.8

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.15	0.04	0.32	< 0.005	—	—	—	—	—	—	0.50	86.3	86.8	0.06	< 0.005	0.26	89.3
Mit.	0.05	0.15	0.04	0.32	< 0.005	—	—	—	—	—	—	0.50	77.6	78.1	0.05	< 0.005	0.26	80.5
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	10%	10%	—	—	—	10%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.15	0.04	0.26	< 0.005	—	—	—	—	—	—	0.50	84.1	84.6	0.06	< 0.005	0.04	86.9
Mit.	0.04	0.15	0.04	0.26	< 0.005	—	—	—	—	—	—	0.50	75.3	75.8	0.06	< 0.005	0.04	78.2
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	10%	10%	—	—	—	10%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.04	0.15	0.04	0.28	< 0.005	—	—	—	—	—	—	0.50	83.1	83.6	0.06	< 0.005	0.13	86.1
Mit.	0.04	0.15	0.04	0.28	< 0.005	—	—	—	—	—	—	0.50	74.4	74.9	0.05	< 0.005	0.13	77.3
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	11%	10%	—	—	—	10%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.03	0.01	0.05	< 0.005	—	—	—	—	—	—	0.08	13.8	13.8	0.01	< 0.005	0.02	14.2
Mit.	0.01	0.03	0.01	0.05	< 0.005	—	—	—	—	—	—	0.08	12.3	12.4	0.01	< 0.005	0.02	12.8
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	11%	10%	1%	2%	—	10%

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Area	0.01	0.11	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.05	0.15	0.04	0.32	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	86.3	86.8	0.06	< 0.005	0.26	89.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0

Area	0.00	0.11	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.04	0.15	0.04	0.26	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	84.1	84.6	0.06	< 0.005	0.04	86.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.03	0.25	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	58.1	58.1	< 0.005	< 0.005	0.10	59.1
Area	< 0.005	0.11	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.07	0.07	< 0.005	< 0.005	—	0.08
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.04	0.15	0.04	0.28	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	83.1	83.6	0.06	< 0.005	0.13	86.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78
Area	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.83	3.83	< 0.005	< 0.005	—	3.85
Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35
Waste	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.01	0.03	0.01	0.05	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.08	13.8	13.8	0.01	< 0.005	0.02	14.2

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Area	0.01	0.11	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.05	0.15	0.04	0.32	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	77.6	78.1	0.05	< 0.005	0.26	80.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0
Area	0.00	0.11	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.04	0.15	0.04	0.26	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	75.3	75.8	0.06	< 0.005	0.04	78.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.04	0.04	0.03	0.25	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	58.1	58.1	< 0.005	< 0.005	0.10	59.1
Area	< 0.005	0.11	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.07	0.07	< 0.005	< 0.005	—	0.08
Energy	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Water	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Waste	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.04	0.15	0.04	0.28	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.50	74.4	74.9	0.05	< 0.005	0.13	77.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78
Area	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01
Energy	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.39	2.39	< 0.005	< 0.005	—	2.39
Water	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35
Waste	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Vegetation	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Total	0.01	0.03	0.01	0.05	< 0.005	NaN	NaN	NaN	NaN	NaN	NaN	0.08	12.3	12.4	0.01	< 0.005	0.02	12.8

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.64	2.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	443	443	0.02	< 0.005	—	445
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.1	12.1	< 0.005	< 0.005	—	12.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.01	2.01	< 0.005	< 0.005	—	2.02
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.9	63.9	< 0.005	< 0.005	0.01	64.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.64	2.85	< 0.005	0.06	—	0.06	0.05	—	0.05	—	443	443	0.02	< 0.005	—	445

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.1	12.1	< 0.005	< 0.005	—	12.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.01	2.01	< 0.005	< 0.005	—	2.02
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.9	63.9	< 0.005	< 0.005	0.01	64.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.29	0.29	< 0.005	< 0.005	< 0.005	0.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	11.8	12.2	0.03	0.50	—	0.50	0.46	—	0.46	—	2,895	2,895	0.12	0.02	—	2,905
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.97	1.01	< 0.005	0.04	—	0.04	0.04	—	0.04	—	238	238	0.01	< 0.005	—	239

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.4	39.4	< 0.005	< 0.005	—	39.5
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.43	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	314	314	0.01	0.05	0.02	329
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.8	25.8	< 0.005	< 0.005	0.03	27.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.78
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.28	4.28	< 0.005	< 0.005	< 0.005	4.48

3.4. Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	11.8	12.2	0.03	0.50	—	0.50	0.46	—	0.46	—	2,895	2,895	0.12	0.02	—	2,905
Dust From Material Movement	—	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.97	1.01	< 0.005	0.04	—	0.04	0.04	—	0.04	—	238	238	0.01	< 0.005	—	239
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	39.4	39.4	< 0.005	< 0.005	—	39.5

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.43	0.10	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	314	314	0.01	0.05	0.02	329
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.8	25.8	< 0.005	< 0.005	0.03	27.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.75	1.75	< 0.005	< 0.005	< 0.005	1.78
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.28	4.28	< 0.005	< 0.005	< 0.005	4.48

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.78	7.04	7.62	0.02	0.28	—	0.28	0.26	—	0.26	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.78	7.04	7.62	0.02	0.28	—	0.28	0.26	—	0.26	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.83	4.14	0.01	0.15	—	0.15	0.14	—	0.14	—	862	862	0.03	0.01	—	865
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.70	0.76	< 0.005	0.03	—	0.03	0.03	—	0.03	—	143	143	0.01	< 0.005	—	143
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.02	4.89
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.30	3.30	< 0.005	< 0.005	0.01	3.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	< 0.005	4.66
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.30	3.30	< 0.005	< 0.005	< 0.005	3.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.52	2.52	< 0.005	< 0.005	< 0.005	2.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.78	7.04	7.62	0.02	0.28	—	0.28	0.26	—	0.26	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.94	0.78	7.04	7.62	0.02	0.28	—	0.28	0.26	—	0.26	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.83	4.14	0.01	0.15	—	0.15	0.14	—	0.14	—	862	862	0.03	0.01	—	865
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.70	0.76	< 0.005	0.03	—	0.03	0.03	—	0.03	—	143	143	0.01	< 0.005	—	143
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.02	4.89
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.30	3.30	< 0.005	< 0.005	0.01	3.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	< 0.005	4.66
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.30	3.30	< 0.005	< 0.005	< 0.005	3.45
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.52	2.52	< 0.005	< 0.005	< 0.005	2.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.69	7.56	0.02	0.25	—	0.25	0.23	—	0.23	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.69	7.56	0.02	0.25	—	0.25	0.23	—	0.23	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.11	< 0.005	0.07	—	0.07	0.07	—	0.07	—	443	443	0.02	< 0.005	—	445
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.04	0.34	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.4	73.4	< 0.005	< 0.005	—	73.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.72	4.72	< 0.005	< 0.005	0.02	4.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.24	3.24	< 0.005	< 0.005	0.01	3.39
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.24	3.24	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.29
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.95
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.69	7.56	0.02	0.25	—	0.25	0.23	—	0.23	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.90	0.75	6.69	7.56	0.02	0.25	—	0.25	0.23	—	0.23	—	1,584	1,584	0.06	0.01	—	1,590
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.11	< 0.005	0.07	—	0.07	0.07	—	0.07	—	443	443	0.02	< 0.005	—	445
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.4	73.4	< 0.005	< 0.005	—	73.6
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.72	4.72	< 0.005	< 0.005	0.02	4.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.24	3.24	< 0.005	< 0.005	0.01	3.39
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	< 0.005	4.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.24	3.24	< 0.005	< 0.005	< 0.005	3.38
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.29
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.95
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.21
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.5	65.5	< 0.005	< 0.005	0.25	66.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.46	3.46	< 0.005	< 0.005	0.01	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	65.5	65.5	< 0.005	< 0.005	0.25	66.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.46	3.46	< 0.005	< 0.005	0.01	3.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	1.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.01	0.01	< 0.005	< 0.005	< 0.005	0.01

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Total	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0
Total	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78
Total	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Total	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	61.2	61.2	< 0.005	< 0.005	0.23	62.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0
Total	0.04	0.04	0.03	0.26	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	59.1	59.1	< 0.005	< 0.005	0.01	60.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78
Total	0.01	0.01	0.01	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.62	9.62	< 0.005	< 0.005	0.02	9.78

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.28
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.28
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.24	9.24	< 0.005	< 0.005	—	9.28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1.53	1.53	< 0.005	< 0.005	—	1.54
Total	—	—	—	—	—	—	—	—	—	—	—	—	1.53	1.53	< 0.005	< 0.005	—	1.54

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08	< 0.005	< 0.005	—	0.08
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08	< 0.005	< 0.005	—	0.08

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.30	2.30	< 0.005	< 0.005	—	2.31
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.30	2.30	< 0.005	< 0.005	—	2.31

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Total	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	14.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.30	2.30	< 0.005	< 0.005	—	2.31
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.30	2.30	< 0.005	< 0.005	—	2.31

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.01	0.11	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.11	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.01	0.01	< 0.005	< 0.005	—	0.01

Total	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.01	0.11	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.11	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00

Consum Products	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.01	0.01	< 0.005	< 0.005	—	0.01
Total	< 0.005	0.02	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	—	0.01

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	1.81	1.88	0.01	< 0.005	—	2.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35
Total	—	—	—	—	—	—	—	—	—	—	—	0.01	0.30	0.31	< 0.005	< 0.005	—	0.35

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51

Total	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Total	—	—	—	—	—	—	—	—	—	—	—	0.43	0.00	0.43	0.04	0.00	—	1.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25
Total	—	—	—	—	—	—	—	—	—	—	—	0.07	0.00	0.07	0.01	0.00	—	0.25

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oak	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	NaN	NaN	NaN	NaN	NaN	NaN	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/30/2025	2/13/2025	5.00	10.0	—
Grading	Grading	2/14/2025	3/28/2025	5.00	30.0	—
Building Construction	Building Construction	3/29/2025	5/23/2026	5.00	300	—
Paving	Paving	5/24/2026	6/21/2026	5.00	20.0	—
Architectural Coating	Architectural Coating	6/22/2026	7/20/2026	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	5.00	71.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Concrete/Industrial Saws	Electric	Average	1.00	4.00	33.0	0.73
Paving	Cement and Mortar Mixers	Electric	Average	1.00	3.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	5.00	71.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Scrapers	Diesel	Average	1.00	8.00	423	0.48

Grading	Tractors/Loaders/Backh	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Concrete/Industrial Saws	Electric	Average	1.00	4.00	33.0	0.73
Paving	Cement and Mortar Mixers	Electric	Average	1.00	3.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	4.53	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—

Building Construction	Worker	0.36	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.11	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.07	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	4.53	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction	—	—	—	—
Building Construction	Worker	0.36	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.11	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	5.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.07	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	9,538	3,179	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	0.00	0.00	—
Grading	197	887	45.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.01

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.01	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	84.4	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Single Family Housing	9.44	9.54	8.55	3,404	78.2	79.0	70.8	28,194

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	9.44	9.54	8.55	3,404	78.2	79.0	70.8	28,194

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—

Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	1
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
9537.75	3,179	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	6,340	532	0.0330	0.0040	43,426

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	340	532	0.0330	0.0040	43,426

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	37,903	185,069

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	37,903	185,069

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	0.80	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	0.80	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
Oak	-3.00	—	—

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
Oak	-3.00	—	—

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.8	annual days of extreme heat
Extreme Precipitation	6.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	25.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	59.7
AQ-PM	41.3
AQ-DPM	35.1
Drinking Water	60.4
Lead Risk Housing	10.7
Pesticides	0.00
Toxic Releases	25.6
Traffic	65.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	10.6

Haz Waste Facilities/Generators	53.5
Impaired Water Bodies	87.0
Solid Waste	0.00
Sensitive Population	—
Asthma	15.0
Cardio-vascular	19.7
Low Birth Weights	47.6
Socioeconomic Factor Indicators	—
Education	5.86
Housing	10.2
Linguistic	10.4
Poverty	1.43
Unemployment	40.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	99.20441422
Employed	77.24881304
Median HI	96.52252021
Education	—
Bachelor's or higher	89.16976774
High school enrollment	100
Preschool enrollment	95.7141024
Transportation	—
Auto Access	96.70216861

Active commuting	6.236365969
Social	—
2-parent households	93.69947389
Voting	89.20826383
Neighborhood	—
Alcohol availability	57.24368023
Park access	81.35506224
Retail density	73.56602079
Supermarket access	44.60413191
Tree canopy	61.63223406
Housing	—
Homeownership	89.5547286
Housing habitability	97.27960991
Low-inc homeowner severe housing cost burden	51.87989221
Low-inc renter severe housing cost burden	97.36943411
Uncrowded housing	96.93314513
Health Outcomes	—
Insured adults	93.81496215
Arthritis	15.0
Asthma ER Admissions	77.9
High Blood Pressure	6.5
Cancer (excluding skin)	4.6
Asthma	76.7
Coronary Heart Disease	25.9
Chronic Obstructive Pulmonary Disease	59.8
Diagnosed Diabetes	73.9
Life Expectancy at Birth	92.5

Cognitively Disabled	95.5
Physically Disabled	38.4
Heart Attack ER Admissions	60.1
Mental Health Not Good	92.6
Chronic Kidney Disease	45.1
Obesity	80.7
Pedestrian Injuries	74.4
Physical Health Not Good	83.3
Stroke	58.2
Health Risk Behaviors	—
Binge Drinking	48.9
Current Smoker	94.5
No Leisure Time for Physical Activity	90.8
Climate Change Exposures	—
Wildfire Risk	73.0
SLR Inundation Area	0.0
Children	97.6
Elderly	7.1
English Speaking	88.1
Foreign-born	13.3
Outdoor Workers	80.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.4
Traffic Density	56.5
Traffic Access	23.0
Other Indices	—
Hardship	7.0

Other Decision Support	—
2016 Voting	91.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	11.0
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Updated figures to reflect latest site plan.
Construction: Construction Phases	No demolition required.
Construction: Off-Road Equipment	Updated to reflect construction for project.

Appendix 5

November 11, 2022

Mr. Kevin Kohan
Principal Planner
Elevated Entitlements
4493 Rayburn St,
Westlake Village, CA 91362
Via e-mail to: kevin@elvted.com

SUBJECT: Cultural Resources Record Search Results for the Ferruzza Residence Project, City of Thousand Oaks, Ventura County, California.

Dear Mr. Kohan,

BioCultural LLC at the request of Elevated Entitlements conducted an in-person records search with the South-Central Coast Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University (CSU), Fullerton in the City of Fullerton, California in order to assess potential presence of cultural resources within the proposed project area and its surrounding 0.25-mile circular buffer area. The purpose of the record search was to identify if any prehistoric and/or historic-period cultural resources and studies had been previously documented in the project area and/or its surrounding 0.25-mile radius in order to better understand the archaeological sensitivity of the areas.

The project proposes to build a single family residence on Assessor's Parcel Number (APN) of 690-0-010-105 with a physical address of 3948 Skelton Canyon Thousand Oaks, CA 91360 and defined as a 6.76-acre Project Area.

RESULTS

The in-person CHRIS records search of the project area and its 0.25-mile radius was conducted at the SCCIC on November 1, 2022. The results indicated No previously recorded cultural resources were found on file within the project area and its 0.25-mile radius. The results also indicated that One previously conducted cultural resources study has been completed within the project area and Seven previously conducted cultural resources studies have been completed within the 0.25-mile radius of the project area. Detailed information can be seen below on Table 1.

Table 1: Previously Conducted Cultural Resources Studies.

Report #	Title	Date / Author(s)	Within Project Area
VN-00118	Cultural Resource Survey and Impact Assessment for Tentative Tract No. 2778, City of Thousand Oaks, Ventura County, California.	1977/ Singer, Clay A.	No

Report #	Title	Date / Author(s)	Within Project Area
VN-00187	An Archaeological Resource Survey and Impact Assessment of the Reclaimed Water Distribution System of the Las Virgenes Municipal Water District, Los Angeles and Ventura Counties.	1979/ Rosen, Martin D.	No
VN-00922	An Archaeological Resource Survey and Impact Assessment of Tentative Tract 4625 in North Ranch, Thousand Oaks Ventura County, California.	1989/ W & S Consultants	No
VN-01811	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 883-02, in the County of Ventura, California.	1999/ Duke, Curt	No
VN-02234	Cultural Resource Assessment Cingular Wireless Facility No. La 883-01 Ventura County, California.	2001/ Duke, Curt	No
VN-02363	Cultural Resource Assessment Cingular Wireless Facility No. La 883-03 Thousand Oaks, Ventura County, California.	2003/ Harper, Caprice D.	No
VN-02788	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC, Candidate SBV032-01 (Cresthaven Light Standard), Southwest Corner of Intersection of Westlake Boulevard and West Cresthaven Drive, Thousand Oaks, Ventura County, California.	2009/ Bonner, Wayne H.	No
VN-02843	Conejo Fire Mitigation, Conejo Recreation and Park District, FEAM-1498-DR-CA, HMGP #1498-98-36.	2005/Amaglio, Alessandro	Yes

CERTIFICATION: I hereby certify that the data and information required and obtained for this cultural resources record search, facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: 11/01/2022 SIGNED: 

PRINTED NAME: Gregorio Pacheco, B.A.

Appendix 6

FIRE PROTECTION PLAN

3948 Skelton Canyon Circle
Thousand Oaks, CA 91362
APN #690-0-010-105
County of Ventura

31 May 2024

Prepared For:
Patricia Ferruzza
2773 Westham Circle
Thousand Oaks, CA 91362

Certified by:

Mel Johnson, Owner
Certified CEQA Wildland Fire Consultant
FIREWISE 2000 LLC
P.O. BOX 339
LOWER LAKE, CA
INFO@FIREWISE2000.COM

FIRE PROTECTION PLAN
3948 Skelton Canyon Circle
Table of Contents

EXECUTIVE SUMMARY

California Government Code Section 51178 requires the California Department of Forestry and Fire Protection (CAL FIRE) to identify and map very high fire hazard areas statewide, referred to as "Very High Fire Hazard Severity Zones".
The purpose of this Government Code chapter is to classify lands in accordance with whether a very high fire hazard severity is present so that public officials are able to identify measures that will mitigate the rate of spread and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken.

Chapter 49 of the 2022 Fire Code provides requirements for a Fire Protection Plan in development areas that are within VHFHZs.

The 2022 Code provided major revision and has added additional requirements.
This FPP will highlight the most important plan improvements and requirements throughout the document. In short, the plan will follow the guidelines stated in Section 4903.

Sec 4903
The fire protection plan shall be based on a project-specific wildfire hazard assessment that includes considerations of location, topography, aspect, and climatic and fire history.
The plan shall identify conformance with all applicable state wildfire protection regulations, statutes, and applicable local ordinances, whichever are more restrictive.
The plan shall address fire department access, egress, road and address signage, water supply in addition to fuel reduction in accordance with Public Resources Code (PRC) 4290; the defensible space requirements in accordance with PRC 4291 or Government Code 51182; and the applicable building codes and standards for wildfire safety. The plan shall identify mitigation measures to address the project's specific wildfire risk and shall include the information required in Section 4903.2.1.

Finally, this FPP and its requirements will be incorporated by reference into the final project Conditions of Approval to ensure compliance with The City of Thousand Oaks and Ventura County Fire, codes/regulations and significance standards.

FIRE PROTECTION PLAN
3948 Skelton Canyon Circle

1.0 GENERAL DESCRIPTION

Project Description. The project proposes to construct a single-family home (SFR) on 15.8 acres. Basement conditioned space sq. ft. 644.57, 1st floor conditioned space sq. ft. 2,517.97; 2nd floor conditioned space sq. ft. 938.85; Total new conditioned space 4,101.39 Garage 608.61Sqft.

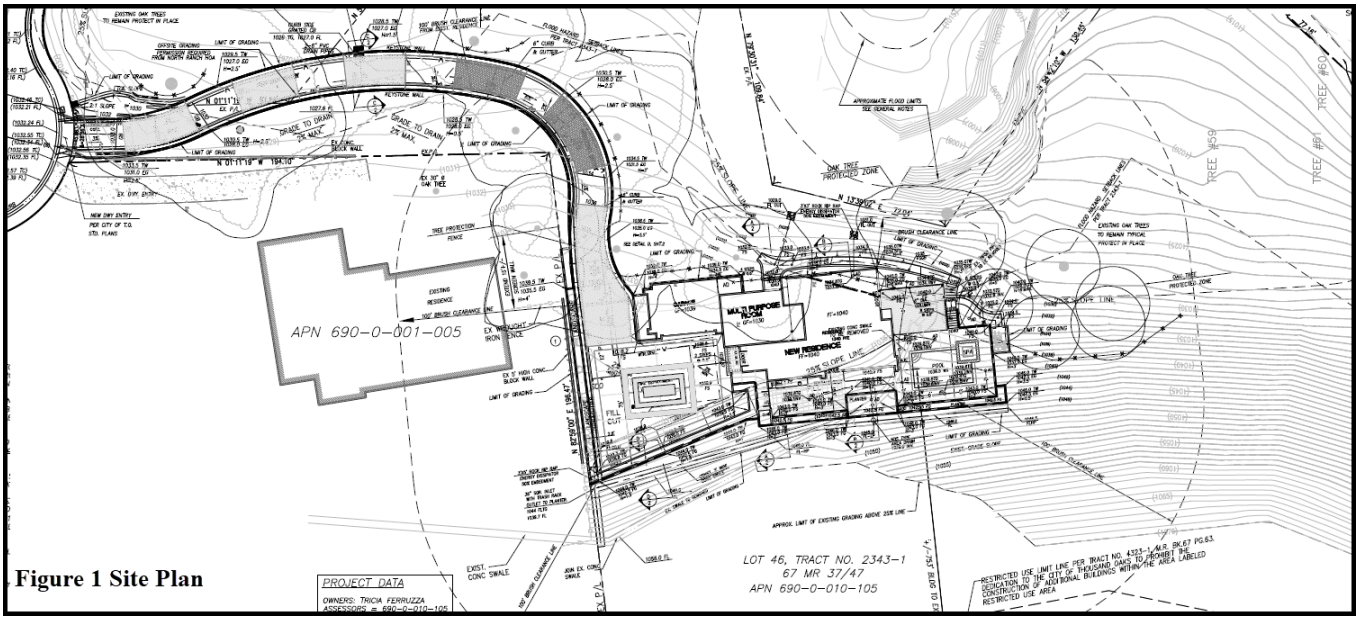


Figure 1 Site Plan

The APN is 690-0-010-105 County of Ventura and is currently undeveloped.
Access to the site will be from 3948 Skelton Canyon Circle. Figure 1 provides a snapshot of the Site Plan.

Project Location:

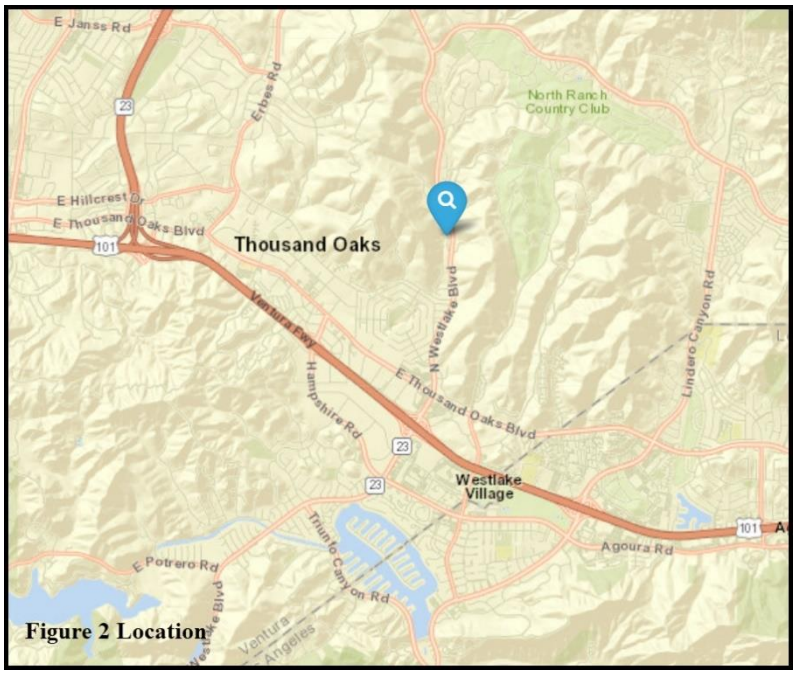
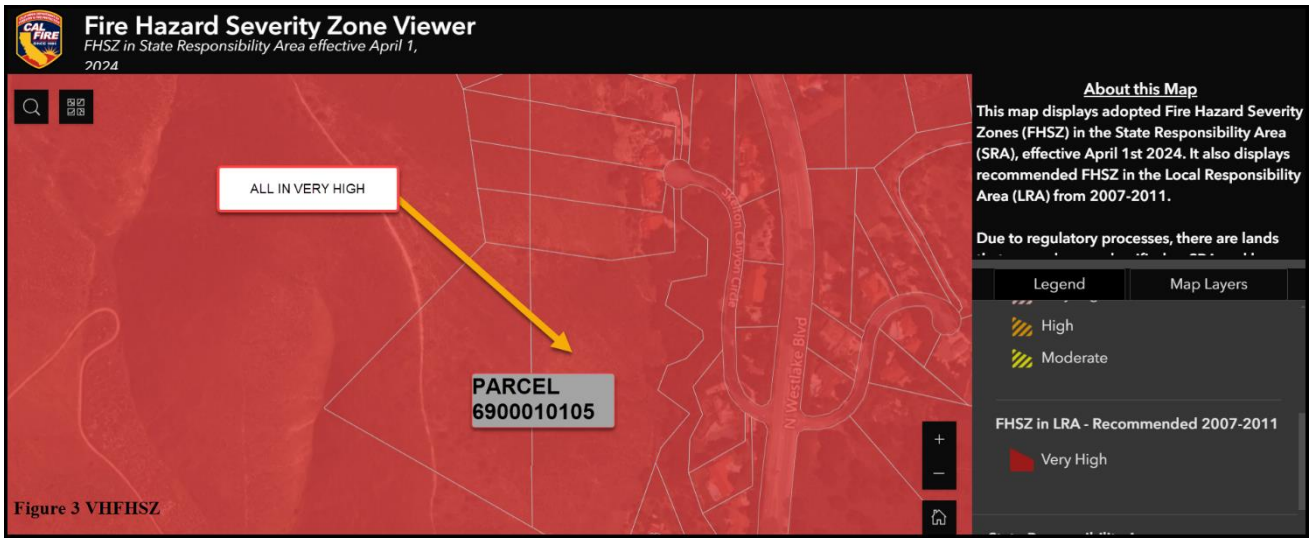


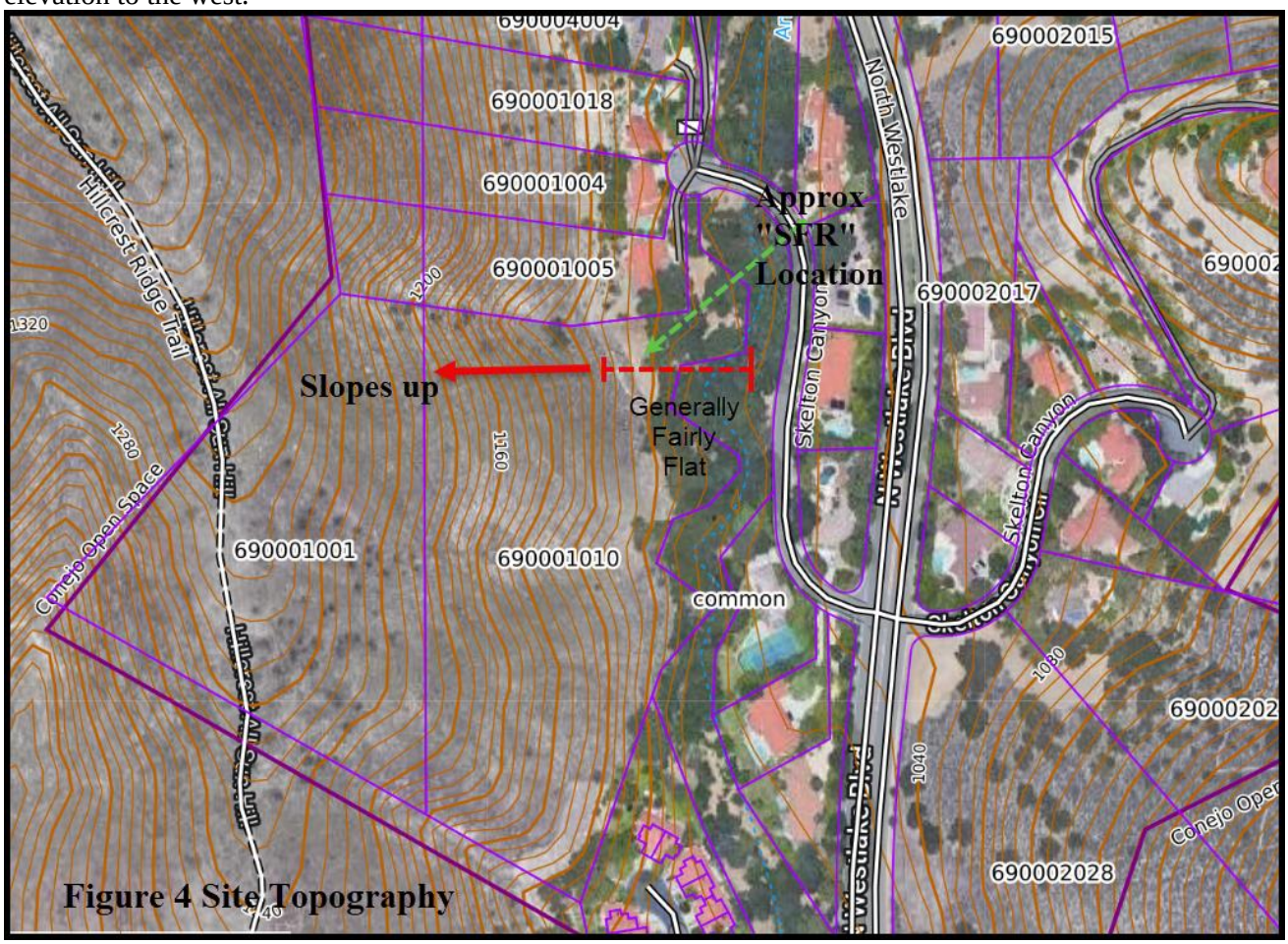
Figure 2 Location

The property is in The City of Thousand Oaks North of US101, west of N. Westlake Blvd. Figure 2.



The proposed development is in LRA and is within a Very High Fire Severity Zone. Figure 3 provides an overview of Hazard Classification that surrounds the future project.

Figure 4 provides a view of the topographic relief of the site, which is mostly hilly with, with an increase in elevation to the west.



Refer to the APPENDIX 'F' Fuel Mod Location Exhibit for the illustration of property lines, structures, and related Vegetation Management Zones
A Fire Protection Plan (FPP) must be submitted to and approved by City of Thousand Oaks and Ventura County Fire Department (VCFD). The approved FPP shall be recorded against all buildable lots. The FPP assesses the overall (on-site and off-site) wildland fire hazards and risks that may threaten life and property associated with the proposed Development. In addition, the FPP establishes both short-term and long-term vegetation management actions needed to minimize any projected wildland fire hazards and assigns annual maintenance responsibilities for each of the required Vegetation Management actions.

1.1 General Information

Owner: ***Patricia Ferruzza***
2773 Westham Circle
Thousand Oaks, CA 91362

Prepared By: Monty Kalin
Firewise2000, LLC
Associate Planner
Monty.Kalin@Firewise2000.com

Approving Departments: City of Thousand Oaks, Agency having Jurisdiction
Fire Authority/Fire Construction Permits Ventura County Fire Department VCFD

The purpose of this FPP is to provide Vegetation Management Zone treatment and construction feature direction for developers, architects, builders, and the individual lot owner. The document will be used in making the structures in the proposed project safe from future wildfires.

Requirements of this FPP are based upon requirements listed in the 2022 California Fire Code, Chapter 49. Public Resources Code, Sections 4201 through 4204, and Government Code, Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires.
Local Amendments as required.
Chapter 7A-California Building Code; 2022 California Residential Code sections R337; National Fire Protection Association Standards (NFPA) 13-D, 2022 Edition.

Hazardous vegetation and fuels around all applicable buildings and structures shall be maintained by the following laws and/or regulations:
Public Resources Code, Section 4291. California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section 1299 (see guidance for implementation "General Guideline to Create Defensible Space"). California Government Code, Section 51182. California Code of Regulations, Title 19, Division 1, Chapter 7, Subchapter 1, Section 3.07.

1.2 Fire History

The site was completely burnt over by the Woolsey Fire in November of 2018. This is evident from damage to existing Oak trees and Coastal Sage Scrub in the vicinity.

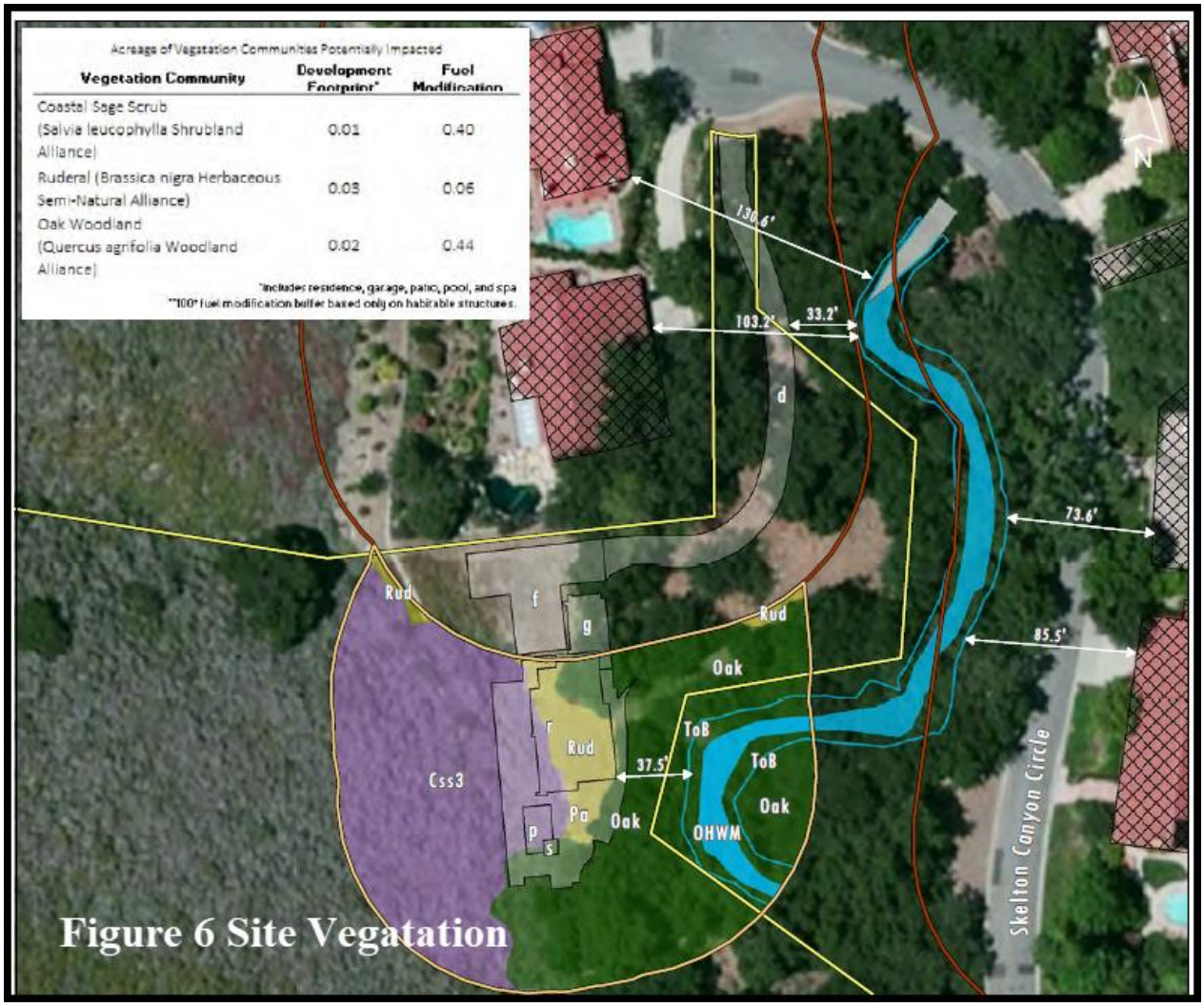
Figure 5 Fire History

2.0 WILDLAND FIRE HAZARD AND RISK ASSESSMENT

In assessing the wildland fire hazard, it is necessary to consider plant succession and the climax plant communities. The vegetation described below is the most likely climax plant community that will exist without human intervention and the one utilized for planning purposes. These plants are what has returned since the Woolsey Fire

2.1 On and Off-Site Fire Hazard and Risk Assessment

The Project site itself is generally flat across the area planned for the pad. To the east is the protected Arroyo Conejo Creek and related stream channel and banks. To the west at the extent of fuel modification is a slope vegetated with Coastal Sage Scrub (CSS) this area slopes down to the proposed graded area. The remainder of the entire buildable site is covered with Oak Woodland. Figure 6 Vegetation, Source Project *Biological Consultants FORDE*



Site vegetation has been affected by years of drought, the CSS areas in close proximity have some dead fuel loading and remaining dead from Woosley Fire.

Also effecting fuel loading is the local Mediterranean climate, where warm wet winters promote abundant new growth, and long, hot, and very dry summer seasons frequently occur. Occasionally, multi-year droughts cause significant parts of these plants to die back.

The following image provides a visual assessment of off-site risks to the project site.

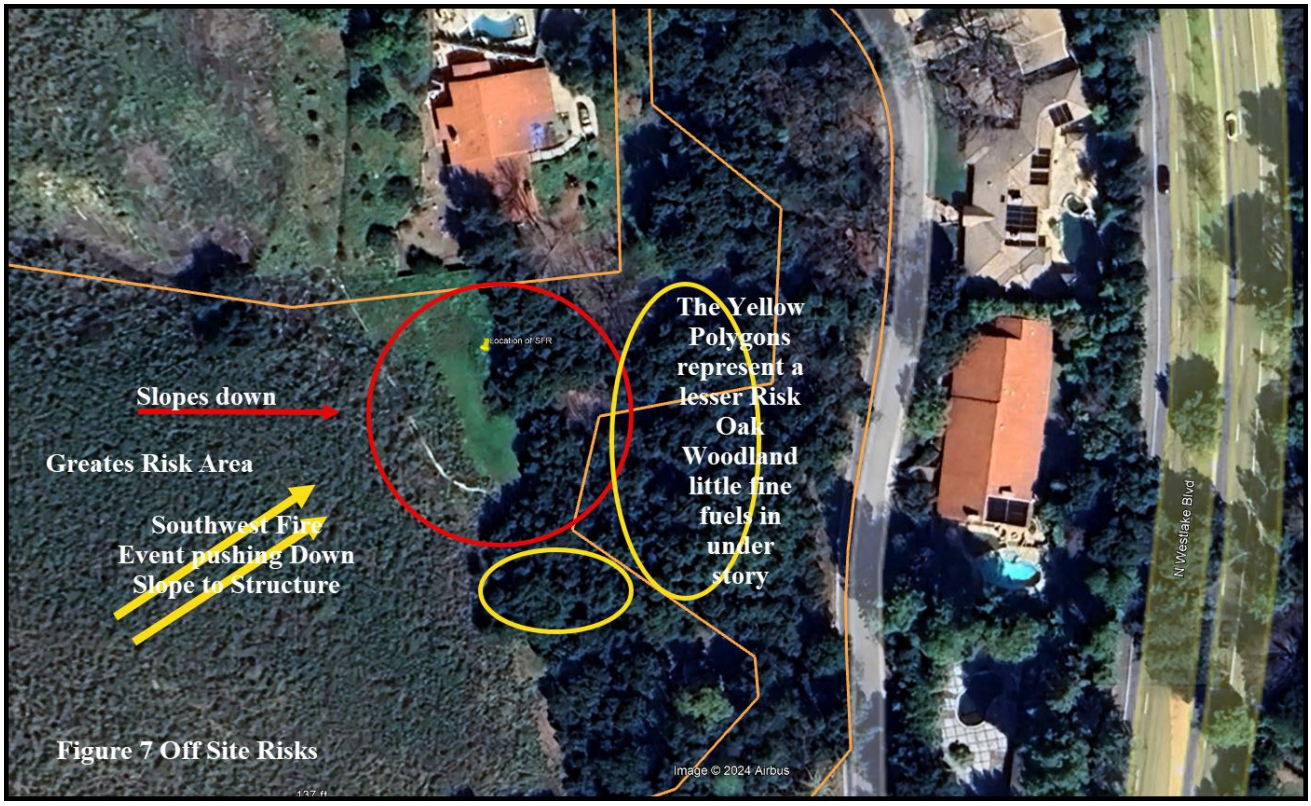
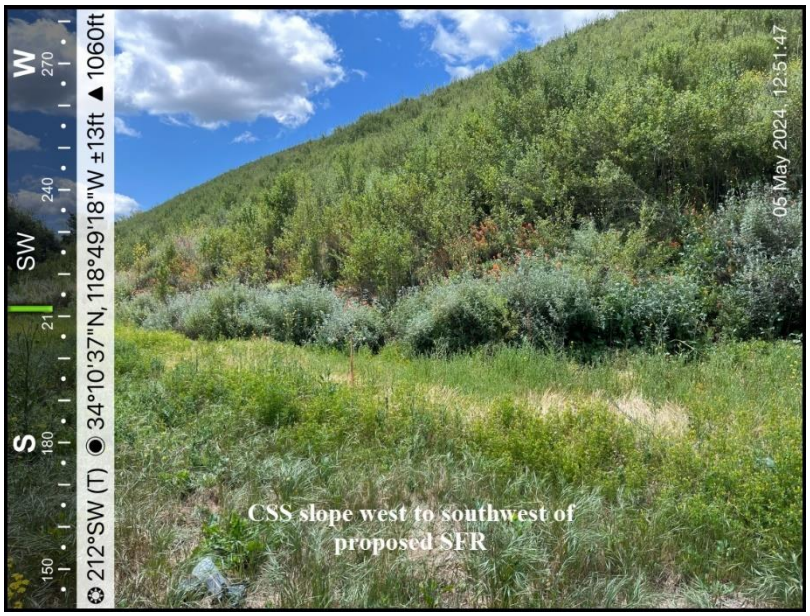


Figure 7 Off Site Risks

See Section 2.4 for Fire Behavior Modeling results in flame length distances and rates of spread.

For Fire Behavior planning purposes model, Fuel Model 147 sh7 Very high load, dry climate shrub (S) was selected based on the site survey.

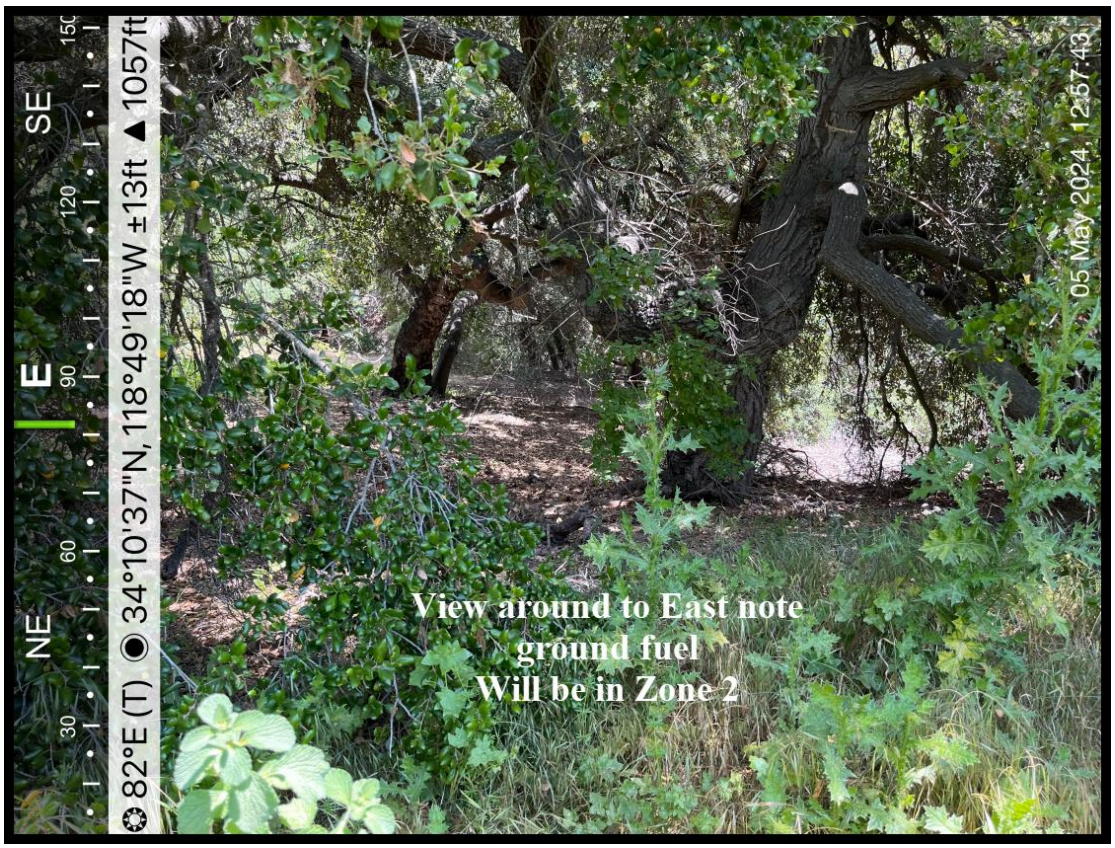
SITE PHOTOS



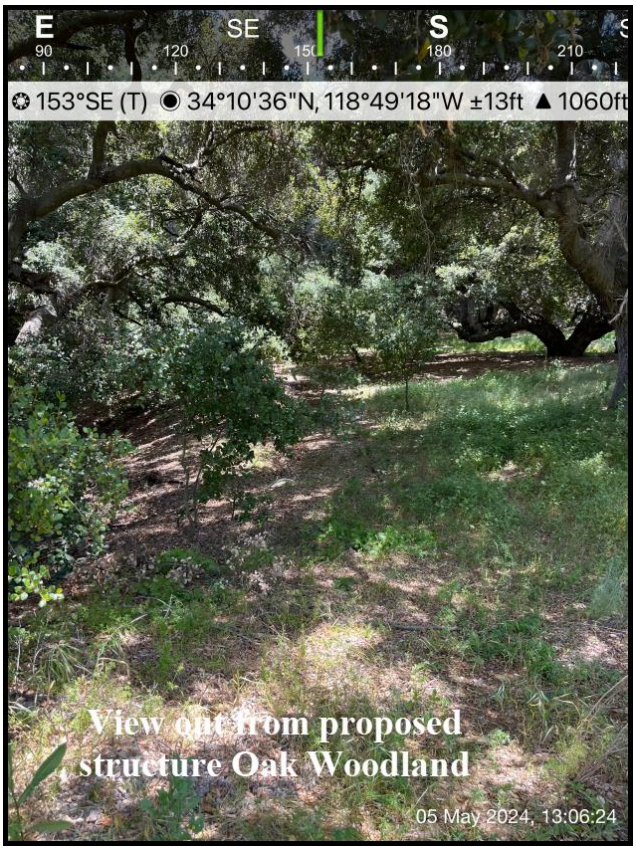

SE
S
SW
192°S (T) 34°10'37"N, 118°49'18"W ±13ft 1060ft
05 May 2024, 12:51:50
Second View of CSS Slope as it tapers into Oak Woodland

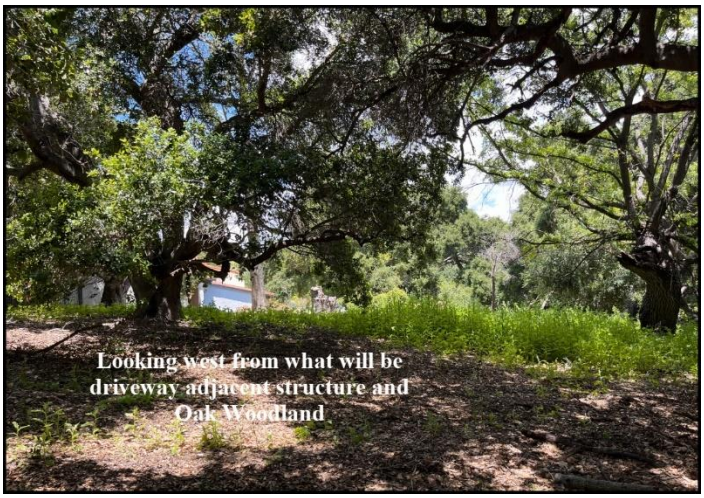

Joining Fuel Mod and Property
N


34°NE (T) 34°10'37"N, 118°49'18"W ±13ft 1054ft
05 May 2024, 12:51:29
Approximate Fire Access
Note joining structure upper left
Light ground fuel, tree will require
limbing up


82°E (T) 34°10'37"N, 118°49'18"W ±13ft 1057ft
05 May 2024, 12:57:43
View around to East note
ground fuel
Will be in Zone 2


NE
60
E
90
SE
120
150
107°E (T) 34°10'36"N, 118°49'17"W ±13ft 1048ft
05 May 2024, 13:04:00
Creek Fuel Loading


E
90
SE
120
S
180
210
153°SE (T) 34°10'36"N, 118°49'18"W ±13ft 1060ft
View out from proposed structure Oak Woodland
05 May 2024, 13:06:24


Looking west from what will be driveway adjacent structure and Oak Woodland

2.2 Climate

The climate within the project area would be characterized as Mediterranean. It has generally mild and wet (14 to 16 inches per year) winters, the bulk of the annual precipitation falling between January and March. Long, hot, and very dry summer seasons frequently occur with occasional multi-year droughts.
The most critical weather pattern is a hot, dry offshore wind, typically called a Santa Ana. Such wind conditions are usually associated with strong (>70 MPH), hot, dry winds with very low (<15%) relative humidity. Santa Ana winds originate over the dry desert land and can occur anytime of the year; however, they generally occur in the late fall (September through November). This is also when non-irrigated vegetation is at its lowest moisture content.
The undeveloped land in proximity can contribute to a damaging wildland fire event. Any wind or topography driven wildfire burning under a northeastern (*Santa Ana*) wind pattern through areas to the north would create a wildland fire hazard to the proposed project. Wildland fires starting west of the proposed site, on a typical fire day with a southwest wind will likely burn up to the fuel treatment areas and be controlled.

The typical prevailing summertime wind pattern is out of the south or southwest and normally is of a much lower velocity (5-19 MPH) with occasional gusts to 30-MPH) and is associated with higher relative humidity readings.
All other (west around to north) wind directions may be occasionally strong and gusty. However, they are generally associated with cooler moist air and often have higher relative humidity (> 40%). They are considered a serious wildland fire weather condition when wind speeds reach > 20-MPH.

All residential structures in the area are threatened by wind-blown embers. The use of 'ignition resistant construction' will generally mitigate against a windblown ember threat (see Appendix D and E for a discussion of these features).
The goal of this FPP is to prevent the loss of lives, buildings, and personal property when wildfires occur. The challenge is using a 'best practices' approach to construction and vegetation management, within a fully functioning mixed chaparral habitat. This goal is carried out by requiring the home to be built with ignition resistant materials and properly designed and maintained vegetation management treatments that safely mitigate the fire fuel hazard to insignificant levels.

2.3 Predicting Wildland Fire Behavior

The BEHAVE 6 (build 626) Fire Behavior Prediction and Fuel Modeling System developed by USDA–Forest Service research scientists Patricia L. Andrews and Collin D. Bevins at the Intermountain Forest Fire Laboratory, Missoula, Montana, is one of the best systematic methods for predicting wildland fire behavior. The BEHAVE fire behavior computer modeling system is utilized by wildland fire experts and managers nationwide. The program projects the expected spotting distance, rate-of-spread and flame lengths with a reasonable degree of certainty for use in Fire Protection Planning purposes. ***FIRE*WISE 2000, LLC**. used the BEHAVE 6 Fire Behavior Prediction Model to make the fire behavior assessments discussed below.

2.4 Wildland Fire Behavior Calculations for the Off-Site Hazardous Vegetative Fuels

Wildland fire behavior calculations have been projected for the hazardous vegetative fuels on the undeveloped areas in proximity to the site. These projections are based on fire scenarios that are considered 'worst case.'
Local environmental assumptions in the vicinity of the project area were used in the model process.

Table 2.4.1 provides Behave Plus Inputs; fuel moisture values are at critical, and the fuel bed is unsheltered. All scenario outputs provide the expected Flame Length (expressed in feet), Rate of Fire Spread (expressed in ft/min), and Fireline Intensity (as btu/ft/s).

Fuel Models were selected from project site observations of those areas within 200ft of proposed boundary, scenarios depict slope, aspect, and wind direction.

Table 2.4.1
Fire Behavior Modeling Inputs

Variable	Summer Weather (Onshore Flow)	Peak Weather (offshore/Santa Ana Condition)
1h Moisture	3%	2%
1Oh Moisture	5%	3%
1OOh Moisture	7%	5%
Live Herbaceous Moisture	50%	30%
Live Woody Moisture	60%	60%
20-foot Wind Speed (upslope/downslope)	15, 30 mph	65mph gusts
Wind Adjustment Factor	0.5	0.5
Slope Steepness	varies	varies

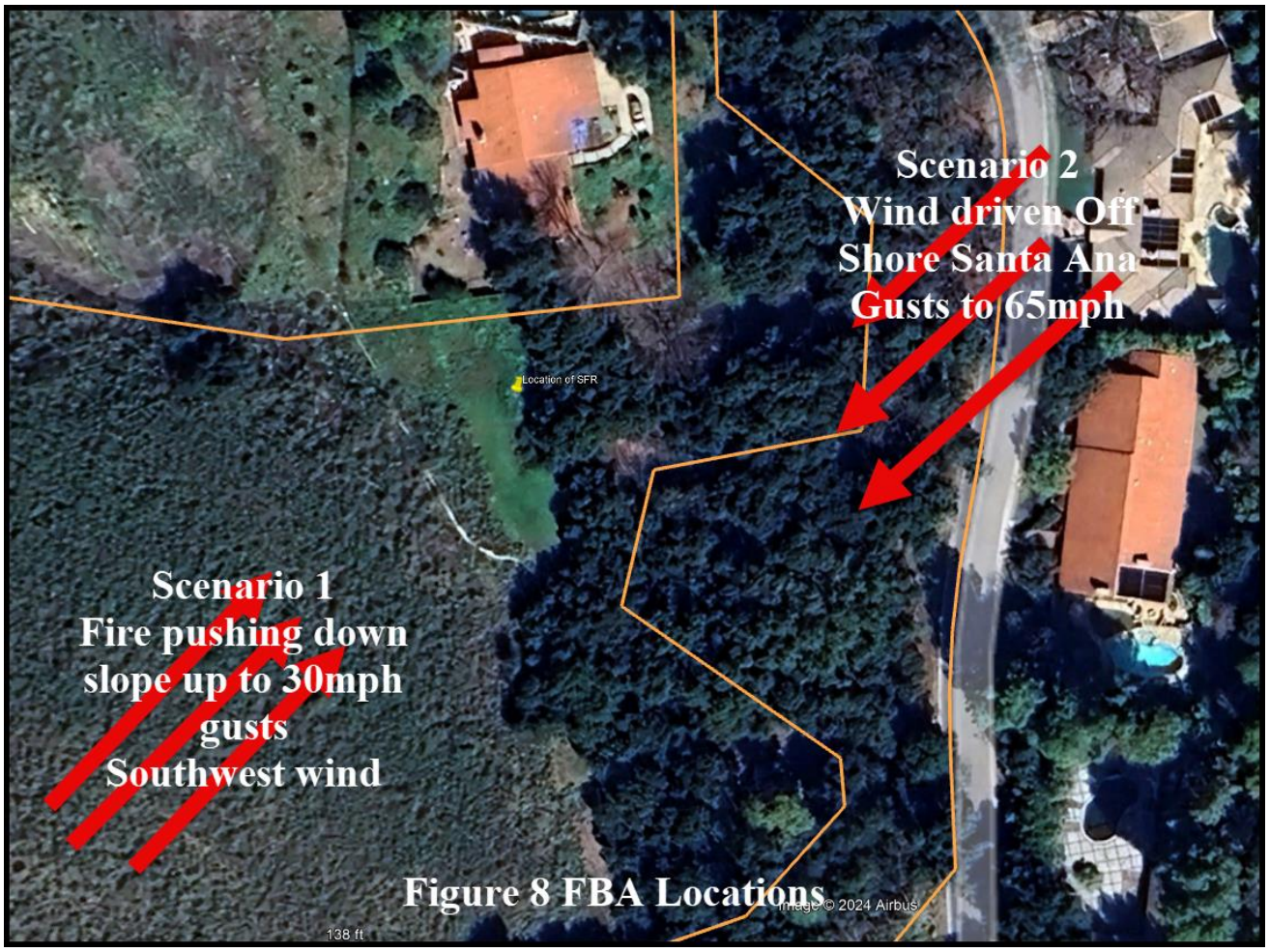
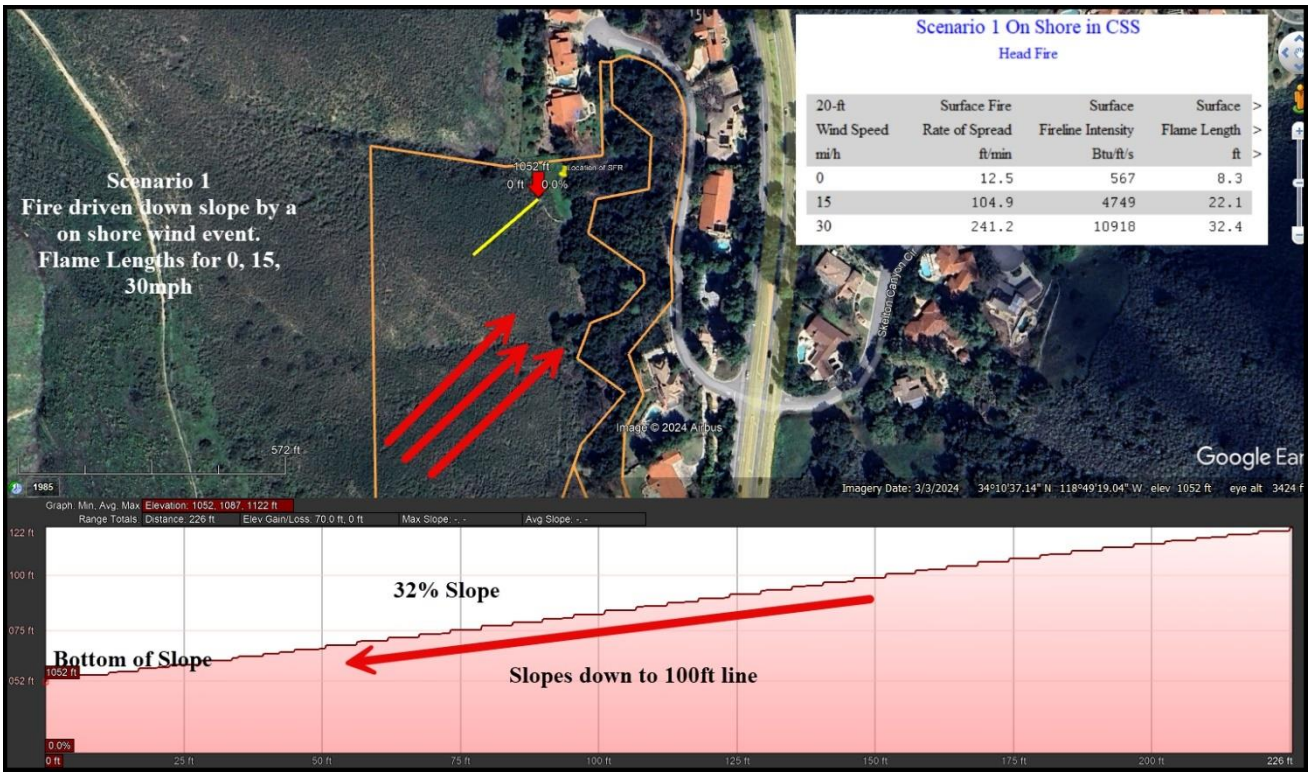
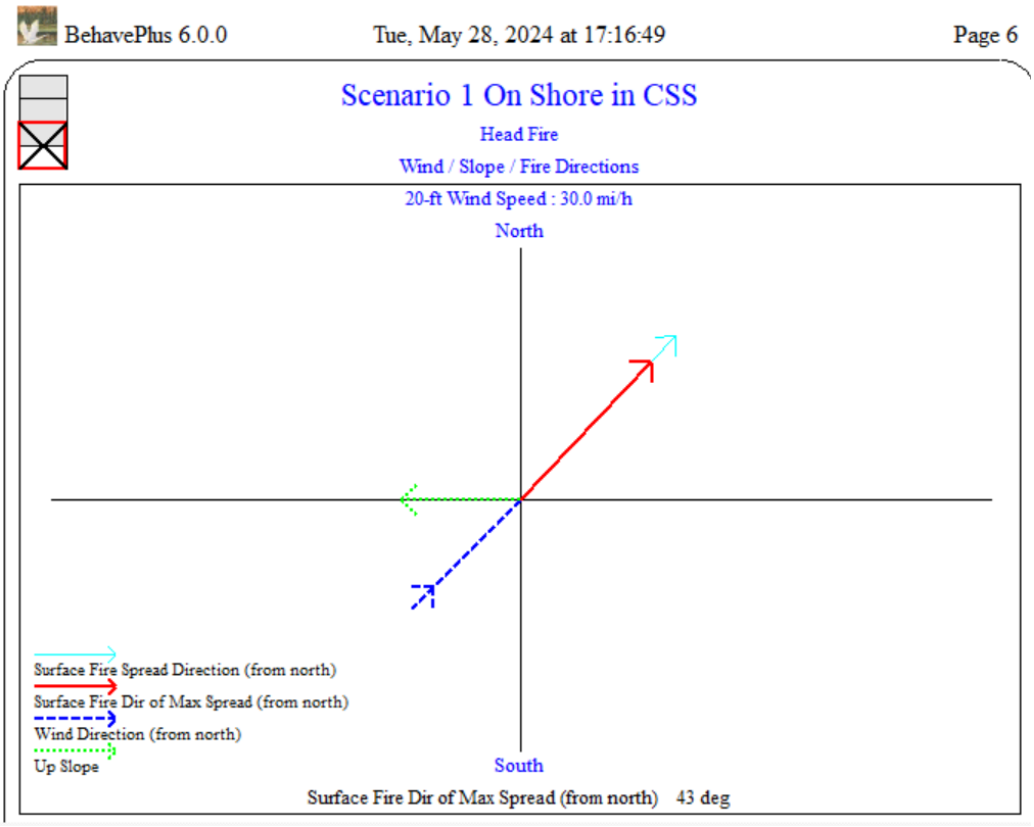


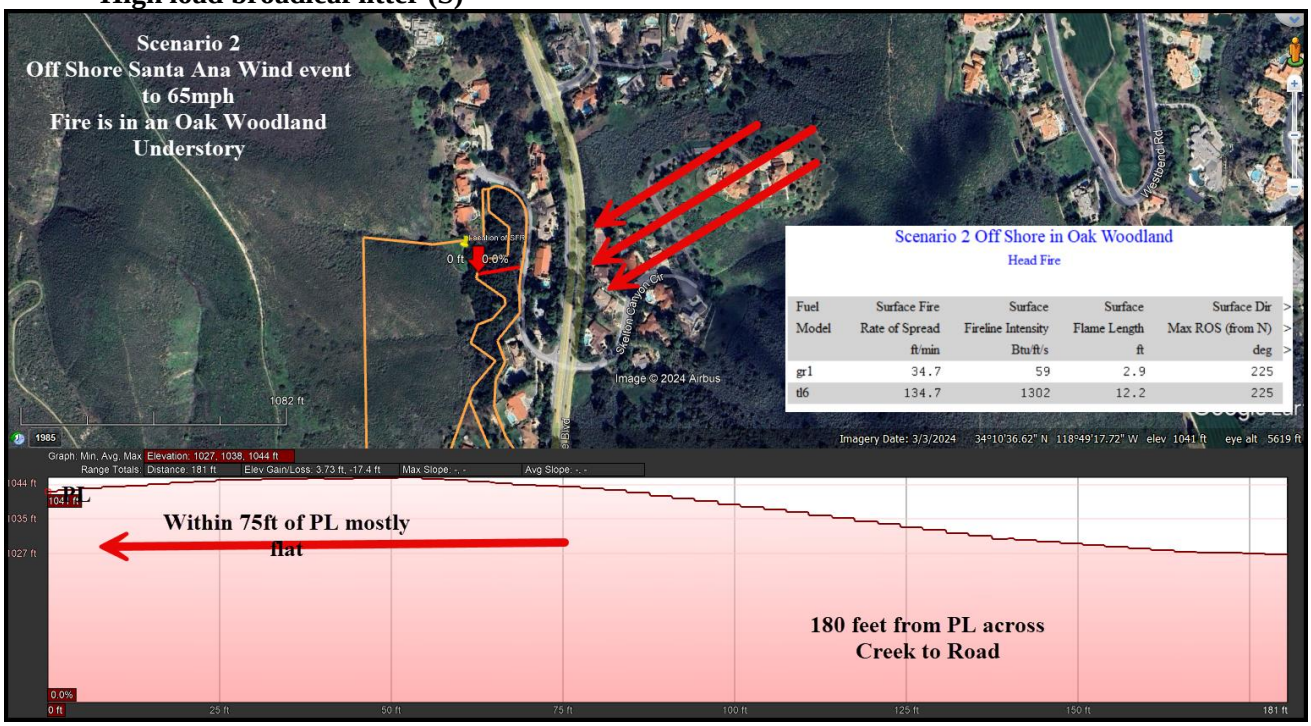
Figure 8 FBA Locations

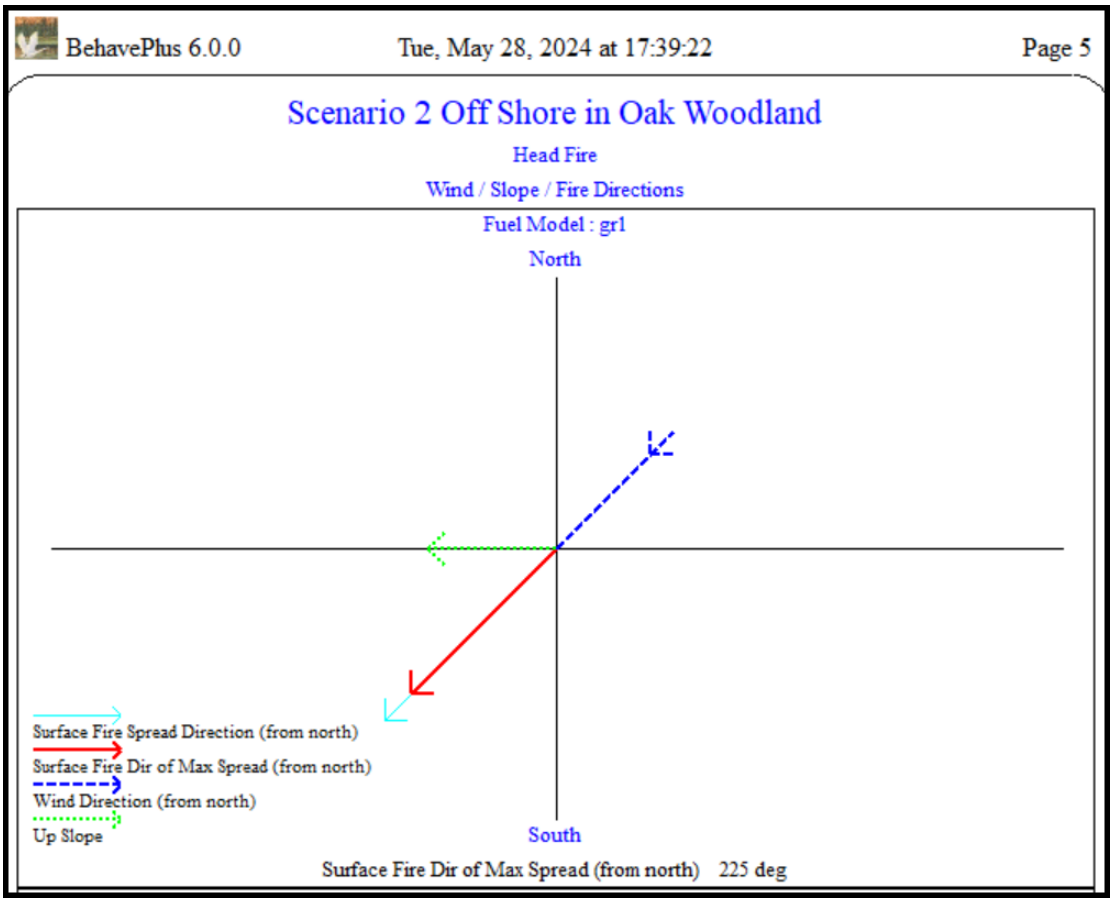
Scenario 1 Fire to the north pushed towards the boundary. Fuel Model 147 sh7 Very high load, dry climate shrub (S)





Scenario 2 Fire burning down slope from the southwest. Fuel Model Grass Component 101 gr1 Short, sparse, dry climate grass (D); Oak Woodland Component Model 186 t16 High load broadleaf litter (S)





3.0 ASSESSING STRUCTURE IGNITIONS IN THE WILDLAND/URBAN INTERFACE

Structure ignitions from wildland wildfires basically come from three sources of heat: convective firebrands (flying embers), direct flame impingement, and radiant heat. The Behave Plus Fire Behavior Computer Modeling Program does not address windblown embers or firebrands. Chapter 7a of the California Building Code and CRC 337 provides detailed requirements providing ignition resistant exterior building materials that will be used in the construction of those structures located on the project site, APPENDIX 'E' provides a description of 'ignition resistive construction features.

3.1 Firebrands

Firebrands are pieces of burning materials that detach from a burning fuel due to the strong convection drafts in the flaming zone. Firebrands may also be referred to as embers. Firebrands can be carried a long distance (one mile or more) by fire drafts and high winds. Severe wildland/urban interface fires can produce heavy showers of firebrands. The chance of these firebrands igniting a structure will depend on the size and number of the firebrands, how long each ember burns after contact, and the type of building materials, building design, and construction features of the structure. Firebrands landing on combustible roofing and decks are common sources for structure ignition. They can also enter a structure through unscreened vents, decks and chimneys, unprotected skylights, and overhangs.

Even with non-combustible roofing, firebrands landing on leaves, needles, and other combustibles located on a roof (due to lack of maintenance) can cause structure ignition. Any open windows, doors or other types of unscreened openings are sources for embers to enter a structure during a wildland fire. If these maintenance issues are addressed on a regular basis, firebrands should not be a concern.

3.2 Radiant Heat/Direct Flame Impingement

Radiation and convection involve the transfer of heat directly from the flame. Unlike radiation heat transfer, convection requires that the flames or heat column contact the structure. An ignition from radiation (given an exposed flammable surface) heat transfer depends on two aspects of the flame:
1) the radiant heat flux to a combustible surface
2) the duration (length of time) of the radiant flux.

The radiant heat flux depends on the flame zone size, flame-structure distance, and how much the combustible material of the structure is exposed to the flame. While the flame from a wildfire may approach 1,800 degrees Fahrenheit, it is the duration of heat that is more critical. For an example, a blow torch flame typically approaches 2,100 degrees Fahrenheit, yet a person can easily pass his/her hand through the flame. Heat duration only becomes critical to a home with a wood exterior surface if the heat is allowed to remain for 30-90 seconds.

Research scientist Jack Cohen of the USDA Forest Service has found that a home's characteristics--its exterior materials and design in relation to the immediate area around a home within 100 feet--principally determine the home ignition potential. He calls the home and its immediate surroundings the home ignition zone. In a study of ignition of wood wallboard, tests by a USDA Forest Service research team described in the Proceedings, 1st International Fire and Materials Conference showed that flame impingement for sufficient length of time (approximately 1 min.) ignites a typical hardboard siding material. Since the requirement in this FPP is for a non-combustible wall or 1-hour fire resistive construction for the exterior portion of a structure, the home's exterior reaching ignition temperature is very unlikely due to either radiant or convective heat.

Fire agencies consider vegetation management as a principal approach to wildland fire hazard reduction. Whenever the flame lengths are within proximity to the structure envelope and 1-2 minutes in duration or more, and if the setback and modified fuel is equal to or less than the separation of combustible vegetation from a combustible structure, there is a high probability of structure ignition. This is not necessarily from the radiant heat, but from a greater chance of ember intrusion into the structure.
Contact with a fire's convection heat column also may cause ignition but the temperature of the column's gases is generally not hot enough or long enough in duration to sustain the ignition of the structure.

Comparing the expected wildland fire behavior projections in each of the scenarios in Section 2.4 against the required fuel modification zones outlined in Section 5.0 demonstrates substantial reductions in the expected flame length and fireline intensity.

By requiring the structures exposed to the threat of wildfire to incorporate the following guidelines, those structures will be provided with the most effective treatment for minimizing losses from flame impingement and associated radiant heat intensities.

- Each structure is constructed of ignition resistant building materials.
- The area surrounding each structure contains an irrigated zone (defensible space) and a thinning zone (low fuel volume buffer strip) between the irrigated zone and the untreated fuels.

The eventual homeowners shall be required to maintain their properties to Zone 1 Vegetation Management standards and shall keep the roofs and rain gutters free of leaves, needles, and other combustible debris. All firewood and other combustible materials must be safely stored away from the structures (minimum 30 ft.) so that embers falling on or near the structures have no suitable host.

3.3 Fire Resistant Plant Palette

Wildland fire research has shown that some types of plants, including many natives, are more fire resistant than others. These low fuel volume, non-oily, non-resinous plants are commonly refered to as 'fire resistant'. This term comes with the proviso that each year these plants are pruned, all dead wood is removed and all grasses or other plant material are removed from beneath the circumference of their canopies. Species selection should be from those that are considered Drought Tollerant/Fire Resistive.

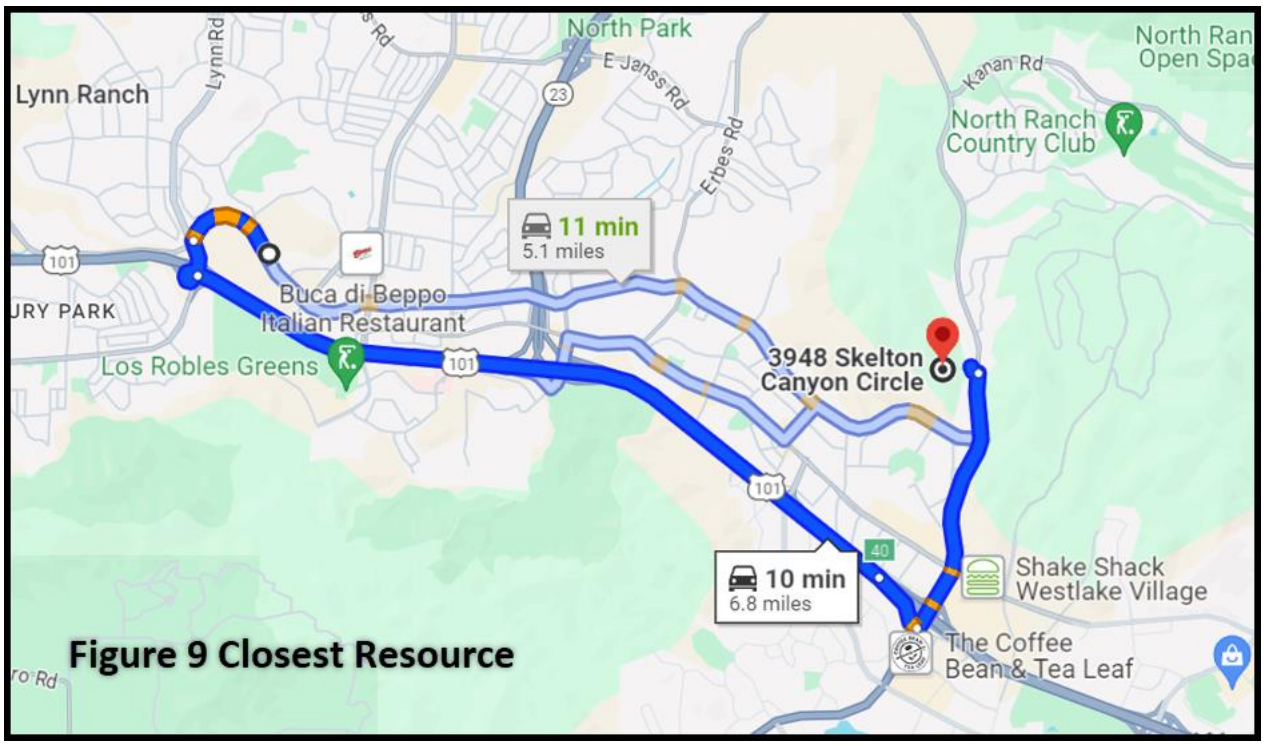
Chapter 49 of the 2022 Code provides references to assist in finding the best fit for the project: Fire-resistant Plants for Home Landscapes, A Pacific Northwest Extension publication; Home Landscaping for Fire, University of California Division of Agriculture and Natural Resources; Sunset Western Garden Book

Some native species are not considered 'undesirable' from a wildfire risk management perspective provided they are properly maintained year round (refer to APPENDIX 'B' for a list of prohibited plant species). Should any plant inadvertantly appear on both the Recommended and Prohibited Lists, the listing on the Prohibited List shall prevail and it shall be prohibited.

4.0 FIRE DEPARTMENT RESPONSE

The Ventura County Fire Department (VCFD) has adequate emergency response equipment to protect 3948 Skelton Canyon Circle. Station 30, 325 W Hillcrest Dr, would be the closest resource. Figure 8
There is no assurance that the closest fire station will be in its station when a wildfire threatens the site from an ignition in the adjacent wildland area. Engines may respond from other stations located further away or from other incidents. On high/extreme fire danger days there often may be multiple fire starts and engine companies may be already deployed on other incidents.

Therefore FIREWISE 2000, LLC. planned projects use 'defensible space', ignition resistant building features, and key fuel treatment strategies that enable residents to substantially increase their ability to survive a wildfire on their own and without the loss of their structure.



The goal of this FPP therefore is to make this SFR and its eventual homeowner as safe as possible and able to survive on their own until such time as firefighting equipment arrives and/or residents can be safely evacuated.

5.0 VEGETATION MANAGEMENT ZONE DESCRIPTIONS & REQUIRED TREATMENTS

5.1 Chapter 49 of the 2022 Fire Code provides overall guidance and requirements as follows. This plan is subject to this criteria as well.

All new vegetation shall be fire-resistant/drought tolerant vegetation in accordance with this section.
To be considered fire-resistant vegetation, it must meet at least one of the following:

1. Be identified as fire-resistant vegetation in an approved book, journal or listing from an approved organization.
2. Be identified as fire-resistant vegetation by a licensed landscape architect with supporting justification.
3. Plants considered fire-resistant vegetation and approved by the local enforcing agency.

All new plantings of shrubs shall comply with the following:

1. Shrubs shall not exceed 6 feet in height.
2. Groupings of shrubs are limited to a maximum aggregate diameter of 10 feet.
3. Shrub groupings shall be separated from other groupings a minimum of 15 feet.
4. Shrub groupings shall be separated from structures a minimum of 30 feet.
5. Where shrubs are located below or within a tree's drip line, the lowest tree branch shall be a minimum of three times the height of the understory shrubs or 10 feet, whichever is greater.

Trees shall be managed as follows within the 30-foot zone of a structure:

1. New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10 feet from any combustible structure.

2.The horizontal distance between crowns of new trees and crowns of adjacent trees shall not be less than 10 feet.
3.Existing trees shall be trimmed to provide a minimum separation of 10 feet away from chimney and stovepipe outlets per Title 14, Section 1299.03.

Below are the descriptions and required treatments for the Vegetation Management Zones. All distances in this report are measured horizontally. These distances are depicted on the attached Fire Protection Plan Exhibit.

Zones 1 and 2 encompass various distances, which will ensure no radiant heat will reach the structure.

Linkage to as-built landscape plans in accordance with Chapter 49 of the Fire Code required as stated below;
4903.2.1.2 Final fire protection plan.
The final fire protection plan shall include items listed in Section 4903.2.1.1 and the following:

1. *A map identifying all proposed plants in the fuel modification zones with a legend that includes a symbol for each proposed plant species. The plan shall include specific information on each species proposed, including but not limited to:*
    a. The plant life-form;
    b. The scientific and common name; and
    c. The expected height and width for mature growth.
2. *Identification of irrigated and non-irrigated zones.*
3. *Requirements for vegetation reduction around emergency access and evacuation routes.*
4. *Identification of points of access for equipment and personnel to maintain vegetation in common areas.*
5. *Legally binding statements regarding community responsibility for maintenance of fuel modification zones.*
6. *Legally binding statements to be included in covenants, conditions, and restrictions regarding property owner responsibilities for vegetation maintenance.*

5.2 Vegetation Management Zone 0 Irrigated - *HOMEOWNER MAINTAINED*
IRRIGATED ZONE 0 (OWNER MAINTAINED) An area starting at the structure envelope extending 5 feet outward. This zone includes the area under and around all attached decks, and requires the most stringent wildfire fuel reduction. This area shall be kept clear of combustibles, landscaping mulch, and any large shrubs and trees. It may have limited plants that are low growing, nonwoody, properly watered and maintained. **It shall include any plantings in Planter Boxes**
Combustible fencing material shall not be attached to the structure.

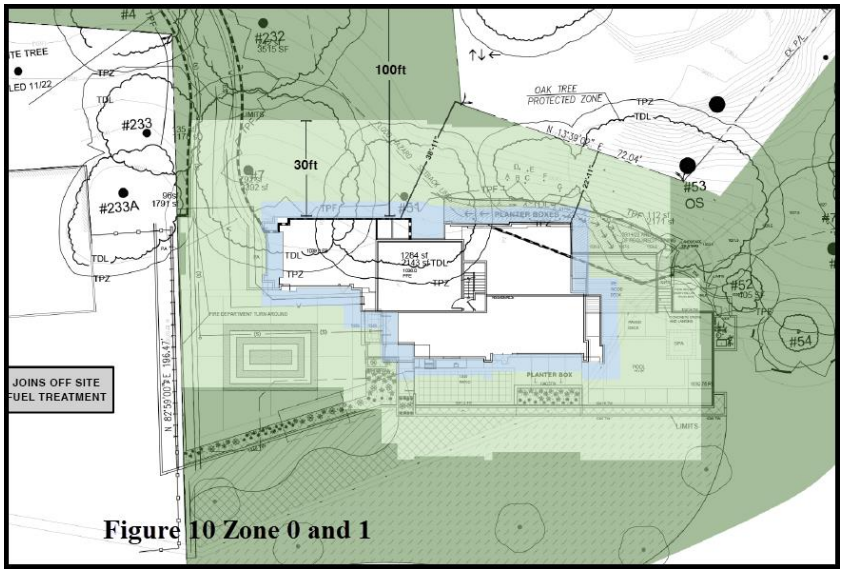


Figure 10 Zone 0 and 1

5.3 Irrigated Zone 1 - An area located outward from Zone 0 extending to 30ft.

Defined:

Required Landscaping where irrigated

- If there are any plants in this zone they shall be fire resistant and shall not include any pyrophytes that are high in oils and resins such as pines, eucalyptus, cedar, cypress, or juniper species. Thick or leathery leaf species with high moisture content is the most 'fire resistant'. For a listing of prohibited plant species refer to APPENDIX 'B' for the Prohibited Plant list.
- Zone 1 will be cleared of all fire prone and undesirable plant species (see APPENDIX 'B').
- If Shrubs are present, they should be low-growing and well-irrigated and should be selected from species that are known to be fire resistive. The project Landscape Architect will have various species that qualify.

Chapter 49 of the Fire Code provides this information; The following sources contain examples of types of vegetation that can be considered fire-resistant vegetation. (Fire-resistant Plants for Home Landscapes, A Pacific Northwest Extension publication; Home Landscaping for Fire, University of California Division of Agriculture and Natural Resources; Sunset Western Garden Book.

- If a local jurisdiction has a preferred plant list, it shall be used in accordance with the requirements.
- Shrubs shall be single specimens or a grouping not exceeding three plants. Mature height of plants shall not exceed 48 inches. At mature growth, single plants or groupings of plants shall be separated from each other by at least 5 feet. Plants shall not be located under vents or windows or within five feet of either side of a window. Single specimens of plants or a grouping not exceeding three plants are allowed under mature trees.
- Trees shall be single specimens or groupings of not more than three trees selected from the approved plant list. Mature canopies will be at least 10 feet from the exterior walls of the structure or from the most distal point of a combustible projection, an attached accessory structure, or an accessory structure within 10 feet of a habitable building.
- An automatic irrigation system is required. Areas inside the drip line of native oak trees shall not be irrigated.

Required Maintenance

- The lot shall be maintained year round by the HOA or CFD within zone boundaries as required by this FPP or other standards as applicable.
- Sprinkler systems shall be checked montyly to insure proper working order.
- Any dead or dying plant material shall be remove and replaced. Shrubs and trees are to be bi-annually maintained free of dead material.
- Trees shall be maintained such that the branches and limbs closest to the ground are pruned to a height from the ground that is equal to 1/3 the overall height of the tree or six feet from the ground, whichever is higher.

5.4 Non-Irrigated Zone 2 - Oak Woodland Shaded Fuel Break. An area extending from 30 feet to 100. This may also include retained oak trees within Zone 1; Figures 10, 11, and 12.

Where the distance is less mitigation measures shall apply.

Prohibited species removed. The area may include single or small clusters of trimmed fire resistance native plants up to 36 inches in height and trimmed native oak trees limbed up to 6 feet from the ground. All saplings less than 2 inches in diameter shall be removed. The ground cover, native plants and grasses below the tree canopies shall be weed whipped and maintained to 4" or less in stubble height. Care should be taken to the area out to the drip line under the mature oaks. This area should not be disturbed by digging or grubbing.

Required Maintenance

- Fuel Modification area shall be maintained year round as required by this FPP. Inspections and compliance shall be by VCFD.

- Shrubs shall be kept trimmed to ensure spacing is maintianed.
- Grasses shall be maintained weed whipped to 4 inches.
- The area shall be maintained free of invasive plants and any volunteer native shrubs.

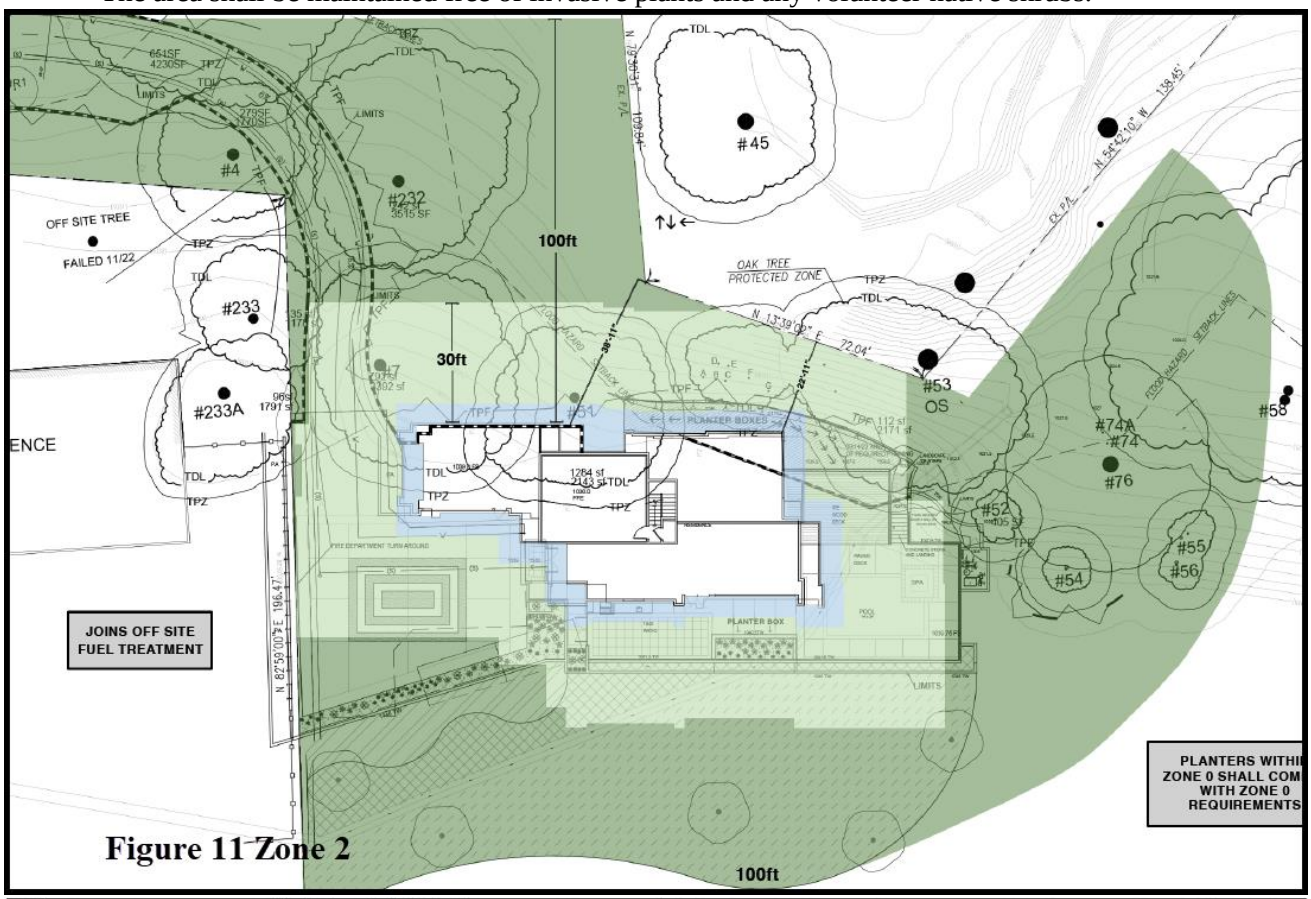


Figure 11 Zone 2

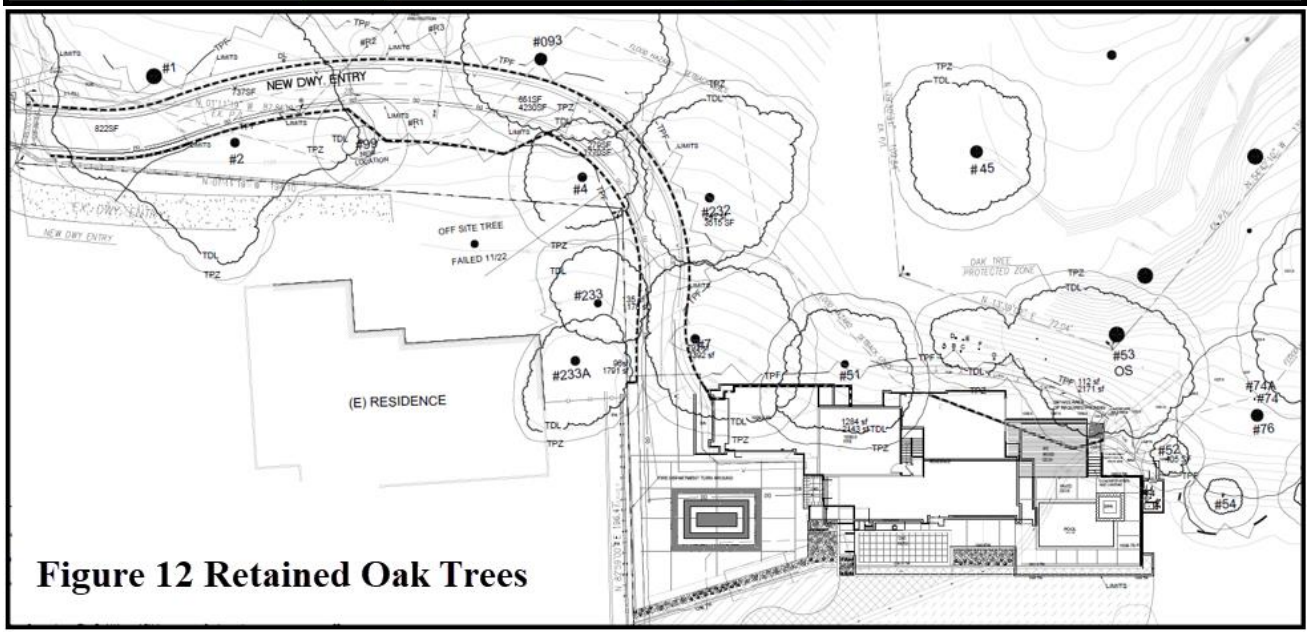


Figure 12 Retained Oak Trees

5.5 Mitigation Measures

In accordance with Section(s) 104.8 and 104.9 of the 2022 Fire Code, We are requesting an alternative method of fire protection for the proposed project indicated above. Mitigations for less than 100ft of defensible space, caused by Resource Agency requirements.

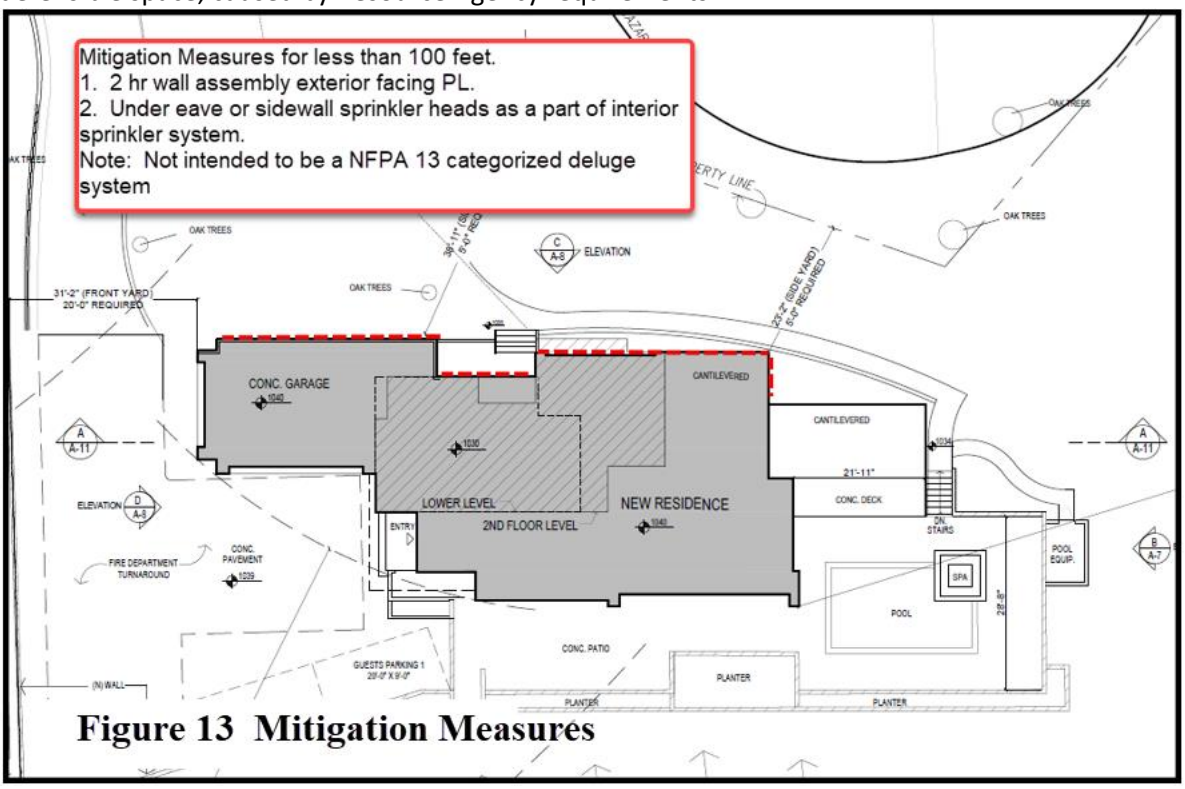


Figure 13 Mitigation Measures

- All of those elements found in CBC 7A and CRC 337 for very high fire severity zone construction. See Appendix 'E' for specific list of required construction features for very high fire areas.
- Structure envelopes facing east will require a 2hr wall assembly, prior to the stucco coat underlay the wood framed assembly with a layer of 5/8 Gypsum Type X drywall, sealed at the lower plate.
- Combustible free zone entire setback area east of structure.

5.6 Construction Standards

All structures within the development site shall meet all wildland/interface standards to the satisfaction of the City of Thousand Oaks and Ventura County Fire. Design and construction shall meet the requirements listed in the 2022 Edition of the Fire and Building Codes, with special adherence to Chapter 7A, and the 2022 Edition of the California Residential Code section R337, with other local amendments/ordnances as adopted.
For a description of the current construction requirements as of the date of this report (see APPENDIX 'E').

All accessory structures such as decks, balconies, patios, covers, gazebos and fences shall be built from non-combustible or ignition resistant materials. The homeowner(s) are not restricted from having concrete patios, concrete walkways, or swimming pools within the Vegetation Management Zones in compliance with other codes. Refer to APPENDIX 'D' for photos and descriptions of non-combustible decks, patio covers, and railings for these accessory structures. Construction or building permits shall not be issued until the fire code official inspects and approves required vegetation clearance, fire apparatus access and water supply for the construction site. The issuance of building permits with regard to these requirements shall be in accordance with the CITY OF THOUSAND OAKS AND VCFD. Prior to the delivery of combustible building construction materials to the project site the following conditions shall be completed to the satisfaction of VCFD.

- All wet and dry utilities shall be installed and approved by the appropriate inspecting department or agency.

- Clearance of Zone 1, and 2 vegetation management shall be provided prior to combustible material arriving on the site and shall be maintained throughout the duration of construction. Fire code officials may require additional vegetation management and/or defensible space when warranted.
- Additional requirements as listed in the development will be adhere to:
  a. Mobile stationery or portable powered operated equipment in the HFA shall not be used without written approval of VCFD. Specific fire protection measures that may be required to mitigate the hazard include, but are not limited to:
     1. A standby water tender, equipped with a pump, fire hose and nozzle.
     2. Pre-wetting of the site to avoid the production of sparks between blades, tracks, and rocks.
     3. Conducting a fire watch for a minimum of one-hour following the cessation of operations each day
     4. For welding, cutting or grinding work, clear away all combustible material from the area around such operations for a minimum distance of 10 feet. A hot-work permit may be required prior to beginning work.
     5. Maintain a serviceable round point shovel with an overall length of not less than forty-six (46) inches and a five (5) gallon backpack water pump-type fire extinguisher fully equipped and ready for use at the immediate area during the operation.

6.0 INFRASTRUCTUE

6.1 Water Supply

Fire flow requirements shall be provided by Thousand Oaks and or Ventura County Fire.
A NFPA 13D Residential Sprinklers, engineered to the satisfaction of Ventura County Fire is required...

6.2 Access Roads/Driveways

Fire access roads shall meet the design requirements for the City of Thousand Oaks and Ventura County Fire, and shall be a paved all weather surface capable of supporting loads of 80,000 lbs gross vehicle weight. A vertical roadway clearance of 13ft 6in is required for all access roads.
Access to all portions of the building must be within 150 feet of the available fire deparment access.
Fire access roads shall be maintained for clear access of emergency vehicles.

7.0 HOMEOWNERS EDUCATION

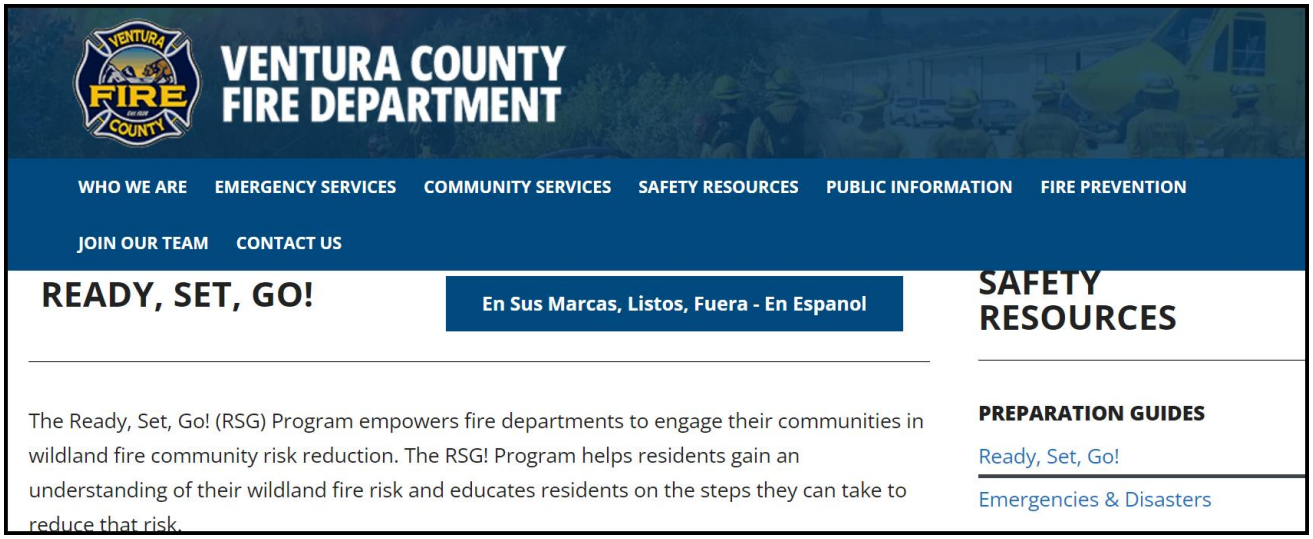
The homeowner, by reviewing this Fire Protection Plan, shall be aware of the herein described fire protection measures; the types of non-combustible construction; and the plant materials that are allowed within their lot boundary. Of importance are APPENDICES ‘A’, ‘B’, and ‘D’ of this plan, which provide guidance in the types of plants that are allowed to be established in landscaped areas and appropriate construction within Vegetation Management Zones. Plant selection is critical as embers often travel over a mile during Santa Ana wind events. Should a wildland fire occur within the geographical area, the homeowner should understand the ‘Ready, Set, Go’ procedures as recommended by Ventura County Fire, https://vcfd.org/ready-set-go/

7.1 APPENDIX 'E' provides details of enhanced construction features required for homes constructed in a Very High Fire Severity Zone.

8.0 FIRE PROTECTION PLAN EXHIBIT

The Exhibit is considered a part of the plan it graphically provides information on required fuel treatment measures.

The FIRE PROTECTION PLAN EXHIBIT, APPENDIX 'F' depicts the location of all proposed vegetation management treatment locations as well as fire access roads, property lines, proposed hydrant locations and



other pertinent information.

APPENDICES

Acceptable Plant List	**APPENDIX 'A'**
Undesirable Plant Species	**APPENDIX 'B'**
Literature Referenced	**APPENDIX 'C'**
Non-combustible & Fire-Resistant Building Materials	**APPENDIX 'D'**
Ignition Resistant Construction Requirements	**APPENDIX 'E'**
Fuel Treatment Exhibit	**APPENDIX 'F'**

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APPENDIX 'A'

Acceptable Plant List

Various lists of plant species are available, Firewise2000, LLC will provide a list of acceptable species if required. A Landscape Architect will be able to provide various listings as needed.

The project Landscape Architect will have various species that qualify within the fire resistive/drought tolerant categories.

If a local jurisdiction has a preferred plant list, it shall be used in accordance with the requirements.

Chapter 49 of the Fire Code provides this information; The following sources contain examples of types of vegetation that can be considered fire-resistant vegetation. (Fire-resistant Plants for Home Landscapes, A Pacific Northwest Extension publication; Home Landscaping for Fire, University of California Division of Agriculture and Natural Resources; Sunset Western Garden Book.

APPENDIX 'B'
PROHIBITED PLANT SPECIES

The following Guidance can be found at https://vcfd.org/standards-guidelines/,

VENTURA COUNTY FIRE DEPARTMENT

Fire Prevention Bureau
165 Durley Avenue, Camarillo, CA 93010-8586
Office: (805) 389-9738 Fax: (805) 388-4356

GUIDELINE 410
PROHIBITED PLANT LIST

This list was first published by the VCFD in 2014. It has been updated as of April 2019. It is intended to provide a list of plants and trees that are not allowed within a new required defensible space (DS) or fuel modification zone (FMZ). It is highly recommended that these plants and trees be thinned and or removed from existing DS and FMZs. In certain instances, the Fire Department may require the thinning and or removal.

This list was prepared by Hunt Research Corporation and Dudek & Associates, and reviewed by Scott Franklin Consulting Co, VCFD has added some plants and has removed plants only listed due to freezing hazard. Please see notes after the list of plants.

For questions regarding this list, please contact the Fire Hazard reduction Program (FHRP) Unit at 085-389-9759 or FHRP@ventura.org

APPENDIX 'C'
REFERENCE MATERIAL

Literature References

1. *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model*, General Technical Report RMRS-GTR-153. June 2005. Joe H. Scott, Robert E. Burgan, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

2. *BEHAVEPlus: Fire Modeling System, version 6 build 626: Variables.* (Not Revised upon release of V6)General Technical Report RMRS-GTR-213WWW Revised. September 2009. Patricia L. Andrews, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

3. *BEHAVEPlus Fire Modeling System, Version 5.0.0* General Technical Report RMRS-GRT-106WWW Revised. June 2008. Patricia L. Andrews, Collin D. Bevins and Robert C. Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

4. *BEHAVEPlus Fire Modeling System, Version 5.0 User's Guide.* General Technical Report RMRS-GRT-106WWW Revised. July 2009. Patricia L. Andrews, Collin D. Bevins, Robert C. Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.

5. The 2022 California Fire Code Chapter 49

6. The 2022 California Fire Code with Local Amendments

7. The 2022 California Residential Code, Section R337.

8. Chapter 7A-California of the 2022 Building Code

9. National Fire Protection Association - NFPA 13 Standard for the Installation of Sprinkler Systems in One – and Two-Family Dwellings and Manufactured Homes, 13-R &13-D, 2022 Editions

10. National Fire Protection Association - NFPA 1144 *Standard for Reducing Structure Ignition Hazards from Wildfire (*2018).

11. National Fire Protection Association - NFPA 1142, 2012 Edition. Table C.11 (b) Time-Distance Table Using an Average Speed of 35 mph.

12. *The California State and Local Responsibility Area Fire Hazard Severity Zone Map – Fire and Resource Assessment Program of CAL FIRE*

13. *Ventura County Fire Department Guidelines*

APPENDIX ‘D’

Non-combustible & Ignition Resistant Building Materials

Non-Combustible & Ignition Resistant Building Materials For Balconies, Carports, Decks, Patio Covers and Floors

Examples of non-combustible & fire-resistant building materials for balconies, carports decks, patio covers, and floors are as follow:

I. **NON-COMBUSTIBLE HEAVY GAGE ALUMINUM MATERIALS** - *Metals USA Building Products Group - Ultra-Lattice*

Ultra-Lattice Stand Alone Patio Cover

Ultra-Lattice Attached Patio Cover

Ultra-Lattice Solid Patio Cover

Ultra-Lattice Vs. Wood

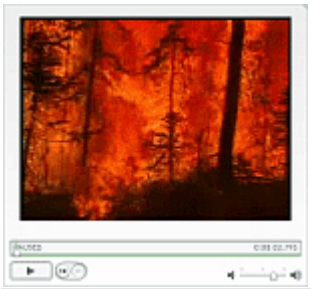
II. FRX Exterior Fire-Retardant Treated Wood

Exterior Fire Retardant Treated (FRT) Wood

FRX® fire retardant treated wood may be used in exterior applications permitted by the codes where: public safety is critical, other materials would transfer heat or allow fires to spread, sprinkler systems cannot easily be installed, corrosive atmospheres necessitate excessive maintenance of other materials, or fire protection is inadequate or not readily available. The International Building, Residential and Urban-Wildland Interface Codes and regulations permit the use of fire-retardant treated wood in specific instances. See below for typical exterior uses and typical residential uses.

Typical Exterior Uses

- Balconies
- Decks



Homeowners and Residential Architects: See this 2-minute video and the diagram below.

For information on fire retardant treated wood for exterior uses, visit www.frxwood.com.

III. **TREX COMPANY, INC** –"Trex Accents ®: Fire Defense ™ " wood and polyethylene composite deck board, nominal 5/4" thick x 5-1/2" width, nominal density of 0.036 lb./in^3.

Trex Accents®: Fire Defense™

The perfect blend of beauty and brawn.

Trex's #1 selling platform, Trex Accents®, exceeds the strict fire regulations set by the State of California and San Diego County.

- Offers superior safety performance:
  - Exceeds ASTM E84 Class B Flame Spread.
  - Exceeds 12-7A-4 Part A (under flame) and Part B (Burning Brand).
- Self-extinguishing even under extreme fire exposure.

Approved for use by the California State Fire Marshal's Office and San Diego County. Read the California Department of Forestry and Fire Protection, Office of the State Fire Marshal WILDLAND URBAN INTERFACE (WUI)PRODUCTS Report. (PDF)

IV. SOLID "WOOD" DECKING

Company Name: Various Manufacturers

Product Description: Solid "Wood" decking: "Redwood", "Western Red Cedar", "Incense Cedar", "Port Orford Cedar", and "Alaska Yellow Cedar".
Sizes: Minimum nominal 2" thickness (American Softwood Lumber Standard PS 20).
Lumber grades: Construction Common and better grades for Redwood, 3 Common and better grades for Cedars, and commercial decking or better grades for both Redwood and Cedars.

Special Instructions: Solid wood decking shall be installed over solid wood joists spacing 24" or less on center.

Decking (SFM Standard 12-7A-4)

V. Vents

Examples of Approved Vents

Brandguard

O'Hagin Fire & Ice® Line – Flame and Ember Resistant
An available option for all O'Hagin attic ventilation products, this attic vent not only features all the same design, construction elements and color choices as the O'Hagin Standard Line, but also features an interior stainless-steel matrix that resists the intrusion of flames and embers. This patent-pending attic vent is accepted for use by many local fire officials for installation in Wildland Urban Interface (WUI) zones.

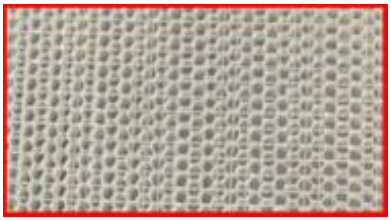
Vulcan Vents

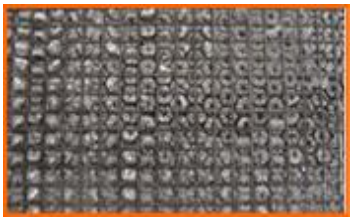
The founders of Gunter Manufacturing have been working closely over the last two years, with the scientists and inventors of Vulcan Technologies to bring to market this incredible product.

Combining our quality vent products with the fire-stopping honeycomb matrix core designed by Vulcan has produced unique and remarkable results.

At Gunter manufacturing has over 50 years of combined sheet metal manufacturing experience. Special orders are not a problem. Their vent frames are industry standard frames so there is little or no learning curve for installers and contractors. Their stated goal is to provide people with the vents they need to secure their homes with additional safety against wildfires and give them piece of mind from knowing that their home or structure is protected by a product that works!

The core of their fire and ember safe vents are manufactured out of hi-grade aluminum honeycomb and coated with an intumescent coating made by Fire Free Coatings. The intumescent coating is designed to quickly swell up and close off when exposed to high heat. The expanded material acts as an insulator to heat, fire, and embers

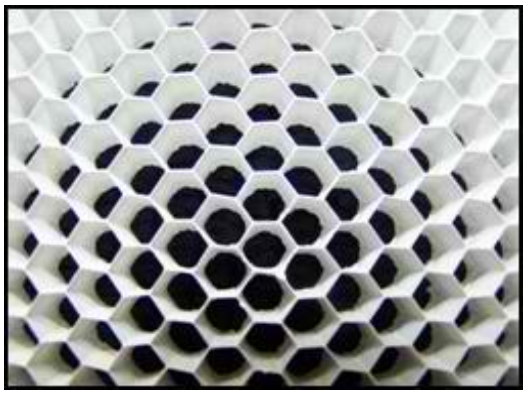




Before **After**

After the cells close off, they are extremely well insulated, and fire or embers cannot penetrate.

Even before the cells close off, the vent is designed to protect against flying embers. In many cases embers will attack a structure before fire ever comes near, so this feature is especially important.



Close-up of the coated honeycomb matrix.

Fire easily passes through a standard vent, on the left, but stops cold when it comes up against a Vulcan Vent shown on right.

Appendix 'E'
Ignition Resistant Construction

The following is a summary of the current requirements for ignition resistant construction for high fire hazard areas under Chapter 7A of the California Building Code (CBC) 2019 edition. However the requirements listed below are not all inclusive and all exterior building construction including roofs, eaves, exterior walls, doors, windows, decks, and other attachments must meet the current CBC Chapter 7A ignition resistance requirements, the California Fire Code, and any additional County and/or City codes in effect at the time of building permit application. See the currrent applicable codes for a detailed description of these requirements and any exceptions.

1. All structures will be built with a Class A Roof Assembly and shall comply with the requirements of Chapter 7A and Chapter 15 of the California Fire Code. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions.

2. Roof valley flashings shall be not less than 0.019-inch (0.48 mm) No. 26 gage galvanized sheet corrosion-resistant metal installed over not less than one layer of minimum 72 pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D3909, at least 36-inch-wide (914 mm) running the full length of the valley.

3. Attic or foundation ventilation louvers or ventilation openings in vertical walls shall be covered with a minimum of 1/16-inch and shall not exceed 1/8-inch mesh corrosion-resistant metal screening or other approved material that offers equivalent protection.

4. Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to resist the intrusion of flames and embers, be fire stopped with approved materials or have one layer of a minimum 72 pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D3909 installed over the combustible decking.

5. Enclosed roof eaves and roof eave soffits with a horizontal underside, sloping rafter tails with an exterior covering applied to the under-side of the rafter tails, shall be protected by one of the following:
    - noncombustible material
    - Ignition-resistant material
    - One layer of $^{5}/_{8}$-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit
    - The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    - Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in Section 707A.10 when tested in accordance with the test procedures set forth in ASTM E2957.
    - Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.
      Exceptions: The following materials do not require protection:
      1. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
      2. Fascia and other architectural trim boards.

6. The exposed roof deck on the underside of unenclosed roof eaves shall consist of one of the following:
    - Noncombustible material, or
    - Ignition-resistant material, or

- One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck, or
- The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the roof deck designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association fire Resistance Design Manual.
  Exceptions: The following materials do not require protection:
  1. Solid wood rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
  2. Solid wood blocking installed between rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm).
  3. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails.
  4. Fascia and other architectural trim boards.

7. Vents - ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, other materials or other devices that meet one of the following requirements:
   A. Vents listed to ASTM E2886 and complying with all the following:
      i. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
      ii. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
      iii. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
   B. Vents shall comply with all of the following:
      i. The dimensions of the openings therein shall be a minimum of $^{1}/_{16}$-inch (1.6 mm) and shall not exceed $^{1}/_{8}$-inch (3.2 mm).
      ii. The materials used shall be noncombustible.
      Exception: Vents located under the roof covering, along the ridge of roofs, with the exposed surface of the vent covered by noncombustible wire mesh, may be of combustible materials.
      iii. The materials used shall be corrosion resistant.

8. Vents shall not be installed on the underside of eaves and cornices.
   Exceptions:
   1. Vents listed to ASTM E2886 and complying with all the following:
      - There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
      - There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
      - The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
   2. The enforcing agency shall be permitted to accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.
   3. Vents complying with the requirements of Section 706A.2 shall be permitted to be installed on the underside of eaves and cornices in accordance with either one of the following conditions:
      3.1. The attic space being ventilated is fully protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or,
      3.2. The exterior wall covering, and exposed underside of the eave are noncombustible materials, or ignition-resistant materials, as determined in accordance with SFM Standard 12-7A-5 Ignition-Resistant Material and the requirements.

9. All chimney, flue or stovepipe openings that will burn solid wood will have an approved spark arrester. An approved spark arrester is defined as a device constructed of nonflammable materials, having a heat and corrosion resistance equivalent to 12-gauge wire, 19-game galvanized steel or 24-gage stainless steel. or other material found satisfactory by the Fire Protection District, having ½-inch perforations for arresting

burning carbon or sparks nor block spheres having a diameter less than 3/8 inch (9.55 mm). It shall be installed to be visible for the purposes of inspection and maintenance and removeable to allow for cleaning of the chimney flue.

10. All residential structures will have automatic interior fire sprinklers installed according to the National Fire Protection Association (NFPA) 13D 2019 edition - *Standard for the Installation of Sprinkler Systems in One and Two-family Dwellings and Manufactured Homes*. Fire sprinklers are not required in unattached non-habitable structures greater than 50 feet from the residence.

11. The exterior wall covering, or wall assembly shall comply with one of the following requirements:
    - Noncombustible material, or
    - Ignition resistant material, or
    - Heavy timber exterior wall assembly, or
    - Log wall construction assembly, or
    - Wall assemblies that have been tested in accordance with the test procedures for a 10-minute direct flame contact expose test set forth in ASTM E2707 with the conditions of acceptance shown in Section 707A.3.1 of the California Building Code, or
    - Wall assemblies 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.
      Exception: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section including;
        - One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing, or
        - The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure includes assemblies using the gypsum panel and sheathing products listed in the Gypsum Associate Fire Resistance Design Manual.

12. Exterior walls shall extend from the top of the foundation to the roof and terminate at 2-inch nominal solid blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.

13. Gutters shall be provided with the means to prevent the accumulation of leaf litter and debris within the gutter that contribute to roof edge ignition.

14. No attic ventilation openings or ventilation louvers shall be permitted in soffits, in eave overhangs, between rafters at eaves, or in other overhanging areas.

15. All projections (exterior balconies, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections) or structures less than five feet from a building shall be of non-combustible material, one-hour fire resistive construction on the underside, heavy timber construction or pressure-treated exterior fire-retardant wood. When such appendages and projections are attached to exterior fire-resistive walls, they shall be constructed to maintain same fire-resistant standards as the exterior walls of the structure.

16. Deck Surfaces shall be constructed with one of the following materials:
    - Material that complies with the performance requirements of Section 709A.4 when tested in accordance with both ASTM E2632 and ASTM E2726, or
    - Ignition-resistant material that complies with the performance requirements of 704A.3 when tested in accordance with ASTM E84 or UL 723, or
    - Material that complies with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5, or
    - Exterior fire retardant treated wood, or
    - Noncombustible material, or

- Any material that complies with the performance requirements of SFM Standard 12-7A-4A when the attached exterior wall covering is also composed of noncombustible or ignition-resistant material.

17. Accessory structures attached to buildings with habitable spaces and projections shall be in accordance with the Building Code. When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have all underfloor areas and exterior wall construction in accordance with Chapter 7A of the Building Code.

18. Exterior windows, skylights and exterior glazed door assemblies shall comply with one of the following requirements:
    - Be constructed of multiplane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, or
    - Be constructed of glass block units, or
    - Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
    - Be tested to meet the performance requirements of SFM Standard 12-7A-2.

19. All eaves, fascia and soffits will be enclosed (boxed) with non-combustible materials. This shall apply to the entire perimeter of each structure. Eaves of heavy timber construction are not required to be enclosed as long as attic venting is not installed in the eaves. For the purposes of this section, heavy timber construction shall consist of a minimum of 4x6 rafter ties and 2x decking.

20. Detached accessory buildings that are less than 120 square feet in floor area and are located more than 30 feet but less than 50 feet from an applicable building shall be constructed of noncombustible materials or of ignition-resistant materials as described in Section 704A.2 of the California Building Code.
    Exception: Accessory structures less than 120 square feet in floor area located at least 30 feet from a building containing a habitable space.

21. All rain gutters, down spouts and gutter hardware shall be constructed from metal or other noncombustible material to prevent wildfire ignition along eave assemblies.

22. All side yard fence and gate assemblies (fences, gate and gate posts) when attached to the home shall be of non-combustable material. The first five feet of fences and other items attached to a structure shall be of non-combustible material.

23. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the methods listed in this section.
    - Weather-stripping products made of materials that:
      (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials) for a period of 2,000 hours, where the maximum allowable difference in tensile strength values between exposed and non-exposed samples does not exceed 10%; and (b) exhibit a V-2 or better flammability rating when tested to UL 94, Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
    - Door overlaps onto jambs and headers.
    - Garage door jambs and headers covered with metal flashing.

24. Exterior doors shall comply with one of the following:
    1. The exterior surface or cladding shall be of noncombustible material or,
    2. The exterior surface or cladding shall be of ignition-resistant material or,

3. The exterior door shall be constructed of solid core wood that complies with the following requirements:

3.1. Stiles and rails shall not be less than 1-3/8 inches thick.

3.2. Panels shall not be less than 1-1/4 inches thick, except for the exterior perimeter of the panel that shall be permitted to taper to a tongue not less than 3/8 inch thick.

4. The exterior door assembly shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252 or,

5. The exterior surface or cladding shall be tested to meet the performance requirements of Section 707A.3.1 when tested in accordance with ASTM E2707 or,

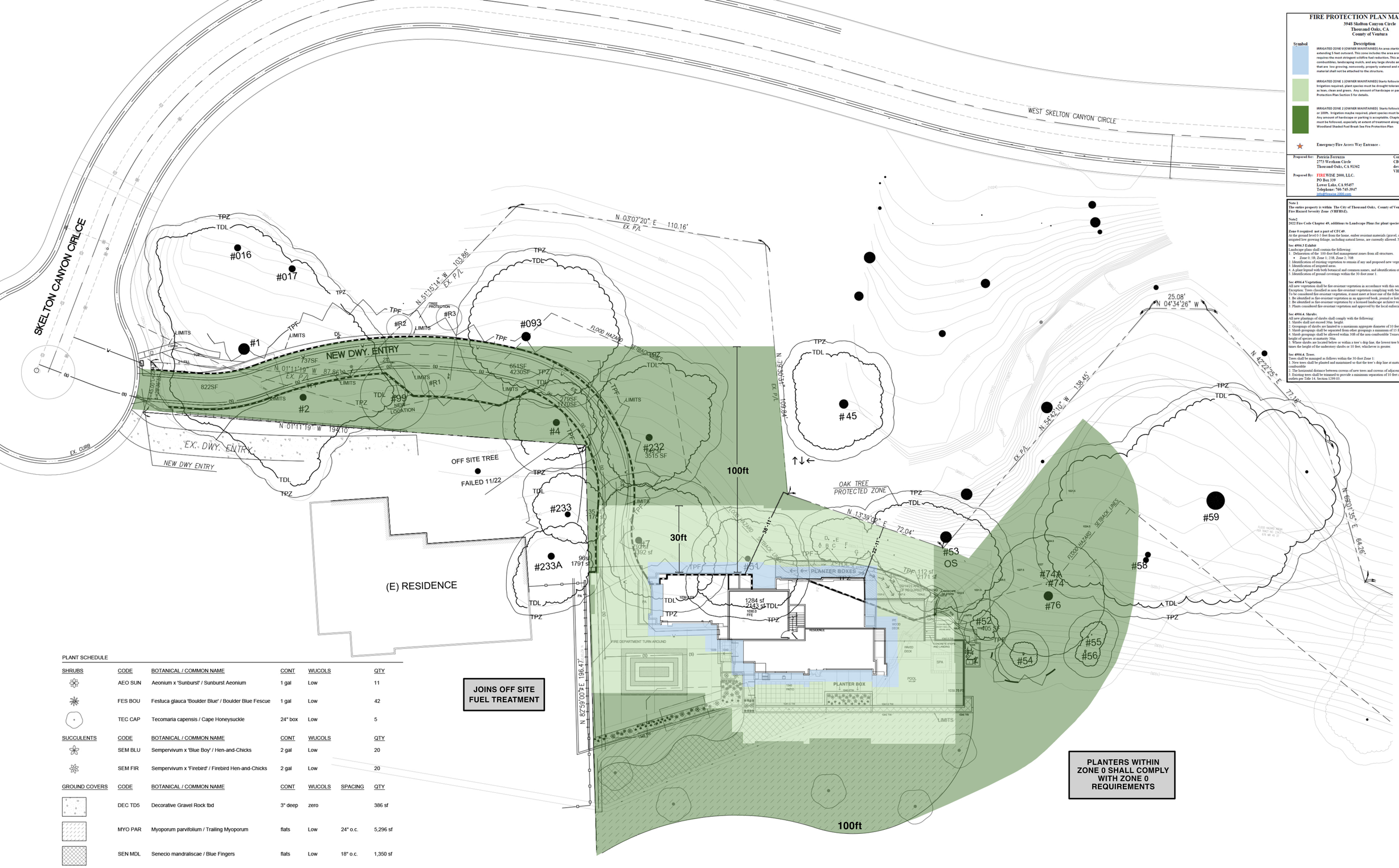
6. The exterior surface or cladding shall be tested to meet the performance requirements of SFM Standard 12-7A-1.

Garage Door Note

Garage Door Battery Backup SB969, required on automatic garage doors that are manufactured for sale, sold, offered for sale, or installed in a residence required to have a battery backup function that is designed to operate when activated because of an electrical outage.

APPENDIX ‘F’
FIRE PROTECTION PLAN EXHIBIT
ACCESS PLAN EXHIBIT

Exhibit shall be scalable and is considered a part of the Fire Protection Plan.



PLANT SCHEDULE

SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS		QTY
	AEO SUN	Aeonium x 'Sunburst' / Sunburst Aeonium	1 gal	Low		11
	FES BOU	Festuca glauca 'Boulder Blue' / Boulder Blue Fescue	1 gal	Low		42
	TEC CAP	Tecomaria capensis / Cape Honeysuckle	24" box	Low		5
SUCCULENTS	**CODE**	**BOTANICAL / COMMON NAME**	**CONT**	**WUCOLS**		**QTY**
	SEM BLU	Sempervivum x 'Blue Boy' / Hen-and-Chicks	2 gal	Low		20
	SEM FIR	Sempervivum x 'Firebird' / Firebird Hen-and-Chicks	2 gal	Low		20
GROUND COVERS	**CODE**	**BOTANICAL / COMMON NAME**	**CONT**	**WUCOLS**	**SPACING**	**QTY**
	DEC TD5	Decorative Gravel Rock tbd	3" deep	zero		386 sf
	MYO PAR	Myoporum parvifolium / Trailing Myoporum	flats	Low	24" o.c.	5,296 sf
	SEN MDL	Senecio mandraliscae / Blue Fingers	flats	Low	18" o.c.	1,350 sf
	THY MOT	Thymus praecox / Mother of Thyme	flats	Low	12" o.c.	692 sf

FIRE PROTECTION PLAN MAP LEGEND

3948 Skelton Canyon Circle
Thousand Oaks, CA
County of Ventura

Symbol	Description
	IRRIGATED ZONE 0 (OWNER MAINTAINED) An area starting at the structure envelope extending 5 feet outward. This zone includes the area around all exits, windows, decks and requires the most stringent wildfire fuel reduction. This area shall be kept clear of combustibles, landscaping mulch, and any large shrubs and trees. It may have limited plants that are low growing, nonwoody, properly watered and maintained. Combustible fencing material shall not be attached to the structure.
	IRRIGATED ZONE 1 (OWNER MAINTAINED) Starts following Zone 0 extending to 30 feet. Irrigation required, plant species must be drought tolerant and fire resistive. Further defined as lean, clean and green. Any amount of hardscape or parking is acceptable. See Fire Protection Plan Section 5 for details.
	IRRIGATED ZONE 2 (OWNER MAINTAINED) Starts following Zone 1 extending to the Parcel line or 100ft. Irrigation maybe required, plant species must be drought tolerant and fire resistive. Any amount of hardscape or parking is acceptable. Chapter 49 planting and tree requirements must be followed, especially at extent of treatment along PL. Portions will be considered Oak Woodland Shaded Fuel Break See Fire Protection Plan Section 5 for details.
★	Emergency/Fire Access Way Entrance -

Prepared for: Patricia Ferruzza
2773 Westham Circle
Thousand Oaks, CA 91362

Prepared By: FIREWISE 2000, LLC.
PO Box 339
Lower Lake, CA 95457
Telephone: 760.745.3947
info@firewise2000.com

Construction shall comply with CBC Chapter 7A required for development in areas subject to VHFHSZ designations

Note 1
The entire property is within The City of Thousand Oaks, County of Ventura and designated a Very High Fire Hazard Severity Zone (VHFHSZ).

Note2
2022 Fire Code Chapter 49, additions to Landscape Plans for plant species, spacing etc.

Zone 0 required not a part of CFC49.
At the ground level 0-5 feet from the house, ember resistant materials (gravel, concrete, stone, etc.) and well-irrigated low growing foliage, including natural lawns, are currently allowed. No combustible mulch.

Sec 4906.3 Exhibit
Landscape plans shall contain the following:
1. Delineation of the 100-foot fuel management zones from all structures.
   - Zone 0; 5ft, Zone 1; 25ft, Zone 2; 70ft
2. Identification of existing vegetation to remain if any and proposed new vegetation.
3. Identification of irrigated areas.
4. A plant legend with both botanical and common names, and identification of all plant material symbols.
5. Identification of ground coverings within the 30-foot zone 1.

Sec 4906.4 Vegetation.
All new vegetation shall be fire-resistant vegetation in accordance with this section.
Exception: Trees classified as non-fire-resistant vegetation complying with Section 4906.4.2.1.
To be considered fire-resistant vegetation, it must meet at least one of the following:
1. Be identified as fire-resistant vegetation in an approved book, journal or listing from an approved organization.
2. Be identified as fire-resistant vegetation by a licensed landscape architect with supporting justification.
3. Plants considered fire-resistant vegetation and approved by the local enforcing agency.

Sec 4906.4. Shrubs:
All new plantings of shrubs shall comply with the following:
1. Shrubs shall not exceed 36in height.
2. Groupings of shrubs are limited to a maximum aggregate diameter of 10 feet.
3. Shrub groupings shall be separated from other groupings a minimum of 15 feet.
4. Shrub groupings shall be allowed within 30ft of the non-combustible Tentacal Commercial Structure, maximum height of species at maturity 36in.
5. Where shrubs are located below or within a tree's drip line, the lowest tree branch shall be a minimum of three times the height of the understory shrubs or 10 feet, whichever is greater.

Sec 4906.4. Trees.
Trees shall be managed as follows within the 30-foot Zone 1:
1. New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10 feet from any combustible.
2. The horizontal distance between crowns of new trees and crowns of adjacent trees shall not be less than 10 feet.
3. Existing trees shall be trimmed to provide a minimum separation of 10 feet away from chimney and stovepipe outlets per Title 14, Section 1299.03.

JAMES DEAN
LANDSCAPE ARCHITECTURE PLANNING URBAN DESIGN
3533 Old Conejo Rd, Suite 113 Newbury Park, CA 91320 805.498.9922

FERRUZZA RESIDENCE
3948 SKELTON CANYON
WESTLAKE VILLAGE, CA

0 8' 16' 32'
Scale: 1/16" = 1'-0"

SCALE: 1/16"=1'-0"

DATE: 9-26-2023

PROTECTED TREE REPORT

Client:
Ms. Tricia Ferruzza

Site:
3948 Skelton Canyon Circle
Westlake Village, CA 91362

Date:

January 20, 2024
September 27, 2023
December 19, 2022
April 2, 2022

Prepared By:
James Dean, RLA

JAMES DEAN

LANDSCAPE ARCHITECTURE | PLANNING | TREE CONSULTANTING

3533 Old Conejo Rd., #113, Newbury Park, CA 91320
Phone (805) 498-9922
www.jamesdeandesign.com

PROTECTED TREE REPORT

CLIENT
Tricia Ferruzza

SITE ADDRESS
3948 Skelton Canyon Circle
Westlake Village, CA 91362

REPORT DATE
January 20, 2024

BACKGROUND

The subject site is in North Ranch. It is one of the only undeveloped parcels remaining there and is approximately nineteen (19) acres in size. It is covered with many old mature indigenous oak trees of the two species found locally. Some of the largest oaks in the North Ranch are found within this forest canopy. The major drainage course of the North Ranch passes through this site and is laden with oaks located upon its freeboard banks. The flow line of the arroyo is at the highest end, approximately twelve to fifteen feet vertically below the adjacent slightly sloping ground on both sides of the arroyo.

CHALLENGES TO DEVELOPMENT WITHIN THE OAK FOREST

The building pad is located deep into the site, adjacent to an existing occupied residence. This building site, as designed for the proposed dwelling, presents a narrow building footprint with oak trees to the east of the structure. The natural toe of an ascending hillside slope occupies the opposite side trending in a north/south direction.

The driveway access to the site is limited to a narrow corridor beginning at the terminus of West Skelton Canyon Drive. A driveway serving the site, acceptable to building codes as well as the fire department, must be as least fifteen (15) feet wide, with curvilinear alignment to accommodate emergency ingress and egress.

To achieve these requirements the driveway must descend from the developed vertical elevation of the street curb to meet natural grade below requiring a minor fill immediate to tree No.1.
Then it meanders through the random locations of the oak trees. As is normal, the natural location of the oaks frustrates the effort to minimize impact of the trees listed within this report.

Due to the alignment of the driveway, passing close to the tree trunks, it is critical that the construction of the paving be porous. It should have minimal embedment into the existing ground to minimize root interference of the oaks. This will ensure that the least amount of root system perturbation will occur.

GENERAL STATEMENT IMPACT TO TREES - DRIVEWAY DESIGN
Our opening statement to the West Skelton oak tree impact and mitigation applies to the trees relating to the driveway. Information concerning the trees, focused within this report, is presented herein.

The entry driveway corridor to this site is a unique feature, serving vehicular access to the site. The driveway design displays the use of individual concrete pavers that will be placed upon a six (6) inch compacted gravel for base. This installation ensures permeability. (See section drawings herein.)

As required by the Geotechnical Consultant, before placement of the gravel, that the first six (6) inches of soil be removed down to competent soil to remove organic material contained therein. This is required to prevent future subsidence of the driveway surface.

Concrete borders will be constructed, on each side of the driveway, to contain the pavers against displacement. No mortar will be necessary. The driveway will skirt through the oak tree forest passing each tree at differing distance from their trunks. (See the drawings for the tree numbers affected by construction of the driveway.)

Special drainage devices made up of perforated drainage pipe will accept runoff water, from the driveway and deposit it onto natural grades through outlets. Natural rainwater will be directed to one side of the driveway and will be received and deposited as presented within the plans prepared by Westland Civil Engineers. Utility service to the site will follow the alignment of the driveway beneath its centerline with associated root interference. (See civil drawings)

GENERAL STATEMENT IMPACT TO TREES – BEYOND THE DRIVEWAY
Besides the removal of Tree 51, the impact that will be received to the other trees will consist of pruning for required fire clearance and some minor feeder root disturbance. Trees 54-76 will receive no impact.

CITY ROOT PROTECTION SPECIFICATIONS STATED
Per the Guidelines (V.B.3.1.b-e), regarding excavation and roots, specifically, when approved, trenching under the dripline of an oak tree shall be performed with hand tools only. All of the work must be conducted in the presence of an oak tree preservation consultant.

Minor roots under one inch in diameter may be cut but must be treated with a fungicide/sealant compound immediately after cutting and before the improvement is installed.

Major roots over one inch diameter may not be cut without permission of the city. Depending upon the type of improvement being proposed, bridging techniques or a new site may need to be employed to protect the root and the tree.

This project cannot be completed without cutting roots over two (2) inches in diameter. Cutting roots is necessary due to the deep trenches required for utilities. Since the driveway passes through commingled root zones of adjacent trees, it is likely that some roots greater than three (3) inches in diameter will be encountered.

RECOMMENDATIONS FOR ANY ROOTS ENCOUNTERED

The following recommendations are presented to execute the work. These comments guide us to successful protection and preserving the oak trees located upon this site.

1, All excavation within the Tree Protected Zone of any oak tree must be performed with hand tools.
2. The condition of the surface of the site, is ladened with deep leaf duff above and mixed within loose soil. The Geotechnical consultant requires that the duff be carefully removed down to competent material, without organic material, before installing concrete curbs and pavement,
3. The compacted gravel base for the driveway paving should be constructed upon firm natural grade limiting excavation to six (6) inches vertical.
4. The drainage swale must be dug to the necessary depth with hand tools.
5. Excavation for utilities will vary in depth and must be executed before construction of the driveway
6. Photographs must be taken of the roots prior to cutting them. The photographs, showing the roots should be presented to the city inspector as proof of adherence the policies and conditions of the City of Thousand Oaks.
7. Cut roots must be treated with Ailette Fungicide immediately after being cut.
8. All work beneath the leaf canopy of each tree should be carefully and continuously supervised.

TREE PROTECTION ORDINANCES AND POLICIES

Public law within the City of Thousand Oaks protects all trees of the genus *Quercus*. CITY ORDINANCE 1610-NS makes the cutting, moving and / or removal of an oak tree without a permit a misdemeanor.

The OAK TREE PRESERVATION AND PROTECTION GUIDELINES RESOLUTION NO. 2010-14 affords additional protection of Oak Trees.

A zone of protection (The Protected Zone or TPZ) is defined as beginning 5' beyond the drip line of an oak tree extending inward to the tree trunk.

The drip line is an imaginary line on the ground directly below the furthest extension of the leaf canopy in any direction. The TPZ shall be no less than fifteen feet from the tree trunk in any direction.

LANDMARK TREE ORDINANCE NO. 1217-NS
RESOLUTION NO. 70-45
Public law within the City of Thousand Oaks protects certain irreplaceable trees with historical significance. Included within this list are certain sized trees of the following species.

Platanus racemosa (California Sycamore)
Umbellaria californica (California Bay Laurel)
Juglans californica (*California walnut)*
Heteromeles arbutifolia (Toyon)

PROTECTED SPECIES
This site and the adjacent Homeowner Association controlled area present a natural forest of oak trees, too many to record the precise location of each unaffected tree. In other words, there are many more trees present on-site that are not listed within this report. Those trees, not listed, will not be affected by the purposed development.

Oaks listed within this report:

23	*Quercus agrifolia*	Coast Live Oak – On Site
1	*Quercus lobata*	Valley Oak – On Site
1	*Platanus racemosa*	California Sycamore (off-site but affected by this development
4	*Quercus agrifolia*	Coast Live Oak (off-site but affected by this development and will need cleanup pruning.

See Tree Location Map for individual tree locations.

September 12, 2023
Ventura county fire code
Ventura County Fire Protection District Ordinance number 32 an ordinance of the Ventura County Fire Protection District repealing Ordinance No. 31, adopting by reference the 2022 California Fire Code together with appendix o, portions of the 2021 international fire code, and portions of title 19 of the California Code of Regulations, with additions, deletions and amendments thereto, and incorporating by reference fire district ordinance no. 29.

4907.7.6.5 trees. New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10-feet (3048 mm) from any combustible structure.

4907.7.6.5.2. Ground clearance of trees. Trees exceeding 6-feet in height shall be limbed up from the ground 6-feet or 1/3 the height of the tree, whichever is less. Exception: Fruit trees when approved.

To adhere to these new rulings, it will be necessary to remove Tree No. 7 and No. 51. Further, Tree No.51 A, B, C and G will receive pruning. It will be necessary to maintain the required distance in perpetuity.

FIRE DEPARTMENT VERTICAL CLEARANCE REQUIREMENTS
The current vertical height clearance required by the VCFD is thirteen feet six (13'-6") inches. Throughout this report we have estimated the clearance to be fifteen (15) feet and will continue with this estimate.

FIRE DEPARTMENT ROADWAY CLEARANCE
4907.9 Clearance of brush or vegetative growth from roadways. The Fire Code Official is authorized to require areas within 10 feet (3 048 mm) on each side of portions of Fire Apparatus Access Roads and driveways to be cleared of non-fire resistive vegetation growth.

This rule applies to the driveway from Skelton Canyon Drive to the VCFD turnaround at the entry to the dwelling.

SITE ENVIRONS
The site features undisturbed natural ground with scattered weed growth, and duff from fallen leaves at the surface. Site boundary at the northerly end of the project is a long and narrow strip with an active arroyo passing by east of the site. The Homeowner's Association owns a small portion of property within the proposed driveway on the northerly portion of the site. They have offered Tricia Ferruza an easement over that property. (See Civil Plans)

DOCUMENTATION
The following documents shall be maintained upon the project site when building commences and until final acceptance by the city:

1. Copy of the approved Tree Report.
2. The Conditions of Approval relating to trees.
3. The approved tree permits and pertinent city conditions of development.

FENCING PLAN

Tree protection fencing (TPF) shall be placed as shown on the Tree Location Map. The employed fence shall be of temporary chain-link, at a minimum height of five (5) feet, with posts at eight (8) feet on center and the posts driven twelve (12) inches into natural soil. The fence must have square white colored signs (2'X2') with black lettering stating that :

WARNING
THIS FENCE SHALL NOT BE REMOVED OR RELOCATED
WITHOUT WRITTEN AUTHORIZATION FROM THE
COMMUNITY DEVELOPMENT DEPARTMENT.

Signs must be inspected by the city and approved before commencement of the work. They must be maintained in place during all construction and may not be removed without obtaining written authorization of the Community Development Department. The signs must be placed at four locations around a tree. Fencing around a group of trees shall be placed at approximately fifty (50) foot intervals.

SITE WORK

Our initial cruise, as a part of new ownership of the site, was conducted February 2022. Many additional site visits have been conducted, over the years, and after that date. The most recent visit was conducted on March 15, 2023.

The current proposed grading plan reflects a driveway alignment designed that will satisfy requirements of the city and the fire authority.

During the initial site visits, each tree affected was assigned an identifying number and a corresponding metal tag number was affixed onto the north side of the trunk at four-foot six inches above grade. The trees were photographed and measured for recording purposes.

Tree numbers are random (not necessarily sequential) using tags available at the time of the site visits. Note that tree tags, and survey stakes, have been vandalized numerous times in the past three years. That is the reason for the random nature of the numbers.

A previous report was prepared by us and many oaks, thought to be involved with that plan, also were numbered and tagged. Therefore, one will observe that some other numbered oaks, are not identified within this report, bear tags.

Seven (7) immature (sapling size) live oak trees were added to the Inventory as shown on the plans, in their approximate location. They are present between Trees 51 and 53 and are assigned numbers 51A-G. They were not tagged due to the

precipitous and dangerous slope condition. The slope varies in angle. It is at an angle of one to one (+-1:1) in some places.

Also, pertinent information was verified as to the current status of each tree. The health and appearance and the presence of any visible disease symptoms and/or apparent structural defects were recorded.

UTILITY PREPARATION

The utility service to the site will follow the alignment of the driveway beneath its centerline. The excavation of each utility will vary in depth to separate each from others. The excavation will cause root impact to individual trees However the consequence of the impact should not be lethal to any tree. The precise diameter of the roots to be excised cannot be precisely determined until hand excavation occurs. This alignment places the root impact to individual trees, as far away from the trunks as possible.

The root disturbance as a result of the utilities, will occur to the following oak trees in order of their location:

Roots from tree Nos. 1, 2, 093, 232, 233, 233a will travel mostly in transverse directions to the driveway alignment crossing the area of the proposed utility trench. In its new location Tree 99 will not be affected by the utility trenching.

The following procedure is designed to provide an organized plan for the work required by the VCFD to construct the driveway. The work includes brush clearance designed to minimize root damage to the trees.

1. First, displace the local root duff on grade and loose soil by hand digging.
2. Clear plants back ten 10' feet away from each side of the proposed driveway improvements.
3. Locate the defined corridor with offset survey stakes. The stakes should be driven deep for their protection.
4. By survey, define the centerline of the utilities. Identify the angular alignment of the utility trench. Mark the width of the trench with temporary off-set stakes. Identify the stakes with a painted color.
5. The excavation should not exceed four (4) feet in width. The outer corridor stakes must be maintained over the construction period.
6. Hand trench to the required depth required by each utility, cutting roots to the full width of the proposed trench.

It will be difficult to determine which roots are attached to what tree. Based upon our field experience, roots this far from a tree trunk, cut at these required distances from the tree trunk, should be in the range of one to Three inches in diameter.

ROOT TREATMENT

Any kind of trenching inside of the tree protection zone requires that direct instructions be given regarding the work. The work must be executed in the presence of the arborist or their designated person.

1. Affected roots should be sawcut at a diagonal with the cut surface facing downward. This statement relies on the evidence documented from the Ben Johnson Scientific Study, authored by us, conducted within the North Ranch of Thousand Oaks , published in 1979.
2. Cut Roots, at the time of excision, must be immediately treated with Ailette Fungicide.
3. Roots that are not excised must be bridged over, and must be covered with a localize sheet/layer of PVC followed by a two to four-inch block of Styrofoam. The purpose is to prevent hard surfaces from resting on viable roots potentially causing damage to bark covering the root. This is important when excavating footings for structures, and/or poured in place concrete over a viable root surface. In this case, separating the concrete from the roots with a four-inch block of Styrofoam is required.

SPECIFIC TREE DATA
The subject trees presented herein are not presented numerically but are listed in the order that they were observed, when traveling from the Skelton Canyon Circle. entry to the future dwelling and beyond. We have tagged and retagged these trees since our first visit in 2019. The tags have been vandalized over time.

TREE NO. 1 (tagged)
This tree is Heritage size and presents a significant hazard of failure. Fallen branches remain below the tree.

SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	55”	C-	B

Coast Live Oak
HAZADOUS

TREE DATA:
See attached Tree Inventory Form

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No.1 is a mature specimen of the species displaying a moderate level of vigor with yearly growth extension present. There is a co-dominant union beginning at four feet above grade and continuing to a height of eight feet.

Additionally, a significant broken branch wound can be seen, high on the east side of the tree leaving a ragged tear visible. Another branch has fallen to the south of the tree Thes branches should be appropriately pruned. Since the tree is located upon the HOA property, the association has been notified.

On the north-west side of the tree, near the ground, there is another very large open cavity that will be visible, resulting from past branch failure. It begins approximately 5’ above grade, extending vertically for eight (8) feet and has a width of two (2) feet. This wound displays major decay and dead wood extending beyond the cavity. Looking into the cavity one can see the central bole of the tree is missing, having been consumed by saprophytes. Also, on the south side. a lesion is present. It travels from grade, upward two and one half (2.5) feet. It is approximately 8” wide.

This lesion also has visible rot and exudation. Considering the degree of rot in the bole, this tree presents a significant risk of failure in the future.

The wounds that have occurred from the branch failures. should be treated in the following way:

1. Clean the wound margin of dead tissue and loose debris.
2. Where possible remove the dead wood extending out of the open cavity.
3. In doing so, avoid creating any new wound, thus preparing the wound for natural closure over time.
4. Tack a sheet of small wire mesh to enclose the cavity preventing the collection of leaf matter into it.

IMPACT:
A concrete drainage swale and a low curb wall, to support the driveway, will extend through the Protected Zone of the tree (see Civil Drawings for location).

There will be encroachment from the driveway, into the protected zone of tree No. 1.

The entrance driveway will pass Tree No. 1 with the edge of the curb approximately five (5) feet from the tree trunk. The resulting impact, from utility excavation, will occur eleven (11) feet from the tree trunk. The vertical placement, and excavation for each utility will vary. The concrete curb, on this side of the drive, will be heavily reinforced with steel bars to prevent future damage of expanding roots.

PRUNING & ENCROACHMENT:
The encroachment percentage is indeterminable because the tree is situated within a forest, under the canopy of other trees.
See Pruning & Encroachment Schedule.

RECOMMENDATION:

1. Consider this tree for removal.
2. Clear brush back ten (10) feet from the edge of the proposed driveway. Install protective fencing as required by the Oak Tree Guidelines.
3. All excavation work must be performed using only hand tools3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
4. Approved Pruning must be performed by an ISA Certified Arborist.
5. Driveway section should be constructed upon natural grade with grading depth to be limited to a 6” vertical cut.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE NO. 2 (tagged)
This tree is of Hertage size

SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	9", 8", 25", 12"	B	B

Coast Live Oak

TREE DATA:
See attached Tree Inventory Form

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No.2, a mature specimen of the species. It presents a high level of vigor with abundant yearly growth extension. Low scaffold branches extend in a south-east direction with the branch growth and the leaf skirt extending downward to natural grade preventing through access for the driveway. The bark of one branch on the southwest side is exfoliating from a continuous lesion with rot underneath.

IMPACT:
The driveway will pass tree No. 2 with the concrete curb approximately three (3) feet west of the tree trunk. Root impact will be encountered as a result of excavation for installation of utilities serving the site. Excavation will pass eleven (11) feet from the tree trunk.

PRUNING & ENCROACHMENT:
The encroachment percentage is indeterminable because the tree is situated within a forest, under the canopy of other trees.
See Pruning & Encroachment Schedule.

RECOMMENDATION:
1. Clear brush back ten (10) feet from the edge of the proposed driveway.
2. Install protective fencing as required by the Oak Tree Guidelines.
3. All excavation work must be performed using only hand tools3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
4. Approved Pruning must be performed by an ISA Certified Arborist.
5. Driveway section should be constructed upon natural grade with grading depth to be limited to a 6" vertical cut.

6. Driveway section should be constructed upon natural grade with grading preparation to be limited to a 6" vertical cut.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE NO. 99	(tagged)		
SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	4"	A	A
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is an immature specimen growing within the Protected Zone of Tree No. 2. It lies within the driveway corridor and cannot remain at that location. It is of a size that could easily be transplanted to another location.

IMPACT:
The Oak Tree Ordinance requires that any oak that is removed, by approval of the city, be replaced at a ratio of 3:1. While Tree No.99 will be relocated on site, it is still considered as a removal by the Guidelines.

Remove / transplant Tree No. 99 to another selected on-site location. See plan for the new location on the west side of the driveway between Trees 2 and 4. The precise location of this transplanted tree should be determined at the time of driveway staking.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE No. 4	(tagged) REMOVE		
SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	Multiple		
Coast Live Oak	Regenerating stump	D	D

TREE DATA:
See attached Tree Inventory Form

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 4 is the stump of an old specimen tree resulting from its past failure. It displays several small volunteer trunks that are dead, and several live trunks alive that are regenerating from the old tree.

A very large Valley Oak, on the neighboring site failed, landing partly upon the Ferruzza site, causing damage to this tree. The damage to the Ferruzza tree occurred to the dead stumps protruding directly from the old tree root crown. The fallen tree has been removed.

IMPACT:
This tree conflicts with the driveway and will need to be removed.

RECOMMENDATION:
Remove tree.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE No. 093 (retagged)
(Formally No. 98) This tree is of Heritage size.

SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	40”	B	B
Coast Live Oak			

TREE DATA:
See attached Inventory form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 093 is a mature specimen of the species presenting a high level of vigor with abundant new yearly growth extension. One large branch extends in a southwesterly direction turning upward near the location of the proposed curb bordering the driveway.

IMPACT:
The driveway will pass tree No. 093 with the edge approximately five (5)feet from the tree trunk. This excavation occurs within the Critical Root Plate of the tree.

The root impact will also occur as a result of excavation for installation of utilities serving the site. Excavation will occur twelve (12) feet from the tree trunk.

PRUNING & ENCROACHMENT:
There will be an encroachment of sixteen percent (16%).
See Pruning & Encroachment Schedule

RECOMMENDATION:

1. Clear brush back ten (10) feet from the edge of the proposed driveway. Install protective fencing as required by the Oak Tree Guidelines.
2. Install protective fencing as required by the Oak Tree Guidelines
3. All excavation work must be performed using only hand tools.
4. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
5. Approved pruning must be performed by an ISA Certified Arborist.
6. Driveway section should be constructed upon natural grade with grading preparation to be limited to a 6" vertical cut.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE No. 232 (tagged)
This tree is of Heritage size

SPECIES	Size (dbh)	Health	Appearance
Quercus lobata	30"	B	B

Valley Oak

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 232 is a mature specimen of the species presenting a high level of vigor with abundant new yearly growth extension. There are two broken branch stubs with significant rot visible. Low scaffold branches extend in a north easterly direction, interfering with the driveway, will require pruning for vehicle clearance.

A large old pruning wound is located high on the south side of the trunk. It measures approximately two-foot (2) across circular area. Surficial woodpecker damage is present along with significant dead wood.

See Pruning & Encroachment Schedule herein.

IMPACT:
The driveway will pass tree No. 232 with the edge of the driveway approximately nine (9) feet from the tree trunk. Root impact will occur as a result of excavation for installation of utilities serving the site. Excavation for utilities will occur seventeen (17) feet from the tree trunk.

PRUNING & ENCROACHMENT:
There will be an encroachment of eighteen percent (18%).
See Pruning & Encroachment Schedule.

RECOMMENDATION:
1. Clear brush back ten (10) feet from the edge of the proposed driveway.
2. Install protective fencing as required by the Oak Tree Guidelines.
3. All excavation work must be performed using only hand tools.
4. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
5. Approved .pruning must be performed by an ISA Certified Arborist.
6. Driveway section should be constructed upon natural grade with grading preparation to be limited to a 6" vertical cut.

TREE NO. 7 (tagged) REMOVE
This tree is of Heritage size.

SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	14", 14", 18", 19"	B	B

Coast Live Oak

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 7 is a mature specimen of the species presenting a high level of vigor with

abundant new yearly growth extension. A co-dominant union exists between the two major trunks. The leaf skirt descends to the west conflicting with the proposed garage structure.

September 14, 2023
It is not possible to meet and maintain the ten (10) foot offset from the dripline of this tree and the proposed garage. Therefore, the tree must be removed to allow reasonable use of the site.

RECOMMENDATION:
Remove this tree as required by the VCFD to have reasonable use of the site.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE NO. 233 (Tagged) Off-Site
Tree is of Landmark size.

SPECIES	Size (dbh)	Health	Appearance
Platanus racemosa	16"	A	A
California Sycamore			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 233 appears healthy and vigorous however, it is deciduous at this time preventing evaluation of its condition.
It displays a single trunk standing vertically. It features a high branching structure with some very small branches that descend over the driveway.

IMPACT:
The driveway will pass tree No. 233 with the edge of the driveway approximately eighteen (18) feet from the tree trunk. Utility excavation will occur seventeen (17) feet away from the northerly curb.

PRUNING & ENCROACHMENT:
There will be an encroachment of three percent (3%).
See Pruning & Encroachment Schedule.

RECOMMENDATION:

1. Clear brush back ten (10) feet from the edge of the proposed driveway.
2. Install protective fencing as required by the Oak Tree Guidelines
3. All excavation work must be performed using only hand tools.
4. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
5. Approved pruning must be performed by an ISA Certified Arborist.
6. Driveway section should be constructed upon natural grade with grading preparation to be limited to a 6" vertical cut.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE NO. 233a	(not tagged) Off-Site		
SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	36"	B	B
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 233a appears healthy and vigorous. Low branches descend onto this site over the edge of the proposed driveway.

IMPACT:
The driveway will pass tree No. 233a with the edge of the driveway approximately 17' from the tree trunk. Root impact could occur as a result of excavation for utility installation which occurs twenty-six (26)' from the tree trunk well outside of the critical root plate.

PRUNING & ENCROACHMENT:
There will be an encroachment of one percent (1%).
See Pruning & Encroachment Schedule.

RECOMMENDATION:

1. Install protective fencing as required by the Oak Tree Guidelines
2. All excavation work must be performed using only hand tools.
3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.

4. Approved .pruning must be performed by an ISA Certified Arborist.
5. Driveway section should be constructed upon natural grade with grading preparation to be limited to a 6" vertical cut.

See STATEMENT OF DESIGN INTENT FOR DRIVEWAY.

TREE No. 51 (tagged) REMOVE

SPECIES	Size (dbh)	Health	Appearance
Quercus agrifolia	20"	A	A
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 51 is a mature specimen of the species presenting a high level of vigor with abundant new yearly growth extension. Low branches extend to the west with their growth and the leaf skirt extending downward, to the pad level, laying on the existing building pad. This growth and maintenance of the tree to meet the ten (10) foot setback from the tree dripline, conflicts with the proposed dwelling.

September 14, 2023
It is not possible to meet and maintain the ten (10) foot offset from the dripline of this tree and the proposed dwelling. Therefore, the tree must be removed to allow reasonable use of the site.

RECOMMENDATION:
Remove this tree as required by the VCFD.

TREE Nos. 51A -51G (not tagged)

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
The following seven (7) live oaks are located close to the daylight elevation of the existing building pad between Tree No's. 51 and 53. We did not tag these trees due to the precipitous down slope.

IMPACT:
Four (4) of these seven (7) trees, are located above the others as shown on the map. Light pruning will be required on three (3) of the seven trees. There will be clean up pruning on Tree No. 51a, 51b, and 51c. Tree 51g, which is next to tree 53, will entail five (5) 3-4 three-inch branches for vertical clearance at the proposed wood deck.

A continuous fill slope is proposed above these trees. Small roots, thought to be 1" or less must be cut in preparation of the sliver fill. This sliver slope will provide pedestrian circulation and maintenance access. It will slightly penetrate the protected zone of these three trees. The remaining three (3) oaks, 51d, 51e, and 51f are considerably below the others. Due to their size and location, there will no impact to these oak trees.

PRUNING & ENCROACHMENT:
The encroachment percentage for Trees 51a, b, c, and g are indeterminable because the trees are situated within a forest, under the canopy of other trees. See Pruning & Encroachment Schedule.

September 14, 2023
As shown on the map, four (4) of these seven (7) trees are located east of the other three. The VCFD will require that these four trees be pruned away from the residence. The remaining trees will require light pruning.

This pruning is required to meet ten (10) foot offset, from tree dripline to combustible structures. By agreement, the property owner must maintain this clearance in perpetuity.

BRIEF DESCRIPTION OF THE SEVEN TREES

Species	*Size (dbh)*	*Health*	*Appearance*
No.51 a			
Quercus agrifolia	*15"*	*B*	*B*
Coast Live Oak			
No. 51 b			
Quercus agrifolia	*8"*	*B*	*B*
Coast Live Oak			
No. 51 c			

Quercus agrifolia	*8”*	*B*	*B*
Coast Live Oak			
No.51 d			
Quercus agrifolia	*9”*	*B*	*B*
Coast Live Oak			
No. 51 e			
Quercus agrifolia	*8”, 4”*	*B*	*B*
Coast Live Oak			
No. 51 f			
Quercus agrifolia	*8”*	*B*	*B*
Coast Live Oak			
No. 51 g			
Quercus agrifolia	*8”*	*B*	*B*
Coast Live Oak			

RECOMMENDATION:
1. Install protective fencing as required by the Oak Tree Guidelines
2. All excavation work must be performed using only hand tools.
3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
4. Approved Pruning must be performed by an ISA Certified Arborist.

TREE NO. 53 Off-Site
Tree is of Heritage size

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	36”	B	B
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
Tree No. 53 presents a high level of vigor with abundant new yearly growth extension. The tree is located down slope (+-12’) below the building pad. Low branches extend to the west. Branch growth and the leaf skirt extend downward, conflicting with a proposed elevated deck attached to the dwelling. The main conflict is low branching restricting use of the deck.

IMPACT*:*
A building foundation will be constructed twenty-five (25) feet west of the trunk of this tree. Excavation at the location of this wall could encounter some transport and feeder roots, up to two (2) inches in diameter. These roots will be excised. We anticipate, since the building pad was graded some time ago, that encountering major roots is not likely.

PRUNING & ENCROACHMENT:
There will be an encroachment of three percent (3%).
See Pruning & Encroachment Schedule.

RECOMMENDATION:

1. Install protective fencing as required by the Oak Tree Guidelines
2. All excavation work must be performed using only hand tools.
3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.
4. Approved pruning must be performed by an ISA Certified Arborist.

TREE NO. 52

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	9"	C+	C+
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This mature tree displays a moderate level of vigor expressed by the leaf density and with normal yearly growth extension It is approximately five (5) feet south of a proposed retaining wall for the pool enclosure and the walk for access.

LOCATION:
See Tree Location Map enclosed.

IMPACT:
A small portion of the proposed concrete access walk and a small corner of the wall enclosure for the pool equipment encroach into the TPZ of this tree. A two (2) foot modular gravity wall, on a loose gravel footing, will be installed to support the

level pad for these improvements. A twelve (12) inches deep footing will be excavated, into the compacted fill, to support the CMU wall enclosure.

PRUNING & ENCROACHMENT:
There will be an encroachment of one percent (1%).
See Pruning & Encroachment Schedule.

RECOMMENDATION:

1. Install protective fencing as required by the Oak Tree Guidelines
2. All excavation work must be performed using only hand tools.
3. Earth spoils from excavation shall not be placed within the protection zone of any oak tree.

TREE Nos. 54 -56 (tagged)

SPECIES	*Size (dbh)*	*Health*	*Appearance*
No.54			
Quercus agrifolia	*7”*	*B*	*B*
Coast Live Oak			
Pruning:	None required.		
No. 55			
Quercus agrifolia	*8”*	*B*	*B*
Coast Live Oak			
Pruning:	None required.		
No. 56			
Quercus agrifolia	*8”*	*B*	*B*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
These three (3) oaks have suffered from prolonged drought. Tree 54 has little foliage. Tree 55, while also suffering from drought, it has more leaves. Tree 56 suffers less drought, and the leaf density is approximately 50% of normal.

IMPACT:
These are immature (forth stage of maturity) oak trees that will not be impacted. All the proposed work is outside of the protected zone of the trees.

PRUNING:
None

PRUNING & ENCROACHMENT:
None.

RECOMMENDATION:

1. Install protective fencing as required by the Oak Tree Guidelines
2. Fencing need only go around Tree 54. The other two trees are outside of the development area.

TREE NO. 58 (tagged)
This is a Heritage size tree.

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	27", 30"	*B*	*B*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is an old age oak tree (6th stage of maturity) residing at the top of slope that descends to a natural drainage course that carries and serves the North Ranch. It has a co-dominant union and displays a good level of vigor with a moderate leaf density. Yearly growth extension is normal. A large branch, on the west side of the tree has fallen leaving a broken branch wound with extensive decay present.

The tree is positioned fifty-six (56) feet southwest of a proposed drainage conveyance pipe serving the site.

PRUNING:
None required.

IMPACT*:*
There will be no pruning or excavation affecting this tree.

RECOMMENDATION
None. Tree is beyond any site improvements.

TREE NO. 59 (tagged)
This is an Historic size tree.

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	*96"*	*B*	*B*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is likely the oldest tree located in the Conejo Valley. It is of humongous size, truly the Great Grandfather of the Forest well into the 6th stage of maturity. It resides on a slightly sloping topography. This slope descends to a natural drainage course that serves and carries most of the nuisance drainage for the North Ranch. It displays an excellent level of vigor with a normal leaf density. Yearly growth extension is normal. There is some epicormic growth, included bark and co-dominant unions with a water trap on one side, along with some broken branch wounds.

PRUNING:
None required.

IMPACT*:*
This tree will not be affected by any development to the site.

PRUNING:
None required.

RECOMMENDATION:
None. Tree is beyond any site improvements.

TREE NO. 76 (tagged)
This tree is of Heritage size.

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	*27"*	*A*	*A*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is immature oak tree residing on a shallow slope that descends to a natural drainage course that carries and serves the North Ranch. It displays a good level of vigor with a g leaf density. Yearly growth extension is normal. The tree is located 25' (+-) southwest of a proposed drainage conveyance pipe serving the site.

IMPACT:
This tree will not be affected by development.

PRUNING:
None required.

RECOMMENDATION:
None. Tree is beyond any site improvements.

TREE NO. 74 (not tagged)

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	3"	*A*	*A*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is an immature volunteer oak tree residing north of Tree 76.

IMPACT:
This tree will not be affected by development.

PRUNING:

None required.

RECOMMENDATION:
None. Tree is beyond any site improvements.

TREE NO. 74 a (not tagged)

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	3"	*A*	*A*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is immature volunteer oak tree residing north of Tree 76.

IMPACT:
This tree will not be affected by development.

PRUNING:
None required.

RECOMMENDATION:
None. Tree is beyond any site improvements.

TREE No. 016 (tagged) Off-site
This is a Heritage size tree.

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	*32"*	*B*	*B*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This tree is in the residing on a moderate slope that descends to a natural drainage course that carries and serves the North Ranch. It displays a good level of vigor with a moderate leaf density. Yearly growth extension is normal.

PRUNING:
None required.

IMPACT:
This tree will not be affected by development.

RECOMMENDATION:
1 .Install protective fencing as required by the Oak Tree Guidelines

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TREE NO. 017 (tagged) Off-site
This is a Heritage size tree.

SPECIES	*Size (dbh)*	*Health*	*Appearance*
Quercus agrifolia	*27"*	*A*	*A*
Coast Live Oak			

TREE DATA:
See attached Tree Inventory Form.

LOCATION:
See Tree Location Map enclosed.

DESCRIPTION:
This is a mature tree residing on a steep descending slope. It displays a good level of vigor with a moderate leaf density. Yearly growth extension is normal.

IMPACT*:*
Extended lateral branches laying on grade blocking access. See pruning and encroachment schedule.

PRUNING & ENCROACHMENT:
See Pruning & Encroachment Schedule

RECOMMENDATION:

1. Install protective fencing as required by the Oak Tree Guidelines

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CONCLUSION

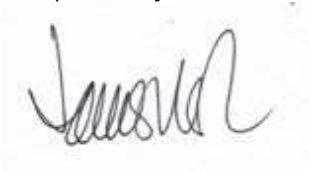
Most of the oak trees upon this site are within a forest providing constant shade upon the natural soil profile below. The ground beneath the trees has been protected against excessive evapotranspiration as a result. This explains why the stand of trees has survived the radical loss of a water supply during the extended drought. The oak tree resource in Southern California has suffered more from the prolonged drought than this stand.

In our opinion, with the years of success with oak tree preservation in the North Ranch, under similar conditions, this work can generally be accomplished with controlled impact to the trees if carefully executed. Other than the listed recommendation for removal, we believe that root perturbation or pruning will not be lethal to any tree listed herein. The work described should not produce any prolonged change to this resource. Nor will the longevity of any tree be shortened, as demonstrated with the Ben Johnson Impact Study, conducted in the North Ranch and published in 1979 by the USDA Department of Agriculture.

Per the Thousand Oaks Preservation Guidelines, a program to monitor all approved oak tree work is included in this report and must be followed. The oak tree consultant must be notified 48 hours prior to any work commencing under the protection zone of any tree.

With protection to this tree forest, the stand of oaks can be preserved as a natural asset to the community.

Respectfully submitted,



James Dean, RLA
Landscape Architect
License No. 1146

REPORT DEFINITIONS

The following is an explanation of general terminology and other information that may be presented within the body of the Oak Tree Report for the subject site.

TREE MATURITY

There are six stages of growth of maturity for trees as follows:

Stage 1 Seedling- just started to grow and cannot make new life
Stage 2 Sapling – generally less than one meter tall
Stage 3 Poles- Trees that have grown vertical before reaching outward
Stage 4 Mature- begins when a tree can manufacturer seeds
Stage 5 Old- vertical grow is nearly stopped
Stage 6 Over mature- are the great grandfathers of the forest

PHYSICAL DESCRIPTION OF OAK TREES

1. Tree number- each tree in the field has been assigned a number that corresponds to a tree location on the "Oak Tree Location Map".
2. Tree number tag- a tree number tag has been placed upon the tree trunk at 4'-6" above grade on the north side of the tree.
3. Species - is the botanical classification of tree that is being evaluated.
4. Number of Trunks- as measured in accordance existing measurements at the time of evaluation.
4. Diameter of Trunks- as measured at 4'-6"' above mean natural grade, existing at the time of evaluation. Diameter is referred to as the trunk diameter at breast height (dbh).
5. Height above grade- is the height above the ground to significant branch structure that restricts movement beneath the branch.
6. Tree Height- is the approximate height of each numbered, evaluated tree.
7. Leaning- is the direction the tree is inclined from the natural vertical position.
8. Shared canopy (sc) describes a condition where leaf canopies of two different trees intertwine within the same aerial space making it difficult to determine the precise dripline of either tree.

PLANT DISEASE AND INSECT VECTORS

Plant disease causes a dysfunction in the physiological processes of a tree and results in a loss of plant vigor.

The three diseases that are of major importance are: Avocado Root Rot (*Phytophthora cinnamomi*) and Oak Root Fungus (*Armillaria mellea*) Butt rot Ganoderma Root Rot *(Ganoderma spp.), Black BAll Fungus (Annulohypoxylon thouarsianum).*

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*T*echnically speaking all oaks are affected with some disease be it pathogenic or nonpathogenic. However, few are afflicted with significant pathological disease that could have lethal consequence.

Phytophthora is an aggressive pathogen. It is classified as a water mold that causes crown or root rot. This organism can infect and grow readily through uninjured trunk or root bark. It can infect a tree at any time of the year in California.

Armillaria is a weaker pathogen. It generally infects through the roots or root crown of a weakened or stressed tree. Once infected the tree gradually declines and most often the tree dies from girdling.

Ganoderma causes butt rot ultimately affecting the ability of a tree to support itself resulting in mass failure of the root crown.

Hypoxylon Fungus is an opportunist attacking the sapwood of a tree. It enters through existing wounds caused by insects or physical injury destroying the cambium of a tree and ultimately can death to the host.

While the previous specific disease information is important, a long discourse in plant pathology or entomology is not necessarily a prerequisite to develop a basic understanding of the casual effects of disease and insects upon living plant tissue. Disease and insect infection, along with the disruption and damage caused by the alteration of the natural oak tree environment is the main cause in decline of the oak resource in California. Decline is manifested by changes plant vigor. Visible signs and symptoms associated with oak tree decline cause a change in visible appearance.

Oak trees are classified as to their level of vigor. Contrasting a subject tree to an indexing tree that is considered to be a perfect example of the species, the subject tree is rated as to its comparable state of vigor.

VIGOR CLASS

Vigor is the capacity of a tree for growth and survival. A vigorous tree has bright green leaves of large size for the species. The bark is relatively smooth, free from cracks and decay. It will more easily ward off disease and insect attacks and will recover from impacts more quickly than a weak tree.

A A vigorous tree with a healthy, dense, full leaf canopy, normal yearly growth extension, excellent foliage color, normal leaf size and reasonably free from structural defect.

B Tree with slightly less vigor, slightly thinner foliage density, and healthy leaf canopy with good color, normal yearly growth extension, and normal leaf size and may have minor structural defects (open cavity exposing decay, etc.)

C Displays plant stress, level of vigor is average or less, fair to poor leaf size or color, may have a minor level of twig or small branch dieback, exudation, insect infestation and/or exfoliating bark. May have significant correctable structural defect.

D Trees with severe condition of disease, thin to very-thin leaf canopy with *dwarfed leaf size, poor to non-existent yearly growth extension, poor callusing at wounds, major cavities with decay, major dieback of main stem or scaffolding branches and limbs, exfoliating bark, wounds with exudation, lesions on stems or distorted bark, fungal conks present, epitomic growth (short, twiggy growth along major branches), thin foliage characterized by small leaves which may be discolored, may have mistletoe: little chance of recovery.

E Dead or almost dead tree.

A basic knowledge of disease and insects should include an understanding of the following information:

PHYSICAL DEFECTS OF OAK TREES

1. Branch Cavities- hollow areas in the trunk or limbs in the upper tree, usually due to the decay of wood.
2. Codominant Trunks – equal in size and relative importance that often creates a hazardous condition due to the expanding growth of both trunks competing for the same physical space. The area between mature trunks is supportive of decay causing organisms
3. Epicormic Growth- excessive growth along main limbs, rather than on twigs.
4. Exudation- the issuance or expelling of liquid, usually from wounds. The cause is generally an agent of a bacteria or fungus.
5. Exfoliating Bark- the flaking off of bark from trunk, branches and/or twigs.
6. Exposed Roots- roots exposed near tree; e.g. in creek bed.
5. Fruiting Bodies- are the outward signs (i.e. mushrooms, conks, etc.) of decay or disease in the interior wood of the tree.
6. Water Pocket- pockets formed at branch crotches that can hold water and possibly weaken the tree's structure (possible hazard).
7. Galls- are an abnormal hypertrophy growth (tumors) on the tree, which may be caused by insects, mites, bacteria, etc.
8. Insect / Mite Damage- are some form of damage to the tree caused by insects or mites (i.e. scale, caterpillars, weevils, borers, mites, etc.)
10. Main stem Dieback- Atrophy or death of healthy main stems from the growing tip back.

11. Oak Pit Scale- has a severe weakening effect on the twigs, frequently resulting in their death. When the scale insect settles on the twigs, a swelling of the twig tissue occurs. So the insect in effect is in a pit formed by the interaction of the twig and the insect; hence, the name.
12. Potential Hazard - any tree may be a hazard to humans, depending on its location and / or health.
13. Thin Foliage- defoliation and twig dieback throughout the canopy.
13. Trunk Cavity- is a hollow area in the trunk, usually due to the decay of wood.
14. Trunk Damage- a damaged area on the trunk, usually due to external force onto the tree. This is classified as a lesion.
15. Twig / Branch Dieback- death of unhealthy twigs from the growing tip back.
16. Weak Crotches- poorly formed branch attachments

AESTHETIC QUALITY

The aesthetic quality of these trees was visually determined from an overall inspection of appearance. The following system was to describe their conditions:

A. OUTSTANDING

The tree is visually symmetrical having the ideal form and appearance for the species.

B. AVERAGE

The tree, though non-symmetrical, has an appealing form for the species with very little dieback of foliage or twigs/branches.

C. POOR

The tree may be intermediate, codominant or suppressed by other trees, may be in debilitated condition with a level of significant decline that affects its visual appearance to a degree that it lacks an overall satisfactory visual quality.

RECOMMENDED TREATMENT

1. Remove Deadwood - if noticeable deadwood, making the tree unattractive, is within the canopy, it should be removed.
2. Remove Wire; etc. - if anything has been physically attached to the tree, it should be removed.
3. Cable / Brace- can extend the time the tree remains healthy, attractive and hazard free.
4. None- no treatment is recommended.
5. Remove Tree - if the tree cannot be saved through any type of treatment, it should be removed with a permit.

REMARKS

(Some other terms that may be used)

1. Bark Beetle Frass- is wood fragments mixed in the insect's excrement.
2. Basal Growth- leaf growth generating from around base of trunk
3. Cankers - are rough swellings with depressed centers resulting in death (atrophy) of tissue that later cracks open and exposes the wood underneath in twigs, branches, and/or trunks.
4. Chlorotic Leaves- leaf veins remain normally green, but the tissue between veins becomes yellow, which is usually caused by nutrient deficiencies.
5. Crowded - is a tree within the canopy of an adjacent tree or canopy.
5. Defoliation- premature leaf drop.
6. Exposed Buttress Roots- soil absent, either all or partial, at basal portion of tree.
7. Heart Rot - decomposition of heartwood (the central portion of a twig / branch/trunk).
8. Lesion –an injury or other change to tissue causing an identifiable change in the appearance when compared to other areas of the same tissue.
9. Mistletoe- is a leafy evergreen perennial parasite with dark green leathery leaves that occur as bunches on the branches.
10. Mottling- leaves have a variegated pattern of green and yellow.
11. Powdery Mildew- are leaves that are covered by a white powdery growth generally when new growth becomes wet for long periods of time; leaves may be distorted, stunted and drop prematurely.
12. Shading Out - defoliation and twig dieback inside the canopy due to the lack of sunlight.
13. Witches Broom - is an abnormal growth cluster of twigs, which may be caused by insects, mites, fungus, etc.

RESPONSE TO ROOT DAMAGE

ROOT DISTURBANCE

The predictable responses to root loss or damage by an oak tree are thought to be as follows:

1. The tree will enter its dormant phase earlier by as much as one month.
2. The tree will abort some amount of leaf canopy to reduce transpiration loss.
3. The individual leaves will curl to reduce transpiration loss.
4. The following season there will be fewer leaves and the new leaves will have less leaf surface.
5. The severed roots could become exposed to root rotting pathogens. It will take several years for a tree to gain closure around a severed root. Each year it will regain some of the lost vigor until it re-establishes itself.

RESPONSE TO PRUNING

PRUNING

Successful healing of pruning wounds to oaks is a function of time, the condition of the tree, size of the roots/branches and the proper execution of the pruning wound. Trees generate new callous tissue growth around a wound to gain closure thereby protecting the inner xylem tissue from invasion of pathogens and insect vectors.

Trees control infection of wounds through a natural process known as Compartmentalization. In this process the tree responds to infection by creating barriers (walls) in all four directions at the margins of the infected tissue. This action delays the advancement of the disease organism until the tree has gained closure at the wound site. Closure of the wound effectively stops or delays the disease process.

Time plays an important role in recovery from pruning wounds to roots and branches. Clearly, smaller root/branch wounds will recover in a short period of time with little consequence to the tree. Rapid closure means that the inner core (Xylem) of the tree is less likely to be exposed to decay causing disease organisms. Larger wounds (10" and greater) could require many years to gain closure. During this period of time more aggressive pathogens can invade the inner wood by successfully breaking down the natural barriers formed by the tree. This allows entry of saprophytic organisms that consume wood and cause decay. Decay within the inner core of the tree is most often not a threat to the life of the tree. Rather, it presents a problem of structural stability.

Psychopathologist Dr. Alex Shigo (deceased) and other notable scientists have demonstrated that smaller pruning wounds are not likely to produce significant areas of decay. Smaller roots/branches of a tree that are properly pruned will gain closure in 5-10 years. After closure small pruning wounds are not a liability to a tree. When pruning to remove small tree roots/branches, and in some cases larger roots/branches, man is immolating the normal and natural process of a tree shedding a root/branch.

PROTECTION NOTES

PROTECTION

Work around oak trees of the site must acknowledge the following:

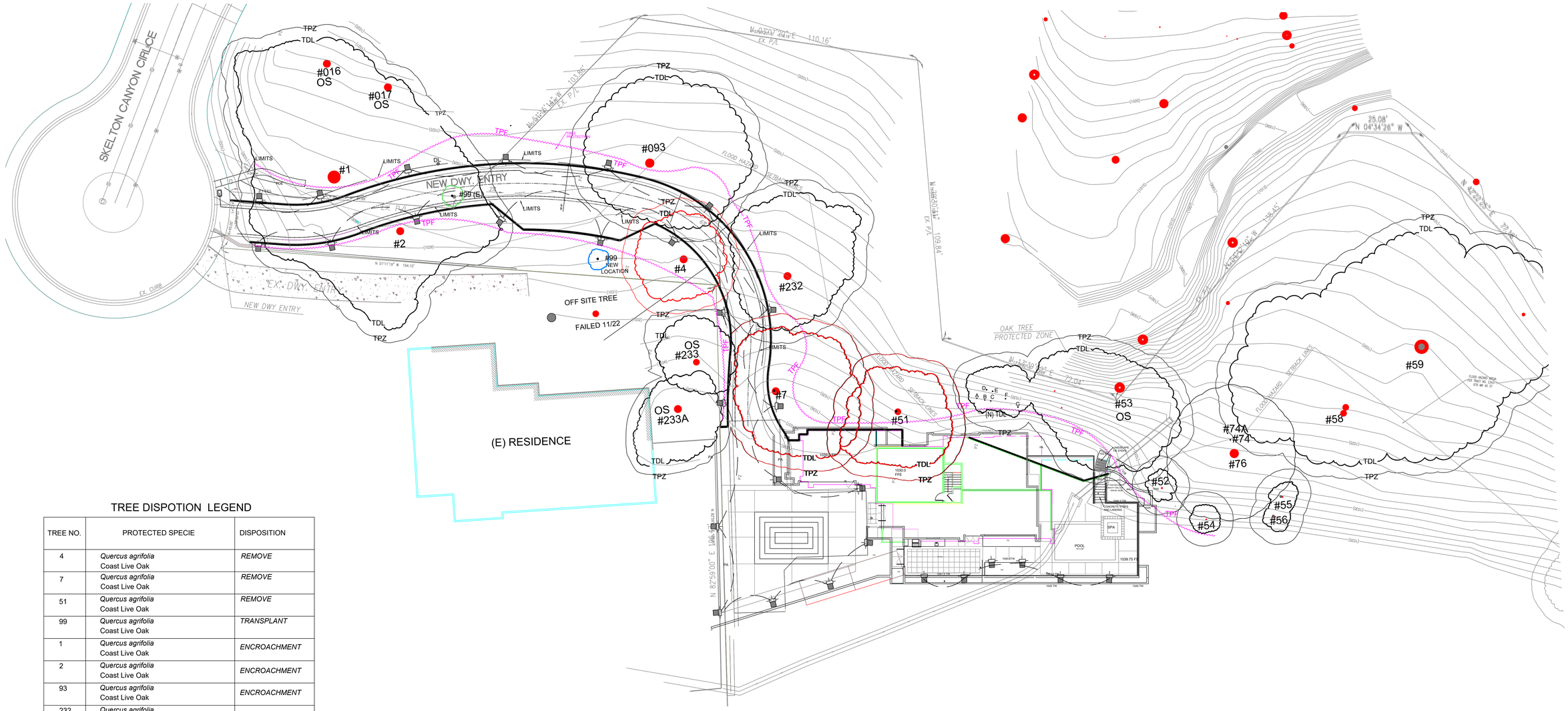
1. Notice: The applicant shall provide a forty-eight (48) hour notice to the City and the applicant's oak tree consultant prior to the start of any approved work within the protected zone of any oak tree.
2. Prior to start of construction: All oak trees shall be fenced at the edge of the protected zone to the extent possible in accordance with the Oak Tree Preservation and Protection Guidelines. The protective fence should remain in place during all phases of construction and should not be removed without notification to the Oak Tree Consultant.
3. Pruning: All approved pruning shall be performed by a qualified arborist under the direction of the applicant's oak tree consultant. The arborist shall use the Pruning Standards of the Western Chapter of the International Society of Arboriculture. No unauthorized pruning is to be performed without prior Permission City Inspector and the Oak Tree Consultant.
4. Excavation: All approved excavation performed within the protected zone of any oak tree shall be performed with hand tools under the direction of the applicant's oak tree consultant.
5. Debris: No construction materials, debris or vehicles shall be stored within the Protected Zone of any oak tree at any time.
6. Planting and Irrigation: Unless specifically approved by the City, no planting or irrigation shall be placed within the protected zone of any oak tree.
7. Mulch: At the completion of construction, the applicant shall place three inches (3") of approved mulch throughout the drip line of each oak tree.
8. Certification: Within ten (10) days of the completion of work, the applicant's oak tree consultant shall submit written forensic certification to the Planning Division. This certification shall describe all work performed and whether such work was performed in accordance with the above permit conditions.
10. Chemicals: No chemical weed killers are used within 100' of any oak tree.
11. Drainage: Direct all drainage water away from the trunk of oak trees. Keep the base of oak trees thoroughly dry.
12. Permit: A copy of the Oak Tree Permit should be kept on file at the site during construction.

TREE INVENTORY

PROTECTED TREE INVENTORY FORM

	CLIENT:	Ferruza		HEIGHT ABOVE GRADE (feet)				MEASURED DRIPLINE (feet)								CONDITION		PHYSICAL DESCRIPTION
	SITE:	Skelton Canyon																
Tree No.	**SPECIES**	**COMMON NAME**	**TRUNK DIAMETER (inches)**	**NORTH**	**EAST**	**SOUTH**	**WEST**	**NORTH**	**NORTHEAST**	**EAST**	**SOUTHEAST**	**SOUTH**	**SOUTHWEST**	**WEST**	**NORTHWEST**	**APPEARANCE**	**HEALTH**	**REMARKS**
1	Quercus agrifolia	Coast Live Oak	55	n/a	30	30	8	27	58	49	41	56	sc	sc	36	B	C-	Co-dominant; Major cavity; broken branch
2	Quercus agrifolia	Coast Live Oak	9, 8, 25, 12	n/a	sc	3	20	sc	sc	sc	sc	39	20	40	30	B	B	Co-dominate union; Rot underneath sw trunk; large
																		trunk laying on the ground.
99	Quercus agrifolia	Coast Live Oak	4	n/a	n/a	n/a	n/a	8	8	8	8	8	8	8	8	A	A	Remove for access
4	Quercus agrifolia	Coast Live Oak	multiple: 1"-6"	n/a	n/a	n/a	n/a	15	15	15	15	15	15	15	15	C	C	Regenerating stump
093	Quercus agrifolia	Coast Live Oak	40	10	10	9	40	25	27	sc	sc	38	32	20	19	B	B	(formerly #98) 10" branch decayed, dead wood
232	Quercus lobata	Valley Oak	30	20	15	25	8	19	28	29	36	22	20	20	22	B	B	Two broken branch wounds with rot
7	Quercus agrifolia	Coast Live Oak	2@14, 19, 18	18	12	25	25	sc	21	18	24	27	19	31	35	B	B	Co-dominate union, woodpecker holes,dead wood
233	Platanus racemosa	California Sycamore	16	n/a	n/a	n/a	n/a	sc	sc	sc	sc	sc	sc	sc	sc	A	A	OS - estimated
233A	Quecus agrifolia	Coast Live Oak	36	15	15	8	15	23	25	25	23	22'	23	23	23	A	A	OS - estimated
51	Quercus agrifolia	Coast Live Oak	20	12	15	0	0	sc	27	35	30	37	27	35	28	A	A	Low branching' dead wood; broken branch wound
51a	Quercus agrifolia	Coast Live Oak	15	sc	sc		sc	sc	sc	sc	sc	sc	sc	20	sc	A	A	Not tagged due to slope - In a forest condition
51b	Quercus agrifolia	Coast Live Oak	8	sc	sc		sc	sc	sc	sc	sc	sc	sc	18	sc	A	A	Not tagged due to slope - In a forest condition
51c	Quercus agrifolia	Coast Live Oak	8	sc	sc		sc	sc	sc	sc	sc	sc	sc	18	sc	A	A	Not tagged due to slope - In a forest condition
51d	Quercus agrifolia	Coast Live Oak	9	sc	sc		sc	sc	sc	sc	sc	sc	sc	sc	sc	A	A	Not tagged due to slope - In a forest condition
51e	Quercus agrifolia	Coast Live Oak	8, 4	sc	sc		sc	sc	sc	sc	sc	sc	sc	sc	sc	A	A	Not tagged due to slope - In a forest condition
51f	Quercus agrifolia	Coast Live Oak	8	sc	sc		sc	sc	sc	sc	sc	sc	sc	sc	sc	A	A	Not tagged due to slope - In a forest condition
51g	Quercus agrifolia	Coast Live Oak	8	sc	sc		sc	sc	sc	sc	sc	sc	sc	18	sc	A	A	Not tagged due to slope - In a forest condition
53	Quercus agrifolia	Coast Live Oak	36	14	n/a	12	15	38	sc	sc	sc	sc	40	45	37	A	A	OS
52	Quercus agrifolia	Coast Live Oak	9	n/a	n/a	n/a	n/a	20	15	sc	sc	sc	10	10	10	C+	C+	Drought stress, epicormic growth
54	Quercus agrifolia	Coast Live Oak	7	n/a	n/a	n/a	n/a	15	15	15	15	15	15	15	15	C-	C-	Epicormic growth
55	Quercus agrifolia	Coast Live Oak	8	n/a	n/a	n/a	n/a	12	12	12	12	12	12	12	12	C	C	Regenerating
56	Quercus agrifolia	Coast Live Oak	8	n/a	n/a	n/a	n/a	12	12	12	12	12	12	12	12	B	B	Regenerating
58	Quercus agrifolia	Coast Live Oak	27, 30	15	0	sc	0	30	35	39	s/c	35	22	12	15	B+	B+	minor water trap, co-dominate union, broken branch
																		wound regenerating, large cavity on south side
59	Quercus agrifolia	Coast Live Oak	96	25	20	30	15	s/c	30	40	s/c	30	40	37	35	B+	B+	Epicormic growth, included bark, broken branch
																		wounds, co-dominate unions, water trap on south side
74	Quercus agrifolia	Coast Live Oak	3	n/a	n/a	n/a	n/a	sc	sc	sc	sc	sc	sc	sc	sc	A	A	Not tagged - small volunteers north of Tree 76
74a	Quercus agrifolia	Coast Live Oak	3	n/a	n/a	n/a	n/a	sc	sc	sc	sc	sc	sc	sc	sc	A	A	Not tagged - small volunteers north of Tree 76
76	Quercus agrifolia	Coast Live Oak	27"	9	n/a	25	15	32	sc	25	28	32	27	23	32	A	A	
017	Quercus agrifolia	Coast Live Oak	27	n/a	35	7	n/a	35	sc	sc	sc	sc	sc	sc	sc	A	A	OS
016	Quercus agrifolia	Coast Live Oak	32	22	35	35	sc	40	sc	sc	40	40	sc	sc	sc	A	A	OS - Leans heavily to the northeast
Abbreviations:																		
OS	**Off Site**																	
sc	**shared canopy**																	
n/a	**not applicable**																	

TREE LOCATION MAP



TREE DISPOTION LEGEND

TREE NO.	PROTECTED SPECIE	DISPOSITION
4	*Quercus agrifolia* Coast Live Oak	*REMOVE*
7	*Quercus agrifolia* Coast Live Oak	*REMOVE*
51	*Quercus agrifolia* Coast Live Oak	*REMOVE*
99	*Quercus agrifolia* Coast Live Oak	*TRANSPLANT*
1	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
2	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
93	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
232	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
233	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
233A	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51a	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51b	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51c	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
51g	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
53	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*
52	*Quercus agrifolia* Coast Live Oak	*ENCROACHMENT*

PROTECTED TREE SPECIES

	PROTECTED SPECIE	TOTALS BY SPECIES	NUMBER TO REMAIN	NUMBER TO BE REMOVED	NUMBER TO BE RELOCATED
ON-SITE	*Quercus agrifolia* Coast Live Oak	23	19	3	1
ON-SITE	*Quercus lobata* Valley Oak	1	1	0	0
OFF-SITE	*Quercus agrifolia* Coast Live Oak	4	4	0	0
OFF-SITE	*Platanus racemosa* California Sycamore	1	1	0	0

LEGEND OF SYMBOLS

EXISTING LOCATION OF TREE #99

POSITION OF RELOCATED TREE #99

PROTECTED TREE TO BE REMOVED

ABBREVIATIONS:
TPZ - Tree Protection Zone
TDL - Tree Dripline
TPF - Tree Protective Fencing
OS - Off-Site

JAMES DEAN
LANDSCAPE ARCHITECTURE PLANNING URBAN DESIGN
3533 Old Conejo Rd, Suite 113 Newbury Park, CA 91320 805.498.9922

PROTECTED TREE LOCATION MAP

FERRUZZA RESIDENCE
3948 SKELTON CANYON
WESTLAKE VILLAGE, CA

0 8' 16' 32'
Scale: 1/16" = 1'-0"

SCALE: 1/16"=1'-0"

DATE
01-25-2024

PROTECTED TREE LOCATION MAP

PRUNING & ENCROACHMENT SCHEDULE

PRUNING & ENCROACHMENT SCHEDULE

Tree No.	Branches Cut	Total SF Area of Tree	Area of Encroach Per Tree Square Feet	Encroachment Percentage
1	0	Indeterminable	527	*
2	1@6", 1@10"	Indeterminable	877	*
93	*4@3", 1@ 6"*	3945	612	0.16
232	1@1, 5", 4@.2", 1>4"	2687	483	0.18
233	4@2", 1<4"	1178	27	0.03
233A	6@2",1@<5", 1@,6"	1791	15	0.01
51a,b,c,g	5@3-4"	Indeterminable	91	*
53	4@2"	2171	63	0.03
52	0	405	3	0.01

* The encroachment percentage is indeterminable because the tree is situated within a forest, under the canopy of other trees.

MONITORING PROGRAM

LANDSCAPE ARCHITECTURE | PLANNING | URBAN DESIGN

PROTECTED TREE MONITORING PROGRAM

The specification for this requirement is as follows Per the City of Thousand Oaks Guidelines for tree preservation:

Guideline V.A. 1 - Oak Tree Preservation Consultant

The services of an Oak Tree Preservation Consultant are made necessary by conditions of various permits issued by the City of Thousand Oaks. The importance of the consultant to the developer/property owner is clear from the requirements listed in this resolution. From the City's perspective it is both necessary and critical that the developer/property owner identify the consultant of record and allow them the latitude to perform their duties in a manner whereby they will be able to certify work as required by this resolution. Consequently, the developer/property owner must not fail to provide their consultant with a forty-eight (48) hour advance notice before commencing any authorized work within the protected zone of oak trees. Moreover, it is mandatory that the developer/property owner notify the Community Development Department in writing within five (5) days of terminations and changes in their oak tree preservation consultant of record.

Guideline V.A. 2 – Forty-Eight (48) Hour Notice

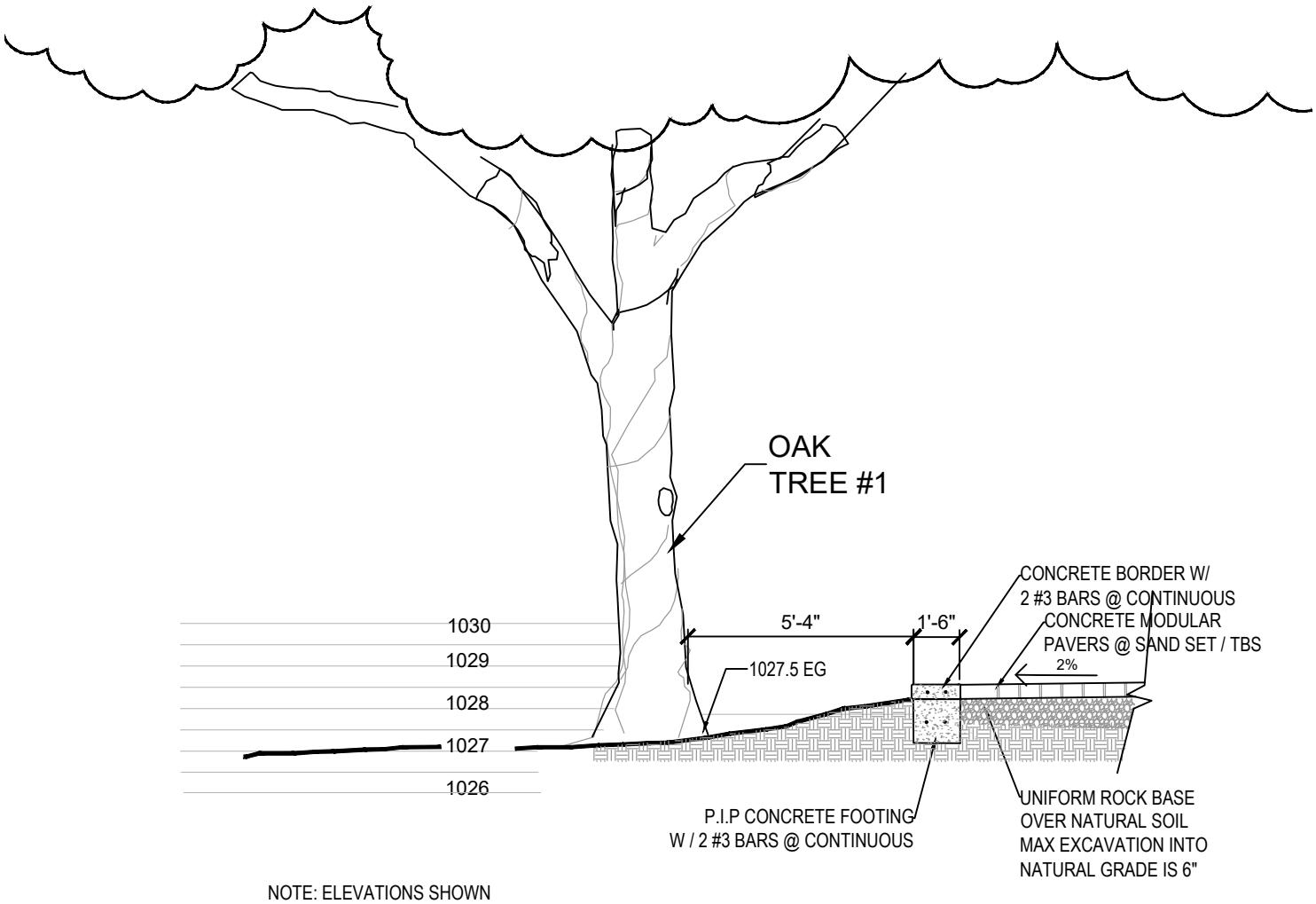
The property owner or his designated representative is required to provide written notice to the Community Development Department and his oak tree preservation consultant forty-eight (48) hours before beginning any work within the protected zone of an oak tree. Written notice shall not absolve nor preclude the property owner from the requirement for on-site direction and supervision by the owner's oak tree consultant.

Guideline V.A. 3 – On-Site Supervision

All work conducted within the protected zone of the oak tree unless otherwise listed as exempt by Title 5, Chapter 14 of the Municipal Code or these Guidelines, will be performed in the presence of the applicant's oak tree preservation consultant.

3533 Old Conejo Rd., #113, Newbury Park, CA 91320
t | 805. 498.9922
www.jamesdeandesign.com

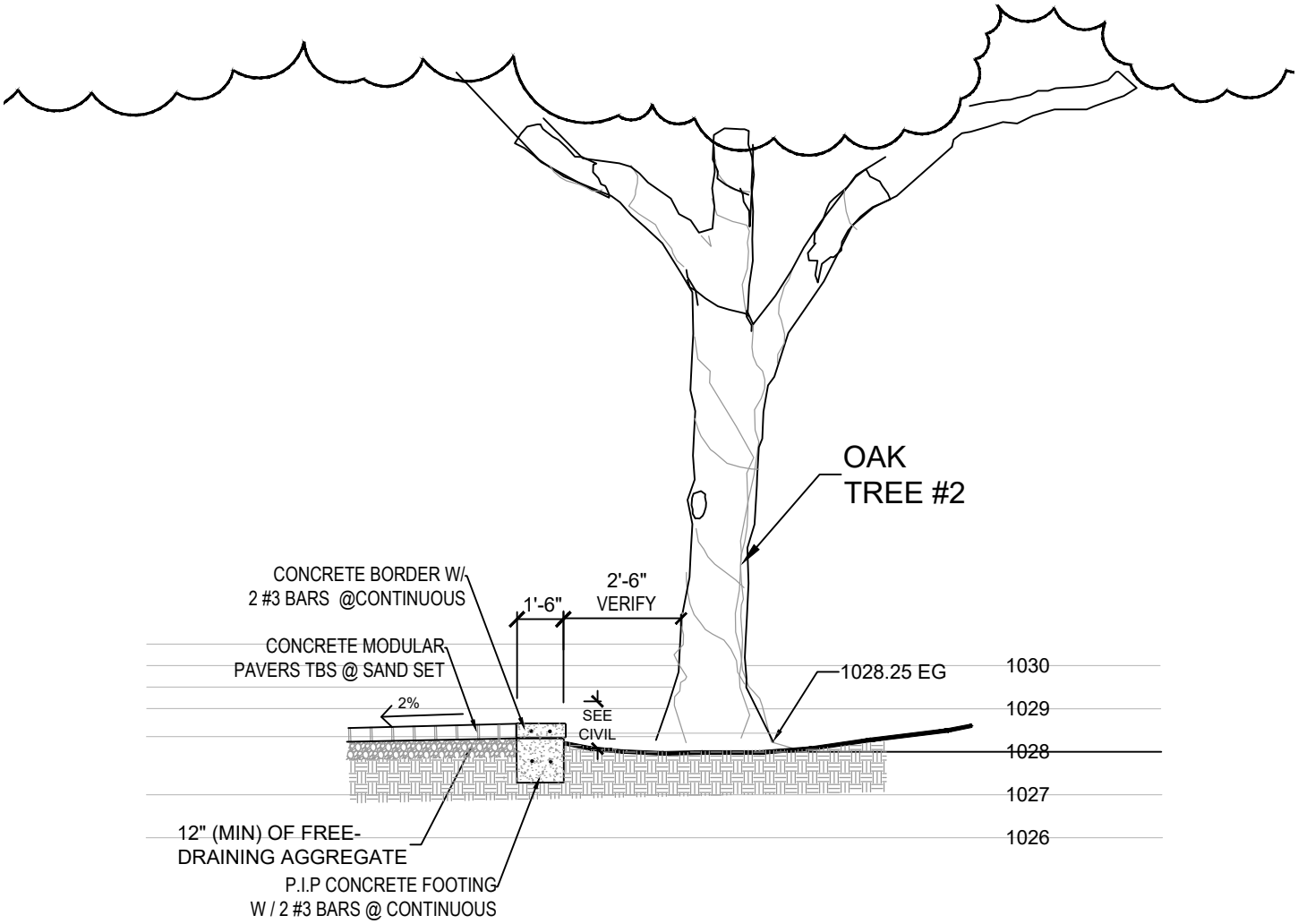
SECTIONS



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 1

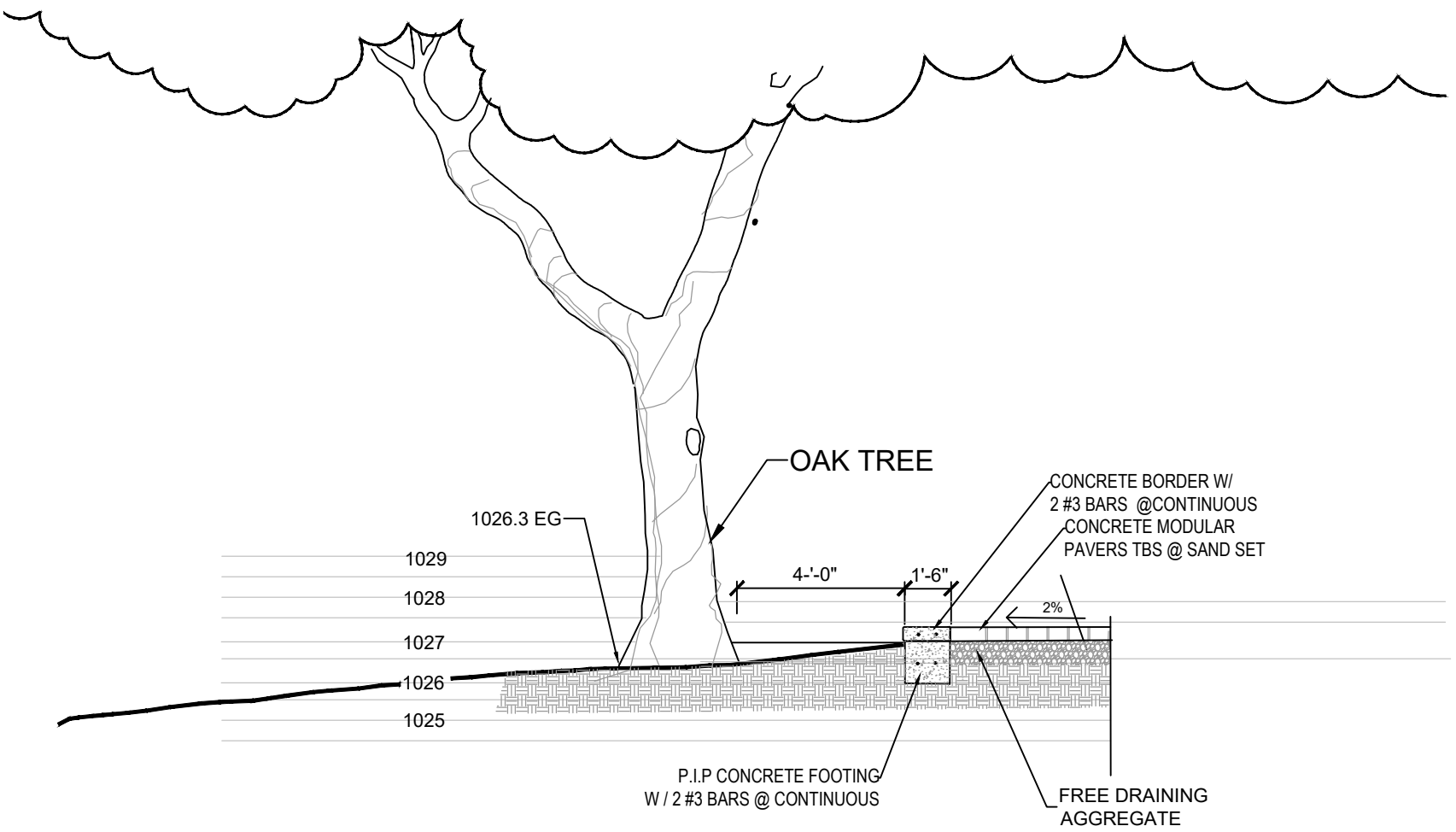
SCALE $\frac{1}{4}$"=1'-0"



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 2

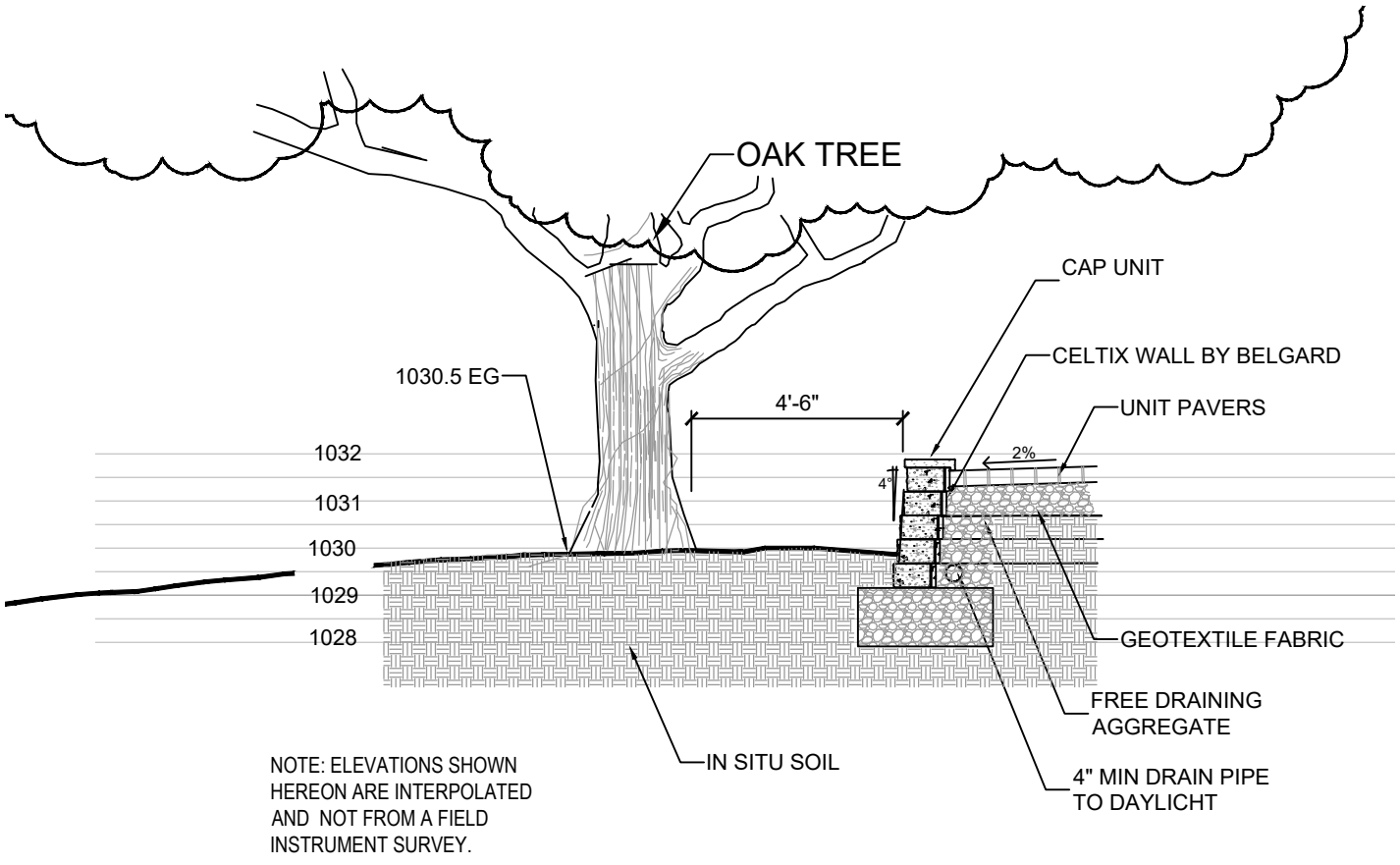
SCALE $\frac{1}{4}$"=1'-0"



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 93

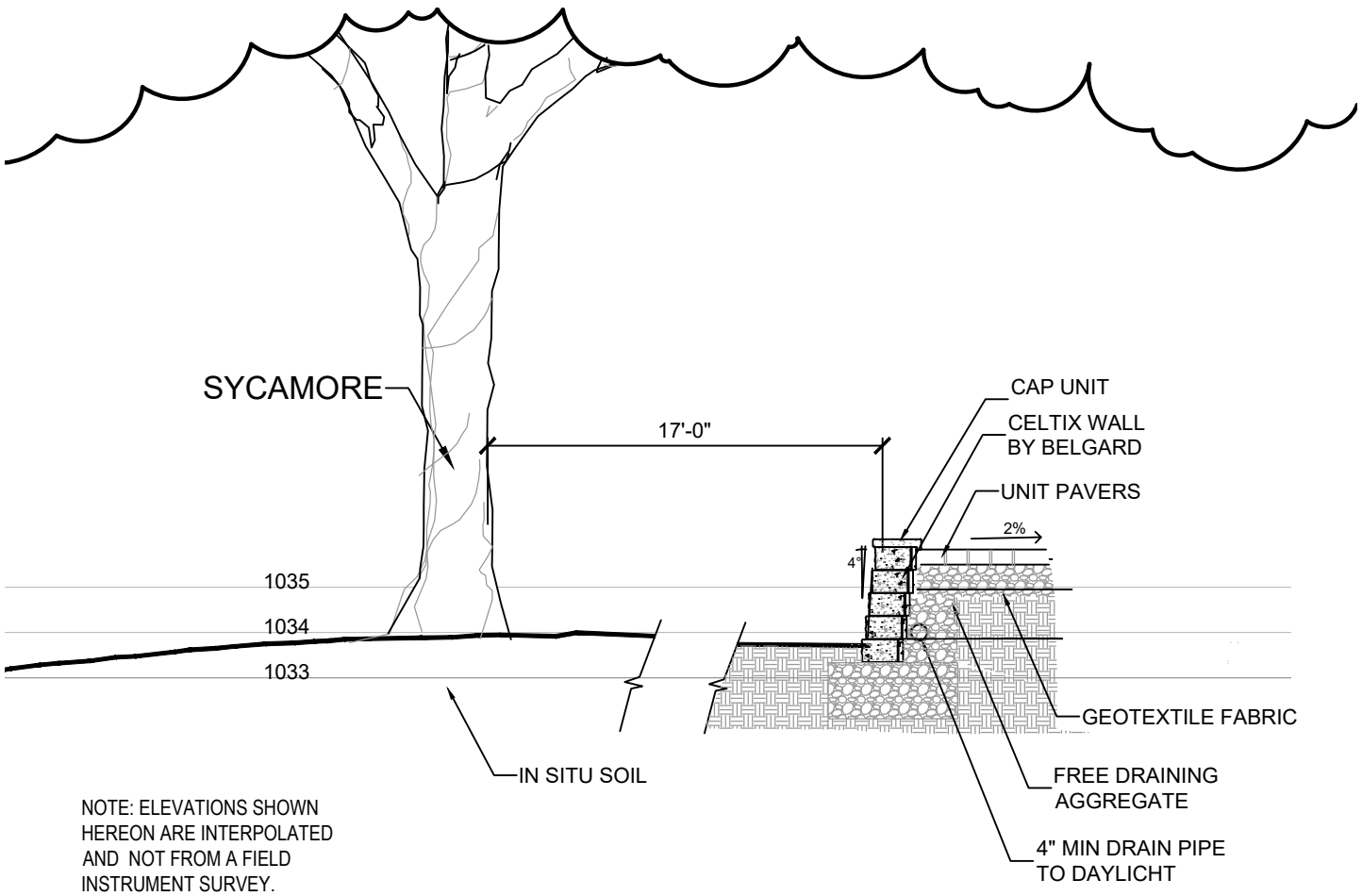
SCALE $\frac{1}{4}$"=1'-0"



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 232

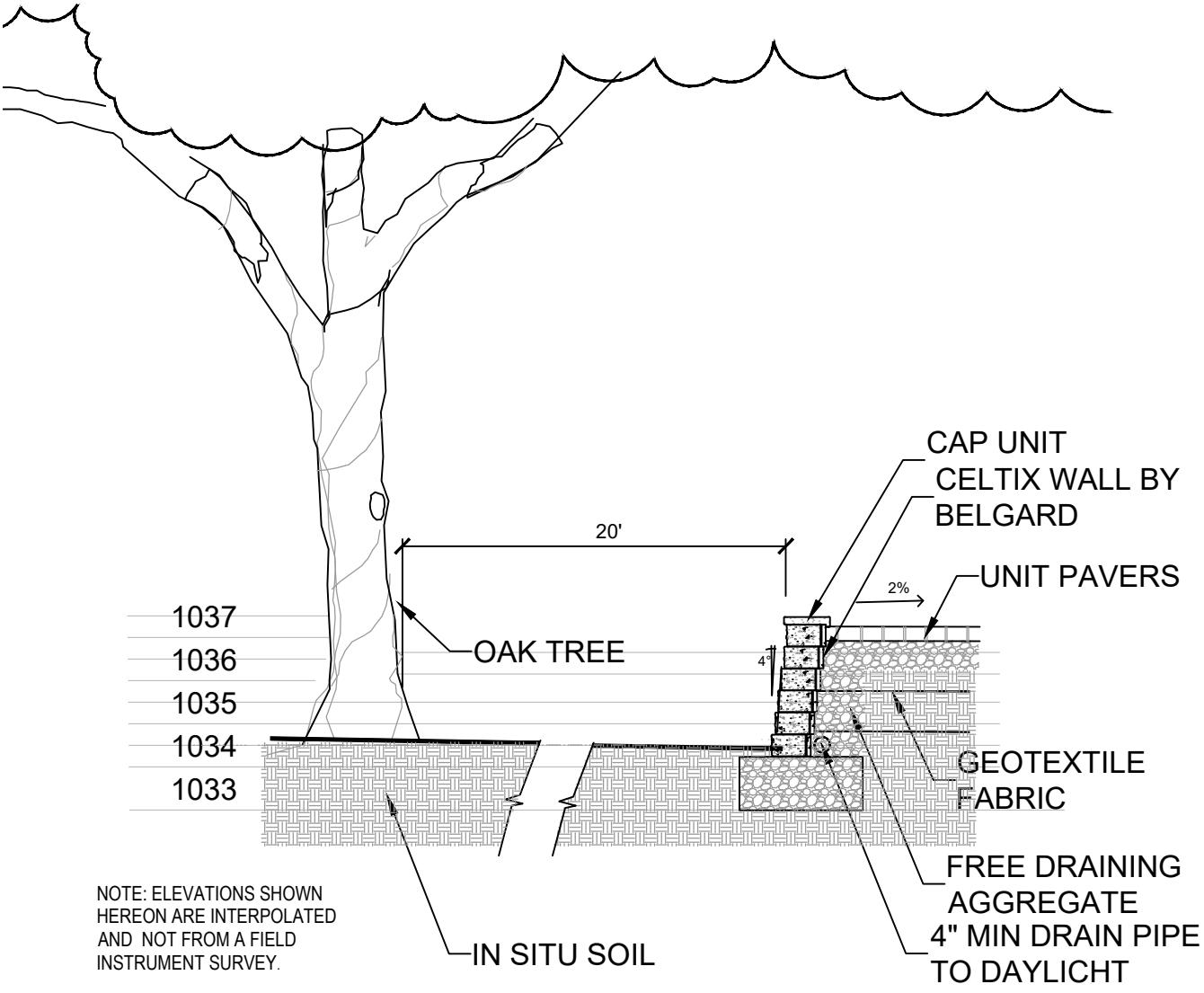
SCALE $\frac{1}{4}$"=1'-0"



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 233

SCALE $\frac{1}{4}$"=1'-0"



NOTE: ELEVATIONS SHOWN HEREON ARE INTERPOLATED AND NOT FROM A FIELD INSTRUMENT SURVEY.

TREE NO. 233a

SCALE $\frac{1}{4}$"=1'-0"

PHOTOGRAPHS

TREE 1

CLOSE UP - TREE 1

CLOSE UP - TREE 1

CLOSE UP - TREE 1

TREE 2

TREE 2 - CLOSE UP

TREE 016

TREE 017

TREE 7

OFF SITE - TREE 233 & 233a behind it

TREE 51

TREE 52

TREES 51A - 51G NOT TAGGED

TREE 45

TREE 233A - OS - NOT TAGGED

TREE 54

TREE 55

TREE 56

TREE 58

TREE 99

TREE 093

TREE 4

TREE 232