

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The City of Calistoga, as the Lead Agency, has prepared this Draft Environmental Impact Report (DEIR) for the Kortum Ranch Development Project (herein after referred to as the proposed project or project) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. As specified in Section 15123 of the CEQA Guidelines, an EIR is required to include a summary of the proposed action and its consequences. The following summary includes a brief description of the project, areas of known controversy, issues to be resolved, and a summary of significant impacts and proposed mitigation measures to reduce or avoid such impacts.

1.2 PROJECT SUMMARY

The proposed project consists of the subdivision of an existing property at 500 Kortum Canyon Road, totaling approximately 30.11 acres, into 20 individual lots. The proposed lots range from 0.40 acres to 6.29 acres and will accommodate future development of detached single-family homes. The project also includes on- and off-site road and utility improvements, including improvements to the intersection of Kortum Canyon Road/Foothill Boulevard (State Route 128), as well as to Terrace Drive, which will provide secondary emergency vehicle access to the project site.

1.3 AREAS OF KNOWN CONTROVERSY/ISSUES TO BE RESOLVED

A Notice of Preparation (NOP) (Appendix 2-A) was published and circulated along with an Initial Study (Appendix 2-B) on September 15, 2023, to solicit comments regarding the scope and content of the EIR. Scoping comments on the project's NOP included oral comments received at the public scoping meeting on September 28, 2023, and eighteen written comments received during the 30-day comment period (Appendix 2-C). Issues raised at the scoping meeting and in the comment letters were generally related to potential hazardous materials, traffic concerns, hydrology, and biological resources.

1.4 SUMMARY OF PROJECT ALTERNATIVES

The range of alternatives considered encompasses two categories: modifications to the project design that would reduce the project's environmental impacts, and other reasonably foreseeable projects that could be implemented if the Kortum Ranch Project

were disapproved. Alternative land uses were not further evaluated because none of the uses listed as permitted by-right in Section 17.15.030 of the Calistoga Municipal Code are applicable to the site. Uses permitted by-right in the RR-H zoning district are restricted to small-scale agriculture, horticulture, and gardens, commercial vineyards and orchards not exceeding two acres; one accessory dwelling unit per lot; and one junior accessory dwelling unit per lot. The site, in its present condition, cannot accommodate any of these by-right uses as it fails to meet the two-acre maximum limit for establishing a small-scale agricultural operation, and lacks primary dwellings necessary to establish an accessory or junior accessory dwelling unit. Additionally, alternate site locations were not considered as an alternative to the project as the applicant does not control access to other properties.

Chapter 6.0 includes a detailed discussion of two project alternatives including the No Project Alternative and the Reduced Building Envelope Alternative. As discussed therein, the Reduced Building Envelope Alternative is environmentally superior after the No Project Alternative.

1.5 IMPACT SUMMARY

A detailed discussion regarding potential environmental impacts of the proposed project is provided in Section 4.0, Environmental Evaluation. A summary of potentially significant impacts identified in the Initial Study, dated September 2023 as well as impacts identified in this DEIR are provided in Table 1-1. Also provided in Table 1-1 are mitigation measures, which are proposed to avoid or reduce significant project and cumulative impacts. The table also indicates the level of impact with implementation of the recommended mitigation measures.

TABLE 1-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Aesthetics			
Impact AES-D: The project has the potential to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	PS	Mitigation Measure AES-1: The applicant shall include a lighting plan on the Final Map/Plan Set for review and approval. The lighting plan shall demonstrate that new lighting fixtures are shielded and/or recessed to avoid light overspill, are directed downward and away from adjoining properties, and are consistent with the International Dark Sky Association model ordinance objectives by providing the minimum lighting level necessary for night-time safety, utility, security, productivity, enjoyment, and commerce and minimizing sky glow, light overspill and obtrusive lighting levels. The final map shall restrict the use of lighting to no more than 3,000 kelvins, and 100 Lumens for exterior lighting.	LTS
Air Quality			
Impact AIR-A: The project has the potential to conflict with or obstruct implementation of the applicable air quality plan.	PS	Mitigation Measure AQ-1: All contractors shall implement the following BMPs during construction of the Project which shall be included as a note on the Final Map and Improvement Plans: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall	LTS

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		<p>be watered two times per day.</p> <ol style="list-style-type: none"> 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as practicable. Building pads shall be laid as soon as practicable after grading unless seeding or soil binders are used. 6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. 7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. 8. Unpaved roads providing access to site located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. 9. Publicly visible signs shall be posted with the telephone 	

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		<p>number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall be visible to ensure compliance with applicable regulations.</p> <p>10. Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.</p> <p>11. Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.</p> <p>12. Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.</p> <p>13. Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.</p> <p>14. Minimize the amount of excavated material or waste materials stored at the site.</p> <p>15. Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.</p>	

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		<p>Mitigation Measure AQ-2: A construction operation plan shall be submitted by all contractors prior to issuance of any and all building permits for units on the site. The plan shall be reviewed by an air quality expert and approved by the City prior to construction. The plan shall be implemented by contractors and reduce DPM emissions by 30 percent and may incorporate one or more of the following methods:</p> <ol style="list-style-type: none"> 1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for PM (PM10 and PM2.5). 2. Use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 30 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination). 3. Use of electrical or non-diesel fueled equipment. 4. Use alternatively fueled equipment. 5. Installation of electric power lines during early construction phases to avoid use of diesel generators and compressors. 	

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		6. Use of electrically-powered equipment. 7. Forklifts and aerial lifts used for exterior and interior building construction shall be electric or propane/natural gas powered, 8. Change in construction build-out plans to lengthen phases, and/or 9. Implementation of different building techniques that result in less diesel equipment usage	
Impact AIR-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?	PS	Mitigation Measure AQ-1: See above Mitigation Measure AQ-2: See above	LTS
Impact AIR-C: Expose sensitive receptors to substantial pollutant concentrations	PS	Mitigation Measure AQ-1: See above Mitigation Measure AQ-2: See above	LTS
Impact AIR-D: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people	PS	Mitigation Measure AQ-1: See above Mitigation Measure AQ-2: See above	LTS

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Biological Resources			
<p>Impact BIO-A: The project has the potential to result in a substantial adverse effect, 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 Game or U.S. Fish and Wildlife Service.</p>	PS	<p>Mitigation Measure BIO-1: To address impacts to the special-status plant species narrow-anthered brodiaea (<i>Brodiaea leptandra</i>), the applicant shall hire a professional biologist to develop a mitigation plan in consultation with the CDFW and submit it to the City of Calistoga for review and approval prior to the issuance of grading permits. Avoidance shall be the preferred mitigation, followed by relocation, and mitigation credits. Deference regarding the appropriate mitigation action shall be given to the project biologist, in consultation with CDFW. The mitigation plan may include some or all of the following elements:</p> <ol style="list-style-type: none"> Avoidance: The project shall avoid development in locations where narrow-anthered brodiaea (<i>Brodiaea leptandra</i>) occur, if feasible, and relocate any individuals found prior to site preparation. Relocation: A qualified botanist shall be contracted by the City at the applicant's expense to conduct a site survey, collect the seeds, propagules, and topsoils, or other parts of the plant (i.e., corms) that would ensure successful replanting of the population elsewhere. The seeds, propagules, or other plantable portions of all plants shall be collected at the appropriate time of the 	LTS

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		<p>year. Half of the propagules collected shall be appropriately stored in long-term storage (for example, at California Academy of Sciences). The other half of the seeds, propagules, or other plantable portion of all plants shall be planted at the appropriate time of year (late-fall months) in an area of the subject property or an off-site, protected property that will not be impacted by the project (if the project has a designated off-site mitigation site for impacts on other special-status species, the plants can be seeded on the mitigation site). This area shall be fenced with permanent fencing (for example, chain link fencing) to ensure protection of the species. The applicant should hire a qualified biologist to conduct annual monitoring surveys of the transplanted plant population for a five-year period and should prepare annual monitoring reports reporting the success or failure of the transplanting effort. These reports should be submitted to the City of Calistoga and any other appropriate resource agency (i.e., CDFW) no later than December 1st each monitoring year.</p> <p>3. Mitigation Credits: All or a portion of the mitigation requirements may be satisfied via the purchase of qualified mitigation credits and the preservation of offsite habitat.</p>	

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		<p>Mitigation Measure BIO-2: To avoid impacts to roosting pallid bats or other bat species the following procedures shall be implemented by a qualified biologist possessing a minimum of two years of experience surveying for roosting bats and in consultation with the CDFW. Specific survey actions depend on the time of year, and shall be as specified below.</p> <p>January 1 – Feb. 28/29 (Hibernation) For tree or building removal: A qualified biologist shall complete preconstruction surveys within 14 days prior to starting work to check for hibernating bats. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion in conjunction with the CDFW.</p> <p>March 1 –April 1 (Seasonal Bat Activity after hibernation and prior to maternity) For tree or building removal: A qualified biologist shall complete preconstruction surveys for roosting bats within 14 days prior to starting work. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion, in conjunction with the CDFW.</p> <p>April 2 – August 30 (Maternity Time) For tree or building removal: A qualified biologist shall complete preconstruction</p>	

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		<p>surveys within 14 days prior to starting work to check for maternity sites. If a maternity site is found, impacts to the maternity site will be avoided by establishment of a non-disturbance buffer until the young have reached independence. The size of the buffer zone shall be determined by the qualified bat biologist at the time of the surveys. Once young have reached independence, the biologist should develop a plan for bat removal and exclusion in conjunction with CDFW.</p> <p>August 31 – Oct. 15 (Seasonal Bat Activity when bats are able to fly and feed independently) For tree or building removal: A qualified biologist shall complete preconstruction surveys for roosting bats within 14 days prior to starting work. If the qualified biologist finds evidence of bat presence during the surveys, then he/she shall develop a plan for removal and exclusion, in conjunction with the CDFW.</p> <p>Oct. 16 – Dec. 31 (Hibernation) For tree or building removal: A qualified biologist shall complete preconstruction surveys within 14 days prior to starting work to check for hibernating bats. If hibernation roosts are found, the qualified biologist shall develop a plan for removal and exclusion in conjunction with the CDFW.</p> <p>Mitigation Measure BIO-3: To avoid impacts to nesting</p>	

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		<p>birds, the following procedures shall be implemented by a qualified ornithologist with extensive experience working with nesting birds near and on construction sites.</p> <ol style="list-style-type: none"> 1. Survey. A preconstruction nesting bird survey shall be conducted within 15 days prior to construction work or tree removal if this work would start between February 1st and August 31st. The nesting bird survey should include an examination of all trees onsite and within 200 feet of the entire project site (i.e., within a zone of influence of nesting birds), not just trees slated for removal. The zone of influence includes those areas outside the project site where birds could be disturbed by earth-moving vibrations and/or other construction-related noise. 2. Nest Buffers. If birds are identified nesting on or within the zone of influence of the construction project, the qualified ornithologist shall establish a temporary protective nest buffer around the nest(s). The nest buffer should be staked with orange construction fencing and of a sufficient size to protect the nesting site from construction-related disturbance or utilize current best practices in establishment of construction exclusion barriers. Typically, adequate nesting buffers are 50 feet from the nest site or nest tree dripline for small birds 	

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		<p>and up to 300 feet for sensitive nesting birds that include several raptor species known from the region of the project site but that are not expected to occur on the project site. No construction or earth-moving activity may occur within any established nest protection buffer prior to September 1 unless it is determined by the ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, or that the nesting cycle is otherwise completed. In the region of the project site, most passerine species complete nesting by mid-July. This date can be significantly earlier or later and would have to be determined by the ornithologist. At the end of the nesting cycle, and fledging from the nest by its occupants, as determined by the ornithologist, temporary nesting buffers may be removed, and construction may commence in established nesting buffers without further regard for the nest site.</p>	
<p>Impact BIO-B: The project has the potential to result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations</p>	<p>PS</p>	<p>Mitigation Measure BIO-4: Prior to removal of trees associated with road widening, a Tree Removal Permit and Tree Protection Plan shall be submitted for review and approval by the City of Calistoga.</p> <p>Concurrent with application of discretionary entitlements for</p>	<p>LTS</p>

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<p>or by the California Department of Fish and Game or US Fish and Wildlife Service.</p>		<p>development of single-family residences, a separate Tree Removal Permit shall be required if trees are proposed for removal. The Tree Removal Permit shall specify trees proposed for removal and shall contain all other information specified in Chapter 19.01 (Trees) of the Calistoga Municipal Code. Application(s) for future discretionary entitlements associated with development of single-family residences shall also specify construction activities that will occur within the root protection zone of protected trees to be preserved, and a Tree Protection Plan shall accompany the application(s). Anticipated conditions of the Tree Removal Permit and Tree Protection Plan may include, but are not limited to the following:</p> <p>Tree Removal Permit</p> <ol style="list-style-type: none"> 1. All replacement trees must be planted prior to final inspection of the building permit for which the removal was sought. 2. Tree replacement shall occur at a rate of no less than three (3) replacement trees planted for every one (1) protected tree removed or killed, unless otherwise specified. 3. Any removal or mortality of any Valley Oak (<i>Quercus lobata</i>) of any size on the project site shall be replaced at 	

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		<p>a ratio of no less than three (3) replacement trees planted for every one (1) removed.</p> <ol style="list-style-type: none"> 4. Replacement trees must be planted onsite or at a suitable off-site location as determined by the Department of Public Works or the mitigation fees stipulated in the Tree Removal/Disturbance Permit are forfeit. 5. Tree removal shall occur between October 1 and January 31. 6. Prior to tree removal, appropriate surveys shall be conducted as specific in Mitigation Measures BIO-2 and BIO-3. <p>Tree Protection Plan(s)</p> <ol style="list-style-type: none"> 1. Protected trees that are not designated for removal shall be protected with temporary chain-link fencing at least 6 feet tall installed around the outer margin of the root protection zone (RPZ). The fence shall remain in place and be properly maintained for the duration of all work onsite. 2. No grading, excavation, construction, storage, or dumping of materials shall occur within the RPZ without application to the City for a Tree Removal/Disturbance Permit. 	

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		<ol style="list-style-type: none"> 3. No underground services including utilities, drains, water, or sewer lines shall be routed within any RPZ without application to the City for a Tree Removal/Disturbance Permit. 4. Any tree work performed on trees to be retained must be performed by an International Society of Arboriculture (ISA) Certified Arborist or Certified Tree Worker and shall adhere to the latest editions of the American National Standards Institute (ANSI) Z133 and A300 standards as well as the ISA Best Management Practices (BMPs) for Tree Pruning. Pruning contractors shall have the C25/D61 license specification. 	
<p>Impact BIO-C: The project has the potential to result in a substantial adverse effect on state protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</p>	PS	<p>Mitigation Measure BIO-5: Indirect impacts to protected wetlands and drainage features shall be avoided through implementation of best management practices (BMPs) prior to earthwork. Construction exclusion zones shall be established by installing appropriate construction fencing, silt fencing, wildlife friendly hay wattles (no monofilament netting), gravel wattles, and other protective measures between project activities and the seasonal wetlands and drainage feature.</p> <p>All non-native, invasive vegetation removed shall be discarded offsite and away from wetland areas to prevent</p>	LTS

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		<p>reseeding.</p> <p>Prior to implementation of the construction project, a biological monitor shall inspect installation of BMPs to ensure proper protection of the seasonal wetlands and jurisdictional drainage feature areas are in place. BMPs shall thereafter be routinely inspected by the construction manager to ensure BMPs remain in place for the duration of construction activities. Upon completion of project construction all exclusion fencing shall be removed along with any temporary BMPs.</p> <p>Mitigation Measure BIO-6: Upon submittal of a Final Development Plan for Design Review approval for single-family residences on lots within 20-feet of mapped features, the owner(s) and/or applicant(s) shall demonstrate all feasible avoidance techniques to reduce direct impacts to seasonal wetlands and drainage features have been considered, and where viable, incorporated into the project. This shall include, at a minimum, establishment of a non-disturbance buffer around the mapped features, which may be demarcated with a split rail fence, or other avoidance techniques such as installation of landscape/greenbelt buffers. All feasible avoidance techniques shall be established in coordination with a qualified biologist and</p>	

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		<p>subject to final review and approval by the Planning Commission. All avoidance techniques approved as part of the Design Review Permit for individual lots shall be clearly identified on all subsequent construction plans (e.g grading, building, and/or another similar permit).</p> <p>If avoidance techniques are determined to be infeasible, a statement from a qualified biologist shall be required and shall clearly state reasons for infeasibility, subject to acceptance by the City of Calistoga. This mitigation shall only be considered satisfied if avoidance techniques are incorporated, or if a qualified biologist provides satisfactory evidence demonstrating the infeasibility of incorporation of such techniques. If avoidance is not feasible, implementation of Mitigation Measure BIO-7 is required.</p> <p>Mitigation Measure BIO-7: Where avoidance of wetlands and drainage features is not feasible, as determined by a qualified biologist, the owner(s) and/or applicant(s) of individual lots shall obtain all necessary permits from the Regional Water Quality Control Board (RWQCB) prior to approval of initial site development permit(s) (e.g. grading, building, or another similar permit). Measures to offset the loss of wetlands and drainage features that may be required by the RWQCB include but are not limited to the following.</p>	

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		<p>Specific measures will be as prescribed by the applicable permitting agency as part of the permit-approval process.</p> <ol style="list-style-type: none"> 1. Replacement of impacted wetlands at a 1:1 ratio. For permanent wetland impacts, wetlands can be replaced at a minimum ratio of one acre created for each acre, or fraction thereof, permanently impacted. 2. Creation of in perpetuity preservation. Regulatory agencies generally require that wetlands not impacted by the proposed project and any new wetlands created to mitigate project impacts be set aside in perpetuity, either through deed restrictions or conservation easements. 3. Establishment of a five-year monitoring program to monitor the progress of wetland mitigation toward an established goal. At the end of each monitoring year, an annual report will be submitted to the, RWQCB and other resource agencies that permitted the project. This report will document the hydrological and vegetative condition of the mitigation wetlands and will recommend remedial measures as necessary to correct deficiencies. The applicant(s)/property owner(s) shall supply the City with a copy of each annual report to demonstrate compliance. 4. In lieu of creating compensation wetlands, as approved 	

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		<p>by the RWQCB, the applicant may purchase mitigation credits from an approved mitigation bank at a 1:1 ratio or as otherwise required by the RWQCB at the time permits are issued.</p> <p>Mitigation Measure BIO-8: Prior to issuance of a grading permit, and prior to any modification to the bed, bank, or channel of the drainages onsite or removal of associated riparian vegetation, the project proponent shall secure a Streambed Alteration Agreement (SBAA) from the CDFW and provide documentation to the City. If removal of riparian vegetation will occur, a Tree Replacement and Riparian Enhancement Plan detailing the proposed plant palette, irrigation and maintenance of plantings, success criteria, and maintenance and monitoring consistent with CDFW requirements shall also be submitted.</p> <p>Typical tree replacement is at a ratio of no less than 3:1 and may include replacement/enhancement planting onsite along a constructed linear feature or along an existing onsite drainage; replacement/enhancement planting at an offsite location; and/or purchase of riparian credits from an approved mitigation or conservation bank. Specific compensation for impacts to drainage features and riparian vegetation shall be as specified by CDFW through the SBAA</p>	

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		process.	
<p>Impact BIO-E: The project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</p>	PS	<p>Mitigation Measure BIO-4: See above</p>	LTS
<p>Impact BIO-G (Impact LUP-B in Initial Study): The project could cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect to biological resources.</p>	PS	<p>Mitigation Measures BIO-1 through BIO-8: See above</p>	LTS
<p>Cultural Resources</p>			
<p>Impact CUL-B: The project has the potential to cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5</p>	PS	<p>Mitigation Measure CUL-1: If during the course of ground-disturbing activities, including, but not limited to, excavation, grading, and construction, prehistoric or historic archaeological features such as a concentration of flaked stone artifacts, culturally modified soil (midden) or dietary shell, or the remnants of an historic trash deposit over 100 years old, are encountered, all work shall be halted in the</p>	LTS

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		vicinity of the discovery. A qualified archaeologist shall be contacted immediately to make an evaluation and determine if the discovered material represents a definite cultural resource. In the event that a potentially significant feature has been identified, a temporary suspension of ground-disturbing activities shall be enforced until an appropriate mitigation program can be developed and implemented to the satisfaction of the City of Calistoga and affiliated Native American Tribes.	
Geology and Soils			
Impact GEO-A: The project has the potential to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides	PS	Mitigation Measure GEO-1: Prior to issuance of grading or construction permits, the applicant shall demonstrate compliance with the recommendations set forth in the Debris Flow Hazard Assessment prepared by Bajada Geosciences, Inc., dated August 8, 2023. As provided therein, to reduce risks associated with debris flows downslope of Lots 2, 4, 9, 10, and 11 (identified as Areas A, B, and C in the Assessment), catchment basins or debris fencing shall be installed to capture debris and prevent displacement downslope. Final design shall be subject to review and approval by the City of Calistoga and ongoing maintenance shall be required to ensure adequate capacity in the event of a debris flow. The location of debris flow areas shall be	LTS

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		included in the Final Map and Improvement Plans and a note shall be included related to required ongoing maintenance.	
<p>Impact GEO-B: The project has the potential to result in substantial soil erosion or the loss of topsoil</p>	PS	<p>Mitigation Measure GEO-2: Prior to issuance of grading permits or construction permits for current or future development, the applicant shall provide final design plans prepared and stamped by a licensed engineer that adhere to all engineering recommendations provided in the site-specific Geotechnical Report prepared for the project by KC Engineering Co., and dated April 16, 2021. The recommendations incorporated into the final improvement plans shall include, but are not be limited to, those related to grading, slopes, surface and subsurface drainage, storm water swales and basins, foundations, slab-on-grade construction, retaining walls, and pavement areas. Proof of compliance with all recommendations set forth in the Geotechnical Report shall be subject to review and approval by the City Engineer.</p> <p>Mitigation Measure GEO-3: Prior to issuance of a grading permit, an erosion control plan along with grading and drainage plans shall be submitted to the City's Planning and Building Department. All earthwork, grading, trenching, backfilling, and compaction operations shall be conducted in</p>	LTS

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		accordance with the City of Calistoga's Stormwater Runoff Pollution Control Ordinance, Chapter 19.05 of the Calistoga Municipal Code. The erosion control plan shall detail erosion control measures such as site watering, sediment capture, equipment staging and laydown pad, and other erosion control measures to be implemented during construction activity on the project site.	
Impact GEO-D: The project is located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), and has the potential to create substantial direct or indirect risks to life or property	PS	Mitigation Measure GEO-2: See above	LTS
Impact GEO-F: The project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	PS	Mitigation Measure GEO-4: In the event that paleontological resources, including individual fossils or assemblages of fossils, are encountered during construction activities all ground disturbing activities shall halt and a qualified paleontologist shall be procured to evaluate the discovery and make treatment recommendations.	LTS
Hydrology and Water Quality			
Impact HYD-A: The project has the potential to violate water quality		Mitigation Measure HYD-1: In accordance with the National Pollution Discharge Elimination System regulation,	

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standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.		<p>upon submittal of plans for building permit, a Storm Water Pollution Prevention Plan (SWPPP) shall be submitted for review and approval by the City. The SWPPP shall address erosion and sediment controls, proper storage of fuels, temporary erosion control measures such as fiber rolls, staked straw bales, geofabric, and sandbags, identification, and cleanup of hazardous materials. Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures. A Notice of Intent, fees, and other documentation shall be filed with the Regional Water Quality Control Board.</p> <p>Mitigation Measure HYD-2: Upon submittal of plans for building permit, a final stormwater control plan shall be submitted for review and approval by the City. The approved permanent and operational runoff pollutant source control BMPs shall be incorporated into construction plans and documents and implemented during construction and after project completion. The project's stormwater treatment and flow-control facilities shall be maintained in perpetuity. As required by the City of Calistoga, and as set forth in the BASMAA Post-Construction Manual, the final stormwater control plans will be required to demonstrate that post-construction peak flows match pre-development peak flows for the 100-year, 24-hour storm event.</p>	

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		Mitigation Measure GEO-1: See above	
<p>Impact HYD-C(i-iv): The project has the potential to 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 polluted runoff; (iv) impede or redirect flood flows</p>		Mitigation Measure HYD-2: See above	
Noise			
Impact NOI-A: The project has the		Mitigation Measure NOI-1: The following Construction best	

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<p>potential to generate 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</p>		<p>management practices shall be included as a note on the Final Map and Improvement Plans and implemented by all contractors during all construction activities:</p> <ol style="list-style-type: none"> 1. Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps. 2. At a minimum, the construction contractor shall implement the following control measures: improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds. 3. Equipment used for project construction shall be hydraulically or electrically powered impact tools (e.g., jack hammers) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Where use of pneumatically-powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. A muffler could lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools 	

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		<p>themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures shall be used (such as drilling rather than impact equipment) wherever feasible.</p> <ol style="list-style-type: none"> 4. The construction contractor shall not allow any construction equipment, trucks, or vehicles to idle while not in active use. 5. Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors. 6. Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. 7. Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors. 	

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		<p>8. Route construction-related traffic along major roadways and as far as feasible from sensitive receptors.</p> <p>9. Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.</p> <p>10. The contractor shall prepare a detailed construction schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.</p> <p>11. Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.</p>	
Transportation			
Impact TRA-C: The project has the	PS	Mitigation Measure TRA-1: Prior to approval of a Final	LTS

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses		Map, the applicant shall either (1) make an irrevocable dedication of the proposed east/west access road and the portions of Terrace Drive that are under private ownership to the City, which may be accepted by the City upon completion of construction; or (2) prepare a long-term maintenance plan that includes maintenance for review and approval by the Director of Public Works and/or Fire Chief that includes maintenance at the project site entrance where the east/west access road intersects with Kortum Canyon, as well as along the length of Terrace Drive, to ensure vegetation is less than three feet in height and branches and hanging limbs of trees have a minimum height of 7 feet to ensure safety for emergency vehicles and daily trips.	
Tribal Cultural Resources			
Impact TCUL-A: The project has the potential to result in a substantial adverse change to resources 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).	PS	Mitigation Measure TCUL-1: To protect buried tribal cultural resources that may be encountered during ground disturbing activities, the project shall implement Mitigation Measure CUL-1.	LTS

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<p>Impact TCUL-B: The project has the potential to result in a substantial adverse change to 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe</p>	PS	<p>Mitigation Measure TCUL-1: See above</p> <p>Mitigation Measure CUL-1: See above</p>	LTS
Wildfire and Wildland Fire Hazards			
<p>Impact FIR-B: The project could exacerbate wildfire risks due to slope, prevailing winds, and other factors which could expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.</p>	PS	<p>Mitigation Measure FIR-1: Prior to approval of the Kortum Ranch Final Map, a final Wildland Fire Protection Plan (WFPP) shall be submitted to the City of Calistoga and the Diamond Mountain Fire Safe Council (DMFSC) for review and approval. The City of Calistoga Fire Department and/or DMFSC shall provide recommendations for periodic inspection of the site. The WFPP shall delineate treatment zones for Defensible</p>	LTS

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		<p>Space/Landscaping (Zone 1), Fuel-Modification (Zone 2), and shall confirm lots requiring preparation of a wildfire behavior model (see Mitigation Measure FIR-2). Treatment zones identified in the final approved WFPP as well as lots requiring preparation of a wildfire behavior model shall be noted on the Final Map prior to approval and/or recordation.</p> <p>Compliance with all recommendations, including those related to structure ignition resistant features contained in the WFPP shall be demonstrated by individual property owners/applicants upon submittal of a Final Development Plan for Design Review approval.</p> <p>Mitigation Measure FIR-2: Upon submittal of a Final Development Plan for Design Review approval to develop individual lots, lot specific wildfire behavior models shall be prepared by a qualified wildfire specialist and submitted by the applicant to the City for review and approval. Lots subject to this requirement shall be determined in the final WFPP as required by Mitigation Measure FIR-1, and shall be used to determine precise setbacks, fire resistive ratings, and other design features. Lot-specific wildfire behavior models shall characterize the following factors for each lot and shall be used to inform orientation, setbacks, fire</p>	

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
		<p>resistive ratings, and other design features for development of single-family residences and associated improvements:</p> <ul style="list-style-type: none"> • Fuel composition including moisture level, chemical makeup, and density. • Weather conditions including wind speed and direction, temperature, and humidity. • Topographic features including elevation, slope, and aspect. <p>Building location, fire-resistive ratings, and other design features shall be subject to review and acceptance by the City of Calistoga Fire Department and Planning Division prior to review and approval of the Design Review permit by the Planning Commission.</p> <p>To ensure individual property owner awareness of this mitigation measure, the following shall be included as a note on the final map:</p> <p>“Upon submittal of lot-specific development proposals for single-family dwellings, a wildfire behavior model shall be prepared by a wildfire specialist and submitted to the City of Calistoga. Lot-specific behavior models shall be used to specify building setbacks and fire resistive ratings for individual single-family residences.”</p>	

POTENTIAL IMPACTS	LEVEL OF SIGNIFICANCE WITH MITIGATION	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<p>Impact FIR-D: The project could 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.</p>	PS	<p>Mitigation Measure GEO-1: See above</p> <p>Mitigation Measure FIR-1: See above</p> <p>Mitigation Measure FIR-2: See above</p>	LTS
<p>Impact FIR-F (Impact LUP-B in Initial Study): The project could cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect related to wildfires</p>	PS	<p>Mitigation Measure FIR-1: See above</p> <p>Mitigation Measure FIR-2: See above</p>	LTS

PS = Potentially Significant

LTS = Less than Significant