County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR
www.sccoplanning.com

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

NOTICE OF PUBLIC REVIEW AND COMMENT PERIOD

Pursuant to the California Environmental Quality Act, the following project has been reviewed by the County Environmental Coordinator to determine if it has a potential to create significant impacts to the environment and, if so, how such impacts could be solved. A Negative Declaration is prepared in cases where the project is determined not to have any significant environmental impacts. Either a Mitigated Negative Declaration or Environmental Impact Report (EIR) is prepared for projects that may result in a significant impact to the environment.

Public review periods are provided for these Environmental Determinations according to the requirements of the County Environmental Review Guidelines. The environmental document is available for review at the County Planning Department located at 701 Ocean Street, in Santa Cruz. You may also view the environmental document on the web at www.sccoplanning.com under the Planning Department menu. If you have questions or comments about this Notice of Intent, please contact Matt Johnston of the Environmental Review staff at (831) 454-3201

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs or activities. If you require special assistance in order to review this information, please contact Bernice Romero at (831) 454-3137 (TDD number (831) 454-2123 or (831) 763-8123) to make arrangements.

PROJECT: Castle Rock State Park Entrance Relocation

APP #: 131055

APN(S): 088-081-12

PROJECT DESCRIPTION: The project is a proposal to relocate the entrance to Castle Rock State Park and construct a gateway to the Park in two phases. Phase One to consist of: demolition of existing structures; grading, construction of a new driveway and entrance, including a sign of up to 48 square feet in size; deceleration and acceleration lanes; construction of a parking lot, amphitheater, restrooms, picnic areas and trails; and installation of landscaping. Phase Two to consist of construction of a visitors center complex of about 6,000 square feet and related improvements. Requires the rescission of the existing Williamson Act contract and entrance into an Open Space Easement contract, a Rezoning to change the current CA-P zoning to PR-O (Parks, Recreation, and Open Space, with an Open Space Easement Combining District), a General Plan re-designation to O-R (Parks, Recreation and Open Space), a Commercial Development Permit to expand the State Park under a phased Master Site Plan and Parking Plan, an Agricultural Buffer Reduction from the required 200 feet to 100 feet, a Variance for a sign to exceed the 12 square feet allowed by County Code and located closer than five feet from the right-of-way, an overheight fence permit to allow an eight-foot high fence within the front yard setback, an Archaeological Report Review, Soils Report Review, Design Review, Preliminary Grading Review and Environmental Review.

PROJECT LOCATION: The project is located on the southwest side of Skyline Boulevard, which is also State Route (SR) 35, about 2.3 miles from its intersection with Highway 9 (15435 Skyline Blvd., Los Gatos.

EXISTING ZONE DISTRICT: Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P)

APPLICANT: Don Neuwirth
OWNER: Sempervirens Fund
PROJECT PLANNER: Annette Olson, (831) 454-3134
EMAIL: Annette.Olson@santacruzcounty.us
ACTION: Negative Declaration with Mitigations
REVIEW PERIOD: April 28, 2014 through May 27, 2014

This project will be considered at a public hearing before the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

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MITIGATED NEGATIVE DECLARATION

Project: Castle Rock State Park Entrance Relocation **APN(S): 088-081-12**

Project Description: The project is a proposal to relocate the entrance to Castle Rock State Park and construct a gateway to the Park in two phases. Phase One to consist of: demolition of existing structures; grading, construction of a new driveway and entrance, including a sign of up to 48 square feet in size; deceleration and acceleration lanes; construction of a parking lot, amphitheater, restrooms, picnic areas and trails; and installation of landscaping. Phase Two to consist of construction of a visitors center complex of about 6,000 square feet and related improvements. Requires the rescission of the existing Williamson Act contract and entrance into an Open Space Easement contract, a Rezoning to change the current CA-P zoning to PR-O (Parks, Recreation, and Open Space, with an Open Space Easement Combining District), a General Plan re-designation to O-R (Parks, Recreation and Open Space), a Commercial Development Permit to expand the State Park under a phased Master Site Plan and Parking Plan, an Agricultural Buffer Reduction from the required 200 feet to 100 feet, a Variance for a sign to exceed the 12 square feet allowed by County Code and located closer than five feet from the right-of-way, an overheight fence permit to allow an eight-foot high fence within the front yard setback, an Archaeological Report Review, Soils Report Review, Design Review, Preliminary Grading Review and Environmental Review.

Project Location: The project is located on the southwest side of Skyline Boulevard, which is also State Route (SR) 35, about 2.3 miles from its intersection with Highway 9 (15435 Skyline Blvd., Los Gatos.

Owner: Sempervirens Fund

Applicant: Don Neuwirth

Staff Planner: Annette.Olson, (831) 454-3134

Email: Annette Olson@santacruzcounty.us

This project will be considered at a public hearing before the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

California Environmental Quality Act Mitigated Negative Declaration Findings:

Find, that this Mitigated Negative Declaration reflects the decision-making body's independent judgment and analysis, and; that the decision-making body has reviewed and considered the information contained in this Mitigated Negative Declaration and the comments received during the public review period; and, that revisions in the project plans or proposals made by or agreed to by the project applicant would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and, on the basis of the whole record before the decision-making body (including this Mitigated Negative Declaration) that there is no substantial evidence that the project as revised will have a significant effect on the environment. The expected environmental impacts of the project are documented in the attached Initial Study on file with the County of Santa Cruz Clerk of the Board located at 701 Ocean Street, 5th Floor, Santa Cruz, California.

Review Period Ends: May 27, 2014 Date: _____

Note: This Document is considered Draft until it is Adopted by the Appropriate County of Santa Cruz Decision-Making Body

_____
TODD SEXAUER, Environmental Coordinator
(831) 454-3511

County of Santa Cruz

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CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ENVIRONMENTAL REVIEW INITIAL STUDY

Date: February 24, 2014 **Application Number:** 131055

Staff Planner: Annette Olson

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Don Neuwirth **APN(s)**: 088-081-12

OWNER: Sempervirens Fund **SUPERVISORAL DISTRICT**: 5

PROJECT LOCATION: The site is located on the southwest side of Skyline Boulevard, which is also State Route (SR) 35, about 2.3 miles from its intersection with Highway 9 (15435 Skyline Blvd., Los Gatos).

SUMMARY PROJECT DESCRIPTION:

Proposal to relocate the entrance to Castle Rock State Park and construct a gateway to the Park in two phases. Phase One to consist of: demolition of existing structures; grading; construction of a new driveway and entrance, including a sign of up to 48 square feet in size; deceleration and acceleration lanes; construction of a parking lot, amphitheater, restrooms, picnic areas and trails; and installation of landscaping. Phase Two to consist of: construction of a visitors center complex of about 6,000 square feet and related improvements.

Requires the rescission of the existing Williamson Act contract and entrance into an Open Space Easement contract, a Rezoning to change the current CA-P zoning to PR-O (Parks, Recreation, and Open Space, with an Open Space Easement Combining District), a General Plan re-designation to O-R (Parks, Recreation and Open Space), a Commercial Development Permit to expand the State Park under a phased Master Site Plan and Parking Plan, an Agricultural Buffer Reduction from the required 200 feet to 100 feet, a Variance for a sign to exceed the 12 square feet allowed by County Code and located closer than five feet from the right-of-way, an overheight fence permit to allow an eight-foot high fence within the front yard setback, an Archaeological Report Review, Soils Report Review, Design Review, Preliminary Grading Review and Environmental Review.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.

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

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

- ☒ General Plan Amendment
- ☐ Land Division
- ☒ Rezoning
- ☒ Development Permit
- ☐ Coastal Development Permit
- ☒ Grading Permit
- ☐ Riparian Exception
- ☒ Other: Rescission of Williamson Act contract and entry into Open Space Easement contract; Agricultural Buffer Reduction; Master Site Plan; Parking Plan; Variance for sign; Overheight Fence Permit, Preliminary Grading Review.

NON-LOCAL APPROVALS

Other agencies that must issue permits or authorizations: Caltrans (Encroachment Permit)

DETERMINATION: (To be completed by the lead agency)
On the basis of this initial evaluation:

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

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

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

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

_____ _____

Todd Sexauer
Environmental Coordinator

Date

II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS

Parcel Size: 32.7 acres
Existing Land Use: ~9 acres used as a Christmas tree farm
Vegetation: Oaks and shrubs along SR 35, Christmas trees, natural vegetation along the Kings Creek corridor; montane hardwood woodland in southwestern portion of parcel
Slope in area affected by project: ☒ 0 - 30% ☒ 31 – 100%
Nearby Watercourse: Headwaters of Kings Creek
Distance To: On subject property

ENVIRONMENTAL RESOURCES AND CONSTRAINTS

Water Supply Watershed: Yes	Fault Zone: Not mapped
Groundwater Recharge: Not mapped	Scenic Corridor: SR 35 is a County scenic highway
Timber or Mineral: Not mapped	Historic: No
Agricultural Resource: Type 1A	Archaeology: Yes
Biologically Sensitive Habitat: Headwaters of Kings Creek at southwest of property	Noise Constraint: No
Fire Hazard: State Response Area - High	Electric Power Lines: Service comes from SR 35
Floodplain: Not mapped	Solar Access: Potential for visitor center to take advantage of southern solar access
Erosion: Highly erodible soils; preliminary erosion control plan submitted and accepted	Solar Orientation: Potential for visitor center to take advantage of southern solar access
Landslide: Not mapped	Hazardous Materials: Underground fuel storage tank previously on-site.
Liquefaction: Low	Other:

SERVICES

Fire Protection: CalFire	Drainage District: None
School District: Los Gatos High/Lakeside Joint Union Elementary School District	Project Access: Highway 35
Sewage Disposal: Septic	Water Supply: Well

PLANNING POLICIES

Zone District: Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P)	Special Designation: None
General Plan: Agriculture (AG)	
Urban Services Line: ☐ Inside	☒ Outside
Coastal Zone: ☐ Inside	☒ Outside

ENVIRONMENTAL SETTING AND PROJECT BACKGROUND:

The subject parcel is located on the Santa Cruz side of SR 35 (Skyline Blvd.), which runs along the crest of the Santa Cruz Mountains, dividing Santa Clara and Santa Cruz counties. Sanborn County Park is located across SR 35 from the subject parcel. On the Santa Cruz County-side of SR 35, Castle Rock State Park surrounds the subject parcel on all but one side. The subject parcel is about 32.7 acres in size and is developed with about nine acres of Christmas trees, an abandoned single-family dwelling, and a small accessory structure. The rest of the parcel has montane hardwood woodland and Kings Creek, an ephemeral riparian area, is located in the southwest portion of the parcel. No riparian vegetation is associated with this riparian area.

The Christmas tree farm is planted with young (four- to nine-foot tall) conifer species used for Christmas trees. Unpaved access roads loop around and through the Christmas tree farm providing access for tree customers and farm maintenance operations. Several old apple trees line the access roads. The majority of the Christmas tree farm area is highly disturbed due to the ongoing tree farming and road maintenance. Native vegetation in the tree farm area is sparse, with a narrow strip of shrubs and small trees along the northern fence line near Skyline Boulevard, as well as annual grasses and a small area of yellow star-thistle. The proposed development footprint consists of approximately six acres, with about 1.8 acres of this being new paving and structures, and is primarily contiguous with the Christmas tree farm area.

The southern portion of the site consists of steep slopes that form one of the headwaters of an ephemeral drainage, which flows to Kings Creek, and eventually to the San Lorenzo River. Vegetation in the southern portion of the project site is characterized as montane hardwood woodland with a mixed tree canopy of canyon live oak (*Quercus chrysolepis*), tanoak (*Lithocarpus densiflorus*), madrone, and California bay (*Umbellularia californica*). The shrub layer is open and herbaceous vegetation is sparse. A few Douglas fir (*Pseudotsuga menziesii*) and black oak (*Quercus kelloggii*) are also present in the woodland. The woodland community on the project site is continuous with the surrounding woodland in Castle Rock State Park.

The adjacent parcel to the north is privately owned by Robert and Mary Ann Whalen and is developed with their home, a second unit under construction, and a Christmas tree farm. Prior to the approval of Permit 06-0589 for a lot line adjustment, the Christmas trees on the Whalen's parcel and the subject parcel were all located on one parcel and operated together.

After the lot line adjustment, the Christmas tree farm became divided by the new property line. As a part of that lot line adjustment, the Williamson Act contract on the subject parcel, which was originally entered into in 1974, was revised to reflect the new property boundaries. In August 2010, the Whalen family sold the subject parcel to Sempervirens Fund, a local nonprofit, for the development of a new entrance to Castle Rock State Park.

The existing entrance to Castle Rock State Park, which is located about 500 feet southeast of the subject property, lacks basic amenities, including potable water and permanent restroom facilities. California State Parks does not currently have the resources to improve or develop the existing entrance. Sempervirens purchased the subject parcel from the Whalen family in order to develop a new entrance with substantially improved amenities and with the ultimate intent to transfer the property to State Parks.

Although no specific transfer date has been established, California State Parks has been involved in the development of this project and supports it (Attachment 3).

DETAILED PROJECT DESCRIPTION:

The proposed project would be implemented in two phases. The first phase includes: demolition of the existing single-family dwelling; removal of the Christmas trees; grading; restoration landscaping for the Christmas tree areas not being developed; construction of a new entrance and driveway, including deceleration and acceleration lanes; construction of a parking lot, amphitheater, restrooms, picnic areas and trails; and installation of landscaping. The second phase includes the construction of the visitor center complex (visitor center, restrooms, patio, ranger offices) and related improvements like the fire protection tanks (see Project Plans, Attachment 2).

In Phase 1, most of the Christmas trees within the development footprint would be removed and the development footprint would be graded. Following grading, the majority of this area would be replanted with native plants and endemic tree plantings to create a "hillside and open meadow" setting. The restoration would be phased to reduce the potential for erosion. The trees would be placed where the edge of the existing Christmas tree farm meets the tall trees of the wooded areas. This would provide a more naturally-appearing transition between the meadow areas and the heavily forested areas (as opposed to the existing stark tree line located between the Christmas tree farm and Castle Rock State Park's forest).

In the right-of-way area, Caltrans requires that trees four-inches in diameter or larger within 20 feet of the outside edge of the lane stripe be removed to provide a clear "recovery zone". Caltrans defines this concept as "an area clear of fixed objects adjacent to the roadway to provide a 'recovery zone' for vehicles that have left the traveled way" (Caltrans 2008). Caltrans advises a minimum recovery area of 20 feet on conventional highways. To meet this requirement, ten trees over six-inches in diameter at breast height along the Skyline Boulevard frontage would need to be removed. All trees over 40-inches in diameter would be located outside the recovery zone and would be avoided. The Skyline Boulevard frontage would also be re-landscaped with native bushes and trees that would be of a height and or distance from Skyline Boulevard such that adequate site distance would be maintained.

Grading / Drainage
Grading is required to establish the proposed visitor center building pad in relation to the parking lot, while maintaining adequate ADA accessibility. The overall grading and drainage strategy outside of the building pad and parking lot is to mimic the natural shapes of the surrounding landscapes wherever possible and to promote sheet flow of storm runoff.

Project grading includes approximately 6,242 cubic yards of cut and 7,511 cubic yards of fill divided according to the below values. Note that "strippings" refers to the organic matter that is removed as a part of the Christmas tree removals.

Cut (in cubic yards)
Gross Site Cut: 7,650 CY
Strippings: -1,408 CY
Total: 6,242 CY
Fill (in cubic yards)
Gross Site Fill: 5,925 CY
Strippings: 1,586 CY
Total: 7,511

The strippings would be removed but then compacted and used as fill, resulting in a Net Total of 1,269 cubic yards of import. This estimate may be reduced as utility trenching is expected to offset some of the fill requirement.

The parking lot would consist of pervious strips under the parking spots which would receive runoff from the surrounding asphalt areas and would be subdrained and directed to naturalized treatment and detention facilities (i.e. bioswales, rain gardens). The eventual outfall into the adjacent gullies would be "level spreaders," which distribute the treated runoff as non-erosive sheet flow.

Entry Feature
The proposed entry feature would include a locking gate located near the intersection of the new driveway with Skyline Boulevard. Sufficient room is provided for a vehicle to pull in out of the travelled in front of the gate. The entry feature would include natural materials and would be designed to be visible, but still blend in with the surrounding environment. A conceptual drawing is included to provide a general idea of the type of feature envisioned (see Attachment 4). Part of the entry feature would be the Park's sign. Although the entry feature is to be within five feet of the right-of-way, it was designed in such a way as to ensure that adequate sight distance is maintained.

Access/Driveway
The new driveway would be located approximately 85 yards south of the existing access point. New acceleration and deceleration lanes on Skyline Boulevard would be development to allow safe access to the new driveway. The deceleration lane would be 483 feet long and the acceleration would be 150 feet long. New wire fencing with stone

pilasters along the parcel's frontage would also be installed. The new driveway would include a single lane in each direction (separated by a naturally vegetated landscape strip) leading to a locking access gate. The driveway would convey drivers to and from the proposed parking area described below. The new driveway would be shared with the adjacent property owners to the west (the Whalen's) as they have an easement across the subject parcel. To accommodate this easement, a new gated frontage road would split off of the Park driveway to access the Whalen's parcel. A separate driveway was considered to provide the Whalen's direct access from Skyline Boulevard, but Caltrans would only support a single entrance at the proposed location.

Parking and Restroom
The project also includes development of a 90-vehicle parking lot to accommodate the proposed new uses. Shade trees and other landscaping are included in the parking lot design. A prefabricated restroom structure would be located near the parking area. Electronic pay stations would be located around the parking lot. There would be no overnight parking except for those backpackers who park their vehicles in the parking area while camping in the trail camps or hiking the "Skyline to the Sea Trail" (consistent with current operations).

Parking facilities for bicyclists would also be provided as part of this project. The park may be frequented by recreational cyclists to use restroom and picnic facilities as they pass by on Skyline Boulevard, but because of the park's relatively remote location, it is unlikely to attract many visitors who arrive by bicycle.

The specific use of the existing Castle Rock State Park parking lot would be determined by California State Parks, but may include oversize vehicle parking, weekend overflow parking, or overnight parking.

Trails and Trail Connections
The project includes several on-site trails within the development footprint, as well as two trails that connect to other trails off the site. The on-site trails would traverse the site providing connection between the various recreational amenities (i.e. parking areas, picnic areas, visitor center, etc.), as well as to the two off-site trails. The first off-site trail connection would follow Skyline Boulevard approximately 50 feet away from the roadway and would connect to the existing entrance area. The second off-site trail connection would wind south of the site approximately 400 feet to connect to the Ridge Trail and Saratoga Gap Trail, which are popular access trails to the "Skyline to the Sea" Trail (a five-mile hike from the project site).

Amphitheater
The proposed project includes a small, trail-accessible amphitheater at the southeast edge of the development footprint. The amphitheater would be used primarily for educational and recreational presentations (i.e., park ranger wildlife and native plant presentations, bouldering demonstrations, etc.). The proposed amphitheater would not include a public address (PA) system or and no electronic amplification would be allowed.

Picnic Areas
The project includes a group picnic area located near the parking area and four picnic areas located on the loop trail beside the riparian area.

Visitor Center Complex
Phase 2 of the project would include the development of the visitors center complex. The visitors center complex would include a series of small freestanding rooms that provide office space for park rangers, restrooms, a caterer's kitchen for warming and serving food prepared off-site, a room for special events and meetings, flexible gallery/exhibit space, permanent interpretive exhibits, and an area to distribute park information and trail maps. The combined floor area of the structures would total approximately 6,000 square feet (s.f.) with additional outdoor trellis-covered walkways connecting the structures. Bicycle parking facilities would also be provided at the visitor center complex. The design of the complex would incorporate natural materials (i.e. wood and stone) and colors (see Attachment 4 for Design Review materials).

Utilities
For Phase 1, water from the existing well would be used for establishing the new landscaping and restoration areas. A new pump and in-line treatment may be required and would be accommodated in the existing pump house. A new well would be constructed to provide potable water to feed the new restroom adjacent to the picnic area (see Sheet C3.00 and C3.01). The water service of the future visitors center would be stubbed out for future connection during Phase 2.

During Phase 2, potable water and fire water service for the visitors center would extend from the stubbed out connection to new storage tanks and potable treatment system on the hillside then fed separately to the Visitor Center domestic/fire systems and hydrant via gravity.

A new septic system would be installed to serve the small restroom structure and, eventually, the visitor center complex. The proposed project would require a electrical service connection at an existing utility pole on the site, which would be distributed to the site via a new transformer.

Outdoor Lighting
Outdoor lighting would be limited to built-in lighting at the visitors' center building and gathering areas and along the main pathways around the parking lot and building. Limited pedestrian-scale parking lot lighting would be provided (four light standards for the entire parking lot). The amphitheater would only be lighted with bollard-height path lights and/or recessed step lights and lights installed in the amphitheater's seatwalls. All exterior lighting would be fully shielded and directed downward. Exterior lighting would be turned on by a switch during special nighttime events and would be on a clock such that all lights (including parking lot lights) would automatically shut off at 10:00 pm, except for minimal indoor security lighting. Auxiliary lighting for special events would be prohibited.

Visitation

The new entrance would be open to visitors during the same days and hours of operation as Castle Rock State Park, i.e. every day from 6 AM to sunset. Special events are proposed to be allowed until 10 PM. Park quiet hours begin after 10 PM.

The enhanced amenities of the new entrance are anticipated to result in additional visits to the park as members of the public become aware of the educational and recreational opportunities provided by the new entrance and programming. The increased number of park visitors is anticipated to be directly related to the programming schedule and scheduling of special events. The Program Statement (Attachment 5) describes the range of possible programming and events, including classes/workshops, nature walks and talks, school field trips, and weddings and other special events. None of these would exceed 60 attendees and all events would be scheduled to ensure that the parking demand of the events would not exceed the available parking. A Parking Management plan was provided that may be instituted if State Parks personnel find the need to more closely manage parking (Attachment 6).

III. ENVIRONMENTAL REVIEW CHECKLIST

A. GEOLOGY AND SOILS

Would the project:

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	A. 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.	☐	☐	☒	☐
	B. Strong seismic ground shaking?	☐	☐	☒	☐
	C. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	D. Landslides?	☐	☐	☒	☐

Discussion (A through D): The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). However, the project site is located approximately eight miles northwest of the San Andreas fault zone, and approximately one mile northeast of the Butano fault zone. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in central California history. During 1990, the U.S. Geological Survey cited a 67 percent probability that an earthquake of Richter magnitude 7, similar to the 1989 Loma Prieta Earthquake, would occur on one of the active faults in the San Francisco Bay Region in the following 30 years. Recently, The probability that a Richter magnitude 7 earthquake would occur was increased to 70 percent as a result of studies in the vicinity of the Hayward Fault. A 23 percent probability is still attributed specifically to the potential for a magnitude 7 earthquake to occur along the San Andreas Fault by the year 2020 (GeoForensics 2012).

A geotechnical investigation for the proposed project was performed by Daniel F.

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

Dyckman of GeoForensics Inc., February 14, 2012 (Attachment 7). The report concludes that the potential for ground rupture due to fault offset is low due to the lack of mapped active fault traces through the site (page 5). The project is, however, likely to be subject to very strong to violent ground shaking due the parcel's proximity to major faults. The report recommends that the project's structural engineer use USGS data to determine the appropriate seismic design category, and adherence to the current building code. Together, this would minimize any damage from an earthquake. Liquefaction was determined to be a relatively low risk given that the subject parcel is underlain with bedrock at shallow depths and the absence of saturated sands. The landslide hazard is similarly a low risk given the presence of competent bedrock material at relatively shallow depths. As shown on the County of Santa Cruz GIS Mapping, no portion of the subject parcel is mapped as being within a Cooper Clark landslide.

Implementation of the additional requirements included in the review letter prepared by Environmental Planning staff (Attachment 8) would serve to further reduce the potential risk of seismic shaking.

2. 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?	☐	☐	☒	☐

Discussion: The report cited above concluded that there is a relatively low potential risk from unstable soil given that the site is underlain by bedrock. Any instability would be shallow and is unlikely to result in landsliding, lateral spreading, subsidence, liquefaction or collapse. As noted above, the proposed improvements would be constructed in conformance with the California building code and with the appropriate seismic design category as determined by the USGS' JAVA Ground Motion Parameter Calculator. The recommendations contained in the geotechnical report, such as foundation and drainage control requirements and standards for fill placement, would be implemented to reduce this potential hazard to a less than significant level.

3. Develop land with a slope exceeding 30%?	☐	☐	☒	☐

Discussion: There are slopes that exceed 30% on the property. No improvements are proposed on slopes in excess of 30%. There would be, however, landscape restoration on slopes greater than 30%. Christmas trees extend up the hillside towards Castle Rock State Park. The project includes the removal of these Christmas trees and the restoration of those areas with native vegetation. Because of concern about the potential erosion of these slopes-- which were determined by GeoForensics to have erodible soils-- and the proximity of Kings Creek, the tree removals and restoration would be done in three phases to avoid "opening" the entire six acre development/restoration area at the same time (see Sheet L10). The geotechnical

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

engineer submitted a plan review letter entitled "Review of Erosion and Relandscaping Plans" which accepts the proposed landscape restoration as being in substantial conformance with the soil report recommendations (Attachment 9).

The first of the three phases would be "A Phase" which includes the 6.72 acre area where the park entrance improvements are proposed, i.e. the driveway, parking area, restrooms, and visitors center complex. This area is relatively flat so the erosion potential is low. Nonetheless, erosion control measures for this phase are included in the project. The project would conform with the Storm Water Pollution Prevention Plan (SWPPP) as required by the State Water Resource Control Board for areas of disturbance of one acre or more. Semi-permanent and permanent erosion control measures would be implemented such as a silt fence to protect the riparian corridor; fiber rolls along grade breaks, around stockpiles, at the downhill perimeter of the site, and at appropriate intervals on slopes equal to or greater than 2:1; compost roll/blanket in rain garden area, hydroseed on all un-irrigated planting areas; and jute netting on slope areas exceeding 20%. In addition, the property owner would plant all irrigated areas, leach field, rain garden, bioswales and all proposed trees which would stabilize those areas.

"B Phase", which includes 2.9 acres, would be implemented at the end of the two-year plant establishment period for "A Phase" (Sheet L9 shows the area of "B Phase"). An audit of the plantings, erosion control measures, irrigation system and invasive species would be performed at this time by the property owner and the Castle Rock State Park naturalist. Deficits in any of these areas would be remedied at this time. The remaining Christmas trees, except those on slopes greater than 30%, would be removed as recommended by the geotechnical engineer, i.e. the holes resulting from the tree removals and other buried objects would be overexcavated into firm materials and then backfilled and compacted with native materials (GeoForensics 2012, 6).

The "C Phase", which covers .35 acres, would be for tree removals in areas with greater than 30% slopes. The tree removals in these areas would begin at the completion of "B Phase" and would be done annually over a ten year period to insure that erosion is minimized and slope stability is not compromised. Each year, a portion of the trees would be removed with localized erosion control methods implemented. An annual audit would be performed for up to a period of three years for each phase to evaluate eroding areas, permanent measures requiring repair, plant success, and presence of invasive species.

4.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Discussion: Some potential for erosion exists during the construction phase of the project. The potential erosion is, however, minimized due to the location of most of the improvements in areas with 10% or less slope—the visitors complex would be on slopes of 20% or less—and an erosion control plan for the construction phase of the project when the potential for erosion is the greatest. The erosion control plan (Sheet L9) shows a stabilized construction entrance with an adjacent wash down area to limit

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

the tracking of materials into the public right-of-way. Jute netting would cover areas exceeding 20% slope. Hydroseeding of the slopes would further limit erosion on the steeper slopes. Fiber rolls would be installed at appropriate intervals on slopes of 2:1 or greater and at grade breaks, around temporary stockpiles, and along the toe top.

In addition to the erosion control plan for the landscape restoration described above in A.3., Sheet L10 includes 18 "Erosion Control Notes" which describe how erosion would be controlled in general and in specific situations, such as when it rains. As an overall requirement, the contractor would be required to refer to the SWPPP and have an approved Qualified Stormwater Practitioner (QSP) or his/her designee on site during periods of construction to insure that the Best Management Practices (BMP) are being implemented. This QSP would monitor and record erosion and sediment control measures during construction in a BMP Log. Weekly checks of the erosion control measures would be made during periods of heavy usage to insure that the control measures are functioning properly.

5.	Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?	☐	☐	☒	☐

Discussion: The geotechnical report for the project did not identify any elevated risk associated with expansive soils.

6.	Place sewage disposal systems in areas dependent upon soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal systems where sewers are not available?	☐	☐	☒	☐

Discussion: The proposed project would use an onsite sewage disposal system, and County Environmental Health Services has determined that site conditions are appropriate to support such a system (see EHS comments, Attachment 10).

7.	Result in coastal cliff erosion?	☐	☐	☐	☒

Discussion: The proposed project is not located in the vicinity of a coastal cliff or bluff; and therefore, would not contribute to coastal cliff erosion.

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

B. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY

Would the project:

1.	Place development within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, no portion of the project site lies within a 100-year flood hazard area.

2.	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated March 2, 2006, no portion of the project site lies within a 100-year flood hazard area.

3.	Be inundated by a seiche, tsunami, or mudflow?	☐	☐	☒	☐

Discussion: The subject parcel is located at the summit of the Santa Cruz Mountains at about 2,900 feet in elevation with no large bodies of water in the vicinity. Given this, a tsunami or seiche would not affect this property. The project geotechnical engineer did not identify mudflows as a risk for development in this area. The proposed improvements would be located on relatively modest slopes of 20% or less, and the local soil is sandy and is, therefore, unlikely to become saturated in heavy rainfall.

4.	Substantially deplete groundwater supplies or 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

Discussion: The project would rely on a private well for water supply. The site currently has an existing well which was originally constructed to serve the single-family dwelling located on-site. Residential uses typically have a higher water demand than do recreational uses such as a park with landscaping that is anticipated to require little water once established. In addition, there are few wells in the vicinity since most of

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

the surrounding land is a part of either Castle Rock State Park or Sanborn County Park. With only one residential property in the immediate vicinity, the demand on groundwater is relatively low in this rural area. The water demand of the project would be expected to decrease after the new landscaping becomes established. The landscaping is required to be compliant with the County's Water Efficient Landscape Ordinance and, as a result, most of the plant selections are drought-tolerant to reduce irrigation needs. The project is not located in a mapped groundwater recharge area.

5.	Substantially degrade a public or private water supply? (Including the contribution of urban contaminants, nutrient enrichments, or other agricultural chemicals or seawater intrusion).	☐	☐	☒	☐

Discussion: Construction of the proposed project could result in increased levels of water pollution to offsite or downstream areas as a result of construction activities. Specifically, construction activities such as grading could result in disturbance of soils and sediments that could be carried into offsite areas during storm events. During construction activities, stormwater runoff could contaminate offsite waterbodies through the accidental discharge of construction-related fuels, oils, hydraulic fluid, and other hazardous substances. Because the applicant would prepare and adhere to a Stormwater Pollution Prevention Plan (SWPPP) and associated Best Management Practices (BMP) during project construction, potential for runoff generated at the project site to contaminate the offsite water bodies would be reduced to a less-than-significant level.

The proposed project includes a new septic system. The Regional Water Quality Control Board (RWQCB) is responsible for ensuring that septic systems do not cause pollution of surface or groundwater. The RWQCB has developed many standards for proper septic system installation, including: groundwater separation, stream and well setbacks, slope limitations, minimum system sizing requirements, and allowances for use of alternative technologies. These standards are contained in the Water Quality Control Plan for the Central Coast Region (Basin Plan). The RWQCB has conditionally delegated authority to oversee and regulate the installation of septic systems to the County of Santa Cruz Environmental Health Service. The County must comply with the minimum standards contained in the Basin Plan in order to keep the authority to permit septic systems. The County Board of Supervisors has adopted Section 7.38 of the County Code (the Sewage Disposal Ordinance) which specifies the standards for septic system installation in Santa Cruz County. Any installation, replacement, or significant repair of any part of a septic system requires a permit from the County's Environmental Health Department. Environmental Health staff review the application and relevant information for the area on soils, groundwater depth, and site conditions in order to determine that the proposal meets the standards as established by the State and the County. Therefore, because the proposed new septic system would be

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

required to meet the County's permit requirements, the proposed project would not violate waste discharge requirements. County Environmental Health staff have accepted the proposed project for this stage in the development.

6. Degrade septic system functioning? ☐ ☐ ☒ ☐

Discussion: There is no indication that existing septic systems in the vicinity would be affected by the project. The area is sparsely populated with just one residential property in the immediate vicinity. Given the ample distance between the project site and the nearest neighbor, it is highly unlikely that the project would have any impact on the adjacent septic system functioning.

7. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding, on- or off-site? ☐ ☐ ☒ ☐

Discussion: Construction of the proposed project would result in the generation of additional stormwater flows from new impervious surfaces during storm events. However, the subject parcel is 32.7 acres in size and paving and structures would cover only about 1.8 acres. Although the project includes some grading to moderate the existing slopes for the development of structures and parking areas, the slight decrease in slope would somewhat reduce the rate of stormwater running off the slope. This slope reduction, in combination with drainage facilities, designed to slow the runoff and allow infiltration, would counteract the increased flow rate cause by the additional impervious surfaces. Therefore, the proposed project would not substantially adversely alter the existing drainage pattern of the site. Additionally, because the site has sandy top soils, precipitation will percolate into the soil. The project would not alter the course of Kings Creek, the only waterway in the vicinity. Department of Public Works Drainage Section staff has reviewed and accepted the proposed drainage plan for this stage of the project.

8. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff? ☐ ☐ ☒ ☐

Discussion: Department of Public Works Stormwater Management staff has reviewed the project and have determined that it would be feasible to develop a stormwater management plan that meets the County Code requirements given the size of the parcel and the limited size of the new impervious areas (about 1.8 acres). The current elements of the plan include several "Low Impact Development" (LID) features such as

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

biofiltration basins, bioswales and permeable paving. These features would have the effect of filtering and slowing down the runoff from the impervious areas. Refer to response B.5. for discussion of urban contaminants and/or other polluting runoff.

9.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

Discussion: As described above, the entire project area is located outside of the FEMA 100-year flood zone. Additionally, the proposed project would not disturb, disrupt, or otherwise contribute to the failure of any levee, dam, or other flood control structure. Therefore, *no impact* would occur.

10.	Otherwise substantially degrade water quality?	☐	☐	☒	☐

Discussion: The proposed drainage plan, which includes best management practices such as bioswales, a raingarden and pervious paving, is designed to slow down runoff to allow for it to infiltrate. Infiltration would filter out substances that could degrade water quality, such as oil from vehicles.

C. BIOLOGICAL RESOURCES

Would the project:

1.	Have 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?	☐	☒	☐	☐

Discussion: Ascent Environmental, County staff and County-consultant, Environmental West, reviewed the project site for special status species. 18 special status plant species and six special-status wildlife species have the potential to occur on the project site. Based on habitats present on the project site, however, 16 of the plant species were ruled out as having the potential to occur on-site (Attachment 11, Appendix A). County staff reviewed and accepted the Biological Resources Evaluation and Site Assessment with one change to the mitigation recommended to protect the marbled murrelet (Attachment 12 and Mitigation Measure Bio-2 below).

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

Special Status Plants
The two special status plant species that have the potential to occur on-site are mosses: Slender silver moss (*Anomobryum julaceum*) and Norris' beard moss (*Didymodon norrisii*). The area where these mosses could occur is limited to moist areas around the existing well site. Moss populations adjacent to the well site would be avoided and are not anticipated to be affected directly or indirectly by pump installation. Therefore, no impacts to special-status plants would occur.

Nesting Birds
The project site provides limited suitable nesting habitat for migratory songbirds and raptors (i.e., hawks and owls). No special-status raptors are expected to nest on the project site due to a lack of suitable nesting and foraging habitat; however, common raptors, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), American kestrel (*Falco sparverius*), and great-horned owl (*Bubo virginianus*), could nest on or adjacent to the project site. Special-status songbirds olive-sided flycatcher and loggerhead shrike (*Lanius ludovicianus*) have potential to nest on the project site. The olive-sided flycatcher (*Contopus cooperi*) is unlikely to be found in the area of development, but is likely to be found in the approximately 22 acres of woodland south of the project site. In addition, marbled murrelet (*Brachyramphus marmoratus*), a state listed endangered and federally listed threatened seabird, could occur in the region, and the project site is federally designated as critical habitat for the marbled murrelet.

Vegetation removal associated with trail construction, tree removal to comply with Caltrans' Clear Zone Recovery requirements, or other ground-disturbing activities to construct the new facilities on the project site could result in the loss of nests, eggs or individuals during the nesting season for special-status birds such as the olive-sided flycatcher and loggerhead shrike. Construction related noise could also disturb marbled murrelet foraging patterns. Disturbance to nesting birds could result in nest abandonment by the adults and mortality of chicks and eggs.

Mitigation Measure BIO-1

To minimize potential disturbance to nesting birds, project activities, including vegetation removal and building demolition, shall occur during the non-breeding season (September 16-February 14), unless it is not feasible to do so, in which case the following measures shall also be applied.

During trail construction, road improvements, and other activities, removal of trees greater than six inches in diameter at breast height (DBH) shall be limited to the greatest degree possible.

If construction activity is scheduled to occur during the nesting season (February 15 to September 15), a qualified biologist shall conduct preconstruction surveys and to identify active nests on and within 500 feet of the project site that could be affected by project construction. The surveys shall be conducted before the approval of grading and/or

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

improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction in a particular area. If no nests are found, no further mitigation is required.

If active nests are found, impacts on nesting birds, including the *olive-sided flycatcher* and loggerhead shrike, shall be avoided by establishment of appropriate buffers around the nests. No project activity shall commence within the buffer area until a qualified biologist confirms that any young have fledged or the nest is no longer active. A 500-foot buffer around raptor nests and 50-foot buffer around songbird nests are generally adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with DFW & USFWS depending on site specific conditions. For trail construction, use of non-power hand-tools may be permitted within the buffer area if the behavior of the nesting birds would not be altered as a result of the construction. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has the potential to adversely affect the nest.

Mitigation Measure BIO-2

The primary factor affecting breeding success in murrelets has been identified as high nest predation by corvids - Steller's jays and common ravens. In order to ensure the use of the proposed facility does not have a significant negative impact on nesting marbled murrelets in the Castle Rock Park vicinity, prior to building permit issuance, the entrance facility shall prepare and implement a corvid-management plan that includes permanent signage regarding the threats to murrelets and a trash management program.

Mitigation Measure BIO-3

To minimize potential disturbance to olive-sided flycatcher and loggerhead shrike, the project shall first seek to avoid removing vegetation and plants that are favored by these species for nesting. The olive-sided flycatcher favors montane forests. Given that the area of development would be located north of the portion of the montane forest which is located on-site, it is unlikely that olive-sided flycatcher nesting sites would be affected. However, to ensure that any potential disturbance is minimized, the mitigations identified in Mitigation Bio-1 shall be implemented. For the loggerhead shrike, which favors thorny shrubs or trees, the same protocol shall be followed.

Occupied Bat Roosts

The proposed project includes removal of and alterations to existing structures in the project site. The vacant house and other structure on the project site could provide day roosts, maternity colony roosts, and/or hibernation roosts for several bat species. Special-status bats that could roost on site include pallid bats (*Antrozous pallidus*) and Townsend's big-eared bats (*Corynorhinus townsendii*). The western red bat (*Lasiurus blossevillii*) is unlikely to occur on-site as its preferred roost trees are not present on the project site.

Demolition of buildings, sealing of openings or cracks, or other construction activities

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

that cause noise, vibration, or physical disturbance to these structures, could affect the survival of adult or young bats if they are present within the buildings at the time of the activity. Loss of an active bat colony resulting from demolition or modification of structures would be considered a potentially significant impact.

Mitigation Measure BIO-4

Surveys for roosting bats on the project site will be conducted by a qualified biologist. Surveys will consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergence survey to note the presence or absence of bats. The type of survey will depend on the condition of the buildings. If no bat roosts are found, then no further study is required. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts, but are not required.

If roosts of pallid or Townsend's big-eared bats are determined to be present and must be removed, the bats shall be excluded from the roosting site before the facility is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with DFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The any lost roost, shall be replaced in consultation with DFW and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the structures shall be removed or sealed.

Level of Impact after Implementation of Mitigation Measures
Implementation of Mitigation Measures BIO-1 through BIO-4 would reduce impacts to special status plant and wildlife species by requiring surveys and implementing avoidance measures to minimize potential take of these species or the potential to adversely affect their habitat. This impact would be reduced to a less-than-significant level.

2.	Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

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

Discussion: The majority of the project site is located on land that is developed as a Christmas tree farm and otherwise previously disturbed. The natural plant community on the remainder of the project site is characterized as montane hardwood woodland. The site is located on along the ridgeline of the Santa Cruz Mountains and the headwaters of Kings Creek (which is a tributary of the San Lorenzo River) is located in the southwest portion of the parcel.

The project includes the replacement of an existing well which may include the replacement of the well pump, plumbing fixtures and utility pipes. The well and line leading to the pump house are located directly adjacent to, but not within, the Kings Creek riparian corridor. If the water line is determined to be unusable, a PVC sleeve already exists. This enables the water line to be replaced without disturbing the above-ground vegetation. While unlikely, if construction to the pump shed were deemed necessary to replace any portion of the water line and sleeve, construction would be limited to the existing pipe location (which ensures no damage to mature vegetation) and requires a small trench, immediate backfill and standard erosion control methods. Additionally, an access trail runs adjacent to the pump shed which provides adequate access.

County Environmental Planning staff identified a possible wetland area just north of the riparian area and north of a culvert area that exhibits some hydrophytic vegetation. To determine whether or not the area qualifies as a wetland, the applicant provided a wetland specialist to conduct a wetland survey.

The wetland specialist used the USACE multi-parameter methodology, which involves collection of soils, vegetation, and hydrologic data to establish the jurisdictional boundaries of wetland features. According to the USACE's three parameter approach, an area must support positive indicators of hydrophytic vegetation (adapted to saturated soil conditions), hydric soils (soils that pond or frequently flood during growing season), and wetland hydrology to be considered a jurisdictional wetland.

The hydrophytic vegetation criterion requires that greater than 50 percent of the dominant vegetation at the sample site be hydrophytic (adapted to saturated soil conditions). Diagnostic features of hydric soils include a depleted matrix, hydrogen sulfate odor, or the presence of concretions or oxidized rhizospheres (redoximorphic features). Positive indicators of wetland hydrology include presence of surface water or saturation in the upper 12 inches of the soil, drainage patterns, cracked soil surface, water stained leaves, and sediment or drift deposits.

The wetland specialist found that this location does not support positive indicators of hydrophytic vegetation, hydric soils, or wetland hydrology. While two hydrophytic plant species, mugwort (*Artemisia douglasiana*) and creeping wild rye (*Elymus triticoides*) were present, they comprised only 13% of the total herbaceous cover and, therefore, the 50% hydrophytic vegetation criterion was not met.

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

The soils at the potential wetlands location did not exhibit positive indicators of hydric soils. Soils on the project site are classified by the NRCS as Ben Lomond sandy loam and Madonna loam; these soils are not listed as hydric on the list of hydric soils of the United States. Although the culvert under the road indicates that water flows through this area at times, there were no positive indicators of wetland hydrology observed. Therefore, it was determined that this area is not a wetland. There were no other potential wetland areas identified on the project site. The wetland specialist prepared a memorandum included as Appendix B of Attachment 11.

3.	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 or migratory wildlife nursery sites?	☐	☐	☒	☐

Discussion: Wildlife corridors are features that provide connections between two or more areas of habitat that would otherwise be isolated and unusable. Often drainages, creeks, or riparian areas are used by wildlife as movement corridors as these features can provide cover and access across a landscape. The area proposed for development does not contain any important wildlife corridors or native wildlife nursery sites as it is currently developed as a Christmas tree farm. Although Kings Creek is located on the subject parcel, that riparian area would not be developed or fenced. The proposed project would restore a portion of the site to native habitats. The proposed project would have a less than significant impact on wildlife movement.

The project is likely to enhance ecological connectivity as the property would be managed by and eventually merged with Castle Rock State Park, instead of remaining as a private commercial agriculture operation.

4.	Produce nighttime lighting that would substantially illuminate wildlife habitats?	☐	☒	☐	☐

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

Discussion: The development area is adjacent to a riparian corridor, which could be adversely affected by a new or additional source of light that is not adequately deflected or minimized. The following mitigation measures shall be added to the project, such that any potential impact will be reduced to a less than significant level.

Mitigation Measure BIO-5

All exterior lighting shall be directed away from the corridor and adjacent properties, light sources shall not be visible from the riparian area or surrounding properties, light sources must be shielded by permanent, landscaping, fixture design or other physical means, lighted parking areas shall utilize low-rise light standards to a maximum height of 15 feet, exterior lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.

5.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Discussion: No federally protected wetlands as defined by Section 404 of the Clean Water Act are present on-site (see response above to C.2)

6.	Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)?	☐	☐	☒	☐

Discussion: The County of Santa Cruz General Plan (1994) addresses protection of biological diversity and sensitive habitats throughout the County. These areas include, but are not limited to, riparian corridors, wetlands, lagoons, lakes, woodlands, marine resources and habitat for rare, threatened or endangered species. The proposed project, as mitigated, would not conflict with County General Plan objectives, policies, or programs.

Kings Creek, the only riparian area on the project site, is an ephemeral drainage in this location. The riparian corridor for ephemeral streams is measured from the mean rainy season (bankfull) flowline or from the edge of riparian vegetation, if present (County Code 16.30). In this case, no riparian vegetation is present as the vegetation in this

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

location is a continuation of the montane hardwood woodland. The geometry of the riparian channel also has no clear bankfull line; therefore, the protected riparian corridor on the subject parcel is the centerline of Kings Creek.

There is an existing well located near Kings Creek, but outside of the riparian corridor. This well, which was originally constructed to serve the single-family dwelling located on site, would be used for irrigation purposes during the period when the new landscaping is becoming established. If the existing waterline is fully functional, then no upgrade would be required. However, if it needs to be upgraded, a PVC sleeve already exists which would enable the upgrade to occur without disturbing vegetation. While unlikely, if construction to the pump shed were deemed necessary to replace any portion of the water line and sleeve, construction would be limited to the existing pipe location (which ensures no damage to mature vegetation) and would require a small trench, immediate backfill and standard erosion control methods. Access is already available via a trail that runs adjacent to the pump shed.

County Code 13.11.075(2)(a) requires the incorporation of mature trees over six inches in diameter at breast height into project landscaping except in certain circumstances. In this case, at least 10 trees over six inches in diameter at breast height would be removed to accommodate the Caltrans-required clear recovery zone. Since this is a State-mandated safety-driven requirement, these tree removals are unavoidable. Trees over 40 inches diameter at breast height would be avoided, and the applicant would work with Caltrans to preserve large, healthy trees to the extent safety permits. To insure that there are no impacts to protected species during the construction of the deceleration and acceleration lanes, a qualified biologist would be required to oversee the construction in these areas (see Mitigation Measures BIO-1 and BIO-2).

For areas within the Coastal Zone, Santa Cruz County Code Chapter 16.34 protects "Significant Trees" from removal or damage. The proposed project site is outside the Coastal Zone; therefore, no significant tree removal permit would be required.

As mitigated, the project would not conflict with any local policies or ordinances which protect biological resources as the majority of the project site is already disturbed with a Christmas tree farm and single-family dwelling. No development is proposed within the riparian corridor. No wetlands were identified on-site, and the subject parcel is not within the Coastal Zone where the Significant Tree Protection Ordinance is applicable.

7.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion: The proposed project would not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact

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

would occur.

D. AGRICULTURE AND FOREST 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 Department 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:

1.	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?	☐	☐	☐	☒

Discussion: The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) identifies the project site as "Farmland of Local Importance," a category characterized by choose-and-cut tree farms and nurseries (Department of Conservation 2010). The project site is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

2.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐

Discussion: The project site is currently managed as a choose-and-cut Christmas tree farm and is zoned Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P). The –P reflects that the property is currently under a Williamson Act Contract. The construction of the new entrance requires a rezoning of the property to Park, Recreation and Open Space with an Open Space Easement Combining District (PR-O). In addition, the project requires a re-designation of the parcel from Agriculture (AG) to Parks, Recreation and Open Space (O-R). Although the County's General Plan is very protective of Agricultural Resource lands such as the subject parcel, General Plan policies 5.13.3 and 5.13.4 show a clear intent to allow Agricultural Resource lands to be used for public parks. The specific policy language is stated below:

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

5.13.3 Land Use Designations for Agricultural Resource Lands:
All lands designated Agricultural Resource shall be maintained in an Agricultural Land Use designation, unless the property is included in a public park or biotic reserve and as signed [sic] as Parks, Recreation and Open Space (0-R), Resource Conservation (O-C), or Public Facility (P) land use designations. (Santa Cruz County 2005)

5.13.4 Zoning of Agricultural Resource Land:
Maintain all lands designated as Agricultural Resources in the "CA", Commercial Agricultural Zone District, except for land in agricultural preserves zoned to the "AP", Agricultural Preserve District or the "A-P", Agriculture Zone District and Agriculture Preserve Combining Zone District; timber resource land zoned to be "TP", Timber Production Zone District; or public parks and biotic conservation areas zoned to be "PR", Parks, Recreation and Open Space Zone District. (Santa Cruz County 2005)

In addition to these policies, this project is not subject to General Plan Policy 5.13.20 (Conversion of Commercial Agricultural Lands). This conversion policy prohibits the conversion of commercial agriculture uses to non-agricultural uses without a determination that the land is nonviable for agriculture. As noted above, Policies 5.13.3 and 5.13.4 allow for Agricultural Resources—which are, by definition, viable agriculture land—to be used for public parks without limitation or condition. County Code 16.50.070 requires that the Type 1 Agricultural Resource designation be removed for all rezoning except for when the rezoning is to PR, TP or CA. This is significant because it indicates that a viable Agriculture Resource may be designated and zoned for a park use, i.e. not an agricultural use without a determination agricultural viability. This project, then, is not subject to General Plan Policy 5.13.20.

The subject parcel is adjacent to another parcel with a "choose and cut" Christmas tree operation (APN 081-088-11, owned by Whalen). The adjacent parcel is designated as having Type 1A soil. County Code 16.50.095(D) requires an Agricultural Buffer of 200 feet between parcels with a Type 1 agricultural resource and new development such as the proposed public parking lot and picnic areas. In this case, a 100-foot buffer is proposed to allow part of the parking lot to encroach 100 feet into the 200-foot buffer. In addition, the restrooms and "Welcome Plaza" with interpretive signs would also encroach about 80 feet into the buffer, and the northern accessible picnic area would encroach about 33 feet into the buffer. These encroachments require an Agricultural Buffer Reduction approval which was recommended for approval by the Agricultural Policy Advisory Committee on December 19, 2013 (see Attachment 13).

To ensure that conflicts between the Christmas tree operation and visitors to Castle Rock State Park are minimized, the applicant proposes to create a dense vegetative buffer between two fences to separate the park and agriculture use. This would provide a buffer between the parking lot and restrooms/visitor welcome feature, and the

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

Christmas tree farm. One fence would be located along the edge of the parking lot. This three-foot tall, split-rail fence is intended to discourage visitors from entering the buffer area. A condition of approval is included, at the request of the neighbor, to require that signs be placed along this fence prohibiting entrance into the buffer as an added deterrent. The second fence is to be located along the shared property line, and is proposed to be eight-feet tall and constructed of wire mesh. Although Sempervirens Fund was willing to provide a solid board fence, the adjacent property owners' representative requested the wire mesh material.

A shadow study was submitted to document the effect of the vegetative screen on the Christmas trees' solar access once the trees and shrubs have matured. The shadow study for the summer solstice (June 21) shows virtually no solar impacts the entire day. During winter solstice (December 21), there would be shading impacts at 10 AM, but by 2 PM, the Christmas trees would not be shaded.

The northern accessible picnic area, located further south beside Kings Creek, would be buffered by the riparian area itself, which includes topographic changes and dense vegetation. This picnic area is about 167 feet from the shared property line; about 400 feet from the edge of the tree crop; and separated by about 50 feet of elevation. Because Kings Creek separates the two uses, no conflicts are anticipated to occur in this location.

At the request of the Whalen's representative, a condition is included requiring the addition of a fence along the subject parcel's frontage to the west of the new entrance to match the one proposed on the eastern side. This condition is in response to a concern that visitors arriving by foot may attempt to take a shortcut through this area, instead of entering the park at the driveway, and may become stuck in the Whalen's easement over the subject parcel. Fencing the frontage would ensure that pedestrians enter through the main entrance.

In addition to the fences, vegetation, and signs, the applicant would also be required to record a Statement of Acknowledgement regarding the issuance of a building permit in an area determined by the County of Santa Cruz to be subject to Agricultural-Residential use conflicts.

Although amendments to the County code are necessary for approval of the proposed project, once the proposed project is transferred to California State Parks, the County's General Plan and zoning code would no longer apply to the project site. The proposed project would be operated and maintained by California State Parks.

As noted above, the project site is currently restricted a Williamson Act Agriculture Land Conservation contract which was initially entered into on February 27, 1976, and re-entered into on December 11, 2007. This contract restricts the property to agricultural uses. Sempervirens Fund proposes to rescind the Williamson Act Land Conservation Contract and simultaneously enter into an Open Space Easement

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

contract consistent with the Open Space Easement Act of 1974 to reflect the change in use from agriculture to open space/recreation.

The Williamson Act provides for this type of conversion in Government Code Sections 51223 and 51255 when the parcel is large enough to provide open-space benefits, by providing wildlife habitat, or preserving the parcel's natural characteristics, beauty or openness for the benefit and enjoyment of the public. In this case, given that the parcel is 32.7 acres in size, the parcel is large enough to provide wildlife habitat benefits. Because Castle Rock State Park is adjacent to the subject property, the restriction of the property would expand the existing wildlife habitat within the park, improving ecological connectivity. In addition, the proposed new structures would occupy about 1.8 acres of the parcel, leaving 31.2 acres in a natural state, preserving the parcel's natural characteristics, beauty and openness for the benefit and enjoyment of the public.

The Open Space Easement would not permit new development except the improvements shown in Exhibit A (Project Plans) which are compatible with and directly related to the open-space use. The subject parcel, proposed improvements and use, and contract are consistent with the requirements of the Open Space Easement section of the State Government Code. The contract would be for a minimum of 10 years.

Transfer of the property to California State Parks would essentially perform the same preservation function as the Williamson Act because the property would be preserved in perpetuity as open space under the State Parks system.

3.	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))?	☐	☐	☐	☒

Discussion: The project is adjacent to Castle Rock State Park, much of which is designated as Timber Resource. Timber harvest is not allowed within State Parks. The proposed project would have no effect on the timber resource, regardless of wether it it can be harvest or not.

4.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion: The forested portions of the project site would not be converted to a non-forest use.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. 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?	☐	☐	☒	☐

Discussion: The project would allow public access to land that is adjacent to an existing Christmas tree farm. Public open space is generally considered consistent with agricultural operations, especially a small, relatively low-impact agricultural operation, such as the adjacent farm. The proposed project would not adversely affect the agricultural operations on the adjacent property.

An Agricultural Viability study was completed as a part of Lot Line Adjustment 06-0589 which adjusted the property line between the subject and adjacent parcel owned by Whalen. That study found that the adjacent tree farm would continue to be a viable agricultural operation following the lot line adjustment when the deed was revised to reflect the current parcel boundaries. This suggests that the elimination of the tree farm on the subject parcel would not impinge upon the viability of the adjacent tree farm (Attachment 14).

E. MINERAL RESOURCES

Would the project:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

Discussion: The site does not contain any known mineral resources that would be of value to the region and the residents of the state. Therefore, no impact is anticipated from project implementation.

2. 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?	☐	☐	☐	☒

Discussion: The project site is zoned Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P), which is not considered to be an Extractive Use Zone (M-3) nor does it have a Land Use Designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general

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

plan, specific plan or other land use plan would occur as a result of this project.

F. VISUAL RESOURCES AND AESTHETICS

Would the project:

1.	Have an adverse effect on a scenic vista?	☐	☐	☐	☒

Discussion: Although the subject parcel is located along a County-designated scenic highway (discussed below under F.2.), there are no notable scenic vistas in the immediate vicinity. Therefore, there the proposed project would not have an effect on a scenic vista.

2.	Substantially damage scenic resources, within a designated scenic corridor or public view shed area including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐

Discussion: The project site is located along SR 35 which is designated as a scenic road in the County General Plan (5.10.10). The existing views in this area of SR 35 are primarily of the vegetation lining the highway with an occasional break in the vegetation allowing for longer views. At the subject parcel, views of the Christmas tree farm are possible at the existing driveway cut and in the few spots where vegetation thins sufficiently to provide glimpses of the hillside. Approaching the subject parcel from the south, topography screens the project site until the area just south of the existing driveway. In this area, the vegetation clears and there are views of the Christmas tree farm up the hillside to the boundary line with Castle Rock State Park where the forest begins. Continuing north, the view of the project site becomes obscured by vegetation.

For projects such as this one where the development would be unavoidably visible from the scenic road, General Plan Policy 5.10.11 (Development Visible from Rural Scenic Roads) requires that the visual qualities worth protection be identified and then development be designed to mitigate the impacts on those visual qualities through siting, architectural design and landscaping. In this case, the visual qualities worth protecting are the views of the mountain hillside, the longer views of the openness of the project site, and the tree-lined character of SR 35.

The proposed project would be unavoidably visible from SR 35 because of the site's topography which, at the front of the parcel, is similar to a bowl. The entrance feature and parking lot would be located on the relatively flat area located adjacent to Highway 35, with the visitors center and amphitheater located low on the hillside which slopes up towards the property line shared with Castle Rock State Park. The proposed landscaping, as well as the existing vegetation which has been incorporated into the project, would screen much of the parking lot. The visitors center was designed to be

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

low impact by minimizing its size, breaking up the massing by designing separate structures linked by trellises, limiting the design to one story, and using natural materials such as wood and stone to help the structure blend into the hillside. Grading has been minimized with the effect being that the structure would appear to conform to the existing contours.

The mountain hillside views would be preserved and enhanced by the proposed restoration of the Christmas tree farm to native vegetation creating a hillside and open meadow setting. Removal of the existing monocrop of Christmas trees would occur in three phases and would create a temporary noticeable visual change. Minimal site grading would occur. The restored hillside area would provide transition to the heavily forested area that currently demarks the Castle Rock State Park boundary. Therefore, as a result of this project, the foreground views of the project site would transition smoothly into adjacent Castle Rock State Park, as compared to current views where the Christmas tree farm creates a distinct separation between Castle Rock State Park and the project site.

As discussed above, tree and shrub removal along SR 35 is required to comply with the Caltrans' clear recovery zone requirement which stipulates a 20-foot wide clear area along the highway to provide sufficient area for vehicles that leave the travelled way. The removal of this vegetation would open up the views of the project site. Ten trees over six inches in diameter at breast height (DBH) are identified on the project plans (Sheets L3 and L4) for removal in the clear recovery zone. Caltrans allows "shielding" of objects that cannot be removed (including for environmental purposes), and the applicant would coordinate with Caltrans to preserve the larger, healthier trees (as safety permits). The project would also preserve over 60 trees along the SR 35 frontage (i.e. more than half of the existing trees), including two large trees over 40 inches DBH. This would preserve the tree-lined character of SR 35 to the maximum extent possible within the Caltrans safety requirements.

Rare tafoni rock formations exist within Castle Rock State Park. The Castle Rock State Park General Plan includes guidelines for protection of these formations, including geological study and limiting rock climbing to only "low-impact" climbing. Although tafoni formations exist at the southwestern edge of the project site, no development or public access is proposed in the vicinity of these tafoni formations. Further, they would be protected by the same policies in the Castle Rock State Park General Plan that protect the formations currently within the Park boundaries.

The existing on-site structures, a single-family dwelling and small accessory structure, are not listed by the County of Santa Cruz as being historic. Therefore, demolition of these structures would not adversely affect an historic resource (see the "Cultural Resources" section for a more detailed discussion). Therefore, no large trees, rock outcroppings, or historic buildings would be substantially affected by the proposed project. This would be a less than significant impact.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3. Substantially degrade the existing visual character or quality of the site and its surroundings, including substantial change in topography or ground surface relief features, and/or development on a ridgeline?	☐	☐	☒	☐

Discussion: As discussed in F.2. above, the proposed project would result in some physical changes on the project site which would alter the existing visual character of the site. The removal of the Christmas tree farm would result in an immediate, but temporary, change in the visual character of the site as new native trees and plants would replace a majority of the approximately nine acres of land currently being used as a Christmas tree farm. This change to the project site is considered an improvement in the visual quality as the new vegetation would blend with the surrounding vegetation of Castle Rock State Park, eliminating the distinct boundary between the project site and Castle Rock State Park. The landscaping modifications along SR 35 would also open up currently obstructed views of the project site to drivers on SR 35.

The proposed project would also include the construction of various new structures such as a new entrance gate, a visitor center, an amphitheater, and other recreational facilities such as restrooms, picnic areas, and benches. As described above under "a" these structures would be consistent with County policy and would be designed with colors and materials to blend into the existing environment. Additionally, the proposed visitor center would be relatively small (6,000 square feet) and would not obstruct or substantially interfere with views of the surrounding hillsides.

Overall, the proposed project would not substantially degrade the existing visual character or quality of the site because it would be consistent with County policy, include architectural features and coatings to blend with the existing surroundings, and would not substantially alter views of the site from offsite areas or block views of surrounding areas. As mentioned under "a" above, removal of several small- to medium-sized trees would be required to meet Caltrans' clear recovery zone requirements. No large trees (over 40-inches dbh) would be removed. This tree removal would thin the dense wall of trees that currently obstruct views onto the project site, but would preserve over half the trees to maintain the "tree-lined" character of SR 35.

4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion: Projects resulting in significant light or glare impacts when they include substantial new light sources, especially in an area (such as the project vicinity) that includes very few artificial light sources, or if they include highly reflective surfaces that can reflect light towards drivers or existing residences. The current visual nighttime

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

setting is very dark with no noticeable light sources visible from adjacent properties.

Landscaping and the existing vegetation that has been incorporated into the site plan would screen much of the parking lot. Therefore, daytime glare from the parking lot or proposed buildings would be filtered from the view of drivers passing the site on SR 35. Daytime glare affecting the adjacent residential property would be filtered by the trees for the agricultural buffer.

The proposed recreational-oriented structures, which include a visitor center, amphitheater, parking areas, restroom facilities, and picnic tables, do not require substantial lighting, since operating hours for the park are generally limited to the daytime hours of the day (i.e., 6:00 a.m. to sunset daily). Lighting would be limited to built-in lighting at the visitors center building and associated gathering areas and along the main pathways around the parking lot and building as well as four pedestrian-scale parking lot lights. Low-level lighting may be installed near and within the proposed amphitheater. No stage lighting would be included. All exterior lighting would be fully shielded and directed downward and would be turned on by a switch during special nighttime events and would be on a clock such that all lights would automatically shut off at 10:00 pm, except for minimal indoor security lighting. Because all lights would be fully shielded and directed downward, the glare associated with the lighting would not be intrusive to the closest residence, which is located over 1,000 feet away from the proposed parking lot (the closest proposed light source to the existing residence). Other site improvements (e.g. gateway entrance, trails and trail connections) would not result in new sources of substantial light or glare. Auxiliary lighting for any event would be prohibited. The proposed lighting would not be expected to substantially alter views of dark skies, given it would be shielded, directed downward, and relatively low to the ground.

G. CULTURAL RESOURCES

Would the project:

1.	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☐	☐	☒

Discussion: The existing structure on the property is not designated as a historic resource on any federal, state or local inventory.

2.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐

Discussion: A Cultural Resources Report (Attachment 15) was prepared specifically

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for the proposed project by ECORP in April 2012. The following discussion is excerpted or based upon the ECORP report.

Records Search and Historic Map Review
ECORP staff conducted a record search for the project area at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University on 3 February 2012. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed project location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. In addition to the official records and maps for archaeological sites and surveys in Santa Cruz and Santa Clara Counties, ECORP also reviewed several other historic references, including property data files, National Park Service and State Historic Preservation Office websites, etc.

The records search found that six previous cultural resource investigations have been conducted within 0.5 mile of the property. These studies revealed the presence of prehistoric sites, including lithic scatters and food processing sites, and historical sites, including residences, orchards, roads, bridges, lookout towers, and water conveyance systems. The records search also determined that 14 previously recorded prehistoric and historic-era cultural resources are located within one-mile of the project area. Of these, four are believed to be associated with Native American occupation of the vicinity, eight are historic-era sites, and two have both historic and prehistoric components associated with them. None of the previously recorded cultural resources are located within the project area.

Tribe Consultation
ECORP contacted the California Native American Heritage Commission (NAHC) on 26 January 2012 to request a search of the Sacred Lands File for the Project Area. The NAHC responded with a letter indicating that their search of the Sacred Lands File failed to indicate the presence of Native American cultural resources in the project area.

Field Survey
On 24 February 2012, the entire Project Area was subjected to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* using 15-20 meter transects.

As a result of the survey, one isolated fragment of thick stoneware was discovered within the rows of Christmas trees (ISO-001). This isolated find consists of a single fragment of thick stoneware crockery. The fragment measures approximately 1.5 inches by 0.75 inch by 0.5 inch thick and has a dark brown glaze on the interior and an off-white glaze on the exterior. A single isolated artifact does not have the potential to yield important information and is not eligible for the California Register of Historical Resources (CRHR) under Criterion 4 and is not eligible for the National Register of

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Historic Places (NRHP) under Criterion D. Due to lack of context and associations, the isolate is also not eligible for the CRHR under Criterion 1 or 2, and is not eligible for the NRHP under Criterion A or B. This artifact does not represent the work of a master and is not otherwise distinctive, and therefore, is not eligible under CRHR Criterion 3 or NRHP Criterion C. Therefore, implementation of the proposed project would not adversely affect a known archaeological resource.

Because multiple cultural resources have been identified within 0.5-mile of the project area, there remains a possibility that unrecorded cultural resources are present beneath the ground surface, and that such resources could be exposed during project construction. Therefore, implementation of the proposed project could result in potentially significant impacts to undocumented archaeological resources.

Mitigation Measure CUL-1

The following measures shall be clearly identified on all grading plans and construction drawings: Pursuant to Sections 16.40.040 of the Santa Cruz County Code, if archeological resources are uncovered during construction, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

Level of Impact after Implementation of Mitigation Measures
CEQA requires the lead agency to address any unanticipated cultural resource discoveries during project construction. The above mitigation measure requires that work immediately cease if any artifact is found and that the proper authorities be notified. Implementation of these measures would reduce potential impacts to a less-than-significant level.

3.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion: Similar to the discussion under G.2. above, although records search and field survey did not identify the presence of human remains within the project area, because other prehistoric resources have been identified within a half mile of the project area, project construction has potential to uncover previously undocumented human remains. The mitigation measure CUL-2 (below) addresses the finding of human remains.

Mitigation Measure CUL-2

The following measures shall be clearly identified on all grading plans and construction drawings: Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the

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Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

Level of Impact after Implementation of Mitigation Measures

CEQA requires the lead agency to address any unanticipated cultural resource discoveries during project construction. The above mitigation measure requires that work immediately cease if any artifact or human remains are found and that the proper authorities be notified. Implementation of these measures would reduce potential impacts to a less-than-significant level.

4.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion: Rare tafoni rock formations exist within Castle Rock State Park. The Castle Rock State Park General Plan includes guidelines for protection of these formations, including geological study and limiting rock climbing to only "low-impact" climbing. Although tafoni formations exist at the southwestern edge of the project site, no development or public access is proposed in the vicinity of these tafoni formations. Further, they would be protected by the same policies in the Castle Rock State Park General Plan that protect the formations currently within the Park boundaries.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

1.	Create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐

Discussion: A Phase I Environmental Site Assessment (ESA) was conducted for the subject property by Amicus-Strategic Environmental Consulting. The ESA was based on an environmental database search provided by Environmental Data Resources, Inc. The database search provided a summary of all record sources required for review by the American Society for Testing and Materials (ASTM). Among this summary, Resource Conservation and Recovery Act (RCRA) generators of hazardous waste and the California Department of Toxic Substances Control (DTSC) databases were included.

The ESA prepared for the proposed project revealed that a 550-gallon gasoline tank was located in an area adjacent to the existing driveway just downslope from the front

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

of the residential structure and was used mainly by the resident of the house for personal vehicle filling. The tank was removed approximately 25 years ago. However, the ESA evaluated the area reported as previously containing the 550-gallon gasoline tank by excavating to the bedrock (six feet below ground surface), and according to the ESA (Amicus 2011), no indication of staining or odor or any other sign of gasoline impact was observed. Review of the environmental records data did not show the presence or likely presence of any hazardous substances or petroleum products on or near the subject property. Additionally, no conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum product were observed on or near the subject property (Amicus 2011).

During project operation, rangers may store common household hazardous materials on the project site, such as paint, pesticides, gasoline, oil, solvents, detergents, etc. These materials would not be stored or transported in large quantities, and would therefore not result in potential hazard to the public or environment. However, construction of the proposed project could result in the transport of materials generally regarded as hazardous materials. It is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials would be brought to the project site, used, and stored during the construction period. The types and quantities of materials to be used could pose a significant risk to the public and/or the environment if not properly handled.

State agencies regulating hazardous materials are the California Environmental Protection Agency (Cal/EPA) and the Office of Emergency Services (OES). The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) enforce regulations for hazardous materials transport. Within Cal/EPA, the Department of Toxic Substances Control (DTSC) has primary regulatory authority to enforce hazardous materials regulations. State hazardous waste regulations are contained primarily in Title 22 of the California Code of Regulations (CCR). The California Occupational Health and Safety Administration (Cal OSHA) has developed rules and regulations regarding worker safety around hazardous and toxic substances. Because the applicant and its contractors would implement and comply with all relevant local, State, and Federal regulations related to the handling, transport, and storage of hazardous materials, potential impacts related to creation of significant hazards to the public through routine transport, use, and disposal of hazardous materials would be minimized. Additionally, because the applicant would prepare and adhere to a Stormwater Pollution Prevention Plan (SWPPP) and associated Best Management Practices (BMP) during project construction (see mitigation measure GEO-2), impacts from potential spills of hazardous materials would be minimized.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
2. 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?	☐	☐	☒	☐

Discussion: During construction of the proposed project, fuels and lubricants have the potential to be released into the environment, causing environmental and/or human exposure to these hazards. However, as described in item H.1. above, the applicant and its contractors would handle, store, and dispose of all hazardous materials used onsite in accordance with all applicable local, State, and federal laws regulating the uses of hazardous materials.

3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

Discussion: There are no existing or proposed schools located within 0.25 mile of the project site. Boulder Creek Elementary is the nearest school and is located approximately seven miles south of the project site. Therefore, *no impacts* would occur related to emissions or handling of hazardous materials within 0.25 mile of an existing or proposed school.

4. 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?	☐	☐	☐	☒

Discussion: The project site is not included on the January 30, 2014 list of hazardous sites in Santa Cruz County compiled pursuant to the specified code. The ESA prepared for the proposed project revealed that 550-gallon gasoline tank was located in an area adjacent to the existing driveway just downslope from the front of the residential structure and was used mainly by the resident of the house for personal vehicle filling. The tank was removed approximately 25 years ago. However, the ESA evaluated the area reported as previously containing the 550-gallon gasoline tank by excavating to the bedrock (6 feet below ground surface), and according to the ESA (Amicus 2011), no indication of staining or odor or any other sign of gasoline impact was observed. Therefore, because the proposed project is not located on a site known to contain hazardous materials and is not included on a list of hazardous materials sites, the proposed project would not create a significant hazard to the public or to the

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

environment as a result of existing hazardous material contamination. *No impact* would occur.

5.	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, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Discussion: The proposed project is not located within an airport land use plan or within two miles of an airport or private airstrip. Additionally, the proposed project would not result in any additional people living or residing in close proximity to an airport or private airstrip. Further, the proposed project does not include any structures of significant height or include any activities that would impair operations of an airport or airstrip in Santa Cruz County. The proposed project would not affect airport safety. Therefore, *no impact* would occur.

6.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Discussion: As discussed above under H.5. above, the proposed project is not located within an airport land use plan or within two miles of an airport or private airstrip and would not result in any additional people living or residing in close proximity to an airport or private airstrip.

7.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Discussion: No new housing or facilities would be constructed such that the project would permanently impair implementation of or physically interfere with the County's adopted emergency response plan or emergency evacuation plan. The proposed project would include new gates and driveways that would facilitate emergency access to the site. CAL FIRE, as is standard, shall have access to the gate so that emergency personnel can respond regardless to emergencies regardless of whether the gates are open or not.

8.	Expose people to electro-magnetic fields associated with electrical transmission lines?	☐	☐	☐	☒

Discussion: The project does not propose electrical transmission lines.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
9. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion: The project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency. The project site is located adjacent to Castle Rock State Park. Although the project would be located adjacent to wildlands, the proposed project would not include any new residences. Once the visitors center is constructed, rangers would have offices on the subject parcel. Their exposure to wildland fire, however, would remain the same as they are currently exposed to the same risk in the current office location. Recreational users of the Park could be exposed to increased fire risk from nearby wildland and forested areas.

Fire protection of the proposed project site would remain under the jurisdiction of the California Department of Forestry and Fire Protection (CAL FIRE), which is the primary fire protection agency for Castle Rock State Park. A State Parks Wildfire Plan for Castle Rock State Park has been approved by CAL FIRE and is on file at the District headquarters. CAL FIRE personnel respond to medical emergencies in the park.

The project site is currently an active Christmas tree farm, which involves the use of tractors and large equipment. These are existing ignition sources, which would be removed as a result of the proposed project. The proposed project would allow increased public access to the site, which can increase ignition potential. The primary ignition sources related to public access are vehicles, open fire, and smoking. The proposed project does not include camp sites or barbeque pits. Smoking is prohibited on trails at Castle Rock State Park. In addition, the proposed parking areas would either be paved or overlain with a pervious rock base which minimizes ignition potential from vehicles, and landscaped areas near parking lots would be irrigated, which would reduce ignition potential.

Although new structures would be proposed in close proximity to wildland where the risk of fire is high, adequate fire protection services would be available to provide fire protection at the proposed site. Additionally, no new permanent residents are included as part of the proposed project. Daytime users of the facilities would not be exposed to higher risks of fire than currently exists at Castle Rock State Park. Park visitors would not reside at the project site, and would be using the facility for a short period of time during the day, and would therefore be less susceptible to loss or injury from fire. Therefore, because adequate fire protection services would be available to the project site, and no permanent residents would be added as part of this project, people and structures would not be exposed to a significant risk from wildland fire. This would be a less than significant impact.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
I. TRANSPORTATION/TRAFFIC				
Would the project:				
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

Discussion: A traffic analysis prepared by WTrans, dated February 14, 2013 was prepared for the proposed project (Attachment 16).Three site visits were made to account for seasonal and day variations in attendance. The fist visits were conducted during winter on Thursday, February 9, 2012 and Sunday, February 12. The third visit was conducted on Saturday, June 8, 2013. The traffic count data obtained the June survey was, as expected for a sunny day during the peak season, higher than those recorded in February. Because of this and to ensure a conservative analysis, the higher recorded traffic volumes were applied to the traffic analysis.

Trip Generation

The report notes that, typically, the total number of vehicle trips that would be generated by a proposed project would be estimated utilizing published trip generation data. There are, however, limited trip data for park facilities which have the same constraints as the subject parcel's, i.e. a mix of uses at a relatively remote location with few alternative transportation modes.

In the absence of appropriate published trip data, WTrans based their analysis on the parking demand generated by the new uses. With the development of the new parking facilities, and including all on-street parking near the Park as a part of the parking supply, there would be an 80.4 percent increase in parking capacity. Therefore, to represent peak project conditions, turning movements entering and exiting the site were increased by 80.4 percent while through movements on SR 35 were assumed to be unchanged due to the project. During the weekday p.m. hour, this would result in 18 additional vehicle trips, and during the weekend midday peak hour, the project would generate an estimated 40 additional vehicle trips.

Additional traffic volume data for SR 35 were obtained from Caltrans District 4; these data were collected quarterly (approximately one week each quarter) between

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

December 2010 and September 2012. An average was calculated for the respective peak periods to represent an annual average traffic volume for SR 35. Turning movement volumes entering and exiting the Park driveway collected during field visits were applied directly to the analysis. Since the parking areas were observed to be at or near capacity during the weekend observations, it is expected that these volumes represent typical operations. Existing traffic volumes are shown in Exhibit 3.16-1.

Level of Service

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. The County's General Plan Policy 3.12. 1 uses this ranking system. Generally, LOS A represents free flow conditions and LOS F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. The HCM is the calculation method identified in the County's General Plan Policy 3.12.2 and contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

SR 35 is operated by Caltrans, so the Department's significance standard was applied to the park entrance. Caltrans indicates that their minimum operational goal is at the transition from LOS C to LOS D.

The existing LOS for SR 35 at the existing Castle Rock State Park driveway was calculated for the existing and existing plus project conditions. It was found that the existing condition is a LOS A, and the LOS with existing plus project would remain at LOS A.

WTrans also forecasted the future conditions using Caltrans' estimated annual growth range of between 1.3 and 3.6 percent per year. To ensure a conservative growth analysis, WTrans used the 3.6 percent growth rate for a period of 18 years (to reach 2030), with the resulting calculated LOS being A and B (depending on time of day and direction).

Temporary construction activities would result in the peak employment of 20 construction workers and an average employment of 10 construction workers over the 7-month construction period. Truck trips associated with the proposed project would average 3 trips per day. Similar to project operation, which would add minimal traffic compared to existing conditions, the temporary addition of 10 to 20 construction worker trips and up to 3 truck trips during the peak hour would not substantially degrade existing and future LOS of intersections, which operate at LOS A under existing and future conditions.

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

Alternative Modes of Transportation
Transit service is provided by the Santa Cruz Metropolitan Transit District and the Santa Clara Valley Transportation Authority for their respective counties. Neither agency provides service to the Park site or along SR 35 in the vicinity of the Park.

SR 35 does not have sidewalks in the vicinity of the Park and shoulder widths in the area vary. These conditions are consistent with the rural nature of SR 35. Pedestrian activity was observed during the two field visits and generally consisted of pedestrians walking between on-street parking areas and the Park entrance or between the Park entrance and another trail-head located on the east side of SR 35.

There are no bicycle facilities along SR 35 in the vicinity of the Castle Rock State Park entrance. In some areas, bicyclists can use paved shoulders; however, for the most part bicyclists must ride in the vehicle lanes. During field observations, several bicyclists were observed riding along SR 35, ranging from zero to four bicyclists per hour; however, none appeared to be destined for the Park.
Both the *Santa Cruz County Bicycle Plan* (Santa Cruz County, March 2011) and the *Santa Clara Countywide Bicycle Plan* (Santa Clara Valley Transportation Authority, August 2008) were reviewed and it was determined that neither Plan identifies any future bicycle facilities on SR 35 in the vicinity of Castle Rock State Park.

2.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

Discussion: The Castle Rock State Park is not located near an airport and would not impact air traffic patterns. Further, the project would not generate air traffic. The proposed project would have no impact.

3.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Discussion:
Sight Distance
Sight distance along SR 35 at the driveway location was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans (see Road Hazards Report, Attachment 16). According the *Highway Design Manual*, at un-signalized intersections, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either

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

turn left or turn right, without requiring the through traffic to radically alter their speed. Sight distance should be measured from a 3.5-foot height at the location of the driver on the minor road to a 4.25-foot object height in the center of the approaching lane of the major road. Setback for the driver on the crossroad shall be a minimum of 15 feet, measured from the edge of the traveled way.

According to W Trans, the *Highway Design Manual* recommended sight distance at minor street approaches that are either a private road or a driveway is based on stopping sight distance, which is based on the approach speed on the major street. Similarly, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is also evaluated based on the approach speed on the major street. In the project vicinity, SR 35 does not have a posted speed limit, resulting in a prima facie speed limit of 55 miles per hour (mph). For speeds of 55 mph, a stopping sight distance of 500 feet is recommended.

Proposed driveway improvement plans for these improvements were provided by Callander Associates in October, 2012 and were used to measure sight distance at the proposed driveway. For turning maneuvers at the project driveway, it was determined that three trees (two to the north of the driveway and one to the south) would impede upon a driver's clear line of sight. As such, W-Trans recommended that these trees be removed. It should be noted that these trees may need to be removed to satisfy Caltrans' clear recover zone requirements, independent of the sight distance requirements. The clear recovery zone is an unobstructed area beyond the edge of the travel way that allows drivers of an errant vehicle to regain control of the vehicle. W-Trans also determined that adequate stopping sight distance of greater than 500 feet for a following driver to stop, if there is a vehicle waiting to turn into the driveway, would be present without the need for further modifications.

In order to reduce the number of trees removed, an alternative configuration was developed that includes extending the channelizing median on the driveway approach to SR 35 to physically prevent a driver in the right-turn lane on SR 35 from continuing through to the acceleration taper. Under this alternative design, the setback would be measured from the edge of the through travel lane and reflective markings would be installed at the end of the median to increase its visibility to drivers on SR 35. Doing so would eliminate the need to remove trees to satisfy sight-distance requirements. It should be noted that either configuration would require Caltrans approval.

Left-Turn Lane Warrants

The need for left-turn channelization in the form of a left-turn pocket on SR 35 was evaluated based on existing and projected future peak hour volumes as well as safety criteria. Under both conditions, which include traffic generated at the Park, a left-turn lane was determined to not be warranted on SR 35 at the Castle Rock State Park Entrance during either of the peak periods evaluated.

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

Although not warranted, the proposed project includes the installation of a southbound right turn lane as well as a right turn acceleration lane. These lanes would ease access to the Park and reduce impacts to through traffic on SR 35. As such, they represent an improvement over existing conditions, both from a traffic flow, and from a safety standpoint.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Records were obtained from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. For the seven-year period of 2004 through 2010, a total of nine collisions were reported along the segment of SR 35 between SR 9 and Bear Creek Road; however, none of these collisions appear to be related to turning movements at the Park entrance or the on-street parking adjacent to the Park, indicating no historic safety issue at the Park entrance.

4.	Result in inadequate emergency access?	☐	☐	☒	☐

Discussion: The proposed project would enhance parking areas and driveway access which would ease access for all drivers, including those of emergency vehicles. The well-defined entrance and driveway would facilitate the orderly access of the park by emergency vehicle drivers. The parking area and access drives would be built with an all-weather surface which would facilitate ingress and egress.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cause an increase in parking demand which cannot be accommodated by existing parking facilities?	☐	☐	☒	☐

Discussion: The proposed project would create a new parking area and Park entrance approximately 85 yards to the north of the existing Park entrance. There are approximately 43 unmarked parking spaces currently available to Park users at the existing Castle Rock State Park entrance. An additional 69 on-street parking spaces—30 on the Park side of SR 35 and 39 across the highway--are available, for a total of 112 existing parking spaces. The new parking lot, designed to accommodate the new uses, would provide 90 new parking spaces.

County Code 13.10.551 (Off-street Parking Facilities Required) states that additional parking shall be required only for the additional increment of square footage or use. In this case, then, the required parking is based upon the new improvements and the manner in which they are proposed to be used as outlined in the Program Statement (Attachment 5).

WTrans provided a parking demand analysis (September 25, 2013, Attachment 16) which evaluated the program statement for the new entrance relative to the proposed parking supply. That analysis determined that even during peak demand on a weekend when two 60-person special events are happening, the calculated parking demand would be 74 spaces. The proposed 90-space parking lot, then, is adequate to fulfill the parking demand of the new uses.

6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion: The project would not conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities.

Transit service is provided by the Santa Cruz Metropolitan Transit District and the Santa Clara Valley Transportation Authority for their respective counties. Neither agency provides service to the Park site or along SR 35 in the vicinity of the Park.

SR 35 does not have sidewalks in the vicinity of the Park and shoulder widths in the area vary. These conditions are consistent with the rural nature of SR 35.

Although SR 35 is identified as a route on the Master Plan of County Bikeway (May 1994). There are, however, no developed bicycle facilities along SR 35 in the vicinity of the Castle Rock State Park entrance. Bicyclists must ride on the paved shoulder when

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

one exists or in the vehicle lane. Both the *Santa Cruz County Bicycle Plan* and the *Santa Clara Countywide Bicycle Plan* (Santa Clara Valley Transportation Authority, August 2008) were reviewed and it was determined that neither Plan identifies any future bicycle facilities on SR 35 in the vicinity of Castle Rock State Park.

7.	Exceed, either individually (the project alone) or cumulatively (the project combined with other development), a level of service standard established by the County General Plan for designated intersections, roads or highways?	☐	☐	☒	☐

Discussion: According to the traffic study performed by WTrans (Attachment 16), the proposed project is anticipated to generate 18 PM. trips during weekdays and 40 additional trips during the weekend midday peak hour to the the intersection of SR 35 and the existing Castle Rock State Park driveway. This would not reduce operations to a level of service below A.

J. NOISE

Would the project result in:

1.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Discussion: The nearest existing noise- and vibration- sensitive receptor is a residence located 1,350 feet from to the west of the project site. The existing noise environment in the project area is primarily influenced by transportation noise from vehicle traffic on SR 35. Other noise sources that contribute to the existing noise environment include the choose-and-cut tree operation located next door to the subject parcel, birds chirping, aircraft flyover, and noises associated with park usage such as people talking, hiking, and horseback riding (an ambient noise study was completed, see Attachment 17).

Short Term Construction Impacts

The proposed project would involve the construction of a new park entrance gate, parking facilitates, new driveway, amphitheater, and visitor center. Construction of this type generally requires certain noise producing equipment such as those listed in the table below. It is expected that maximum noise levels would be associated with site preparation activities from the use of graders. Noise emission levels at 50 feet from graders and other typical construction equipment are shown below.

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

Typical Reference Noise Emission Levels from Construction Equipment	
Equipment Type	**Reference Level (L_{max} dBA) @ 50 feet**
Grader	85
Loader	85
Backhoe	80
Excavator	85
Crane	85
Asphalt Paver	85
Roller	85
Manlift	85

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.
Source: FHWA 2006

Based on typical noise generated by construction equipment and accounting for typical usage factors of individual pieces of equipment and activity types along with standard attenuation rates, the report indicates that the onsite construction-related activities could result in hourly average noise levels of approximately 81 dBA L_{eq} (88 dBA L_{max}) at 50 feet and approximately 46 dBA L_{eq} (50 dBA L_{max}) at the nearest sensitive receptors (e.g., residence located 1,350 feet from the acoustical center of the project site; note that the acoustical center of the project site is farther away than the proposed parking lot, which is approximately 1,000 feet away from the residence).

These modeled noise levels would not exceed the daytime standard of 50 dBA L_{eq} or 70 dB L_{max}, but could exceed the nighttime performance standards if construction activities took place from 10:00 p.m. to 7:00 a.m. However, since construction would be prohibited at night, concerns about exceeding the nighttime performance standards are eliminated.

Long-term Operational Noise Sources

Operational noise from development projects can be attributed to additional stationary noise sources and from increases in vehicular traffic on nearby roadways. As a result of the proposed project, new recreational facilities (e.g., amphitheater, visitor center, parking areas, picnic areas, restrooms) would be constructed and operated. Noise from these sources is described separately below.

Parking Lot Noise generated from parking lots is associated with horns honking, engines starting, doors slamming, engines idling, car alarms sounding, and various other sounds associated with moving vehicles. These noise sources are typically short in duration, intermittent throughout the day, and vary as a function of the number of vehicles present throughout the day (i.e. peak hours would result in more noise).

The project would include the construction of one new paved 90-space parking lot that would provide parking to meet existing parking demand. The parking lot would be located at the northern end of the project site just inside the proposed gate feature, approximately 1,000 feet to the east of the existing nearest sensitive receptor.

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

Based on the estimated traffic and usage demand, a total of 90 parking spaces would be required to adequately accommodate all park users on a peak-season weekend day. For this noise analysis, it was conservatively assumed that the parking lot would be full all day long and; therefore, the parking lot could have a peak traffic demand of up to 90 cars per hour during the day time hours (i.e., 6:00 a.m. – 10:00 p.m.). The parking lot would also provide parking for overnight visitors (e.g., campers, backpackers) and therefore night time peak traffic demand could reach up to 26 cars per hour during the nighttime hours (i.e., 10:00 p.m. – 6:00 a.m.).

Noise associated with proposed parking lots was calculated. It is anticipated that the proposed parking lot would result in daytime noise levels of 52 dBA L_{eq} at 50 feet from the edge of the proposed lot and 26 dBA L_{eq} at the nearest sensitive receptor (i.e., residence located approximately 1,000 feet to the west of the parking lot). Although the park would close at 10:00 p.m., night time noise levels were evaluated due to the fact that there may be minimal noise associated with overnight campers accessing their vehicles. Night time noise levels would reach a level of 47 dBA Leq at 50 feet from the edge of the proposed lot and 21 dBA L_{eq} at the sensitive receptor (i.e., residence located approximately 1,000 feet to the west of the parking lot). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 a.m. – 7:00 a.m.) or 50 dBA L_{eq} during the daytime (7:00 a.m. – 10:00 p.m.) hours at the nearest sensitive receptor.

Amphitheater The proposed project includes the construction of a small amphitheater that would be used primarily for environmental educational purposes. For purposes of conducting a conservative analysis, it was assumed that the amphitheater could be located as near as 1,000 from the nearest existing sensitive receptor (i.e., residence located to the north west of the Castle Rock State Park property). See exhibit 2-3 for approximate location (which shows the amphitheater approximately 1,400 feet from the nearest residence).

As described in the project description, though the amphitheater would primarily be used for education events, other potential events held there could include weddings, picnics, unamplified (i.e., acoustic) musician performances, and rock climbing classes. Any electronic amplification or a public address (PA) system would be prohibited. Auxiliary lighting for any event would also be prohibited. Quiet hours for the entire park would be 10:00 P.M. to 6:00 A.M. daily. All events at the park would comply with these times and end by 10:00 P.M. No more than 60 attendees would be allowed at any future event.

Noise sources from the amphitheater and events that could take place there consist of a number of outdoor activities. These outdoor activities could involve children and adults talking, laughing, and playing, with the sound of human voices sometimes traveling off-site. In addition, non-amplified musical instruments (e.g., guitar) could be used during special events such as weddings or small outdoor concerts.

A group of 20 people (including children and adults) engaged in outdoor activities could

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

result in noise levels of approximately 54 dBA L_{eq} at 50 feet (Mariposa County 2003). No more than 60 people would be allowed to attend events at Castle Rock State Park. However, for a conservative analysis, it was assumed that up to 80 people could be on the site at once, which based on the measurements above would result in a noise level of 60 dBA L_{eq} at 50 feet. The sound levels from an acoustic guitar would result in approximately 52 dBA L_{eq} at 45 feet from the guitar. It was assumed that these two noise sources could occur simultaneously during the daytime hours of park operation (i.e., 6:00 A.M.-10:00 P.M.). Therefore, accounting for typical attenuation rates and based on these reference noise levels, the combined noise from the amphitheater activities could result in levels of up to 61 dBA L_{eq} at 50 feet from the source and up to 29 dBA L_{eq} at the nearest off-site sensitive receptor (i.e., residence located approximately 1,000 feet to the north west of the proposed facilities). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 P.M.-7:00 A.M.) or 50 dBA L_{eq} during the daytime (7:00 A.M-10:00 P.M.) hours at the nearest sensitive receptor.

Total Operational Noise Sources

The proposed parking lot would operate all the time but peak activity would occur during a weekend day. Amphitheater noise could consist of people congregating, people talking, children playing, and the occasional event involving an unamplified musical instrument, such as a guitar. Assuming a peak weekend day (i.e., the parking lot is at capacity all day) and an event is taking place with up to 80 people, including an acoustic guitar, combined noise levels could reach up to 61 dBA L_{eq} at 50 feet during the daytime and 47 dBA L_{eq} during the nighttime from the source of the activities. Accounting for typical attenuation rates, the total combined noise from these activities could reach up to 29 dBA L_{eq} during the daytime and 21 dBA L_{eq} at the nearest off-site sensitive receptor (i.e., residence located approximately 1,000 feet to the north west of the proposed facilities). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 P.M-7:00 A.M.) or 50 dBA L_{eq} during the daytime (7:00 A.M-10:00 P.M.) hours at the nearest sensitive receptor.

2.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Discussion: Project construction involves activities such as clearing and grubbing, site grading, installation of drainage equipment, etc. that would result in ground borne vibration or ground borne noise levels. However, this is considered a temporary construction impact and would therefore not result in significant noise impacts.

3.	Exposure of persons to or generation of noise levels in excess of standards established in the General Plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

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

Discussion: See discussion under J.1. above.

4.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Discussion: Noise generated during construction would increase the ambient noise levels for adjoining areas (see analysis above under J.1.). Construction would be temporary, however, and given the limited duration of this impact it is considered to be less than significant.

5.	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, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion: The proposed project is not located within an airport land use plan or within two miles of an airport or private airstrip. Additionally, the proposed project would not result in any additional people living or residing in close proximity to an airport or private airstrip. Therefore, the proposed project would not expose people to excessive noise levels from airports or private airstrips.

6.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion: The proposed project is not located within an airport land use plan or within two miles of an airport or private airstrip. Additionally, the proposed project would not result in any additional people living or residing in close proximity to an airport or private airstrip. Therefore, the proposed project would not expose people to excessive noise levels from airports or private airstrips.

K. AIR QUALITY

Where available, the significance criteria established by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) may be relied upon to make the following determinations. Would the project:

1.	Violate any air quality standard or contribute substantially to an existing	☐	☐	☒	☐

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

or projected air quality violation?

Discussion: The Monterey Unified Air Pollution Control District (MUAPCD) regulates the emission of particulate matter during grading. The North Central Coast Air Basin does not meet state standards for ozone and particulate matter (PM_{10}). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors (Volatile Organic Compounds [VOCs] and nitrogen oxides [NO_x]), and PM_{10}.

Project construction may result in a short-term, localized decrease in air quality due to generation of dust. However, standard dust control best management practices included on the plans, such as periodic watering, would be implemented during construction to reduce impacts to a less than significant level. Thus, a mitigation measure is not required.

The project would not result in a substantial increase in mobile sources of air pollutants (i.e., emissions associated with vehicular travel) or consist of any new area or stationary sources of air pollutant emissions. Therefore, emissions associated with the proposed project would result primarily from construction-related activities and thus, only construction-related emissions were modeled.

Short-term Impacts Project construction may result in a short-term, localized decrease in air quality due to generation of dust. Monterey Bay Unified Air Pollution Control District (MBUAPCD) has established a grading limit of 2.2 acres per day which, if adhered to, will keep a project below the 82lb/day that the air district has determined to be the threshold of significance. The project shall be conditioned to limit grading to less than 2.2 acres per day. In addition, standard dust control best management practices included on the plans, such as periodic watering, shall be implemented during construction to reduce impacts to a less than significant level.

Ascent Environmental provided the results of their Air Quality modeling (Attachment 18). Based on the modeling conducted, project-generated short-term construction-related emissions would not exceed MBUAPCD's applicable thresholds of significance for PM_{10}. Emissions of ROG and ozone precursor NOx were not modeled because temporary emissions of these ozone precursors have been accommodated for in State- and federally-required air plans. Additionally, typical construction equipment would be used (e.g., loaders, graders, scrapers, rollers, tractors, dozers), minimal site grading would take place, and construction activity would be relatively short (i.e., seven months). For these reasons, construction activities associated with the proposed project would not have the potential to result in localized concentrations of criteria air pollutants and precursors that would exceed applicable ambient air quality standards. Thus, project-generated emissions would not violate or contribute substantially to an existing or projected air quality violation. This impact would be less than significant.

Long-Term Impacts Given the modest amount of new traffic that would be generated by the project there is no indication that new emissions of VOCs or NO_x would exceed MBUAPCD thresholds for these pollutants and therefore would not be a significant

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

contribution to an existing air quality violation. Nonetheless, the project is subject to an air pollution control district permit prior to construction. A mitigation measure it not required as this is a standard condition of project approval.

Ascent Environmental evaluated the potential impact of the project on carbon monoxide (CO) concentration. CO concentration is a direct function of vehicle idling time and, thus, traffic flow conditions. Under specific meteorological conditions, CO concentrations near congested roadways and/or intersections may reach unhealthy levels with respect to local sensitive land-uses such as residential areas, schools, and hospitals. As a result, it is recommended that CO not be analyzed at the regional level, but at the local level.

MBUAPCD provides a list of scenarios that if any of which were to occur as a result of the proposed project, could result in a potentially significant impact from increased concentrations of CO on roadway intersections of segments. According to the MBUAPCD CEQA Guidelines, the following would represent a potentially impact from CO:

- Intersections or road segments that operate at (Level of Service) LOS D or better that would operate at LOS E or F with the project's traffic;
- Intersections or road segments that operate at LOS E or F where the volume-to capacity (V/C) ratio would increase 0.05 or more with the project's traffic;
- Intersections or road segments that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic;
- Un-signalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic (this criterion is based on the turning movement with the worst reserve capacity); or
- The project would generate substantial heavy-duty truck traffic, substantial traffic along urban street canyons, or substantial traffic near a major stationary source of CO.

Given that, in all scenarios, the LOS in the area would be at LOS B or better, the scenarios described above would not occur. Except during construction, the project would not generate substantial heavy-duty truck traffic; the project site is not located in the vicinity of an urban street canyon; and the project would not generate substantial traffic near a major stationary source of CO. Therefore, the long-term impact of this project on air quality is less than significant.

2.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

Discussion: The project would not conflict with or obstruct implementation of the regional air quality plan. See K.1. above.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
3. 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒

Discussion: It is not anticipated that the project would result in a cumulative increase in pollutants because the project does not proposed air pollutants as part of operation of the park. Thus, no impacts are anticipated.

4. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒

Discussion: The project does not involve substantial pollutants. Therefore, no impacts are anticipated.

5. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Discussion: The project operation does not involve odorous products. Therefore, impacts are not anticipated.

L. GREENHOUSE GAS EMISSIONS

Would the project:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Discussion: The proposed project, like all development, would be responsible for an incremental increase in green house gas emissions by usage of fossil fuels during the site grading and construction. All project construction equipment would be required to comply with the California Air Resources Board emissions requirements for construction equipment. Greenhouse gas (GHG) emissions would be emitted by off-road and on-road construction equipment and worker vehicles.

The County Board of Supervisors approved the County of Santa Cruz Climate Action Strategy (CAS) on February 26, 2013. No thresholds of significance for project-generated GHG emissions were included in the CAS. Instead, the County is looking to the Monterey Bay Unified Air Pollution Control District (MBUAPCD) for guidance in this area. The MCUAPCD has not yet adopted recommended thresholds of significance for land use projects within the North Central Coast Air Basin. However, on February 20, 2013, the MBUAPCD Board of Directors received an informational report on the status

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

of developing GHG emissions thresholds for evaluating projects under CEQA. (MBUAPCD 2013). Although no action was taken, staff recommended further review of a GHG threshold of 2,000 metric tons of CO_2 equivalent ($MTCO_2e$) per year for land use projects or compliance with an adopted GHG reduction plan/climate action plan.

Impacts associated with the temporary increase in green house gas emissions are expected to be less than significant.

2.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion: See the discussion under L.1. above. Impacts are anticipated to be less than significant.

M. PUBLIC SERVICES

Would the project:

1.	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:				
	a. Fire protection?	☐	☐	☒	☐
	b. Police protection?	☐	☐	☒	☐
	c. Schools?	☐	☐	☐	☒
	d. Parks or other recreational activities?	☐	☐	☐	☒
	e. Other public facilities; including the maintenance of roads?	☐	☐	☒	☐

Discussion (a through e): While the project represents an incremental contribution to the need for services, the increase would be minimal as Castle Rock State Park is an

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

existing use in the immediate vicinity of the subject parcel. Moreover, the project meets all of the standards and requirements identified by the local fire agency. The school, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase in demand for school and recreational facilities and public roads. Since there is no residential component to this project, there would be no effect on school enrollment. The project would enhance Castle Rock State Park by improving the amenities which would result in an enhancement of park and recreational activities. SR 35 is a highway maintained by Caltrans and although there is anticipated to be additional traffic resulting from the project, visitors would mostly arrive in non-commercial vehicles which would not have a significant impact on the condition of SR 35.

N. RECREATION

Would the project:

1.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

Discussion: The project is itself the expansion of Castle Rock State Park with the provision of enhanced amenities. No additional staff would be required. No housing is proposed. No new population would be generated by the project that would demand additional recreational facilities or overuse existing recreational facilities.

2.	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?	☐	☐	☒	☐

Discussion: As described in item N-1 above, new facilities would be constructed which would become a part of Castle Rock State Park. There would be no new employment opportunities or residential land uses that would increase demand for recreational facilities. The construction of recreational facilities and improvements has been evaluated throughout this initial study. As described herein, the project would result in less-than-significant impacts with implementation of the mitigation measures identified.

O. UTILITIES AND SERVICE SYSTEMS

Would the project:

1.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause	☐	☐	☒	☐

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

significant environmental effects?

Discussion: Department of Public Works Drainage staff have reviewed the drainage information and have determined that given site characteristics (sandy soils and the proximity of Kings Creek), and the limited size of the development relative to the parcel size (about 1.8 acres of new impervious or semi-pervious materials compared to a parcel size of 32.7 acres), the proposed on-site drainage improvements would be adequate to handle the increase in runoff associated with the project. No new storm water drainage facilities or expansion of existing facilities would be required as a result of this project.

2.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

Discussion: The project would rely on an individual well for water supply. Public water delivery facilities would not have to be expanded.

A new septic system with leach field would be installed to serve the small restroom structure and, eventually, the visitor center complex. The septic system would be designed and installed to comply with all County standards and regulations and would be adequate to support the domestic waste water produced at the project site. The proposed project would not produce any other wastewater and would not exceed any waste water treatment requirements established by the Regional Water Quality Control Board since all wastewater would be handled and treated onsite.

3.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

Discussion: The project's wastewater flows would not violate any wastewater treatment standards. The project would be required to comply with the standards of the Regional Water Quality Control Board.

4.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Discussion: The project does not include land uses that would result in a substantial water demand (e.g., multiple residences). The project would rely on a private well for water supply. The site currently has an existing well which was originally constructed to serve the single-family dwelling located on-site. Residential uses typically have a

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

higher water demand than do recreational uses such as a park with landscaping that is anticipated to require little water once established. In addition, there are few wells in the vicinity since most of the surrounding land is a part of either Castle Rock State Park or Sanborn County Park. With only one residential property in the immediate vicinity, the demand on groundwater is relatively low in this rural area. The water demand of the project would be expected to decrease after the new landscaping becomes established. The landscaping is required to be compliant with the County's Water Efficient Landscape Ordinance and, as a result, most of the plant selections are drought-tolerant to reduce irrigation needs.

5.	Result in 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?	☐	☐	☐	☒

Discussion: The project would not require wastewater treatment services from Santa Cruz County. All wastewater would be collected by an onsite septic system. Therefore, no impact would occur.

6.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Discussion: Project construction activities would generate minimal solid waste related to materials from demolition of the single-family dwelling, excess construction materials, and material removed during site clearing.

Minimum amounts of waste would be generated by park operations. Therefore, significant impacts are not anticipated.

7.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion: See O.6. above.

P. LAND USE AND PLANNING

Would the project:

1.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the	☐	☐	☒	☐

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

general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Discussion: The County's General Plan contains several policies to prevent non-agricultural uses and land divisions on land with an agricultural resource. This project proposes to convert a parcel with an agricultural resource (Type 1A soil) to a park with improvements. To facilitate this change of use, the project includes a General Plan re-designation from Agriculture (AG) to Parks, Recreation and Open Space (O-R), and a rezoning from Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P) to Park, Recreation and Open Space with an Open Space Easement Combining District (PR-O).

The General Plan Policies 5.13.3 and 5.13.4 specifically provides for re-designations and rezonings of agricultural resource lands into public parks. Policy 5.13.3 states, "All lands designated as Agriculture Resource shall be maintained as Agriculture Land Use designation unless the property is included in a public park....and [assigned] as Parks, Recreation, and Open Space [O-R]." Similarly, Policy 5.13.4 states, "Maintain all lands designated as Agricultural Resource in the 'CA', Commercial Agriculture Zone District, except for land in...public parks...zoned to be 'PR', Parks, Recreation and Open Space Zone District." Therefore, the proposed re-designation and rezoning are not in conflict with policies adopted for the purpose of avoiding or mitigating an environmental effect.

This project is not subject to General Plan Policy 5.13.20 (Conversion of Commercial Agricultural Lands). This conversion policy prohibits the conversion of commercial agriculture uses to non-agricultural uses without a determination that the land is nonviable for agriculture. As noted above, Policies 5.13.3 and 5.13.4 allow for Agricultural Resources—which are, by definition, viable agriculture land—to be used for public parks without limitation or condition. County Code 16.50.070 requires that the Type 1 Agricultural Resource designation be removed for all rezoning except for when the rezoning is to PR, TP or CA. This is significant because it indicates that a viable Agriculture Resource may be designated and zoned for a park use, i.e. not an agricultural use without a determination agricultural viability. This project, then, is not subject to General Plan Policy 5.13.20.

The General Plan amendments and Rezoning do not conflict with any specific plan as none has been adopted for this planning area. No change is proposed to the resource and constraints designations applicable to the site which includes slopes over 30% and the protection of Kings Creek.

County Code 13.10.355 (Special standards and conditions) requires that any new or expanded PR use provide a Master Site Plan. The required elements of that plan are: a description of the proposed uses; proposed immediate and future phases of construction; anticipated future boundary expansions; provisions for adequate access

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

and public services; a management plan for the conservation and use of the open space resource. The applicant provided a Master Site Plan (see Attachment 19 and Attachment 2) with each of these elements. The proposed uses, as described earlier, would include: parking for visitors, restrooms, trail connections; an amphitheater for educational and other events; a visitors center with offices for State Park staff, restrooms, a catering kitchen, a meeting/gathering space, space for exhibits and park information. The park entrance would be developed in two phases (see "Detailed Project Description") with the ultimate intent of transferring the property to State Parks. Until that transfer has occurred, the subject parcel would be operated with the same days and hours of operation as Castle Rock State Park to ensure that adequate access and public services are provided (see "Public Services" for the discussion about public services/facilities). As a part of the project, the Christmas tree area would be restored to native plantings in a three-phase restoration plan (see "Geology and Soils" item three for a discussion of this restoration). Once the entrance project is constructed, Sempervirens Fund would manage the parcel using best management practices with the eventual intent to transfer the property to State Parks. State Parks then, would incorporate the parcel into its management plan for Castle Rock State Park. Sempervirens Fund will develop a stewardship fund to support the ongoing management of the site and protection of the open space resource.

The proposed variance to allow the sign to be 48 square feet in size instead of the 12 square feet allowed by County Code would not result in any environmental impacts. The size of the sign is appropriate given the length of the parcel's frontage and size of the parcel. The larger sign would facilitate the orderly access of the parcel by members of the public and emergency responders. The sign would be located in such a way as to avoid any impacts to the line of sight for drivers exiting the parcel.

2.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion: No habitat conservation plan or natural community conservation plan has been adopted that includes the subject parcel.

3.	Physically divide an established community?	☐	☐	☐	☒

Discussion: The project would not include any element that would physically divide an established community.

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

Q. POPULATION AND HOUSING

Would the project:

1.	Induce substantial 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)?	☐	☐	☐	☒

Discussion: The proposed project would not induce population growth in the area because the project does not propose any physical or regulatory change that would remove a restriction to or encourage population growth in an area including, but not limited to the following: new or extended infrastructure; new commercial or industrial facilities; large-scale residential development; accelerated conversion of homes to commercial or multi-family use; or regulatory changes including General Plan amendments that would induce growth, specific plan amendments, zone reclassifications, sewer or water annexations; or LAFCO annexation actions. The project is intended to enhance the amenities at Castle Rock State Park, a use that has been in the immediate vicinity of the subject parcel for many years.

2.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Discussion: The subject parcel currently is developed with a house that has been abandoned for many years. This house would be demolished as a part of the proposed project. The loss of one unused house does not represent a substantial displacement of existing housing. There would be a less than significant impact.

3.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion: The proposed project would not displace a substantial number of people since the site is currently operated as a Christmas tree farm with no on-site residential uses.

R. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
1. Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal community, 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?	☐	☒	☐	☐

Discussion: The potential to 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, 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 were considered in the response to each question in Section III of this Initial Study.

Resources that have been evaluated as significant would be potentially impacted by the project, particularly biological and archaeological resources. However, mitigation has been included that clearly reduces these effects to a level below significance. This mitigation includes plant surveys by a qualified biologist to ensure that no protected species would be negatively affected; measures to protect nesting birds and roosting bats; and a mitigation to cease construction and contact the appropriate agencies if archaeological resources or human remains are found. As a result of this evaluation, there is no substantial evidence that, after mitigation, significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
2. 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)?	☐	☐	☒	☐

Discussion: In addition to project specific impacts, this evaluation considered the projects potential for incremental effects that are cumulatively considerable. As a result of this evaluation, no impacts were determined to be potentially significant cumulative effects. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion: In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to specific questions in Section III. As noted above, mitigations have been included to address potential impacts to biological and archaeological impacts to reduce them to less than significant. There were no impacts warranting mitigation for other issues which might cause substantial adverse effects on human beings. Traffic and noise were the most likely impacts to affect the adjacent neighbors. Technical reports, however, demonstrated that the impacts would be less than significant. As a result of this evaluation, there is no substantial evidence that, after mitigation, there are adverse effects to human beings associated with this project. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

IV. REFERENCES USED IN THE COMPLETION OF THIS ENVIRONMENTAL REVIEW INITIAL STUDY

County of Santa Cruz *1994 General Plan for the County of Santa Cruz, California.* Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

County of Santa Cruz and the Santa Cruz County Regional Transportation Commission *2011* Santa Cruz County Bicycle Plan

County of Santa Cruz. *Geographic Information System*

Department of Conservation 2010. Santa Cruz County Important Farmland 2010ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scr10.pdf

Environmental Health Hazardous Materials Site List

Santa Clara Valley Transportation Authority *2008 Santa Clara Countywide Bicycle Plan*

V. ATTACHMENTS

1. *Location Map, Map of Zoning Districts; Map of General Plan Designations; and Assessor's Parcel Map.*
2. *Master Site Plan prepared* by Callander Associates 7/15/2013 *and Preliminary Improvement Plans*, prepared by Sherwood Design Engineers 7/15/13. (Improvement Plans on file at the County of Santa Cruz Planning Department)
3. *Letter from Chet Bardo, Santa Cruz District Superintendent of California State Parks,* 5/17/13
4. *Design Review Book* 2013 Callander Associates
5. *Program Statement* 2013 Callander Associates
6. *Parking Management Plan* W-trans 7/17/13
7. *Geotechnical Investigation*, prepared by GeoForensics Inc., dated 2/14/12
8. *Geotechnical Review Letter*, prepared by Carolyn Burke, dated 12/23/13
9. *Review of Erosion and Relandscaping Plans* by GeoForensics Inc., dated 8/27/13; and *Erosion Supplement* by GeoForensics Inc., dated 8/20/13
10. *Discretionary Application Comments*
11. *Biological Resources Evaluation* by Ascent Environmental, dated 4/2014
12. *Acceptance Letter for Biological Resources Evaluation and Site Assessment* by Mathew Johnston, County of Santa Cruz Environmental Coordinator, dated 4/11/14
13. *APAC minutes and staff report* by Annette Olson dated 12/19/13
14. *Agricultural Viability Report* by Rush and Associates dated 5/1/06
15. *Cultural Resources Survey Report* by ECORP Consulting Inc. dated 1/13.

16. *Transportation Impact Analysis* by W-trans dated 3/4/14
17. *Noise* Analysis by Ascent Environmental dated 1/13
18. *Air Quality* Analysis by Ascent Environmental dated 1/13
19. *Master Site Plan* by Callander Associates, no date

County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

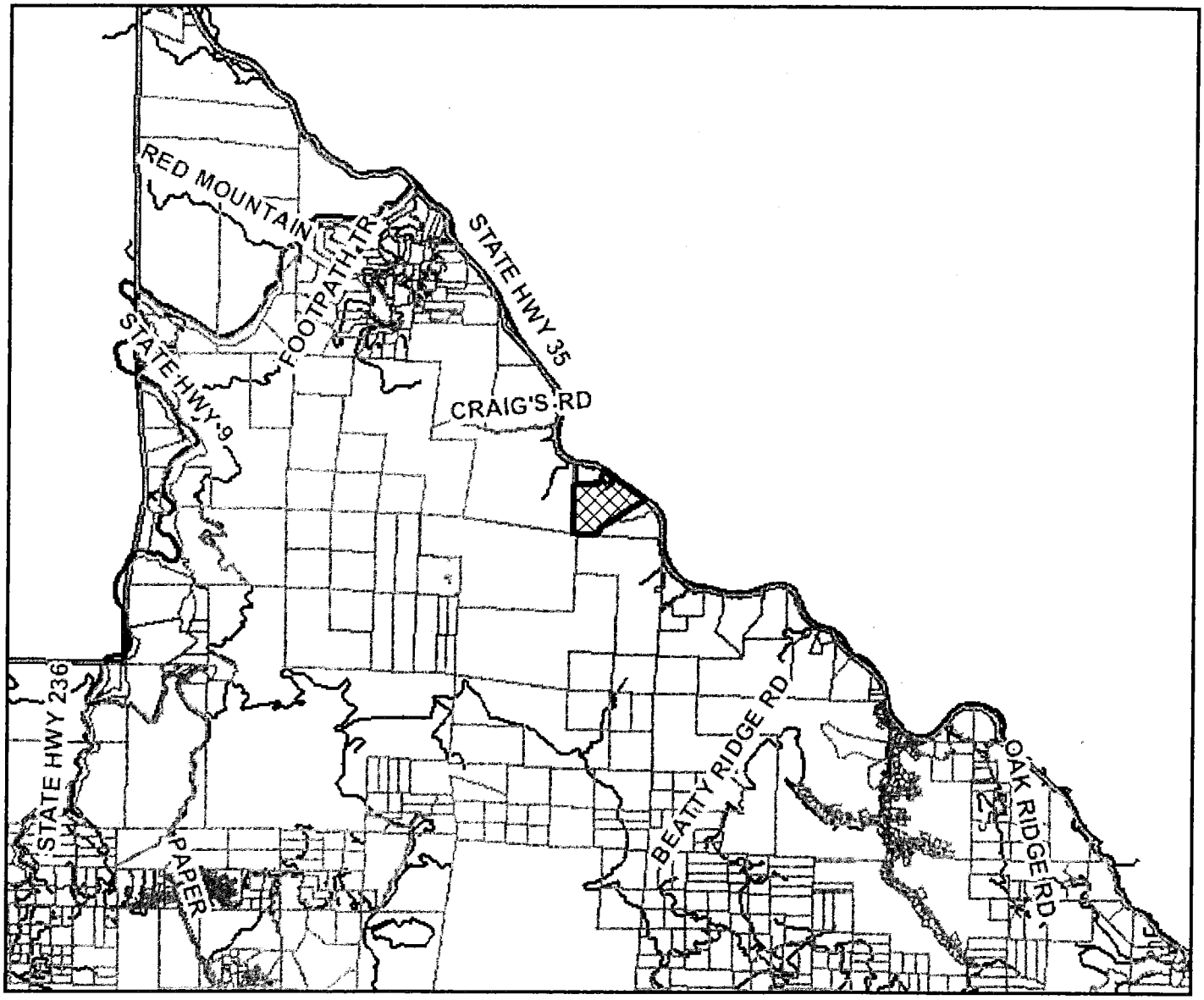
MITIGATION MONITORING AND REPORTING PROGRAM for Application No. 131055, February 24, 2014

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Biological Resources					
BIO-1	Have 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?	To minimize potential disturbance to nesting birds, project activities, including vegetation removal and building demolition, shall occur during the non-breeding season (September 16-February 14), unless it is not feasible to do so, in which case the following measures shall also be applied. During trail construction, road improvements, and other activities, removal of trees greater than six inches in diameter at breast height (DBH) shall be limited to the greatest degree possible. If construction activity is scheduled to occur during the nesting season (February 15 to September 15), a qualified biologist shall conduct preconstruction surveys and to identify active nests on and within 500 feet of the project site that could be affected by project construction. The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction in a particular area. If no nests are found, no further mitigation is required. If active nests are found, impacts on nesting birds, including the olive-sided flycatcher and loggerhead shrike, shall be avoided by establishment of appropriate buffers around the nests. No project activity shall commence within the buffer area until a qualified biologist confirms that any young have fledged or the nest is no longer active. A 500-foot buffer around raptor nests and 50-foot buffer around songbird nests are generally adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with DFW & USFWS depending on site specific conditions. For trail construction, use of non-power hand-tools may be permitted within the buffer area if the behavior of the nesting birds would not be altered as a result of the construction. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has the potential to adversely affect the nest.	Project Applicant	Compliance monitored by the County Planning Department	To be implemented during project design, construction and monitoring period.
BIO-2		<u>Olive-sided flycatcher and Loggerhead shrike</u> The primary factor affecting breeding success in murrelets has been identified as high nest predation by corvids - Steller's jays and common ravens. In order to ensure the use of the proposed facility does not have a significant negative impact on nesting marbled murrelets in the Castle Rock Park vicinity, prior to building permit issuance, the entrance facility shall prepare and implement a corvid-management plan that includes permanent signage regarding the threats to murrelets and a trash management	Project Applicant	Compliance monitored by the County Planning Department	To be completed prior to issuance of the building permit.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		program.			
BIO-3		To minimize potential disturbance to olive-sided flycatcher and loggerhead shrike, the project shall first seek to avoid removing vegetation and plants that are favored by these species for nesting. The olive-sided flycatcher favors montane forests. Given that the area of development would be located north of the portion of the montane forest which is located on-site, it is unlikely that olive-sided flycatcher nesting sites would be affected. However, to ensure that any potential disturbance is minimized, the mitigations identified in Mitigation Bio-1 shall be implemented. For the loggerhead shrike, which favors thorny shrubs or trees, the same protocol shall be followed.	Project Applicant	Compliance monitored by the County Planning Department	To be implemented during project design, construction and monitoring period.
BIO-4		Surveys for roosting bats on the project site will be conducted by a qualified biologist. Surveys will consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergence survey to note the presence or absence of bats. The type of survey will depend on the condition of the buildings. If no bat roosts are found, then no further study is required. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts, but are not required. If roosts of pallid or Townsend's big-eared bats are determined to be present and must be removed, the bats shall be excluded from the roosting site before the facility is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with DFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts shall be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The any lost roost, shall be replaced in consultation with DFW and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the structures shall be removed or sealed.	Project Applicant	Compliance monitored by the County Planning Department	Prior to site disturbance.
BIO-5	Produce nighttime lighting that would substantially illuminate wildlife habitats?	All exterior lighting shall be directed away from the corridor and adjacent properties, light sources shall not be visible from the riparian area or surrounding properties, light sources must be shielded by permanent, landscaping, fixture design or other physical means, lighted parking areas shall utilize low-rise light standards to a maximum height of 15 feet, exterior lighting shall be high-pressure sodium vapor, metal halide, fluorescent, or equivalent energy-efficient fixtures.	Project Applicant	Compliance monitored by the County Planning Department	To be implemented during project design, construction and operation.
Cultural Resources					
CUL-1	Cause a substantial	The following measures shall be clearly identified on all grading plans and	Project Applicant	Compliance	To be implemented

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	construction drawings: Pursuant to Sections 16.40.040 of the Santa Cruz County Code, if archeological resources are uncovered during construction, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.		monitored by the County Planning Department	during construction.
CUL-2	Disturb any human remains, including those interred outside of formal cemeteries?	The following measures shall be clearly identified on all grading plans and construction drawings: Pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.	Project Applicant	Compliance monitored by the County Planning Department	To be implemented during construction.

Location Map



LEGEND

- APN: 088-081-12
- Assessors Parcels
- Streets
- State Highways
- County Boundary

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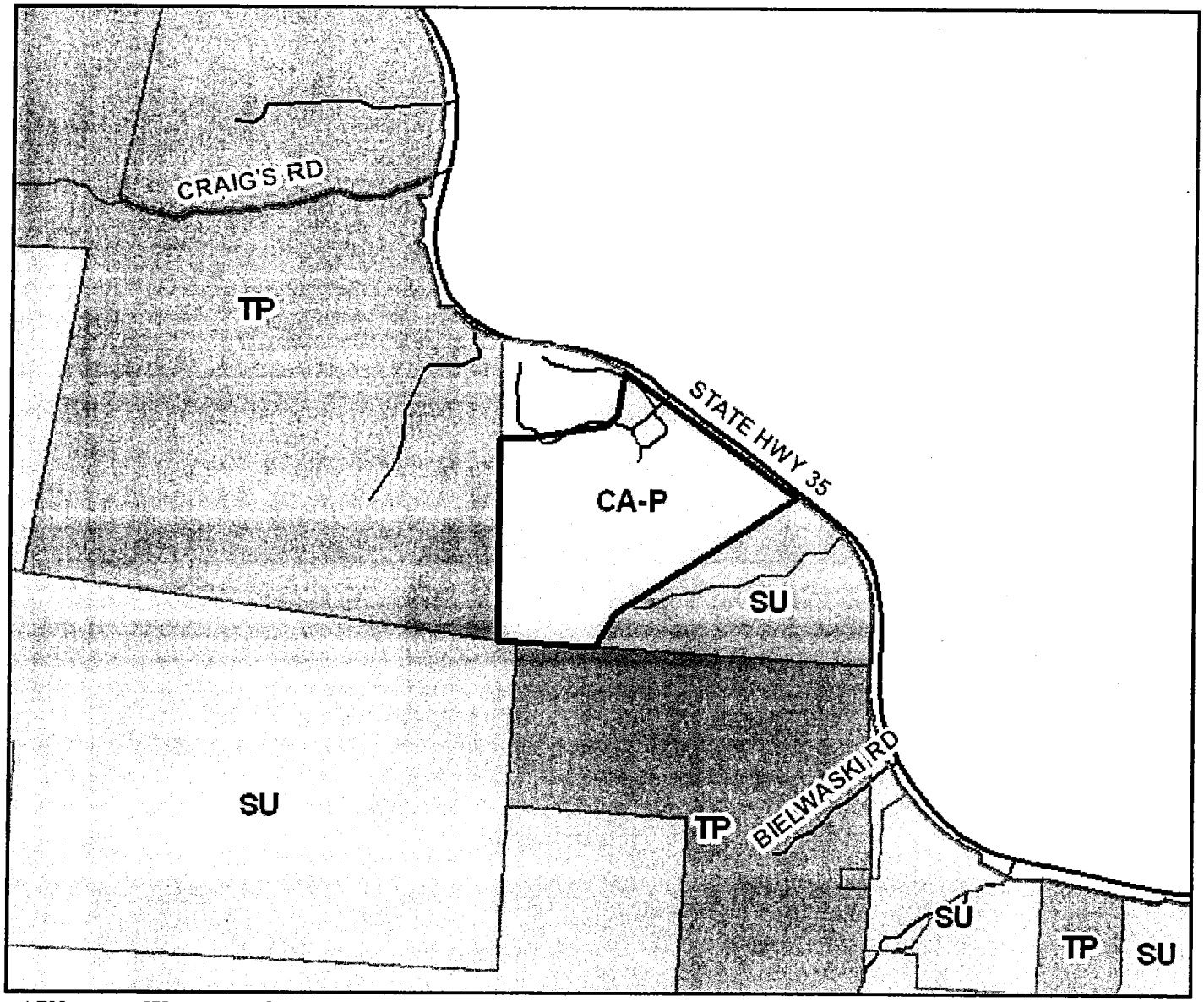
Map Created by
County of Santa Cruz
Planning Department
March 2013

ATTACHMENT 1

Zoning Map



LEGEND

- APN: 088-081-12
- Assessors Parcels
- Streets
- State Highways
- County Boundary
- AGRICULTURE COMMERCIAL
- SPECIAL USE
- TIMBER PRODUCTION

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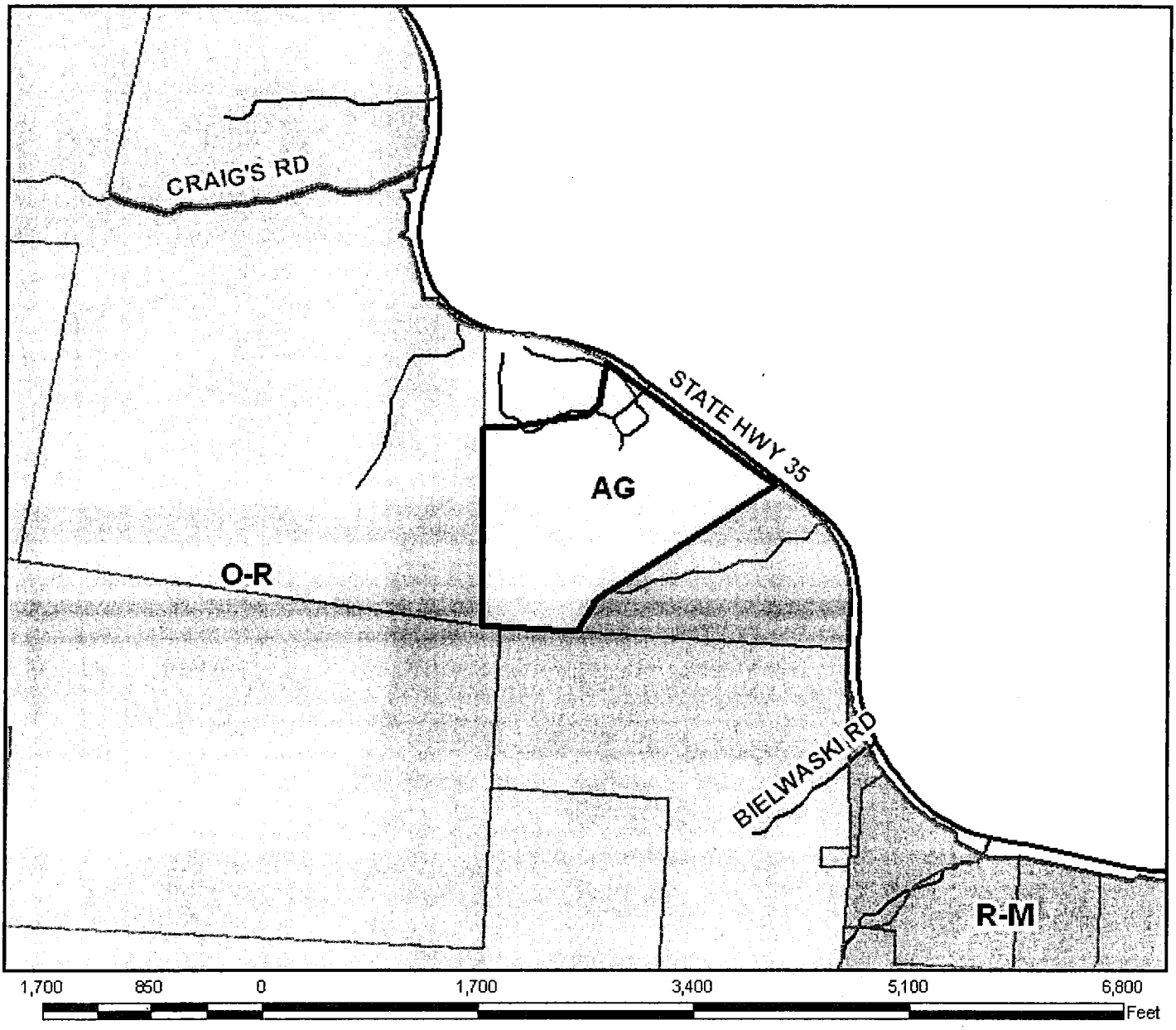
Map Created by
County of Santa Cruz
Planning Department
March 2013

ATTACHMENT 1

General Plan Designation Map



LEGEND

- APN: 088-081-12
- Assessors Parcels
- Streets
- State Highways
- County Boundary
- Agriculture
- Parks and Recreation
- Residential-Mountain

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Map Created by
County of Santa Cruz
Planning Department
March 2013

ATTACHMENT

FOR TAX PURPOSES ONLY

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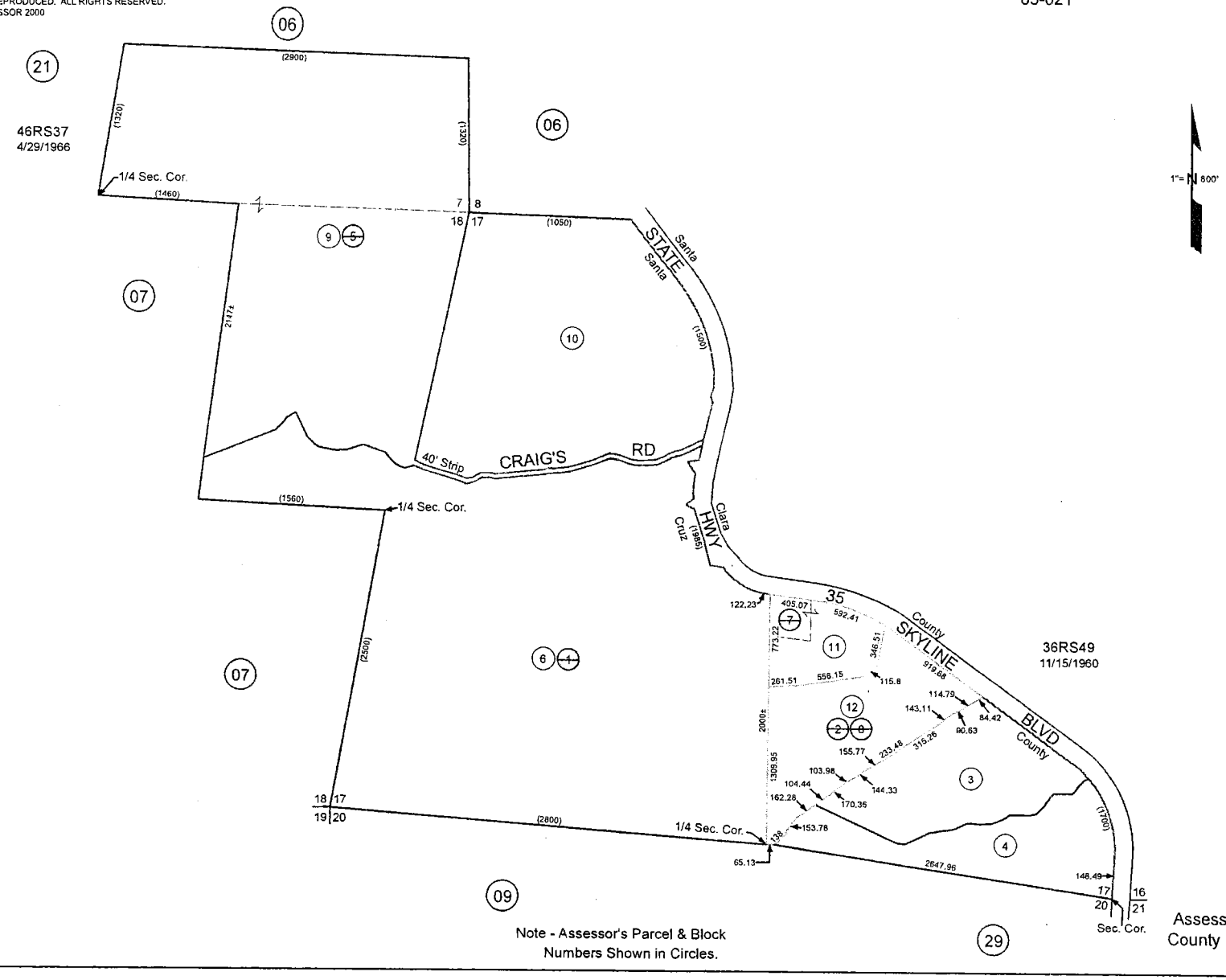
POR. SECS. 7, 17 & 18, T.8S., R.2W., M.D.B. & M.

Tax Area Code
65-021

88-08

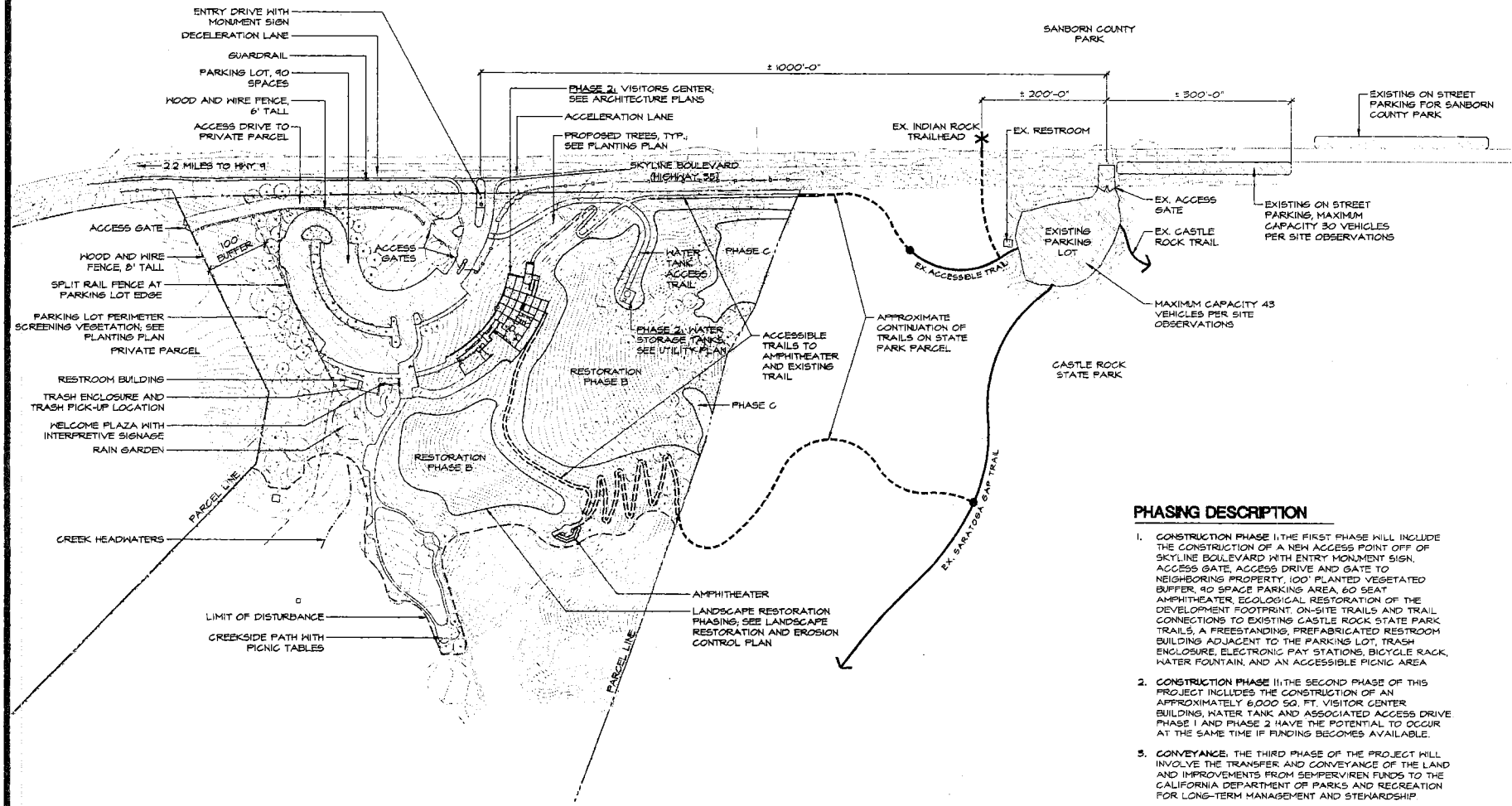
ATTACHMENT 1



Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 88-08
County of Santa Cruz, Calif.
Jan., 2000

Electronically Redrawn 1/24/00 mvm
Rev. 8/31/01 mvm (changed page refs.)
Rev. 6/11/08 mc (8-0018275, LBA 1-11 & 12)
Rev 3/14/13 CB (Cor fmework on 1-3 & 12 as per 8-0018272)



PHASING DESCRIPTION

1. **CONSTRUCTION PHASE I:** THE FIRST PHASE WILL INCLUDE THE CONSTRUCTION OF A NEW ACCESS POINT OFF OF SKYLINE BOULEVARD WITH ENTRY MONUMENT SIGN, ACCESS GATE, ACCESS DRIVE AND GATE TO NEIGHBORING PROPERTY, 100' PLANTED VEGETATED BUFFER, 90 SPACE PARKING AREA, 60 SEAT AMPHITHEATER, ECOLOGICAL RESTORATION OF THE DEVELOPMENT FOOTPRINT, ON-SITE TRAILS AND TRAIL CONNECTIONS TO EXISTING CASTLE ROCK STATE PARK TRAILS, A FREESTANDING, PREFABRICATED RESTROOM BUILDING ADJACENT TO THE PARKING LOT, TRASH ENCLOSURE, ELECTRONIC PAY STATIONS, BICYCLE RACK, WATER FOUNTAIN, AND AN ACCESSIBLE PICNIC AREA
2. **CONSTRUCTION PHASE II:** THE SECOND PHASE OF THIS PROJECT INCLUDES THE CONSTRUCTION OF AN APPROXIMATELY 6,000 SQ. FT. VISITOR CENTER BUILDING, WATER TANK AND ASSOCIATED ACCESS DRIVE PHASE I AND PHASE 2 HAVE THE POTENTIAL TO OCCUR AT THE SAME TIME IF FUNDING BECOMES AVAILABLE.
3. **CONVEYANCE:** THE THIRD PHASE OF THE PROJECT WILL INVOLVE THE TRANSFER AND CONVEYANCE OF THE LAND AND IMPROVEMENTS FROM SEMPERVIREN FUNDS TO THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION FOR LONG-TERM MANAGEMENT AND STEWARDSHIP

0 40' 80' 160'

Callander Associates
Landscape Architecture
Urban Design
Land Planning
Park and Recreation Planning
Environmental Planning
311 Seventh Ave.
San Mateo, CA 94401
T 650.373.1313
F 650.344.5290

Revisions

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Sempervirens Fund

MASTER SITE PLAN

CASTLE ROCK STATE PARK

ROBERT C. KIRKWOOD GATE AT SEMPERVIRENS RANCH
15455 Skyline Blvd. - APN 089-081-12
Santa Cruz County, California

Date	7/16/13
Scale	As Shown
Drawn By	CS
Checked	TZ
Project No.	11.057
Cadd File	11057MS

Sheet No. L2
2 of 51

ATTACHMENT C

EXHIBIT C

State of California • Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
P.O. Box 942896 • Sacramento, CA 94296-0001

Edmund G. Brown Jr., *Governor*
Major General Anthony L. Jackson, USMC (Ret), *Director*

May 17, 2013

Ms. Annette Olsen
Project Planner
Development Review
Planning Department
County of Santa Cruz
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

Dear Ms. Olsen:

State Parks has had a very long and successful partnership with Sempervirens Fund. It started with the establishment of Big Basin Redwoods State Park in 1902, and has deepened and expanded ever since.

Two years ago we embarked on a park design at Castle Rock with Sempervirens Fund and others after Sempervirens acquired the adjoining property, previously owned by Robert and Mary Ann Whalen. This property, which was identified in the Castle Rock State Park General Plan, has been long considered the best location for the entrance to the park, but only became available recently. We were obviously gratified when Sempervirens secured this important site three years ago. We were also pleased when we learned Robert Kirkwood had generously donated half the funds needed to acquire the Whalen property, design a new state park entrance, and assist with funding of the new construction.

During the last year and a half, State Parks has worked closely with Sempervirens Fund to select the design team and have worked with them to design a new state park entrance appropriate to the site and consistent with our needs and requirements. The application Sempervirens Fund submitted to the County of Santa Cruz in March is the project we mutually agreed upon and would very much like to complete. It would be a vast improvement over the current entrance and meet all state standards and specifications for inclusion into the California State Park system.

State Parks is very interested in incorporating this entrance into Castle Rock State Park and relocating all of our existing day-use parking to this new, preferred location. It would become a focal point for park visitors and give them more options for discovering this 5,400-acre park that includes rock climbing and bouldering, incredible vistas of the San Lorenzo River watershed, and 33 miles of hiking trails. Sempervirens Funds has also agreed to work with us on establishing a Castle Rock stewardship fund, which will assist in funding park programming so visitors become better aquatinted with this park and its outstanding recreational opportunities.

ATTACHMENT

While it is impossible to know exactly when this transfer will take place or when the entrance will become incorporated into Castle Rock State Park, we are committed to the success of this project and we will continue to work closely with Sempervirens to ensure that these important improvements to the park are made available to the visiting public.

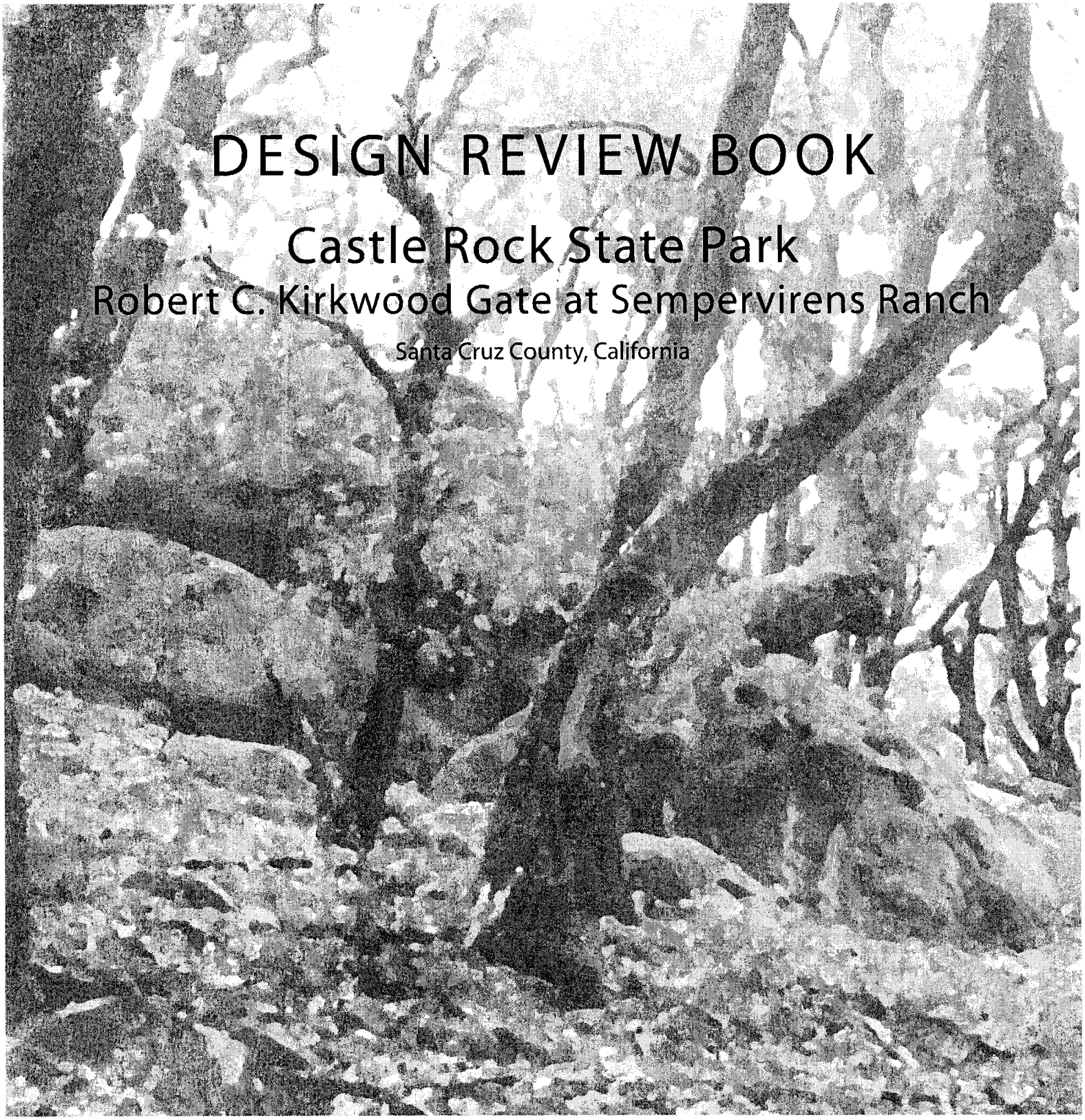
Please know that we very much support this project and urge the Santa Cruz County's Agricultural Commission, Planning Commission, and Board of Supervisors to approve it. This new entrance will modernize the park, provide new facilities, a safer entrance, and will welcome Santa Cruz visitors for generations to come.

Sincerely,

Chet M. Bardo
Santa Cruz District Superintendent
California State Parks

Cc: Reed Holderman. Sempervirens Fund

ATTACHMENT 2



DESIGN REVIEW BOOK

Castle Rock State Park

Robert C. Kirkwood Gate at Sempervirens Ranch

Santa Cruz County, California

prepared for

Sempervirens Fund

February 15, 2013

Callander Associates
Landscape Architecture, Inc.

ATTACHMENT

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Landscape Boulders
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Building Materials

Materials and Color Samples

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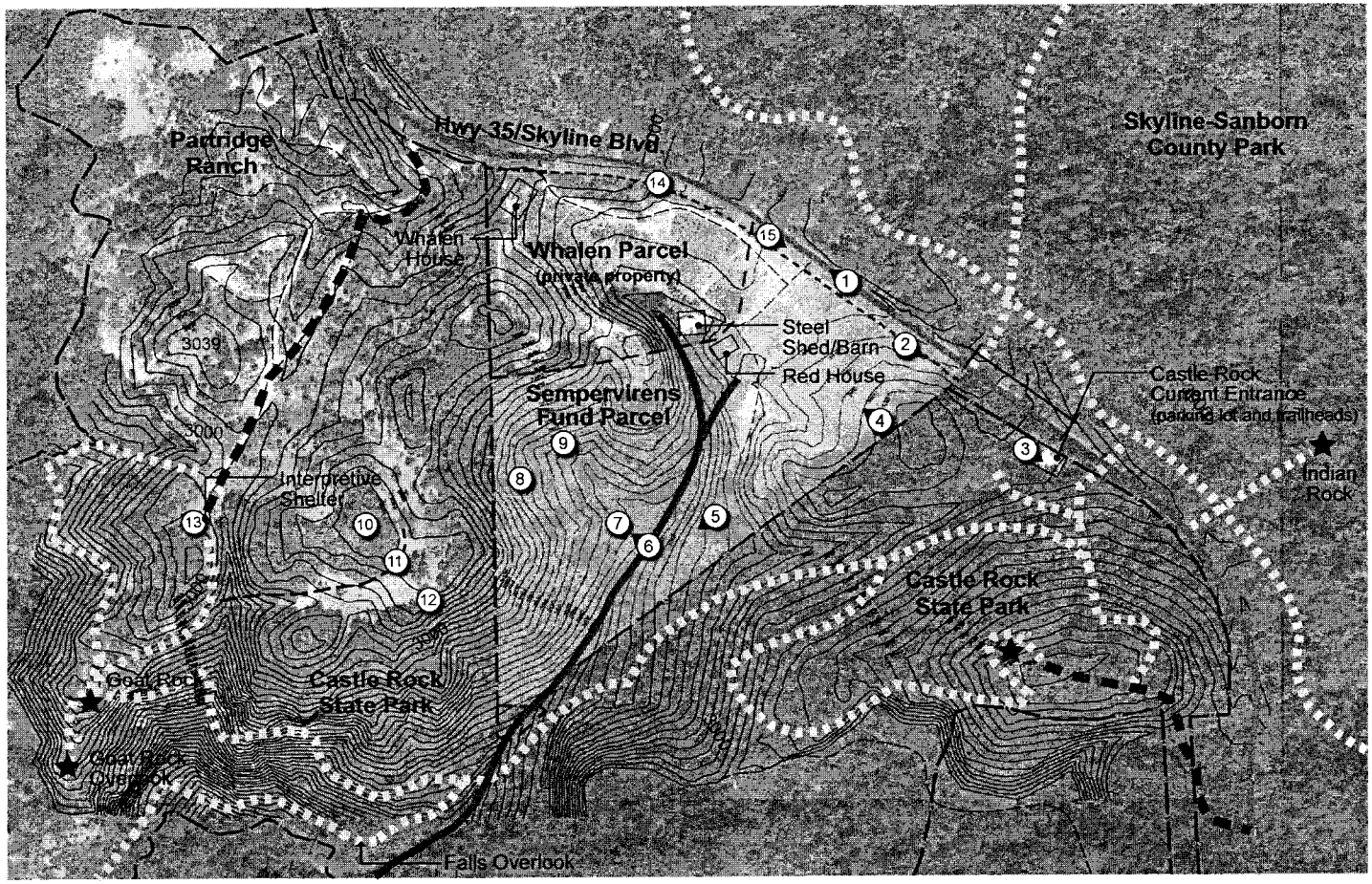
ATTACHMENT 4

CASTLE ROCK STATE PARK

Robert C. Kirkwood Gate

EXISTING CONDITIONS

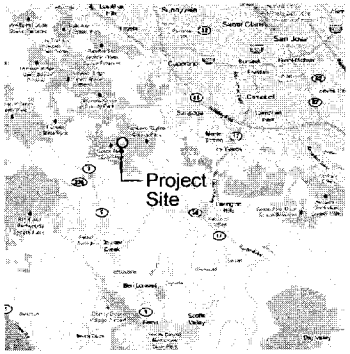
November 20, 2012



Legend

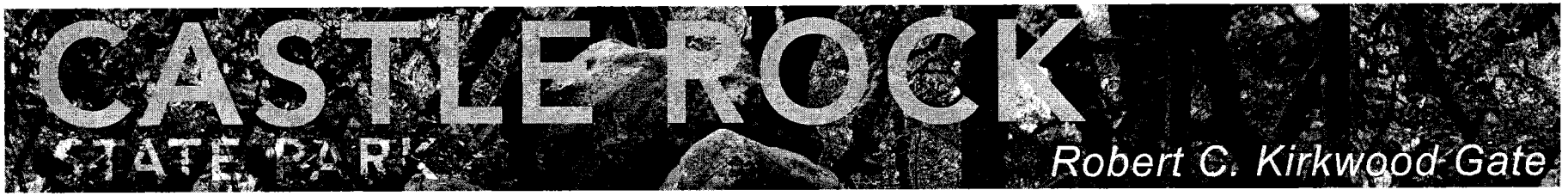
- Property Line
- Trail
- Light Duty Paved Road (for service vehicles only)
- Unpaved Road
- Primary Highway
- Creek
- Point of Interest

Vicinity Map



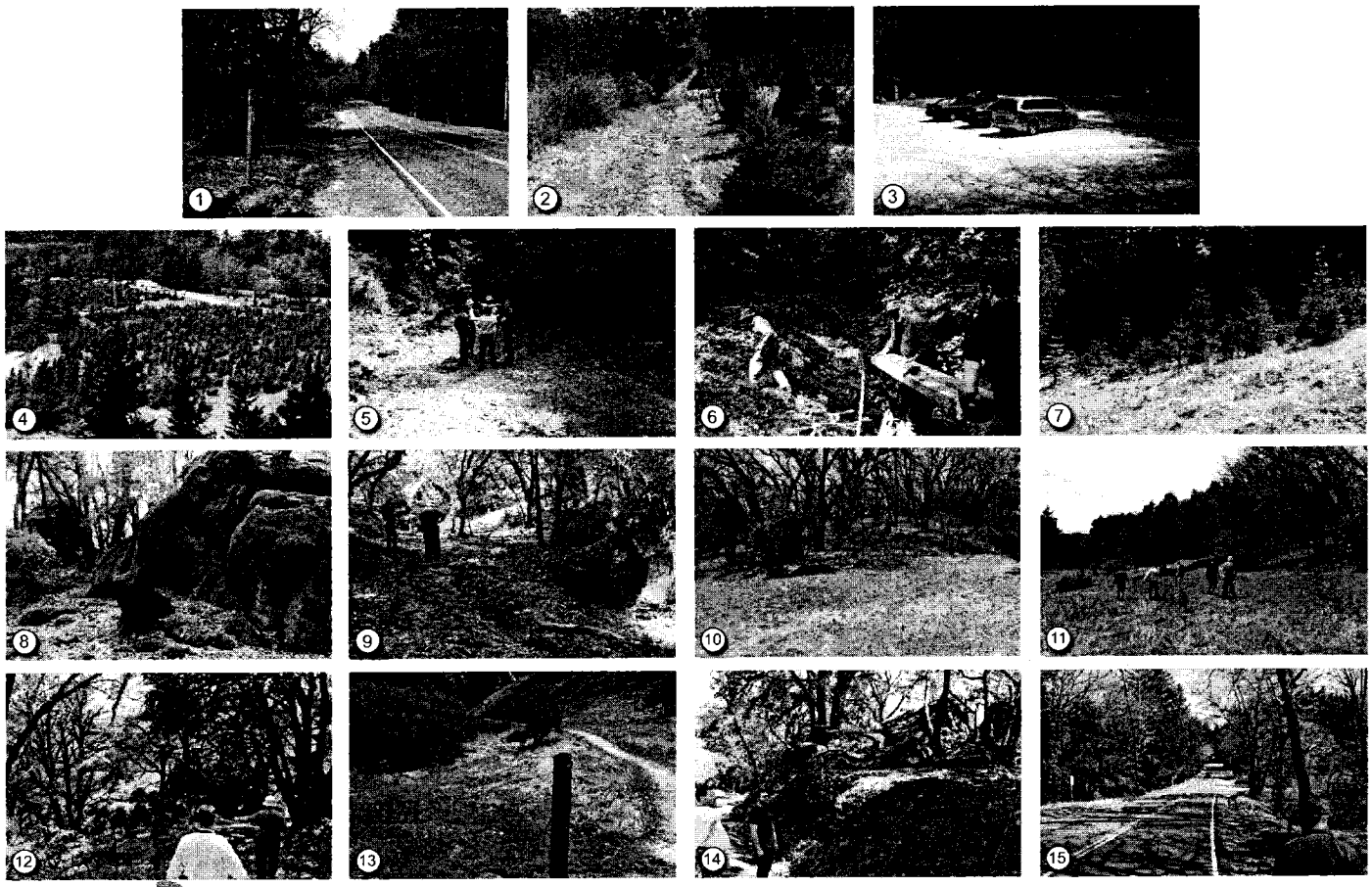
Callander Associates | BSA Architects | Ascent Environmental | Sherwood Engineers

0 75' 150' 300'



SITE PHOTOS

November 20, 2011



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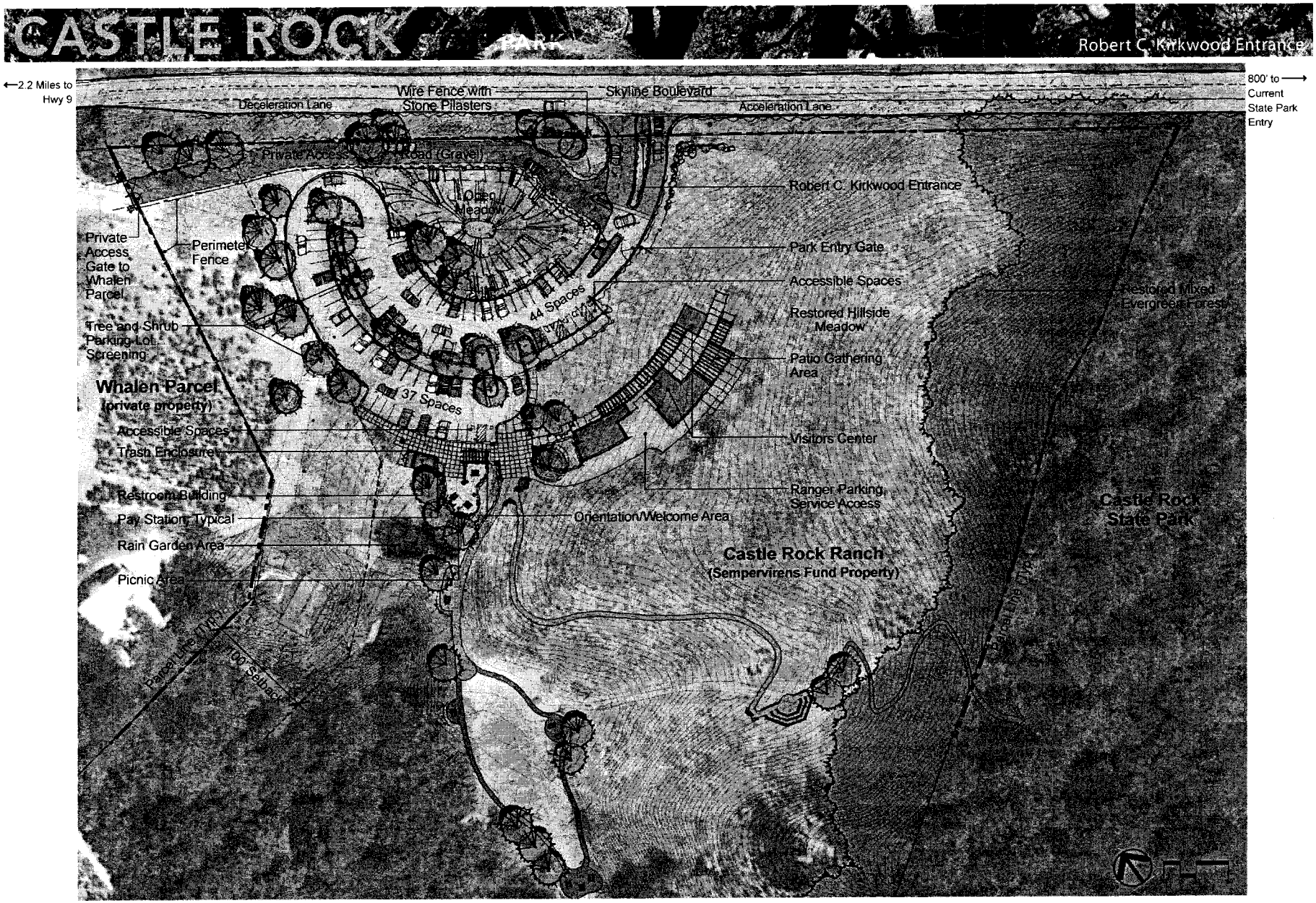
ATTACHMENT 2

CASTLE ROCK



CONCEPTUAL PLAN

November 20, 2012

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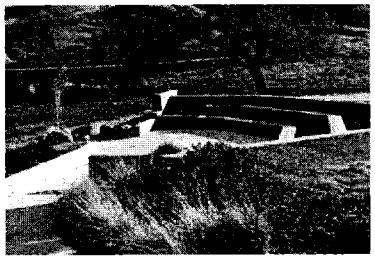
CASTLE ROCK STATE PARK

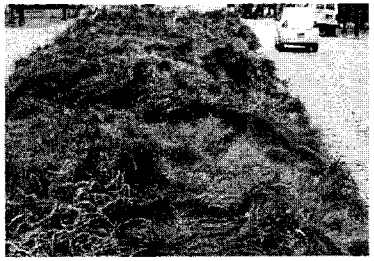
Robert C. Kirkwood Gate

SITE IMAGERY



Amphitheater and Overlook

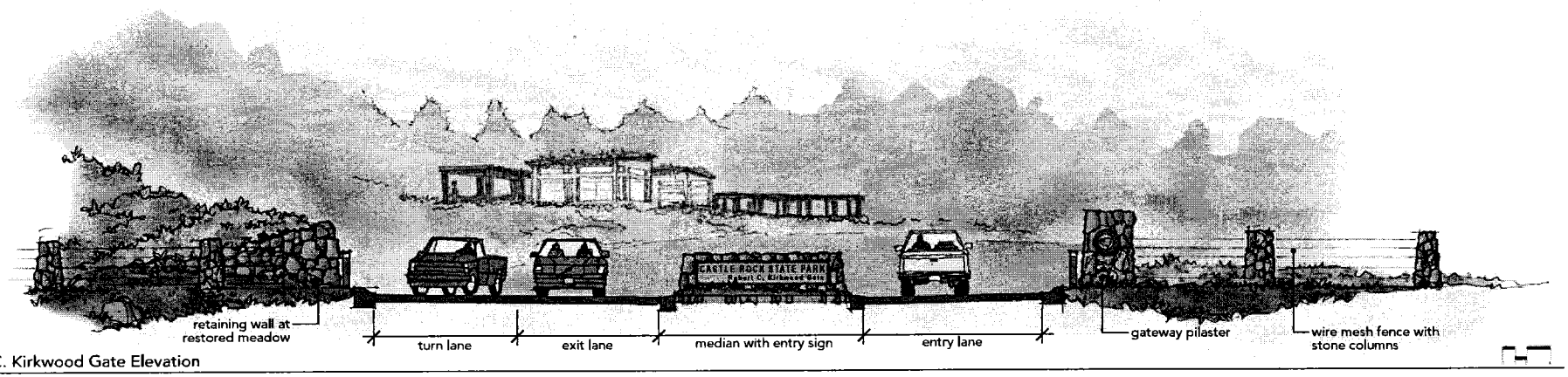
Meadow Trail



Entry Median Fits Road to Hillside

Screened Parking

Permeable Gravel Pavement

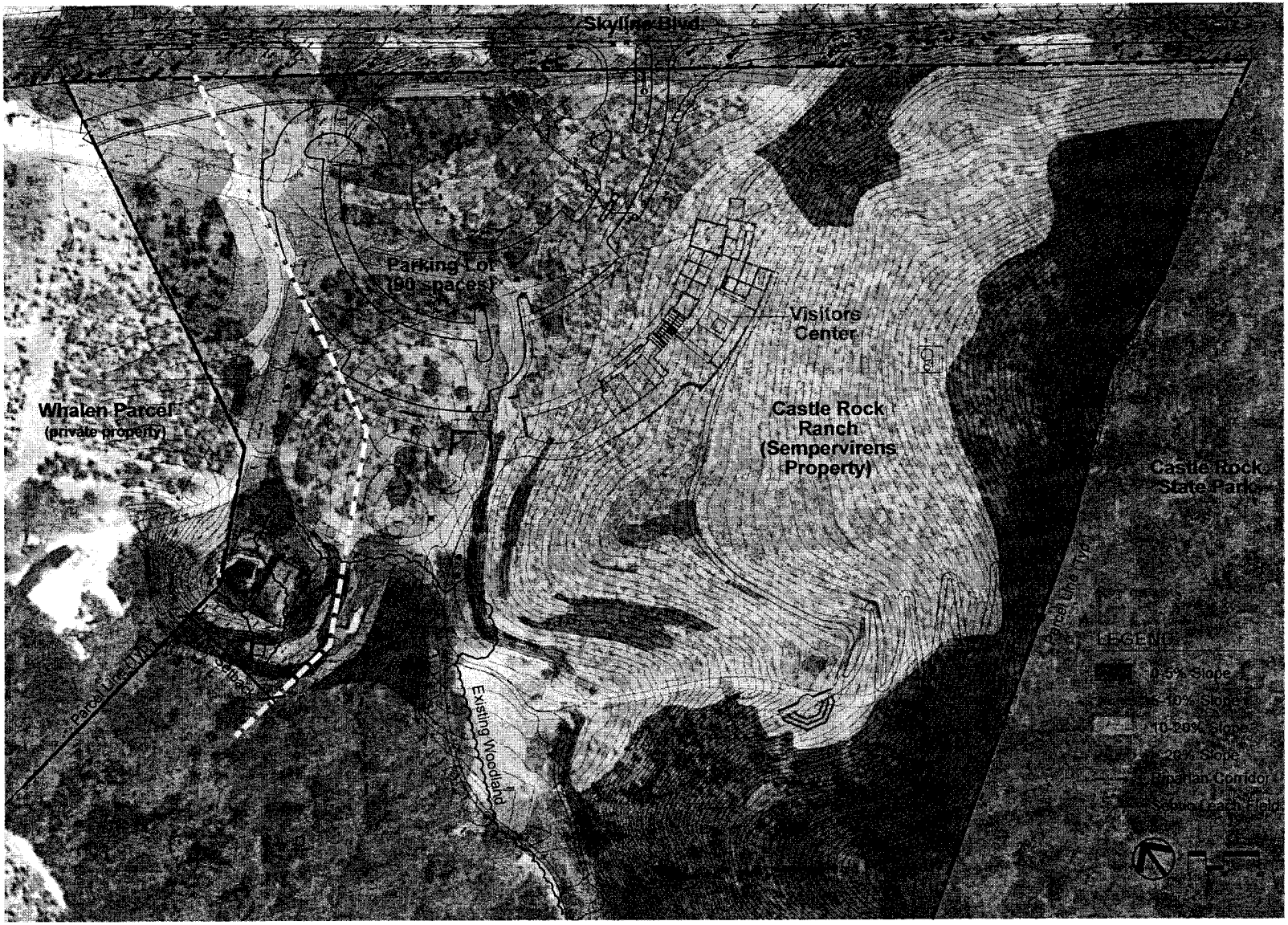


Robert C. Kirkwood Gate Elevation

Callander Associates | BSA Architects | Ascent Environmental | Sherwood Engineers | Neuwirth Associates

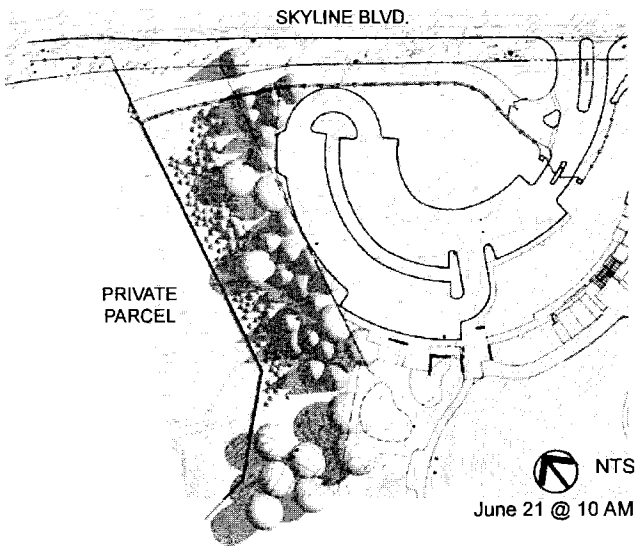
CASTLE ROCK

Robert C. Kirkwood Entrance

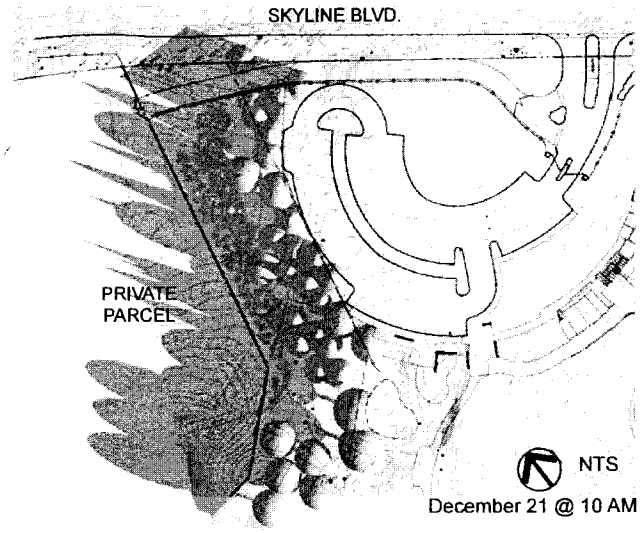


SITE CONSTRAINTS

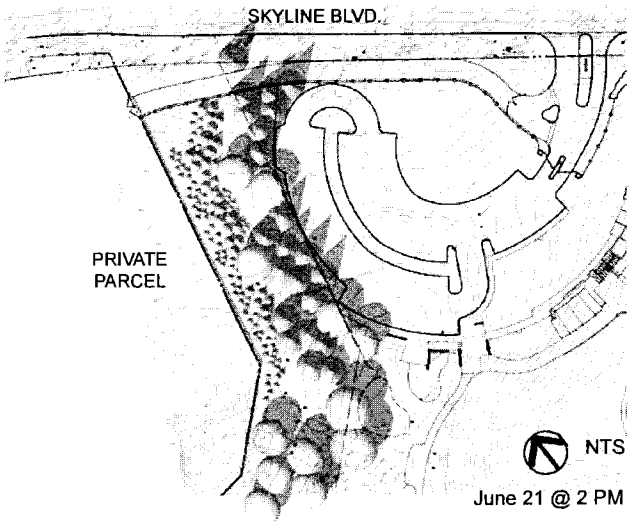
July 15, 2012



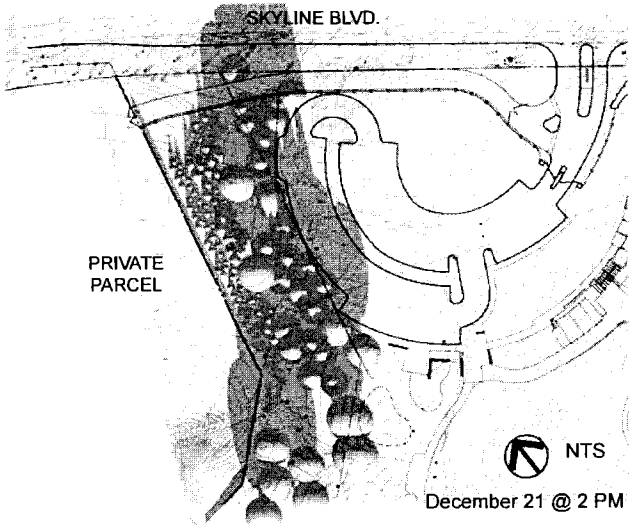
June 21 @ 10 AM



December 21 @ 10 AM



June 21 @ 2 PM



December 21 @ 2 PM

Notes:

1. Study depicts proposed fence, trees, and shrub planting within 100' of the adjacent private parcel.
2. The following predicted mature heights of trees and shrubs were used to create this study's model

   Quercus Agrifolia = 70'
   Pseudotsuga Menziesii =100'
   Rhamnus Californica= 15'
   Rhus Integrifolia = 10'
   Prunus Ilicifolia = 30'
   Heteromeles Arbutifolia= 25'
   Ceanothus Thyrsiflorus =20'
   Acer Macrophyllum = 90'

3. Refer to the Planting Plan for details of plant locations and species.
4. A latitude of 37° N was used to create this study.

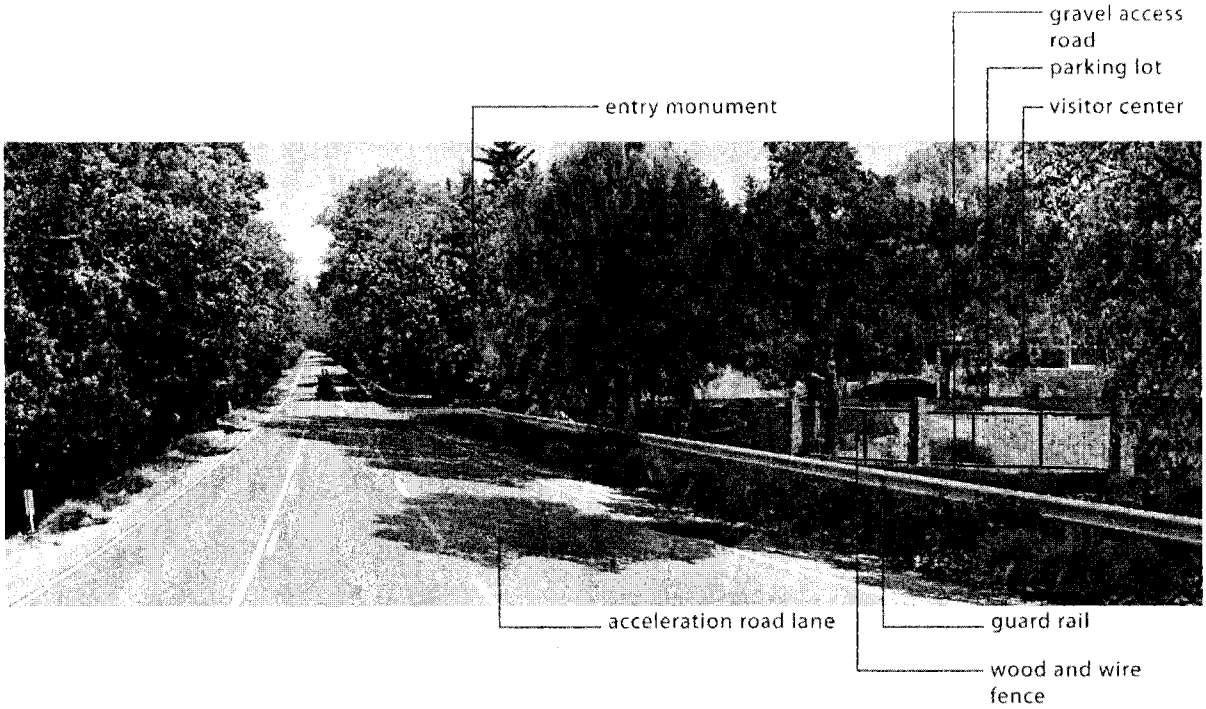
SHADOW STUDY
June 20, 2013

Callander Associates

VISUAL RENDERINGS

View from Southbound Skyline Boulevard,
taken from approximately the shared driveway entrance to Sempervirens property.

Existing Conditions



Proposed Conditions

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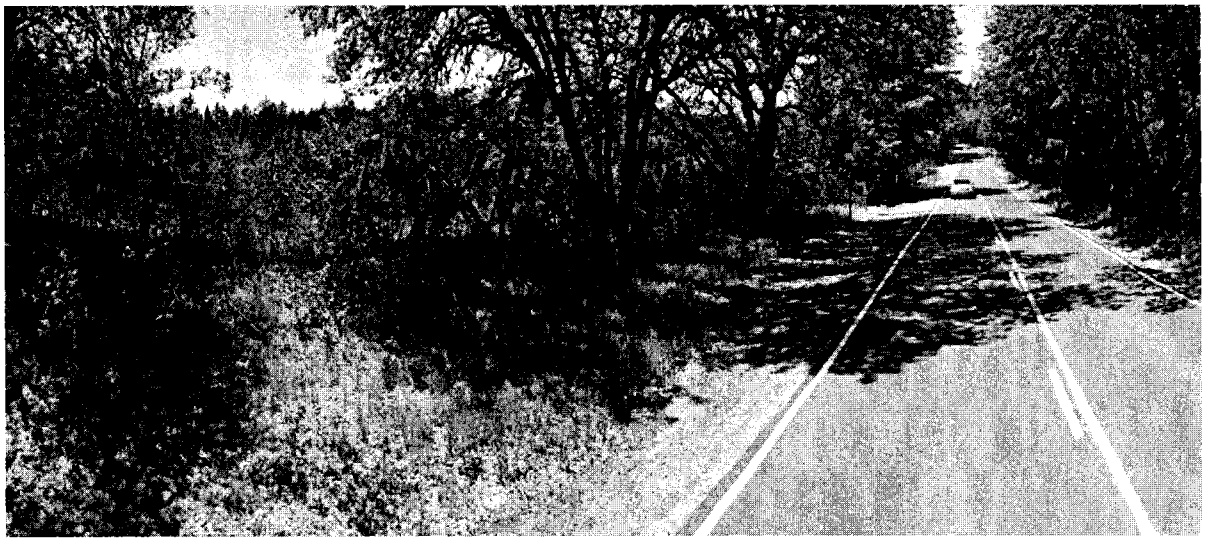
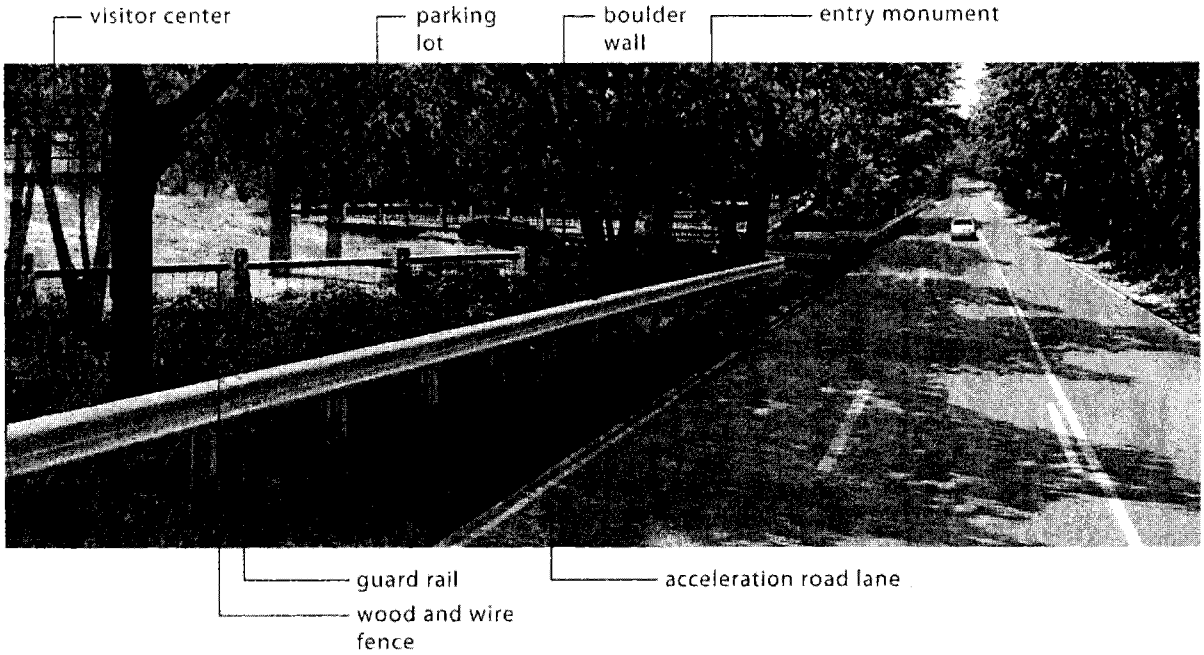
VISUAL RENDERINGS

View from Nouthbound Skyline Boulevard,
taken from approximately 100' south of the proposed driveway entrance to Sempervirens property.



Existing Conditions



Proposed Conditions

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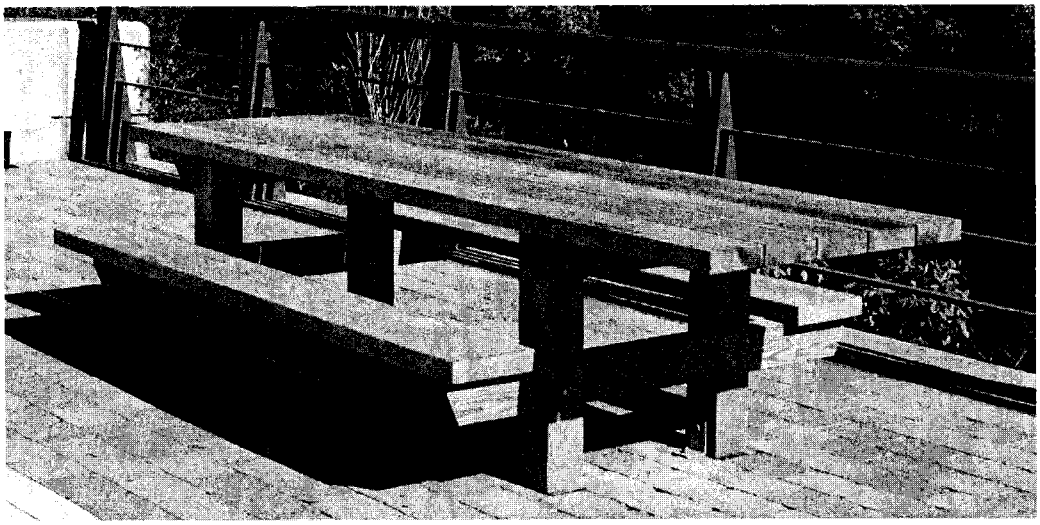
Trash and Recycling Receptacle

Description: Steel, animal-proof trash and recycling receptacle manufactured by Hid-A-Bag. Available with precast mounting pad, ADA-accessible doors, side hinge door, and decorative recycled plastic siding.



Picnic Table

Description: Timberform Model 2243-8, 8'-0" length rustic table made of Douglas Fir. Available in an ADA-accessible configuration. Surface mounted to concrete pads. Finished with a clear protective stain.

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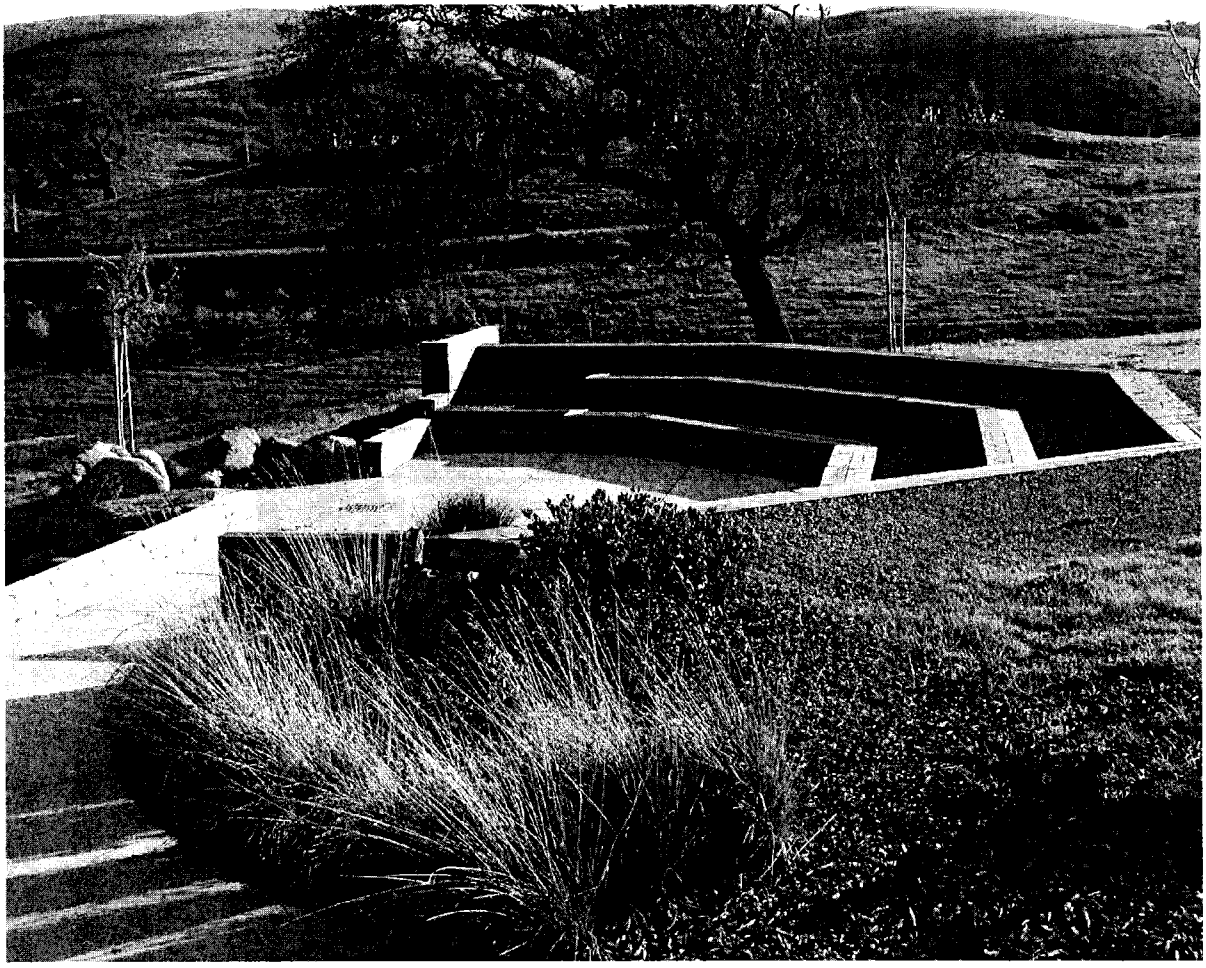

Amphitheater Seating

Description: Constructed-in-place timber seatwalls and stairs with gravel infill to create a rustic seating area that fits into the existing hillside's contours. Paved accessible trail leads to accessible seating in the front row of the amphitheater.

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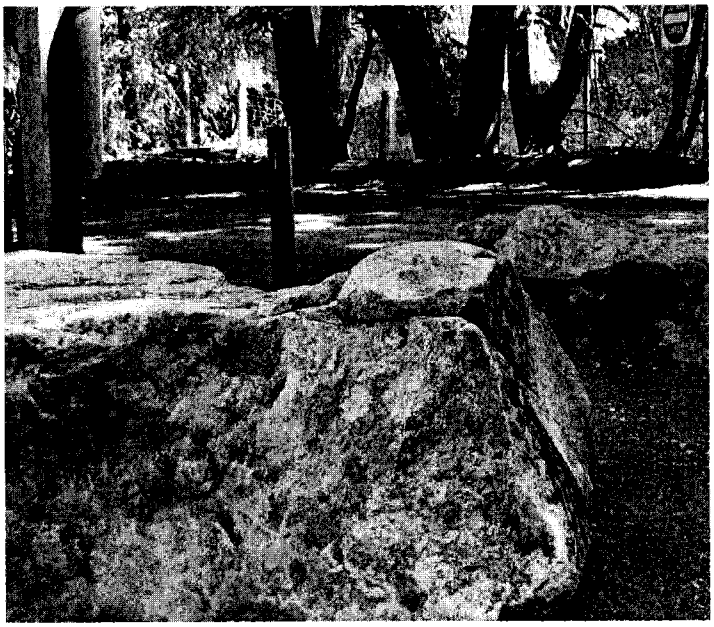
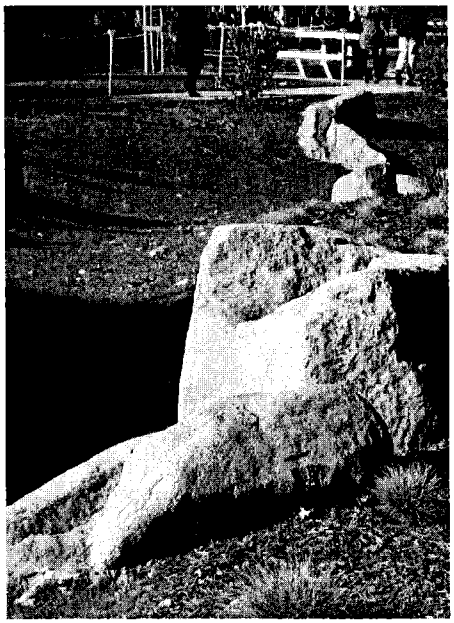
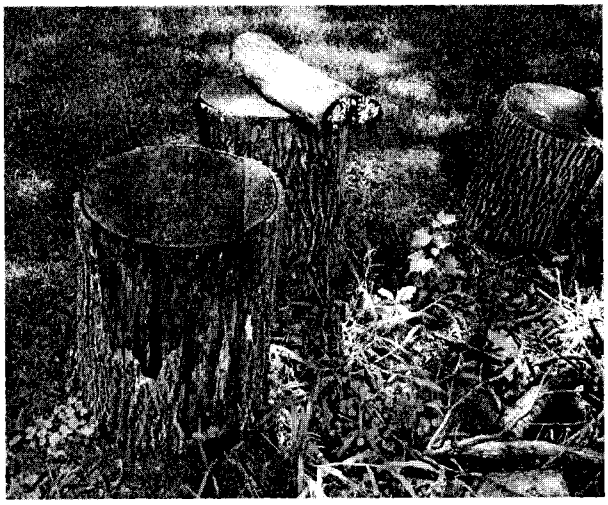




Landscape Boulders

Description: Boulders and stones unearthed during grading operations will be salvaged and placed naturalistically around the park to delineate spaces, provide informal seating, and reference the distinctive geology of Castle Rock State Park. Additional natural stones may be imported from local landscape materials suppliers if needed.



Stump Seats

Description: Informal seating salvaged from on-site trees to be removed; size varies. Grouped near picnic areas to flexible seating for small group gatherings.

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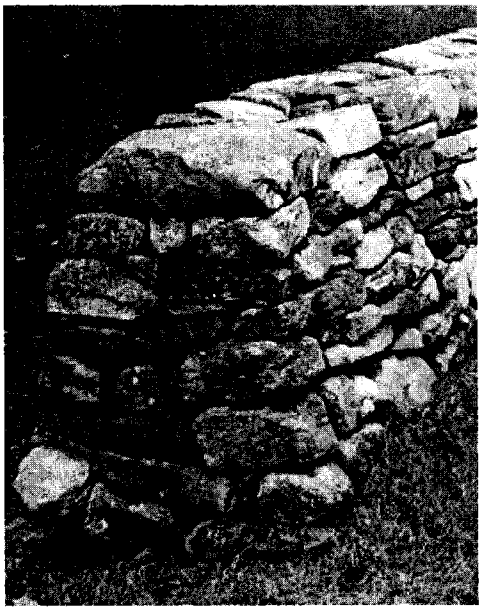

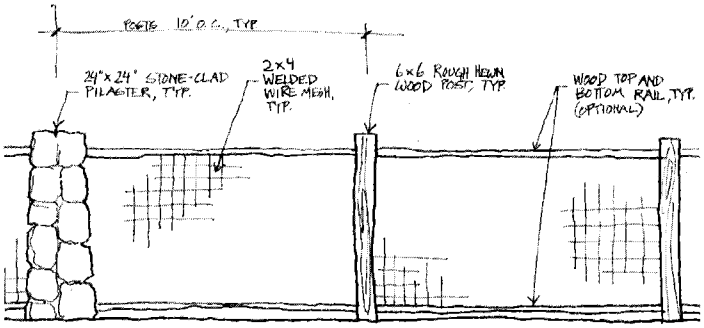

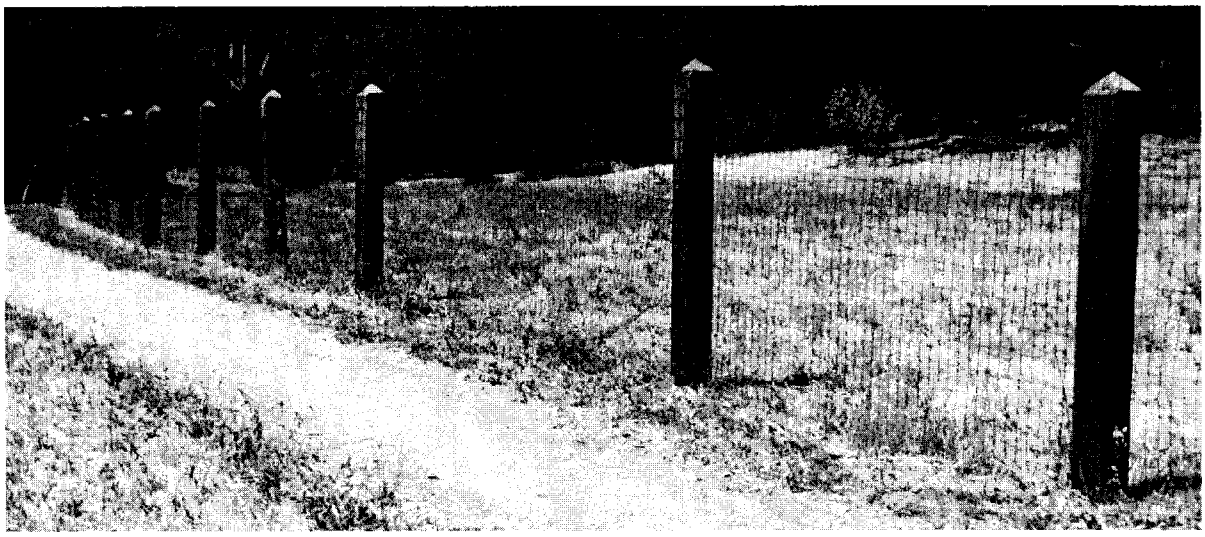

Wood and Wire Fences

Description: Wood posts and rails with welded wire mesh fencing. Perimeter fence along neighboring private property will be 8'-0" high; Park entry fence along Skyline Boulevard will be 6'-0" high and will incorporate ornamental stone-clad pilasters that complement stone construction within the park.

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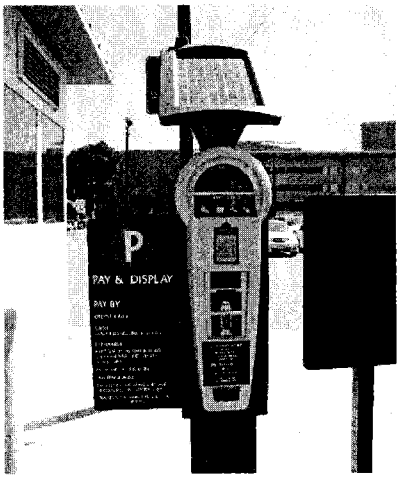
ATTACHMENT 4

Access Gate

Description: Steel double gates will span the park access drive. Gates will be opened/ closed and locked/unlocked manually. Gate shown above is used at the current State Park entry parking lot.



Parking Pay Station

Description: Solar-powered pay stations located around the parking lot and orientation area eliminate queues at an entrance kiosk and reduce staff demands.

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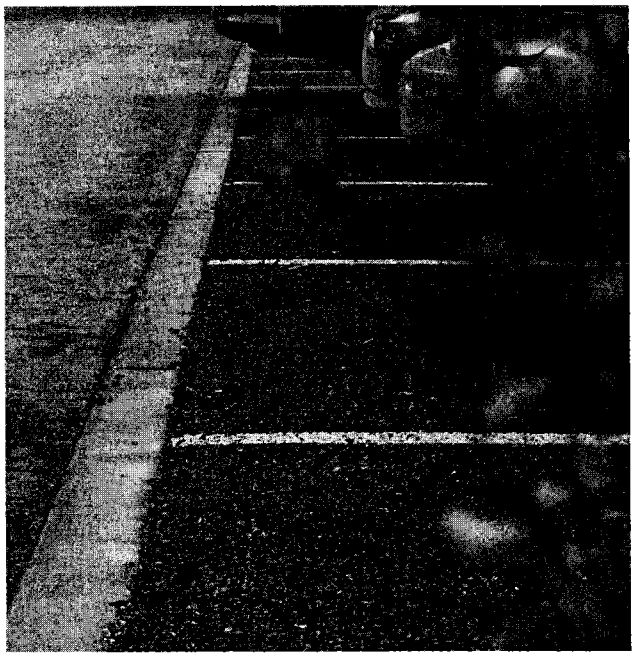
ATTACHMENT 4



Permeable Asphalt Pavement

Description: Permeable asphalt will be used in the parking lot, reducing the amount of storm runoff and slowing storm water's route to the creek. Parking lot will be bound with concrete flush and vertical curbs to direct storm water to treatment areas. Upon further analysis of infiltration and treatement goals, a portion of pavement area may be traditional non-premeable asphalt pavement.

Compacted Dirt Trail

Description: For secondary paths and trails around the park, unpaved footpaths would be aligned with sensitivity to existing contours and vegetation.

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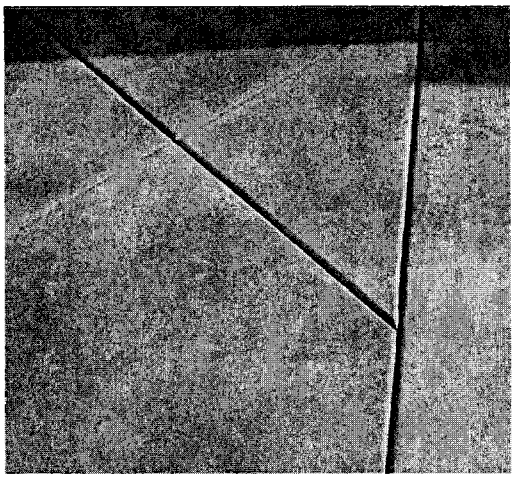
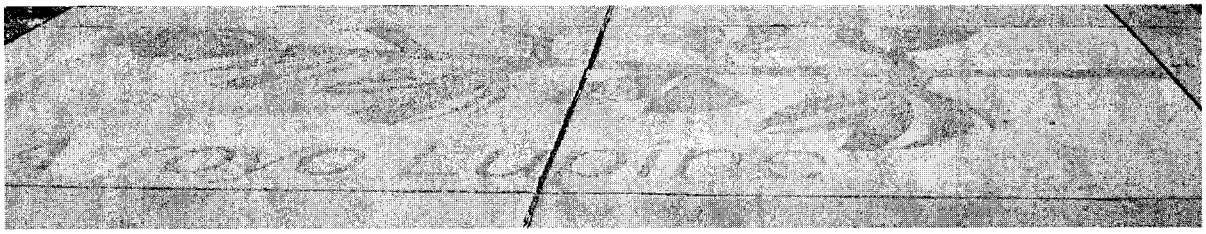
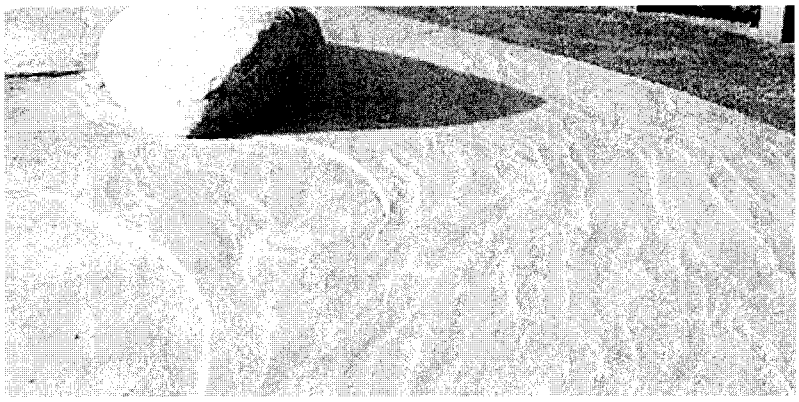
ATTACHMENT 4



Concrete Pavement Options

Description: Concrete sidewalks and plazas may incorporate integrally colored concrete in earthtone colors, imprints of natural materials, and/or sandblasted patterns.

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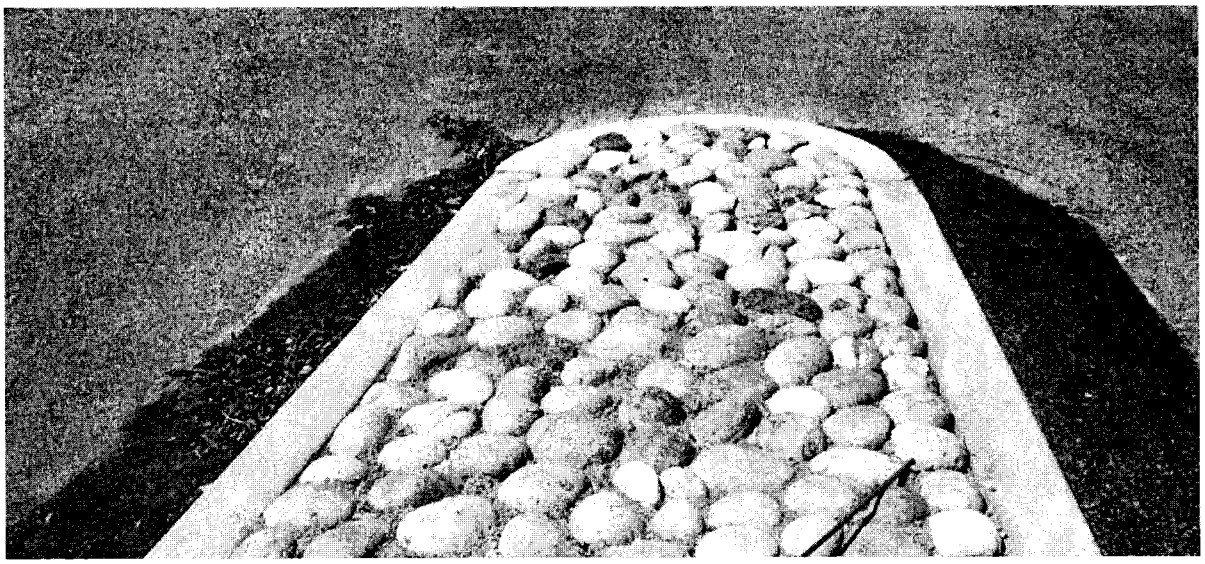

Cobble Pavement

Description: Smooth river cobble, +/- 6" diameter, set in grout to form durable, decorative pavement in entry median.

Gravel Pavement

Description: Gravel placed and compacted to form permeable, driveable surfaces.

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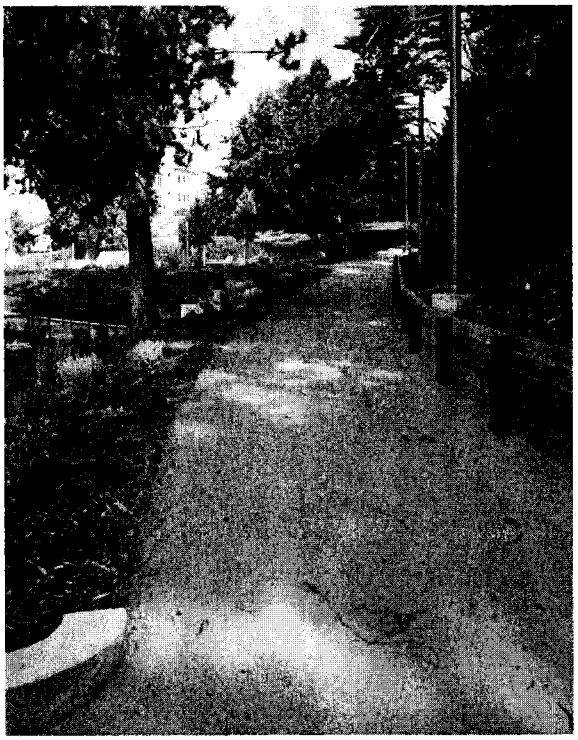

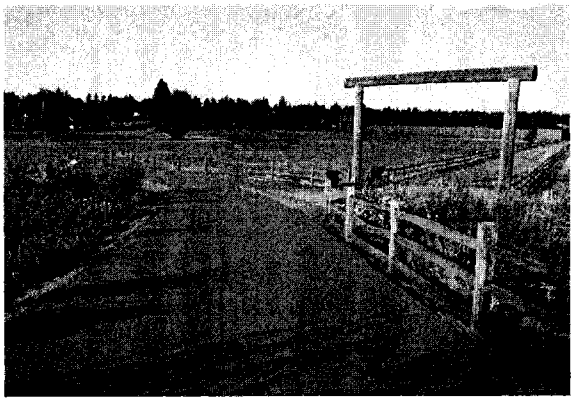

NaturePave Pavement

Description: Resin-bound permeable pavement is installed similar to asphalt as a warm, flexible mix of aggregate and binder. The resin is not petroleum based and, because the pavement retains the natural coloration and texture of the constituent aggregate material, a naturalist earthtone color can be achieved. This pavement would be used for ADA-accessible trails and paths for which a natural-looking durable surface is desired.

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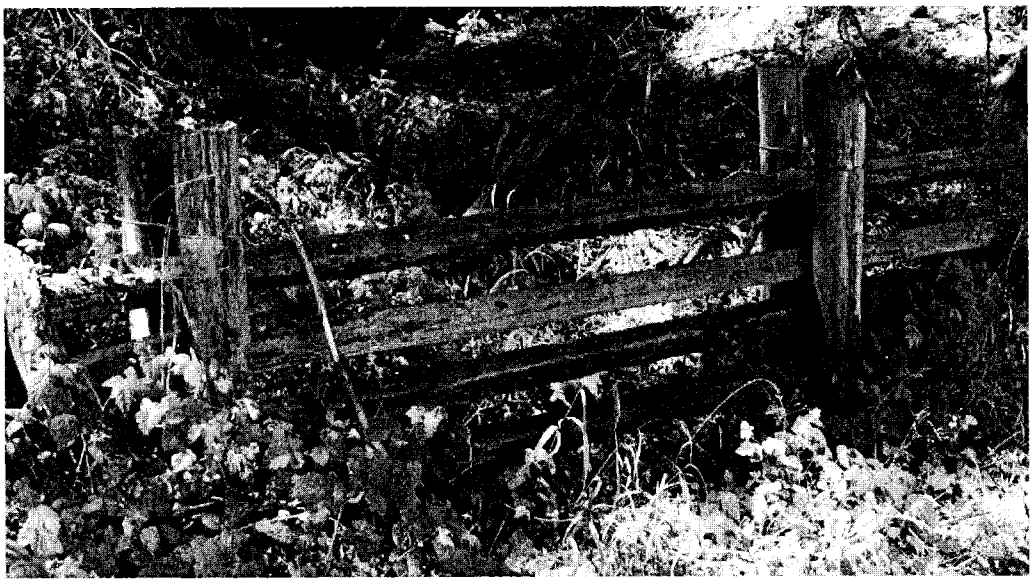
ATTACHMENT 4

Wood Stairs

Description: Where stairs are needed along dirt trails or other unpaved areas, stairs made of heavy timbers and filled with gravel or dirt will be used.



Wood Split Rail Fence

Description: Rustic wood fence, approximately 42" tall, delineates gathering spaces and discourages passage into sensitive habitat areas.

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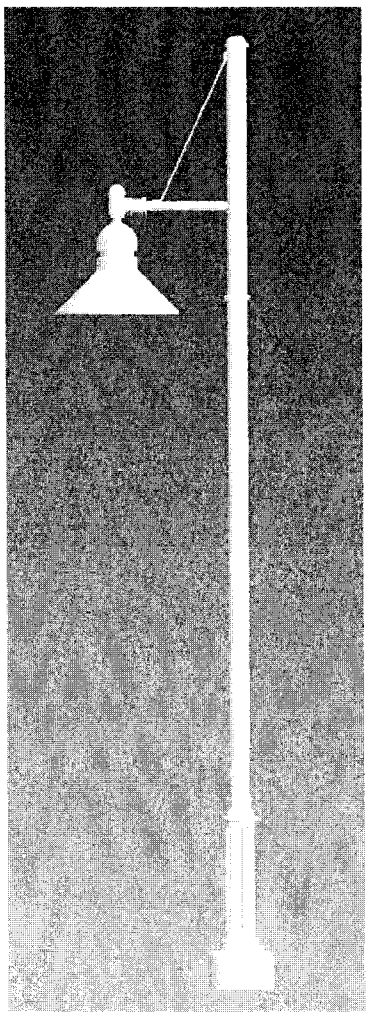

Safety Lighting

Description: Minimal lighting around the restroom and entry plaza and leading to the visitors center building will be provided by overhead, pedestrian-scale light standards with LED fixtures for maximum efficiency and full-cutoff luminaires to prevent light pollution. Several manufacturers such as Holophane, Visionaire, and Lumec are considered. Finish will be dark powdercoat in a shade that complements the visitors center color palette.

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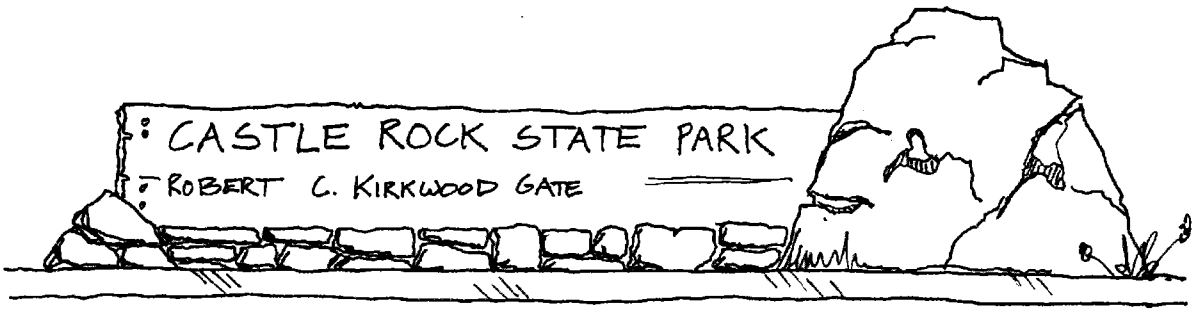

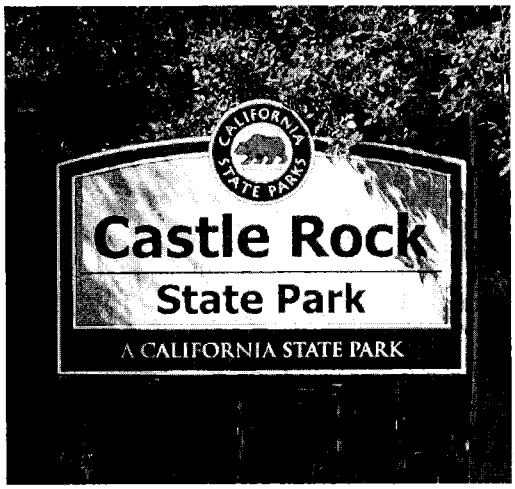

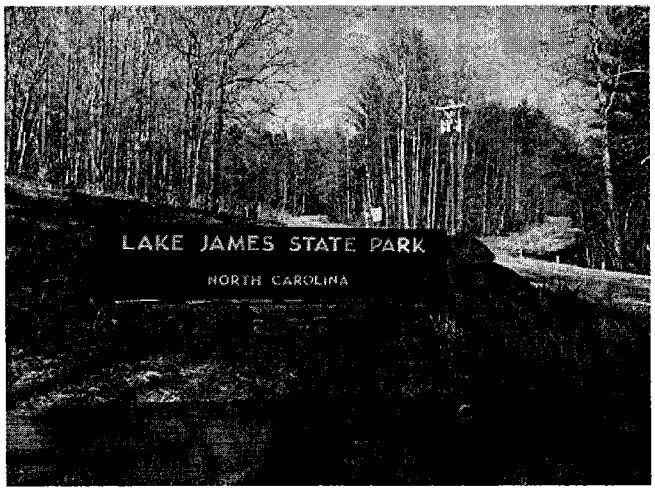

Entry Monument Sign

Description: The entry monument will be the first sign of the ROCK in Castle Rock State Park. It is envisioned as a low sign made of timbers that complement the visitors center building, with high visibility lettering, installed on a plinth of stacked stones and anchored by a large tafoni boulder.

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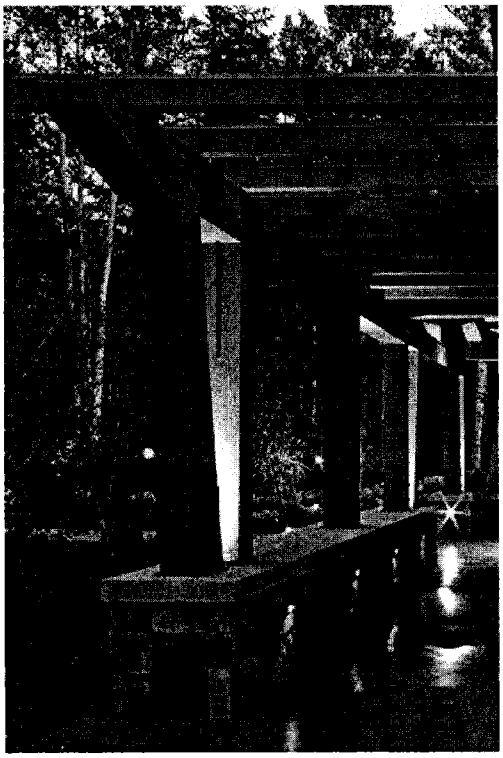

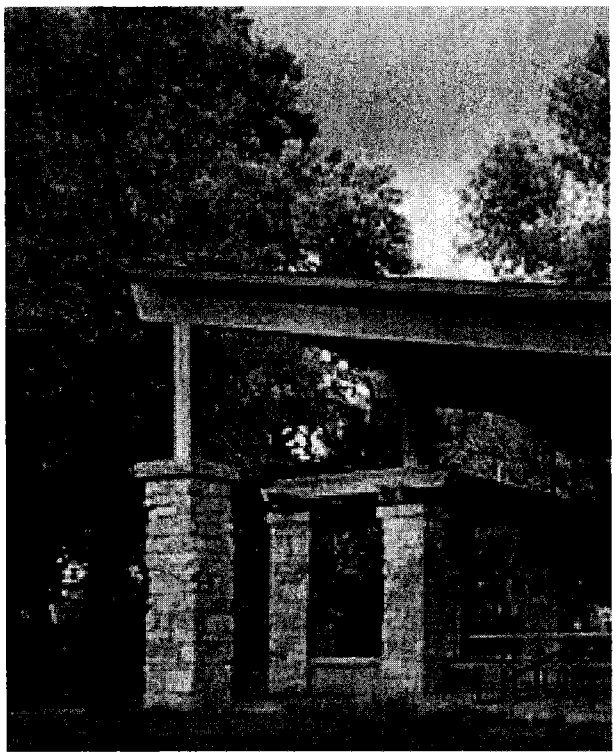

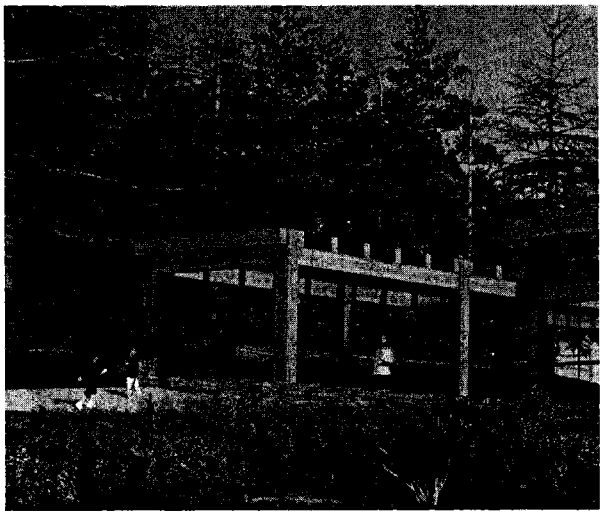

Trellis Structure at Orientation Area

Description: A trellis structure will house park maps, informational postings, interpretive feature, and general orientation information. The structure will be bound on two sides by seatwalls and open to the entry plaza area on the other two sides. Constructed of heavy timbers in a 'contemporary rustic' style, the structure will complement the design of the visitors center building.

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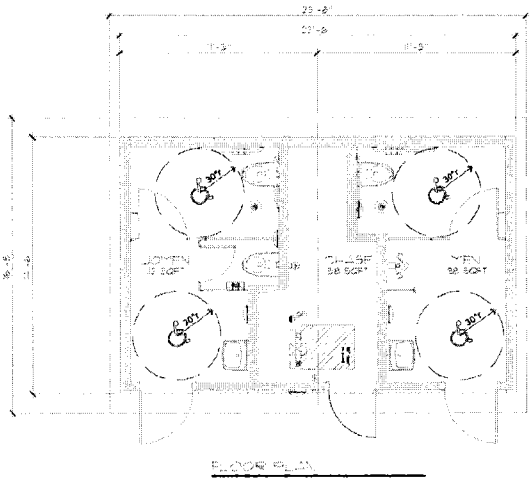
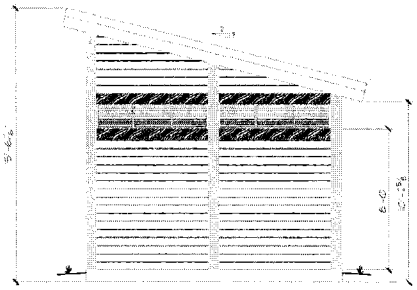
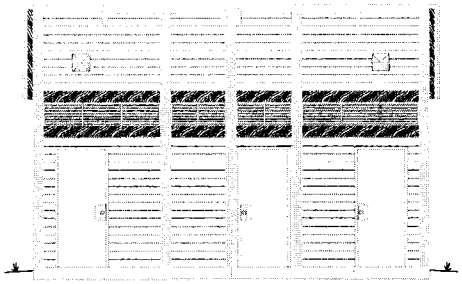


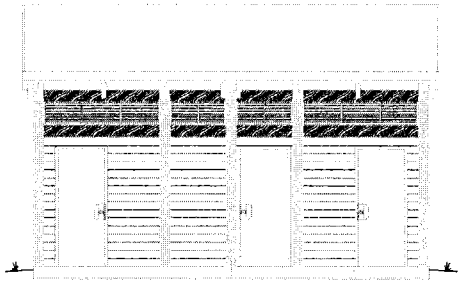
FLOOR PLAN



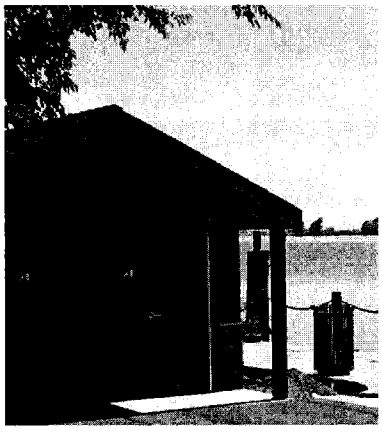
SIDE ELEVATION

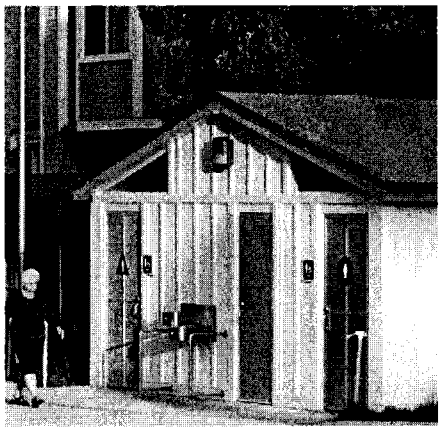


FRONT ELEVATION



REAR ELEVATION





Prefabricated Restroom

Description: A variety of materials, finishes, and customization options are available to create a prefabricated restroom building that complements the visitors center building and fits in with its rustic setting. The preliminary drawings above show exterior wood siding, shed-style slanted roof of standing-seam metal, heavy timber beams, facilities separated by gender, and an equipment/storage room. Exterior safety lighting would be integrated into the restroom. The photos illustrate some of the variety of materials palettes and features available.

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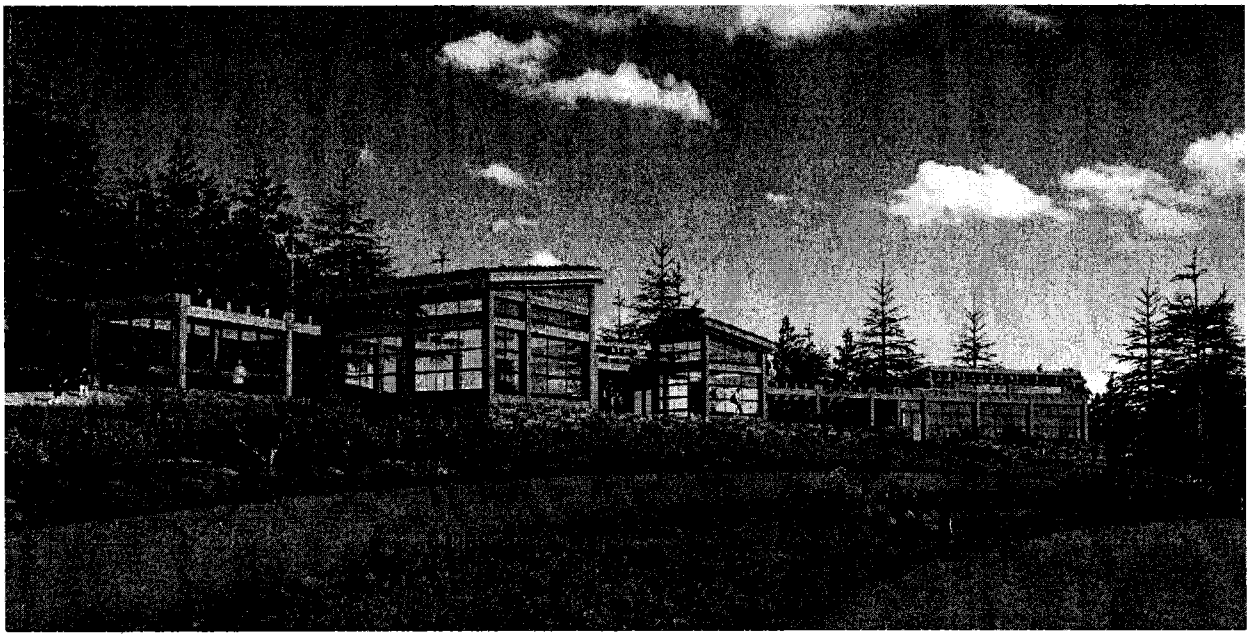
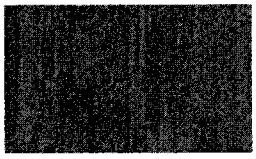
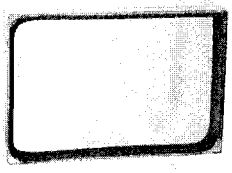


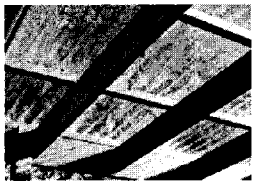
Aluminum Storefront: RAL 8004



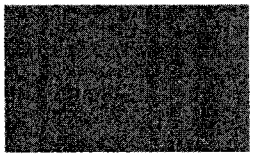
Cabot Red Cedar



PPG Solarban Low-E Glass



Polycarbonate panels



Standing Seam Metal Roof: Berridge Buckskin

Materials and Color Samples

CASTLE ROCK STATE PARK PROGRAM STATEMENT

Overview

Castle Rock State Park is a unique park that features some of the best bouldering and rock climbing in the San Francisco Bay Area. The park is also home to 35 miles of hiking trails and a popular starting point for the 31-mile *Skyline to the Sea Trail* that ends at Waddell Beach. Beyond great rock climbing and hiking, the park offers visitors amazing vistas of the entire Monterey Bay, waterfalls, towering redwoods, a large interior wilderness, connections to other regional parks, and the headwaters of the San Lorenzo River that flows out to the sea in Santa Cruz. This 5,400-acre park has incredible natural beauty and interesting tafoni rock formations, yet it lacks in visitor-services such as potable water and modern restrooms. It's not uncommon for people traveling on State Highways 9 or 35 (Skyline Boulevard) to ask: "Where is Castle Rock State Park?", and then be underwhelmed by the limited facilities they find when they get there. As the gateway park into the Santa Cruz Mountains and the closest State Park to Silicon Valley, Castle Rock deserves a functional, beautiful entrance befitting its many natural wonders and to connect city dwellers to their greater ecosystem.

It is for this very reason that Sempervirens Fund and State Parks have spent over a year working with a preeminent landscape design firm and a group of stakeholders to design a new State Park entrance that would provide the basic services people need – and expect – and are not present at the existing park entrance (i.e. drinking water, clean restrooms, safe places to park and relax, orientation to the park's recreational options, good directional and interpretive signage, etc). Our project reflects these goals and seeks to restore a Christmas tree farm back to native meadow and forest habitat, while providing essential visitor amenities to support Castle Rock as one of the Bay Area's favorite outdoor destinations.

A guiding principle of this new park is *less is more.* Only 10 acres of the 33-acre parcel will be improved, and 6 of those 10 acres will be restored open space habitat. As a rule, the park improvements will focus on getting people out of their cars, into the fresh air, onto the trails, and out to the boulders. The rest of the property will remain untouched in keeping with Sempervirens Fund's mission of preserving redwood forests and providing an appropriate level of public access.

Project Phases and Transfer to State Parks

The project comprises three phases:

1. The first phase will include the construction of a new access point off of Skyline Boulevard with entry monument sign, access gate, access drive and gate to neighboring property, 100' planted vegetated buffer, 90 space parking area, 60 seat amphitheater, ecological restoration of the development footprint, on-site trails and connections to existing Castle Rock State Park trails, a freestanding, prefabricated restroom building adjacent to the parking lot, trash enclosure, electronic pay stations, bicycle rack, water fountain, and an accessible picnic area.

ATTACHMENT

2. The second phase of this project includes the construction of an approximately 6,000 sq. ft. visitor center building, water tank, associated access drive and continued ecological restoration of the hillside area. Phase 1 and Phase 2 have the potential to occur at the same time if funding becomes available.

3. The third phase of the project will involve the transfer and conveyance of the land and improvements from Sempervirens Funds to the California Department of Parks and Recreation for long-term management and stewardship.

When State Parks owns this property, Sempervirens Fund will provide a stewardship endowment to ensure State Parks can operate these facilities. If State Parks is not prepared to take possession of the land and improvements, Sempervirens Fund may operate the park under a private concession agreement until such time as State Parks is ready to assume possession and control of the project.

When this project began, the design team initially studied a larger area to better understand the site's context. That larger study area included the current park entrance and Partridge Ranch, owned by State Parks, and an adjoining 11-acre private parcel owned by Robert and Mary Ann Whalen. That larger study area is not part of this project, and this project is not contingent upon the availability or use of those other parcels.

The current proposal was developed as a stand-alone project and will only impact these adjacent parcels in two ways: 1) the construction of a new frontage road, fence, and gate for the Whalens to separate their private access route to their parcel from the public's access to the park; and 2) the connection of our interior trail system to the trails that exist at the current park entrance.

Park Uses and Capacity Constraints

While there would be no new climbing facilities, campgrounds, or trail destinations proposed as part of this project, the enhancements to park access and parking may result in an increase in the number of park visitors. The intent of the project is to provide improved facilities for uses that already occur in the park. These improved facilities are summarized in the following paragraphs.

Currently it is common for park visitors to find no available parking during peak hours. This project proposes additional parking to help meet a current unmet parking demand; the existing 43 space parking lot will be retained and a new 90 space parking lot will be constructed, for a total of 133 on-site parking spaces. The proposed parking supply will accommodate peak demand as addressed in the traffic and parking analysis section of the Initial Study.

Additionally, it should be noted that there are 30 on-street parking spaces adjacent to the existing parking lot and 39 spaces opposite the existing parking lot, intended for Sanborn County Park, within the Caltrans right-of-way. While there are no legal restrictions that would stop a Castle Rock State Park visitor from parking in on-street spaces, it has not been counted as part of the parks on-site parking supply.

The proposed park improvements include a new, relocated entrance to take advantage of maximum visibility and site distances for safer highway access; a gravel and asphalt parking lot containing 90 replacement parking spaces to accommodate new uses. The existing 43-space parking lot would remain in place. At full utilization there would be a supply of 133 on-site parking spaces. A parking management plan would be implemented to reserve parking spaces as necessary for special events and scheduled visits. Additionally, a new restroom facility with flush toilets and drinking fountains; two picnic areas; a small amphitheater for environmental education; new trail connections to the Skyline to *the Sea Trail* and barrier-free trails; remote solar-powered pay collection stations to avoid cars queuing up at the park entrance; a new frontage road, fencing, and gate to separate the adjoining private parcel from public uses; restored meadows, tree plantings and other native landscaping; and a new visitor center building that will be constructed when funding becomes available.

The new visitor center building will include a series of small freestanding rooms that provide office space for park rangers, a restroom, a room with a caterer's kitchen for special events and meetings, flexible gallery/exhibit space, permanent interpretive exhibits, and an area to distribute park information and trail maps. The freestanding structures will be connected with overhead trellises that knit the individual indoor and outdoor 'rooms' into a single flexible, scalable space for park visitors. Two additional parking spaces reserved for park rangers will be provided adjacent to the building.
The proposed project would include implementation of a parking management plan. This parking management plan will set guidelines for use of the two parking lots, permitting procedures, signage and special event procedures. In general, special events will also operate under these same capacity constraints and the number of available parking spaces will dictate maximum capacity of the site; however, other parking management strategies may be allowed, with the event organizer responsible for associated costs.

Special Events

The public will be able to rent facilities and spaces within the park for special events such as wedding receptions, memorials, graduations and birthday parties, and other gatherings. Educational events such as lectures or workshops may also be arranged by affiliated nonprofit groups, local clubs, or members of the public. All special events would require permission from State Parks. Allowed attendance at these events would be capped and limited by the number of parking spaces available inside the park, as defined in the park's proposed parking management plan. Special event hours would mirror park operating hours except in special cases approved by the District Superintendent of Parks and Recreation. Depending on the size and purpose of the gathering, events may be convened at the visitor center building, the amphitheater, or the picnic areas. Amplification for any event will be prohibited. Auxiliary lighting for any event will also be prohibited – lighting will be limited to built-in lighting at the visitors center building and along the main pathways around the parking lot and building.

A matrix of potential special events and corresponding maximum attendance, timing, and parking implications is shown below. Events would be scheduled in a manner to reduce overlap in accordance with the parking management plan and park scheduling policies:

Potential Special Events at Castle Rock State Park

Event	Maximum Attendance	Allowable Times of Day	Allowable Days of Week	Allowable Frequency	Required Parking
Special Events: Wedding ceremonies/ receptions/ graduations/birthdays/ family reunions/ company picnics	60	regular park hours; plus weekends: sunset-10pm	all	2/month	24 (reservable spaces, assume 2.5 occupants per vehicle)
Docent-led nature talks and walks/adult club outings	60	regular park hours	weekdays and non-peak season weekends	1/day	24 (assume 2.5 occupants per vehicle)
Classes/workshops: rock-climbing, bouldering techniques, naturalist training, photography/ art practices, yoga, meditation, etc.	20	regular park hours	weekdays and non-peak season weekends	1/day	8 (assume 2.5 occupants per vehicle)
Educational lectures	60	weekdays-regular park hours; weekends-4pm-10pm	all	2/month	4 (attendees arrive by bus, instructors by car)
Day retreats for team building, etc.	20	regular park hours	weekdays and non-peak season weekends	1/day	8 (assume 2.5 occupants per vehicle)
Receptions for temporary art or educational exhibits	60	weekdays-regular park hours; weekends-4pm-10pm	all	1/month	24 (assume 2.5 occupants per vehicle)
Unamplified musician performances	60	weekdays-regular park hours; weekends-4pm-10pm	all	2/month	24 (assume 2.5 occupants per vehicle)
School field trips	60	Weekdays - regular park hours	weekdays	2/month	4 (attendees arrive by bus, instructors by car)
Summertime youth day camps; scouting and youth club outings	20	regular park hours	weekdays	1/day	2 (attendees are dropped off by parents)
Volunteer group projects such as restoration planting, litter cleanup, trail maintenance	20	regular park hours	all	1/week	8 (assume 2.5 occupants per vehicle)

ATTACHMENT 5

Park Hours of Operation

The park will be open daily to visitors from 6:00 a.m. to sunset year-round, consistent with its current operation. Permitted special events may be held in the evening as late as 10:00 p.m., as described below in the Special Events section. Only campers registered in backpack trail camps may remain in the park overnight. Quiet hours for the entire park will be 10:00 p.m. to 6 a.m. daily.

A locked gate will secure the new entrance at dusk, and will be opened and closed each day by park personnel or park concessions staff.

Parking

The design team has taken efforts to confirm parking counts stated in the Castle Rock General Plan. See memorandum of Castle Rock State Park Observed Parking Demand which summarizes existing parking capacities. Per site observations, the current parking lot has a capacity to hold 43 vehicles. The project proposes to retain the existing on-site 43 spaces plus provide 90 new parking spaces, for a total of 133 spaces.

There will be no overnight parking except for those backpackers who park their vehicles in the parking area while camping in the trail camps or hiking the *Skyline to the Sea Trail* (as is consistent with current operations). Parking would be reserved for overnight backpackers as scheduled visitors in accordance with the proposed parking management plan. There may be limited opportunities for on-site bus parking depending on demand for reserved parking spaces. Scheduled visits will be controlled by policies recommended in the park's proposed parking management plan. This proposal does not include any overflow parking. Once parking has reached capacity, visitors will need to go elsewhere to access the park.

Parking facilities for bicyclists will also be provided as part of this project. The park may be frequented by recreational cyclists to use restroom and picnic facilities as they pass by on Skyline Boulevard, but because of the park's relatively remote location, it's unlikely to attract many special event attendees arriving by bicycle.

Shared Access with Adjoining Property Owner

The Whalens and Sempervirens Fund have a shared access easement on the Sempervirens Fund parcel. This easement leads from Skyline Boulevard, across the Sempervirens Fund parcel, to the Whalen parcel. This project will continue to provide a shared access easement, but at a different location that improves visibility and site distance for motorists entering or leaving either property. The project will also accommodate the Whalens' desire for a private entrance into their property by constructing a frontage road parallel to Skyline Boulevard – in addition to the shared easement - for their exclusive use to access their parcel and bypass the entrance gate. The project recommends against the construction of a separate driveway because Caltrans has indicated it will only support a single entrance from Skyline Boulevard, and its preference is the project's proposed location because it will have the optimal sight distance for park visitors leaving the park and turning onto Skyline Boulevard.

Agricultural Buffer

With respect to the 200' agricultural buffer addressed in SCCC 16.50.095, Sempervirens Fund plans to apply for a reduction of the buffer requirement to 100' given the following considerations:

1) The agricultural operation formerly on the Sempervirens Fund property and currently on the 11-acre Whalen property is a Christmas tree farm where trees are sold approximately 10 days out of the year, in late November through December. The trees require very little annual maintenance and no spraying. Proposed uses within the 100' buffer (portions of an access road, vegetated screening, fencing) would have no impacts on either the maintenance nor sale of the trees on the adjacent parcel.

2) The Whalens are currently processing a new home site permit through Santa Cruz County, the approval of which would allow a third home amongst the Christmas tree farm agricultural uses (two houses on the 11-acre Whalen parcel and the house to be demolished on the 33-acre Sempervirens Fund parcel). All of these homes encroach into the agricultural buffer area; yet will not impact existing agricultural uses on the property. LAFCO has permitted recreational uses within the buffer in the Franich subdivision and park in Watsonville.

Coordination with State Parks

State Parks staff has been intimately involved in this project and are very supportive of its implementation because it will improve and upgrade the existing park and provide a new model for paying for the park's operating costs. One of the primary reasons Castle Rock was proposed for closure, and will be proposed again, is because the park has very few "recorded" visitors and generates very little revenue from day use fees, despite being well used. Most people park outside the existing entrance and do not pay the day use fee. This situation is problematic as Castle Rock receives very little day use revenue to pay for its operating costs. By providing enhanced and convenient on-site parking, channeling park visitors into the park, State Parks will also increase park revenue leading to better and more sustained park stewardship.

If we cannot come up with another model to pay for Castle Rock's operating costs, we risk losing this park and watching it degrade as State Park's limited funding is cut back. The new reality is *every park is on its own*. Our proposal attempts to permanently keep Castle Rock open by providing enough basic services to entice existing park users to use the new entrance and pay the day use fee.

Public Benefit and Need

Castle Rock State Park is an under-utilized local and regional outdoor recreational resource because of site constraints, size, and funding. At the time of its development, the existing site was not thought to be the best location for a park entrance; the Whalen property was the preferred location, but not for sale. Two years ago, the Whalens subdivided their parcel and sold the larger of the two parcels to Sempervirens Fund for the purpose of developing a

new and improved State Park entrance.

The current plan, while modest in scope, will create enormous public benefit by keeping Castle Rock permanently open, adding amenities, and making the park more attractive and useable. Moreover, by providing essential sanitation and water for hikers and climbers it meets an urgent public health need.

The public deserves a park that will stay open, be safe, and provide a range of outdoor recreational opportunities, while providing basic amenities that visitors need to facilitate their visit.

Conclusion

Castle Rock State Park is a very special and unique place. The current dirt lot, with a weathered and closed kiosk, near an old pit toilet that should have been abandoned years ago, is for many the first introduction to Castle Rock and the Santa Cruz Mountains. We can and must do better. If we want the public to use Castle Rock and support our parks, we must make it easier to access and enjoy, without having to look high and low for drinking water. This project offers a unique opportunity to get people safely *into* the park, welcome them with convenient parking, interpretive signage and functional facilities, and send them on their way to explore the incredible natural wonders throughout the park.

memorandum

w-trans

Whitlock & Weinberger Transportation, Inc.

475 14th Street
Suite 290
Oakland, CA 94612

voice (510) 444-2600

website www.w-trans.com
email mspencer@w-trans.com

Date: July 17, 2013

To: **Mr. Mike Parker**
Ascent Environmental, Inc.

From: Mark Spencer
Tony Henderson

Project: SZX008

Subject: Castle Rock State Park – Parking Management Plan

Whitlock & Weinberger Transportation, Inc. (W-Trans) has prepared the following recommended parking management plan for Castle Rock State Park in Santa Cruz County. This plan supplements the *Draft Traffic Impact Study for Castle Rock State Park.*

Background

Access, parking and visitor improvements are currently proposed for Castle Rock State Park, located on State Route (SR) 35, in the County of Santa Cruz. These improvements would include development of a new parking lot, visitor center and other amenities. The existing parking lot would be retained, but would be designated for scheduled visitors only, including special event guest, members of organized trips, school trips and backcountry hikers who obtain overnight parking permits in advance. This memorandum provides recommended parking management strategies so that all park visitors are able to conveniently park their vehicle and proceed to their activities at Castle Rock State Park.

For the purpose of this parking management plan, the new proposed parking lot is referred to as the "General Parking Lot" and the existing parking lot is referred to as the "Scheduled Visitor Parking Lot".

Parking Management Strategies

The following parking management strategies are recommended for Castle Rock State Park.

General Parking Lot

- The General Parking Lot is to be available for use by members of the public who wish to visit Castle Rock State Park during normal Park operating hours, who are not attending a special event and are not staying in the park overnight.
- The lot is to be open for use during Park operating hours, as established by California State Parks. Vehicles parked in the General Park Lot outside of posted operating hours may receive a citation.
- All parking restrictions will need to be posted at the parking lot entrance and within the parking lot on signs that conform to standards established in the California Manual on Uniform Traffic Control Devices and the California Vehicle Code.

ATTACHMENT 5

- There will be a fee for parking in the General Parking Lot, as established by California State Parks. Failure to pay the day use fee and properly display the parking pass may result in the driver receiving a citation.

- It is recommended that parking permits purchased for the General Parking Lot not be honored at the Scheduled Visitor Parking Lot. It is recommended that this restriction be clearly stated both on the parking permit, and on signage within both parking lots.

Scheduled Visitor Parking Lot

- It is recommended that the Park operators establish a procedure for issuing scheduled parking permits in advance of the planned visit. These procedures would need to conform to California State Parks standard parking operating procedures.

- It is recommended that a daily use fee be established for the Scheduled Visitor Parking Lot, equal to, or greater than the fee charged for parking at the General Use Parking Lot. The fee structure would need to be established in accordance with California State Parks procedures.

- Time restrictions, if any, on when the parking permit would be valid should be clearly stated on the permit application and on the permit itself.

- Scheduled visitor parking permits should only be issued in advance of the scheduled visit, with no permits issued on the day of visit.

- A database should be created to keep track of all scheduled visit parking permits issued to ensure that all permit holders can be accommodated within the Scheduled Visitor Parking Lot. If the Scheduled Visitor Parking Lot is expected to be full on any given date, no additional permits should be issued.

- It is recommended that only one permit should be issued for each parking space per day.

- If a special event requires more parking permits than can be accommodated within the Scheduled Visitor Parking Lot, then alternative parking measures would need to be implemented. The expenses of these measures would be charged back to the requesting party. These measures could include:

    - An off-site parking plan and shuttle service could be implemented. The Park's parking operator would be required to secure the off-site parking area and arranging the necessary shuttle service.

    - The Park's parking operator could implement internal parking management strategies to increase parking utilization, such as valet parking or stacked parking.

- It is recommended that scheduled visit parking permits only be honored at the Scheduled Visitor Parking Lot. If this is implemented, it is recommended that this restriction be clearly stated on the parking permit, reservation literature and on signage within both parking lots.

- Buses or large passenger vans may be accommodated at the Scheduled Visitor Parking Lot, but the size of the vehicle should be taken into account to ensure that all permit holders can be accommodated within the space.

- If a special event occurs outside of normal Park operating hours, the General Parking Lot may be used for event parking, in accordance with all other Scheduled Visitor parking permitting procedures.

MES/tdh/SZX008.M2.doc

ATTACHMENT 6

GEOFORENSICS INC. **Consulting Soil Engineering**

561-D Pilgrim Drive, Foster City, CA 94404 Phone: (650) 349-3369 Fax: (650) 571-1878

File: 212001
February 14, 2012

Callander Associate
311 Seventh Avenue
San Mateo, CA 94401

Attention: Brian Fletcher

Subject: **Castle Rock Park**
15435 Skyline Boulevard
Santa Cruz County, California
GEOTECHNICAL INVESTIGATION FOR
PROPOSED PARK IMPROVEMENTS

Dear Mr. Fletcher:

In accordance with your authorization, we have performed a subsurface investigation into the geotechnical conditions present at the location of the proposed improvements. This report summarizes the conditions we measured and observed, and presents our opinions and recommendations for the design and construction of the proposed park improvements.

Site Description

The subject site is a gently to steeply sloping, irregularly-shaped parcel located on the south side of Skyline Drive (at the approximate location shown on Figure 1). The property is bounded by Castle Rock State Park to the south, a privately owned tree farm to the north, forested areas to the west, and Skyline Drive to the east.

The site is currently occupied by an extension of the tree farm and a one-story accessory structure. A dirt access road traverses through/around the existing trees on the site.

The ground surface in the site vicinity has an overall slope down towards the north and west (as shown on Figure 2). At the site, the ground slopes gently to steeply down towards the north and west. Surface gradients range from 20:1 to 2:1 (horizontal:vertical, H:V). During the original development of the property, it appears that little or no grading work was performed on the site.

Proposed Construction

We understand that the current development for the site proposes the demolition of the existing accessory structure, and the subsequent construction of a new bathroom structure, amphitheater, visitor center and access various access roads and paths. The structures are to be of conventional, wood-framed construction. New foundation loads are expected to be typical for these types of structures (i.e. light).

ATTACHMENT 4

Excavation work at the site is expected to be limited to septic and foundation excavations. Minor fill placement is anticipated as part of this work. No significant retaining walls (>3 feet tall) are anticipated for this scope of work. No basement is planned for any of the structures.

INVESTIGATION

Scope and Purpose

The purpose of our investigation was to determine the nature of the subsurface soil conditions so that we could provide geotechnical recommendations for the construction of the proposed new bathroom structure, amphitheater, visitor center, and various access roads. In order to achieve this purpose, we have performed the following scope of work:

1 - visited the property to observe the geotechnical setting of the area to be developed;
2 - reviewed relevant published geotechnical maps;
3 - drilled six borings near the location of the proposed improvements;
4 - performed laboratory testing on collected soil samples;
5 - assessed the collected information and prepared this report.

The findings of these work items are discussed in the following sections of this report.

Site Observations

We visited the site on January 16, 2012 to observe the geotechnically relevant site conditions. During our visit, we noted the following conditions:

A - The trees in the area were observed to be generally straight and no hummocky terrain (to suggest any active or historic landsliding/slope instability) was observed.

B - We would characterize the drainage on the lot to be sheet flow to the north.

Geologic Map Review

We reviewed the *Preliminary Geologic Map of the Castle Rock Ridge Quadrangle, Santa Cruz and Santa Clara Counties, California*, by E.E. Brabb and T. Dibblee, JR (1979), which depicts the area as underlain by Vaqueros Sandstone ("Tqv"). A portion of the geologic map is attached as Figure 3. This bedrock type is described as including primarily marine arkosic sandstone and minor siltstone.
Our subsurface exploration (see below) encountered sandy materials over sandstone and siltstone bedrock.

The active San Andreas Fault is mapped approximately 1.2 miles (2 km) southwest of the site.

Subsurface Exploration

On January 16, 2012 we drilled 6 borings at the site at the locations shown on Figure 4. The borings were drilled using a Mobile B-24 track-mounted drilling rig equipped with 4.0 inch diameter, helical flight augers. Logs of the soils encountered during drilling record our observations of the cuttings traveling up the augers and of relatively undisturbed samples collected from the base of the advancing holes. The final boring logs are based upon the field logs with occasional modifications made upon further laboratory examinations of the recovered samples and laboratory test results. The final logs are attached in Appendix A.

The relatively undisturbed samples were obtained by driving a 3.0 inch (outer diameter) Modified California Sampler and a Standard Penetration Sampler (as noted on logs) into the base of the advancing hole by repeated blows from a 140 pound hammer lifted 30 inches. On the logs, the number of blows required to drive the sampler the final 12 inches of the 18 inch drive, have been recorded as the Blow Counts. These blows have not been adjusted to reflect equivalent blows of any other type of sampler or hammer, or to account for the different samplers used.

Subsurface Conditions

Borings 1 (drilled in the area of the front entry road), Boring 2 (drilled in the area of the access road), and Boring 4 (drilled in the area of the bio-retention area), encountered similar subsurface soil and rock conditions. These borings first penetrated 3 to 3.5 feet of loose to medium dense silty sand. This was underlain by dense to very dense sandstone down to the terminated boring depths of 5.5, 5.5, and 10.5 feet, respectively.

Boring 3, drilled in the area of the parking lot, penetrated 2.5 feet of hard sandy silt. This was underlain by hard siltstone down to the terminated boring depth of 6 feet.

Boring 5, drilled in the area of the amphitheater, penetrated 5.5 feet of very loose sand over 1 foot of very stiff sandy silt. This was underlain by very dense silty sand (sandstone?) down to the terminated boring depth of 9.5 feet.

Boring 6, drilled in the area of the proposed visitor center, penetrated 3 feet of loose sand. Below the sand was very dense silty sandstone, which graded to a hard siltstone by a depth of 9 feet. The boring was terminated in the siltstone at a depth of 10.5 feet.

Please refer to Appendix A for a more detailed description of each boring.

No free groundwater was encountered during the drilling of the hole. However, during periods of heavy rain or late in the winter, groundwater seepage may exist at shallower depths, most likely as perched water atop the bedrock.

ATTACHMENT 7

Laboratory Testing

The relatively undisturbed samples collected during the drilling process were returned to the laboratory for testing of engineering properties. In the lab, selected soil samples were tested for moisture content, density, plasticity, 200 sieve wash, consolidation, and strength. The results of the laboratory tests are attached to this report in Appendix B.

R-Value testing (Caltrans 301) performed on bulk samples of the site soils produced values of 31 and 56, indicating that the soils will provide relatively good support for pavements (provided the soils are adequately compacted).

Strength testing was conducted on a sample of the near surface material (Sample 5-1 @ 2 feet). The testing showed that this material has moderate to high strength parameters (cohesion = 0 psf, friction angle = 34 degrees). The other deeper soils at the site were judged to also have high strengths based upon their higher blow counts as obtained during the sampling process.

CONCLUSIONS AND RECOMMENDATIONS

General

Based upon our investigation, we believe that the proposed improvements can be safely constructed. Geotechnical development of the site is controlled by the presence of loose near surface sands, however, is aided by the presence of strong non-expansive bedrock.

The recommendations in this report should be incorporated into the design and construction of the proposed new residence park improvements.

Seismicity

The greater San Francisco Bay Area is recognized by Geologists and Seismologists as one of the most active seismic regions in the United States. Several major fault zones pass through the Bay Area in a northwest direction which have produced approximately 12 earthquakes per century strong enough to cause structural damage. The faults causing such earthquakes are part of the San Andreas Fault System, a major rift in the earth's crust that extends for at least 700 miles along western California. The San Andreas Fault System includes the San Andreas, San Gregorio, Hayward, Calaveras Fault Zones, and other faults.

During 1990, the U.S. Geological Survey cited a 67 percent probability that an earthquake of Richter magnitude 7, similar to the 1989 Loma Prieta Earthquake, would occur on one of the active faults in the San Francisco Bay Region in the following 30 years. Recently, this probability was increased to 70 percent, as a result of studies in the vicinity of the Hayward Fault. A 23 percent probability is still attributed specifically to the potential for a magnitude 7 earthquake to occur along the San Andreas Fault by the year 2020.

ATTACHMENT 7

Ground Rupture - The lack of mapped active fault traces through the site, suggests that the potential for primary rupture due to fault offset on the property is low.

Ground Shaking - The subject site is likely to be subject to very strong to violent ground shaking during its life span due to a major earthquake in one of the above-listed fault zones. Current (2010) building code design may be followed by the structural engineer to minimize damages due to seismic shaking, using the following input parameters from the USGS Java Ground Motion Parameter Calculator:

Site Class – C	$SM_S = 2.111$	$SM_1 = 1.512$	$SD_S = 1.408$	$SD_1 = 1.008$

Landsliding - The subject site and the surrounding area are gently to steeply sloping. Fortunately, the site is underlain by competent bedrock material at relatively shallow depths. Therefore, the hazard due to large-scale seismically-induced landsliding is, in our opinion, relatively low for the site. However, as with any slope, minor sloughing of the steeper site slopes could occur during earthquake shaking. The proposed improvements should not be affected by any such sloughing, as they will be supported by the stable bedrock materials at the site.

Liquefaction - Liquefaction most commonly occurs during earthquake shaking in loose fine sands and silty sands associated with a high ground water table. Although there are some loose sand deposits at the site, they are not saturated, and hence are unlikely to be subject to liquefaction. Based upon the subsurface investigation, the proposed building site is underlain by sandy soils then bedrock at shallow depths. Therefore, it is our opinion the liquefaction is unlikely to occur on the subject property.

Ground Subsidence - Ground subsidence may occur when poorly consolidated soils densify as a result of earthquake shaking. The small projected amounts of potential seismic settlement (about1 inch) can be eliminated if the upper loose soils are recompacted, or their potential effects can be mitigated by extending foundation elements to bedrock.

Lateral Spreading - Lateral spreading may occur when a weak layer of material, such as a sensitive silt or clay, loses its shear strength as a result of earthquake shaking. Overlying blocks of competent material may be translated laterally towards a free face. Such conditions were not encountered on the proposed building site, therefore, the hazard due to lateral spreading is, in our opinion, considered very low.

Site Preparation and Grading

All debris resulting from the demolition of existing improvements should be removed from the site and may not be used as fill. Any existing underground utility lines to be abandoned should be removed from within the proposed building envelope and their ends capped outside of the building envelope.

Any vegetation and organically contaminated soils should be cleared from the building area. All holes resulting from removal of tree stumps and roots, or other buried objects, should be over-excavated into firm materials and then backfilled and compacted with native materials.

The placement of fills at the site is expected to include: reconstructed building pads and pavement subgrades; utility trench backfill, slab subgrade materials, and finished drainage and landscaping grading. These and all other fills should be placed in conformance with the following guidelines:

Fills may use organic-free soils available at the site or import materials. Import soils should be free of construction debris or other deleterious materials and be non-expansive. *A minimum of 3 days prior to the placement of any fill, our office should be supplied with a 30 pound sample (approximately a full 5 gallon bucket) of any soil or baserock to be used as fill (including native and import materials) for testing and approval.*

All areas to receive fills should be stripped of organics and loose or soft near-surface soils. Fills should be placed on level benches in lifts no greater than 6 inches thick (loose) and be compacted to at least 90 percent of their Maximum Dry Density (MDD), as determined by ASTM D-1557. In pavement areas (permeable concrete, asphalt, or gravel) to receive vehicular traffic, all baserock materials should be compacted to at least 95 percent of their MDD. Also, the ***upper 18 inches*** of soil subgrade beneath these pavements should be compacted to at least 90 percent of its MDD, with the upper 6 inches compacted to 95 percent. The over-excavation and recompaction should extend a minimum of 3 feet beyond the edges of the proposed pavement areas.

All unretained fills to be placed on slopes steeper than 6 to 1 (horizontal to vertical, H:V) will need to be keyed and benched into competent native materials. Any retained fills will need to be benched into competent native materials, however, a formal keyway is not required. The entire base of any keyway should extend into competent weathered bedrock materials, located about 3 to 6 feet below grade. The entire bases of all benches should extend into or through competent colluvial soils, as identified in the field by representatives from our office. It should be anticipated that the outer edge of bench excavations will extend at least 4 feet below native grade. Keyways and benches should be sloped back into the hillside at a minimum 2% gradient.

Temporary, dry-weather, vertical excavations should remain stable for short periods of time to heights of 3 feet. Deeper excavations may experience sloughing where the sandy soils extend below this depth. All excavations should be shored or sloped in accordance with OSHA standards.

Even moderately deep cuts (>4 feet) are likely to encounter hard bedrock materials. Heavy excavation equipment will likely be required.

Permanent cut and/or fill slopes should be no steeper than 2:1 (H:V). Positive drainage improvements (e.g. drainage swales, catch basins, etc.) should be provided to prevent water from flowing over the tops of cut and/or fill slopes.

ATTACHMENT 7

Building Foundations

Visitor Center and Bathroom - Due to the relatively loose nature of the near surface soils, combined with the relatively light building loads, we anticipate that the bathroom will be supported by a mat slab (typically 6 to 8 inches thick). The slab should be designed assuming a modulus of subgrade reaction of 100 tci for these loose sandy soils. Similar construction may be used for the Visitor Center Building, or it may be supported by a conventional foundation system with either raised wood floors or slab on grade floors.

Should a conventional slab and footing system be desired, then it will be necessary to over-excavate and recompact the upper 3 feet of soil as engineered fill (see above requirements). Any floor slab may be of conventional slab on grade construction (see below), and footings should have bearing pressures which do not exceed 2500 psf (although a 1/3 increase in this value is appropriate for seismic loading conditions). Footings should be embedded a minimum of 18 inches below exterior grade, and 12 inches below interior soil grades.

Footings should be nominally reinforced with four #4 bars (two at top and two at bottom). The designer should determine actual width, embedment and reinforcement for the footings.

Adjacent, parallel utility trenches should be kept away from the building such that they fall above an imaginary line projecting at a 1:1 slope from the base of the mat slab.

Lateral pressures may be resisted by friction between the base of the slab and underlying soils using a friction coefficient of 0.40. These values may be increased 1/3 for transient loads (i.e. seismic and wind).

If the above recommendations are followed, total foundation settlements should be less than 1 inch, while differential settlements should be less than ¾ inches.

Amphitheater – Any foundations necessary for the amphitheater may consist of conventional spread footings, but they will need to be founded on recompacted engineered fill. The depth of fill reconstruction will depend upon the amount of excavation work performed for the creation of the amphitheater, but removal of loose soils for re-compaction should be expected to extend to depths of 5 feet below existing grades.

All footings should be a minimum of 12 inches wide. Strip footings should be embedded a minimum of 18 inches below lowest adjacent grades, or bear on sandstone bedrock. The footings should be designed to exert pressures on the ground, which do not exceed 2500 psf for Dead plus Live Loads. The weight of the embedded portion of the footings may be neglected when determining bearing pressures. Lateral pressures may be resisted by friction between the base of the footings and the ground surface. A friction coefficient of 0.40 may be assumed. Alternatively, lateral pressures may be resisted by a passive pressure of 400 pcf EFW assumed to be acting against the face of the footings (or shear keys, if required). These values may be increased 1/3 for transient loads (i.e. seismic and wind).

ATTACHMENT 7

Footings should be nominally reinforced with four #4 bars (two at top and two at bottom). The designer should determine actual width, embedment and reinforcement for the footings.

If the above recommendations are followed, total foundation settlements should be less than 1 inch, while differential settlements should be less than ¾ inches.

Retaining Walls

No new retaining walls are proposed for this scope of work. If plans should change to include retaining walls, then our office should be contacted for additional recommendations.

Slabs-on-Grade

Sidewalks or patios may consist of conventional concrete slabs-on-grade. To help reduce cracking, we recommend slabs be a minimum of 4 inches thick and be nominally reinforced with #4 bars at 18 inches on center, each way. Slabs which are thinner or more lightly reinforced may experience undesirable cosmetic cracking. However, actual reinforcement and thickness should be determined by the structural engineer based upon anticipated usage and loading.

In large non-interior slabs (e.g. patios, etc.), score joints should be placed at a maximum of 10 feet on center. In sidewalks, score joints should be placed at a maximum of 5 feet on center. All slabs should be separated from adjacent improvements (e.g. footings, porches, columns, etc.) with expansion joints. Interior floor slabs will experience shrinkage cracking. These cosmetic cracks may be sealed with epoxy or other measures specified by the architect.

All building slabs (e.g. bathroom) should be underlain by 2 inches of sand over 4 inches of clean ¾ inch crushed drain rock. The sand and drain rock should be separated by a vapor barrier which conforms to ASTM E1745-97 (e.g. Moistop, Stego Wrap). To provide the best protection from moisture penetration up through interior floor slabs, we suggest that a perforated collector drain system be installed at the base of the 4 inch drain rock layer. The collector pipe may then drain via gravity to daylight for discharge.

Slabs which will be subject to light vehicular loads and through which moisture transmission is not a concern (e.g. driveway) should be underlain by at least 6 inches of compacted baserock, in lieu of the sand and gravel. Where permeable concrete materials are used, baserock should not be installed under the pavement as the baserock will not have good percolation properties. For such pavements, follow the manufacturer's recommendations for subgrade preparation.

As stated previously, in pavement (concrete or asphalt) areas to receive vehicular traffic, all baserock materials should be compacted to at least 95 percent of their MDD. Also, the upper 6 inches of recompacted soil subgrade beneath any pavements should be compacted to at least 95 percent of its MDD, with at least 12 inches of soil below that compacted to 90 percent compaction.

Exterior landscaping flatwork (e.g. patios and sidewalks) may be placed directly on proof-rolled soil subgrade materials (e.g. no granular subgrade).

Drainage

Due to the gently sloping nature of the site, but highly erodible soils, it will be important to provide good drainage improvements at the property.

Surface Drainage - Adjacent to any buildings, the ground surface should slope at least 4 percent away from the foundations within 5 feet of the perimeter. Impervious surfaces should have a minimum gradient of 2 percent away from the foundation.

Surface water should be directed away from all buildings into drainage swales, or into a surface drainage system (i.e. catch basins and a solid drain line). "Trapped" planting areas should not be created next to any buildings without providing means for drainage (i.e. area drains).

Footing Drain - Due to the potential for changes to surface drainage provisions, it would be wise (though not required) to install a perimeter footing drain to intercept water attempting to enter any crawlspace. If a footing drain is not installed, some infiltration of moisture into the crawlspace may occur. Such penetration should not be detrimental to the performance of the structure, but can possibly cause humidity and mildew problems within the building.

The footing drain system, if installed, should consist of a 12 inch wide gravel-filled trench, *dug at least 12 inches below the elevation of the adjacent crawlspace*. The trench should be lined with a layer of filter fabric (Mirafi 140N or equivalent) to prevent migration of silts and clays into the gravel, but still permit the flow of water. Then 1 to 2 inches of drain rock (clean crushed rock or pea gravel) should be placed in the base of the lined trench. Next a perforated pipe (minimum 3 inch diameter) should be placed on top of the thin rock layer. The perforations in the pipe should be face down. The trench should then be backfilled with more rock to within 6 inches of finished grade. The filter fabric should be wrapped over the top of the rock. Above the filter fabric 6 inches of native soils should be used to cap the drain. If concrete slabs are to directly overlay the drain, then the gravel should continue to the base of the slab, without the 6 inch soil cap. <u>This drain should not be connected to any surface drainage system.</u>

If a floor slab is used, an under-slab drain system would be installed as an alternative to the perimeter footing drain (see above). This system would consist of perforated collector pipes spread no more than 20 feet apart, embedded within the sub slab drain rock, to evacuate any water which gathers within the drain rock.

Utility Lines

Consideration should be given to ensuring that water which may tend to chase utility pipeline trenches will not penetrate under building perimeters. This may require the use of a concrete plug, or passage through a perimeter subdrain system.

ATTACHMENT "Y"

The utility trenches may be backfilled with compacted native soils or clean imported fill. Only mechanical means of compaction of trench backfill will be allowed. Jetting of sands is not acceptable. Trench backfill should be compacted to at least 90 percent of its MDD. However, under pavements, concrete flatwork, and footings the upper 12 inches of trench backfill must be compacted to at least 95 percent of its MDD.

Pavement

The new entry lane, paved roads, and parking areas are expected to be of highly variable composition. Some will be of asphaltic concrete over Caltrans Class II aggregate base (baserock), some will be of a permeable nature (permeable concrete?), while the parking areas are likely to be gravel surfaced.

Asphalt - Based upon the measured R-values of the soils (31 and 56), we recommend the following pavement design thicknesses to achieve the normal 10 year design life pavement based upon the various traffic indices:

Traffic Index	AC Thickness	AB Thickness
4	2.0	5.0
4.5	2.0	6.5
	2.5	5.5

The anticipated traffic loading should be determined by the architect or civil engineer based upon the future use of these pavements. Pavement sections for heavier traffic loadings can be provided if required. If import fill will be used to raise the driveway elevation, the R-value of the fill must be at least 30 for these design values to remain valid, otherwise the pavement sections should be redesigned once the R-value of the fill has been established. Note that the upper 18 inches of subgrade soils must be over-excavated and recompacted as engineered fill.

Permeable Pavement – the type of pavement to be provided in these areas is not currently known to our office. However, as discussed in the grading section, the upper 18 inches of soil will need to be recompacted to provide adequate support for the new pavements. We note that baserock is not likely to have sufficient percolation properties to permit adequate infiltration rates. Manufacturer's recommendations should be followed to for pavement subgrade construction.

Gravel Parking – As with both other pavements, the upper 18 inches of subgrade must be recompacted. If baserock will not be used for the pavement surface, then we recommend that a layer of reinforcing fabric (e.g. Mirafi 500X) be used to prevent gravel separation into the sandy soils. The gravel should have a minimum thickness of 4 inches, and consist of angular particles (i.e. crushed rock, not river-run).

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February14, 2012

Plan Review and Construction Observations

The use of the recommendations contained within this report is contingent upon our being contracted to review the plans, and to observe geotechnically relevant aspects of the construction.

We should be provided with a full set of plans to review at the same time the plans are submitted to the building/planning department for review. A minimum of one working week should be provided for review of the plans.

At a minimum, our observations should include: key and bench excavations; compaction testing of fills and subgrades; footing excavations; slab and driveway subgrade preparation; installation of any drainage system (e.g. footing and surface), and final grading. A minimum of 48 hours notice should be provided for all construction observations.

LIMITATIONS

This report has been prepared for the exclusive use of the addressee, and their architects and engineers for aiding in the design and construction of the proposed development. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials, and contractors to ensure correct implementation of the recommendations.

The opinions, comments and conclusions presented in this report were based upon information derived from our field investigation and laboratory testing. Conditions between or beyond our borings may vary from those encountered. Such variations may result in changes to our recommendations and possibly variations in project costs. Should any additional information become available, or should there be changes in the proposed scope of work as outlined above, then we should be supplied with that information so as to make any necessary changes to our opinions and recommendations. Such changes may require additional investigation or analyses, and hence additional costs may be incurred.

Our work has been conducted in general conformance with the standard of care in the field of geotechnical engineering currently in practice in the San Francisco Bay Area for projects of this nature and magnitude. We make no other warranty either expressed or implied. By utilizing the design recommendations within this report, the addressee acknowledges and accepts the risks and limitations of development at the site, as outlined within the report.

Respectfully Submitted;
GeoForensics, Inc.

Daniel F. Dyckman, PE, GE
Senior Geotechnical Engineer, GE 2145

REGISTERED PROFESSIONAL ENGINEER
Daniel F. Dyckman
No. 002145
Geotechnical
STATE OF CALIFORNIA

Bernard A. Atendido
Field Engineer

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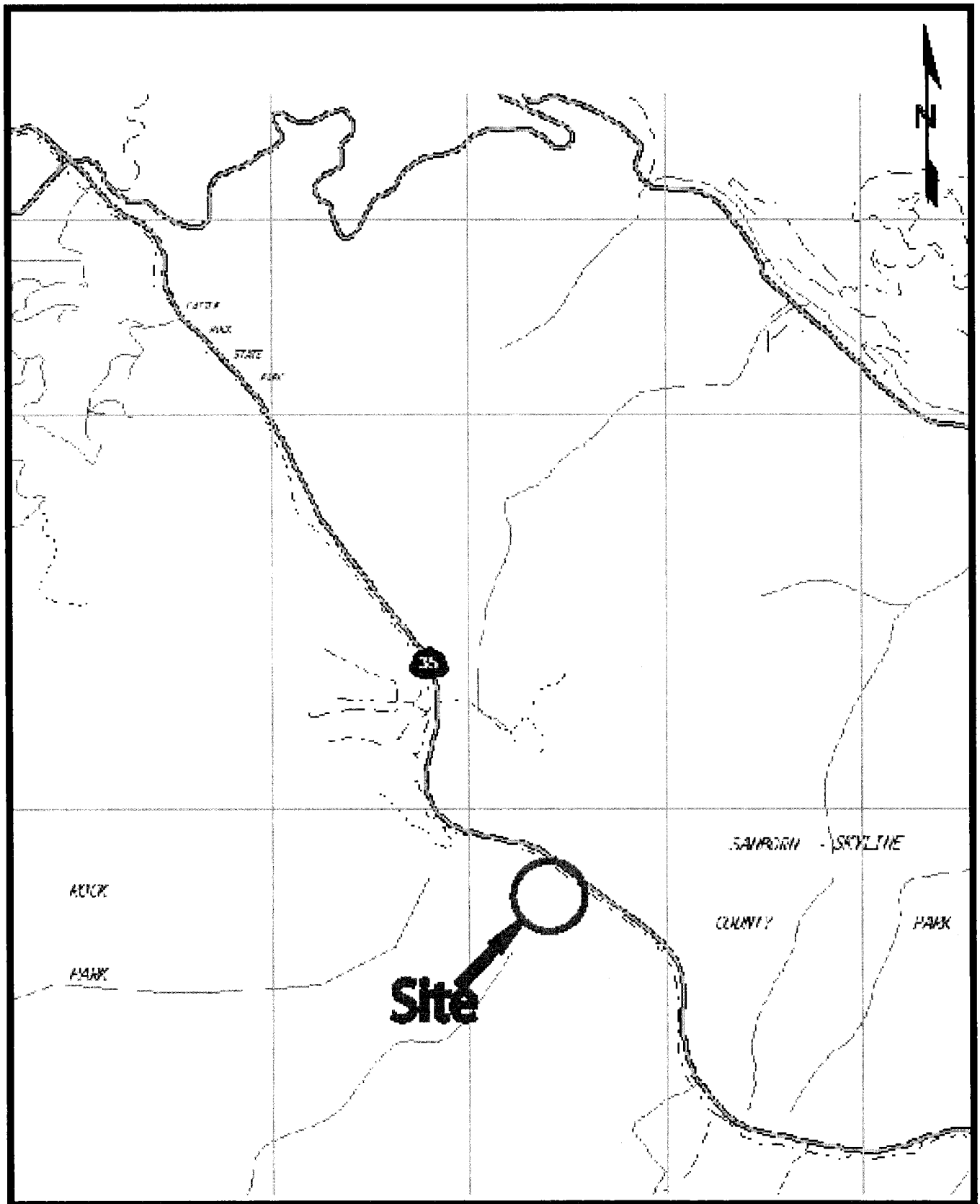

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Figure 1- Site Location

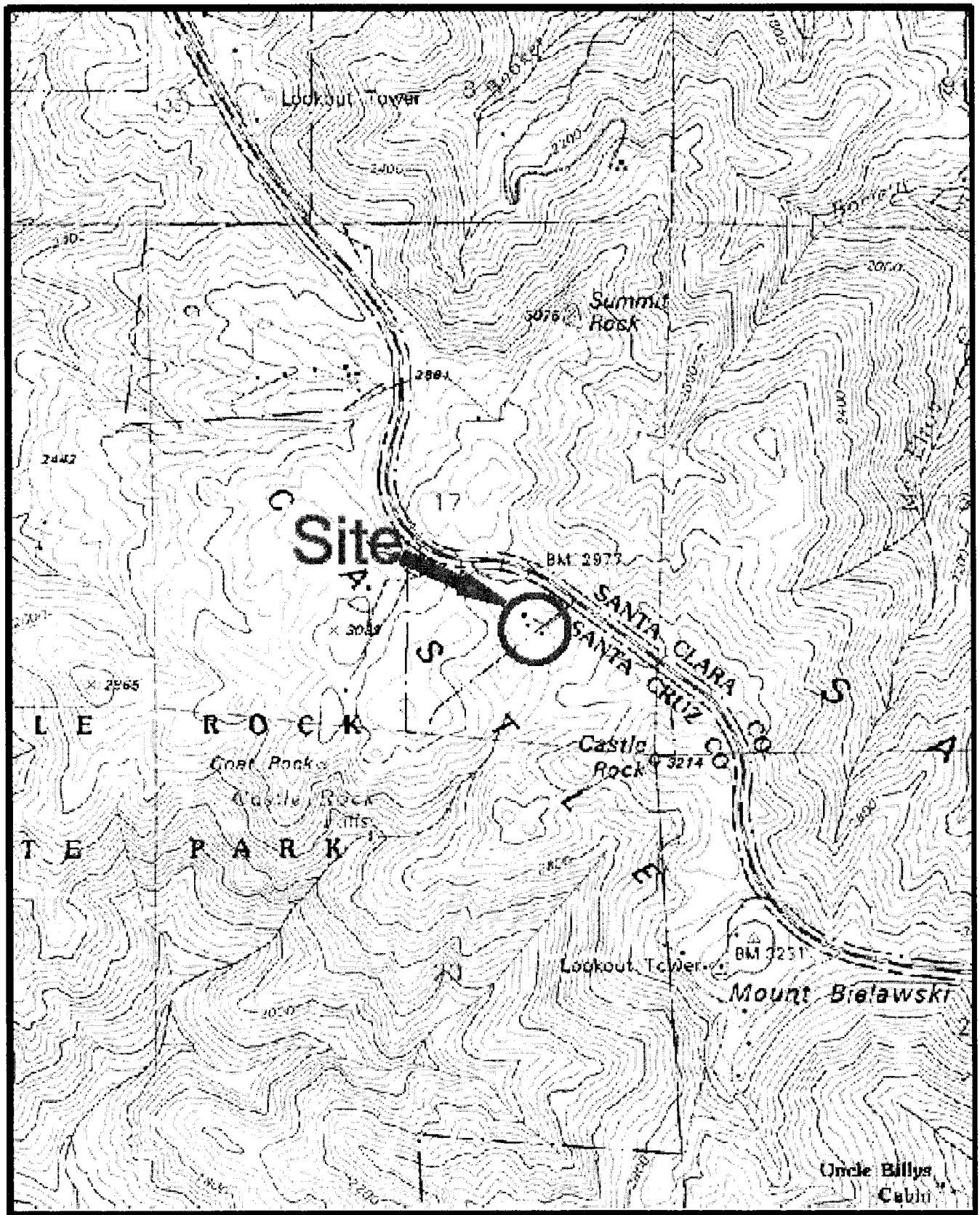

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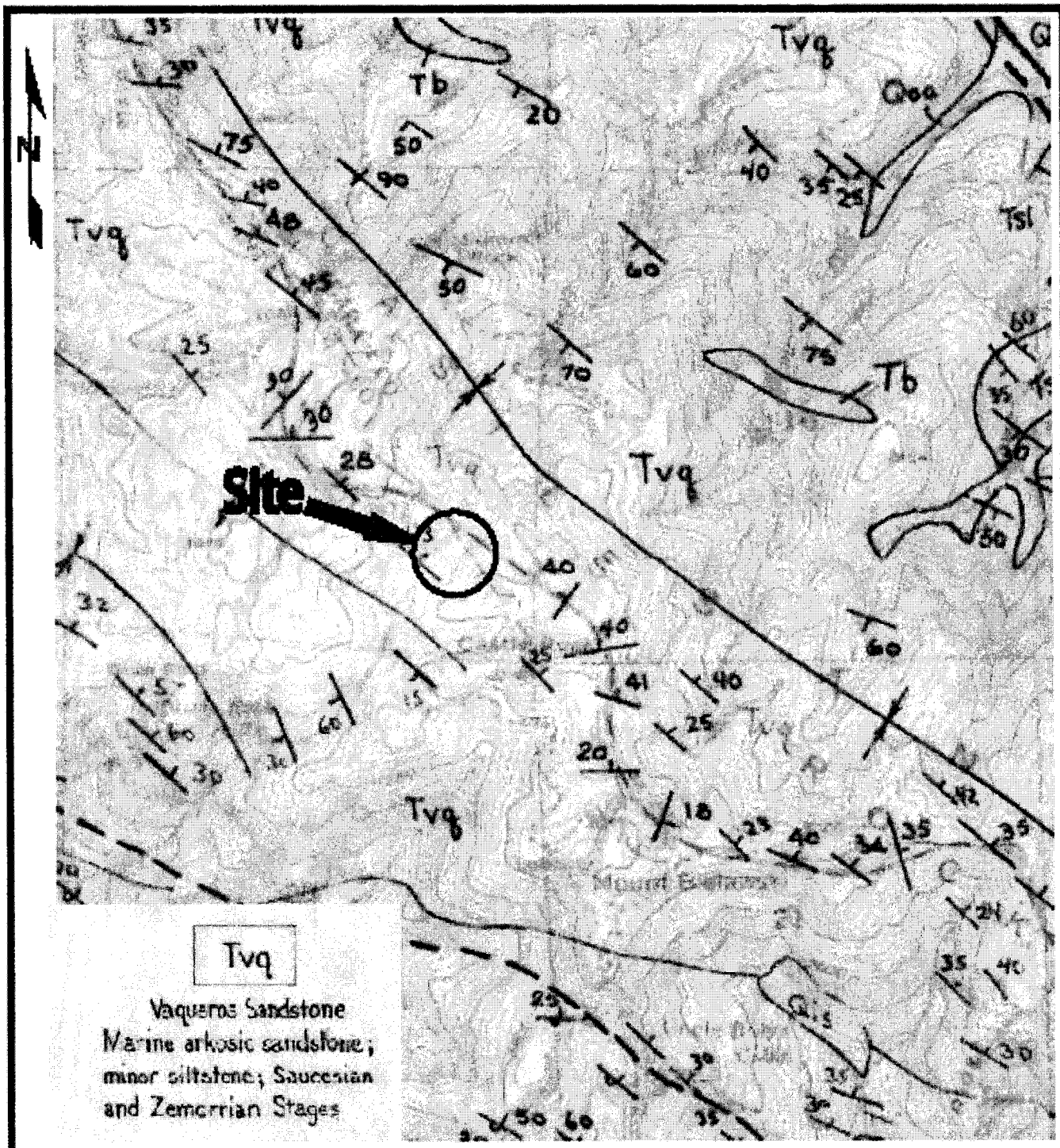
Figure 2 - Vicinity Topography



Base: Preliminary Geologic Map of the Castle Rock Ridge Quadrangle, Santa Cruz and Clara Counties, California - by E.E. Brabb and T. Dibblee, Jr - 1979

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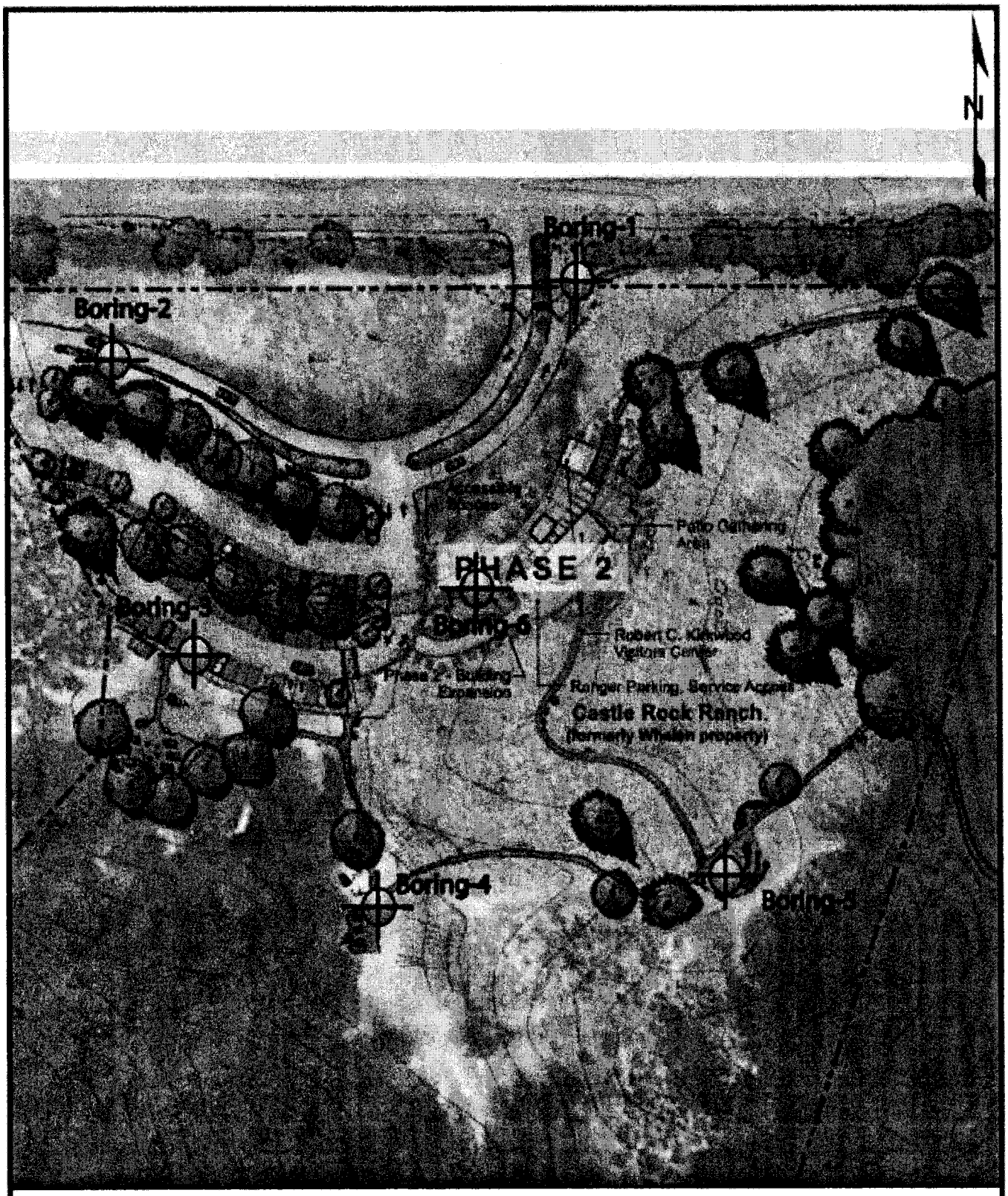
Figure 3- Geologic Map



Source: Google Earth

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561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Figure 4 - Site Plan with Approximate Boring Locations

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Appendix A – Logs of Borings

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION		DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	1-1		21	silty fine SAND (near sandy SILT) brown & orange brown; slightly moist, medium dense	(SM)	109.2	13.8
5	1-2		93/10"	silty SANDSTONE; tan & yellow brown; slightly moist, very dense	(SM)	109.0	11.6
10	1-3 SPT		60	as above	(SM)	-	12.6
15				Bottom of Boring @ 10.5 ft No Groundwater			
20							
25							
30							

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler
SPT Sampler

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Castle Rock Park- Boring 1

ATTACHMENT 7

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 Inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	2-1		12	silty fine SAND (near sandy SILT) brown & orange brown; slightly moist, dense (SM)	88.8	11.0
5	2-2		50/5"	silty SANDSTONE; tan & yellow brown; slightly moist, very dense (SM)	86.7	8.2
				Bottom of Boring @ 5.5 ft No Groundwater		
10						
15						
20						
25						
30						

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler

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Castle Rock Park- Boring 2

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	3-1		31	fine sandy SILT (near silty fine SAND) with siltstone fragments brown with yellow brown; slightly moist, hard (ML)	100.1	20.3
5	3-2 SPT		77/11"	fine sandy SILTSTONE; yellow brown & orange brown; slightly moist, hard (ML)	-	21.5
				Bottom of Boring @ 6ft		
				No Groundwater		
10						
15						
20						
25						
30						

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler
SPT Sampler

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Castle Rock Park- Boring 3

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	4-1		39	silty fine SAND; brown with yellow brown; slightly moist; medium dense (SM)	101.0	11.9
5	4-2		76	silty SANDSTONE; yellow brown & orange brown; slightly moist; dense (SM)	109.7	6.8
				Bottom of Boring @ 5.5ft No Groundwater		
10						
15						
20						
25						
30						

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler
SPT Sampler

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Castle Rock Park- Boring 4

APPENDIX C

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 Inches)	MATERIAL DESCRIPTION	DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	5-1		5	silty fine SAND (near fine sandy SILT) brown to dark brown; slightly moist, very loose (SM)	90.6	13.4
5	5-2		33	fine sandy SILT, (near silty fine SAND) brown; slightly moist, very stiff (siltstone in tip of sampler) (ML)	97.0	8.7
	5-3 SPT		56/6"	silty fine SAND dark brown & brown; slightly moist, very dense (SM)	-	10.5
10				Bottom of Boring @ 9.5 ft No Groundwater		
15						
20						
25						
30						

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler
SPT Sampler

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Castle Rock Park- Boring 5

LOG OF BORING

DEPTH (ft)	SAMPLE NUMBER	SAMPLE LOC.	BLOW COUNTS (12 inches)	MATERIAL DESCRIPTION		DRY DENSITY (pcf)	MOISTURE CONTENT (%)
	6-1		14	silty fine SAND, with sandstone fragments dark brown with yellow brown; slightly moist, stiff	(ML)	96.8	11.2
5	6-2		26/11"	silty SANDSTONE yellow & orange brown; slightly moist, very dense	(SM)	103.2	6.4
				- -grades to			
10	6-3 SPT		44	SILTSTONE with some fine sand yellow & orange brown; slightly moist, hard	(ML)	-	28.5
				Bottom of Boring @ 10.5 ft No Groundwater			
15							
20							
25							
30							

Logged by: BA
Job# 212001
Drilled on 1/16/12

Truck Rig
140 Pound Hammer
No Groundwater encountered

Mod. Cal Sampler
SPT Sampler

GEOFORENSICS, INC.
561 Pilgrim Dr., Suite D, Foster City, CA 94404
Tel: (650) 349-3369 Fax: (650) 571-1878

Castle Rock Park- Boring 6

File: 212001
February14, 2012

Appendix B – Laboratory Test Results

Moisture-Density-Porosity Report

Cooper Testing Labs, Inc. (ASTM D 2937)

CTL Job No:	060-2109a	Project No.	212001	By:	RU
Client:	GeoForensics	Date:	02/06/12		
Project Name:	Castle Rock	Remarks:			

Boring:	1-1	1-2	1-3	2-1	2-2	3-1	3-2	4-1
Sample:								
Depth, ft:	2	5	10	2	5	2	5.5	2
Visual Description:	Dark Yellowish Brown Silty SAND (slightly plastic)	Light Yellowish Brown SAND w/ Silt	Olive Yellow Silty SAND	Very Dark Brown Silty SAND	Pale Yellow SAND w/ Silt (slightly plastic)	Very Dark Brown mixed with Light Yellowish Brown Sandy CLAY	Light Olive Brown Mottled Strong Brown Sandy CLAY/ Clayey SAND	Light Olive Brown SAND w/ Clay
Actual G_s								
Assumed G_s	2.70	2.70		2.70	2.70	2.70		2.70
Moisture, %	13.8	11.6	12.6	11.0	8.2	20.3	21.5	11.9
Wet Unit wt, pcf	124.2	121.7		98.5	93.8	120.4		113.0
Dry Unit wt, pcf	109.2	109.0		88.8	86.7	100.1		101.0
Dry Bulk Dens.pb, (g/cc)	1.75	1.75		1.42	1.39	1.60		1.62
Saturation, %	68.3	57.4		33.0	23.3	80.0		47.9
Total Porosity, %	35.3	35.4		47.4	48.6	40.7		40.1
Volumetric Water Cont.,θw	24.1	20.3		15.6	11.3	32.5		19.2
Volumetric Air Cont., θa	11.2	15.1		31.8	37.3	8.1		20.9
Void Ratio	0.54	0.55		0.90	0.95	0.69		0.67
Series	1	2	3	4	5	6	7	8

Note: All reported parameters are from the as-received sample condition unless otherwise noted. If an assumed specific gravity (Gs) was used then the saturation, porosities, and void ratio should be considered approximate.

ATTACHMENT 7

Moisture-Density-Porosity Report
Cooper Testing Labs, Inc. (ASTM D 2937)

CTL Job No:	060-2109b	Project No.	212001	By:	RU
Client:	GeoForensics	Date:	02/06/12		
Project Name:	Castle Rock	Remarks:			

Boring:	4-2	5-2	5-3	6-1	6-2	6-3		
Sample:								
Depth, ft:	5	6	9	2	6	10		
Visual Description:	Olive Yellow Silty SAND (slightly plastic)	Light Olive Brown Silty SAND	Olive Brown SAND w/ Silt	Olive Brown Mottled Silty SAND	Pale Yellow SAND w/ Silt	Pale Yellow SAND w/ Silt		
Actual G_s								
Assumed G_s	2.70	2.70		2.70	2.70			
Moisture, %	6.8	8.7	10.5	11.2	6.4	28.5		
Wet Unit wt, pcf	117.2	105.5		107.7	109.8			
Dry Unit wt, pcf	109.7	97.0		96.8	103.2			
Dry Bulk Dens,pb, (g/cc)	1.76	1.55		1.55	1.65			
Saturation, %	34.3	31.8		40.9	27.3			
Total Porosity, %	34.9	42.5		42.6	38.8			
Volumetric Water Cont,θw	12.0	13.5		17.4	10.6			
Volumetric Air Cont., θa	23.0	29.0		25.2	28.2			
Void Ratio	0.54	0.74		0.74	0.63			
Series	1	2	3	4	5	6	7	8

Note: All reported parameters are from the as-received sample condition unless otherwise noted. If an assumed specific gravity (Gs) was used then the saturation, porosities, and void ratio should be considered approximate.

The Zero Air-Voids curves represent the dry density at 100% saturation for each value of specific gravity

COOPER TESTING LABORATORY

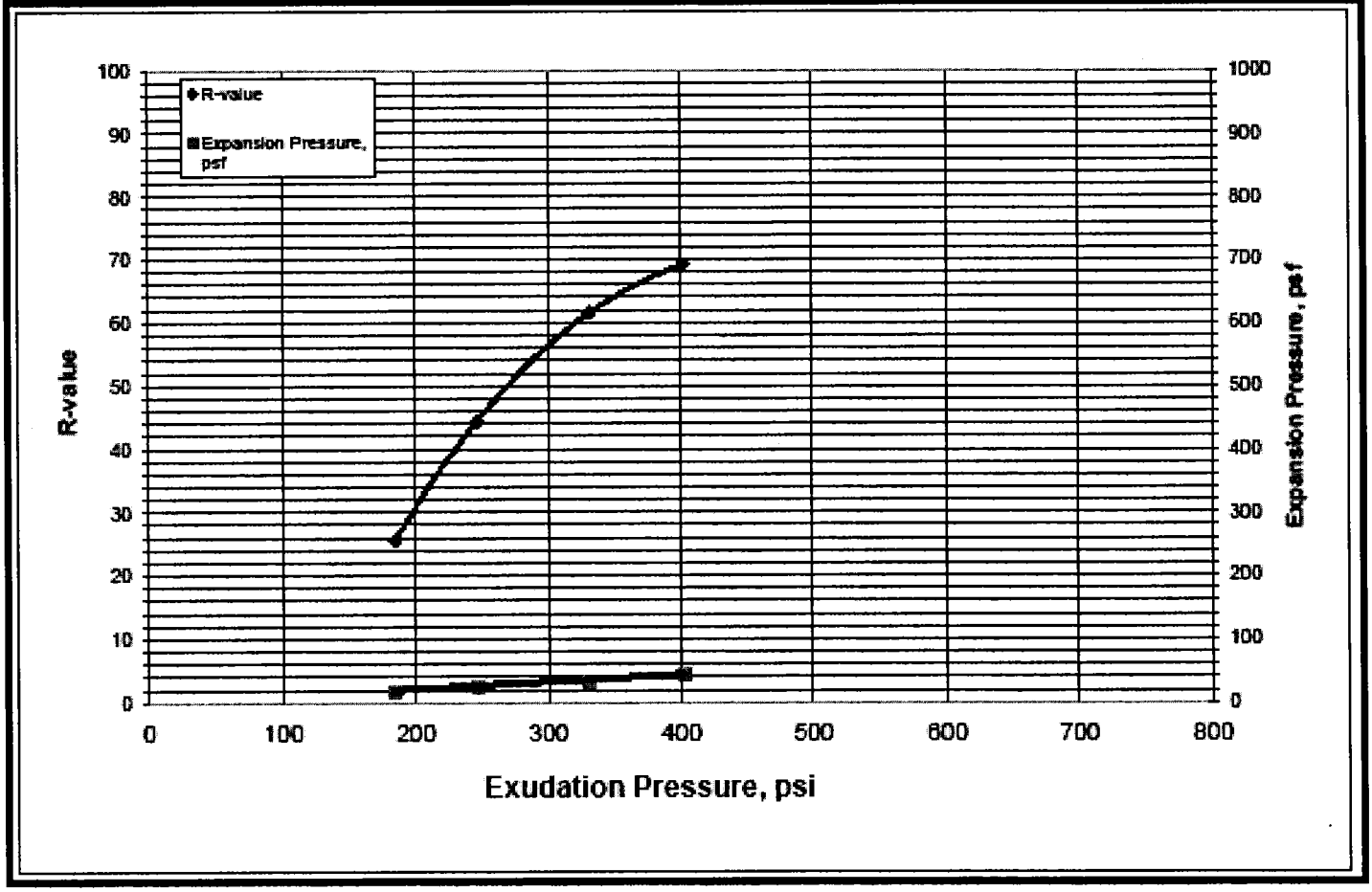
ATTACHMENT 7

R-value Test Report (Caltrans 301)

Job No.:	060-2109	Date:	01/31/12	Initial Moisture,	7.8%
Client:	GeoForensics	Tested	MD	R-value by Stabilometer	56
Project:	Castle Rock - 212001	Reduced	RU		
Sample	Bulk# 1	Checked	DC	Expansion Pressure	30 psf

Soil Type: Dark Olive Brown Silty SAND w/ surface organics (slightly plastic)

Specimen Number	A	B	C	D	Remarks:
Exudation Pressure, psi	185	332	402	246	
Prepared Weight, grams	1200	1200	1200	1200	
Final Water Added, grams/cc	58	38	24	48	
Weight of Soil & Mold, grams	3104	3126	3115	3154	
Weight of Mold, grams	2085	2092	2100	2107	
Height After Compaction, in.	2.3	2.38	2.35	2.44	
Moisture Content, %	13.0	11.2	10.0	12.1	
Dry Density, pcf	118.7	118.3	118.9	115.9	
Expansion Pressure, psf	17.2	30.1	43.0	25.8	
Stabilometer @ 1000					
Stabilometer @ 2000	93	40	34	64	
Turns Displacement	4.36	4.16	3.62	4.43	
R-value	26	62	69	44	



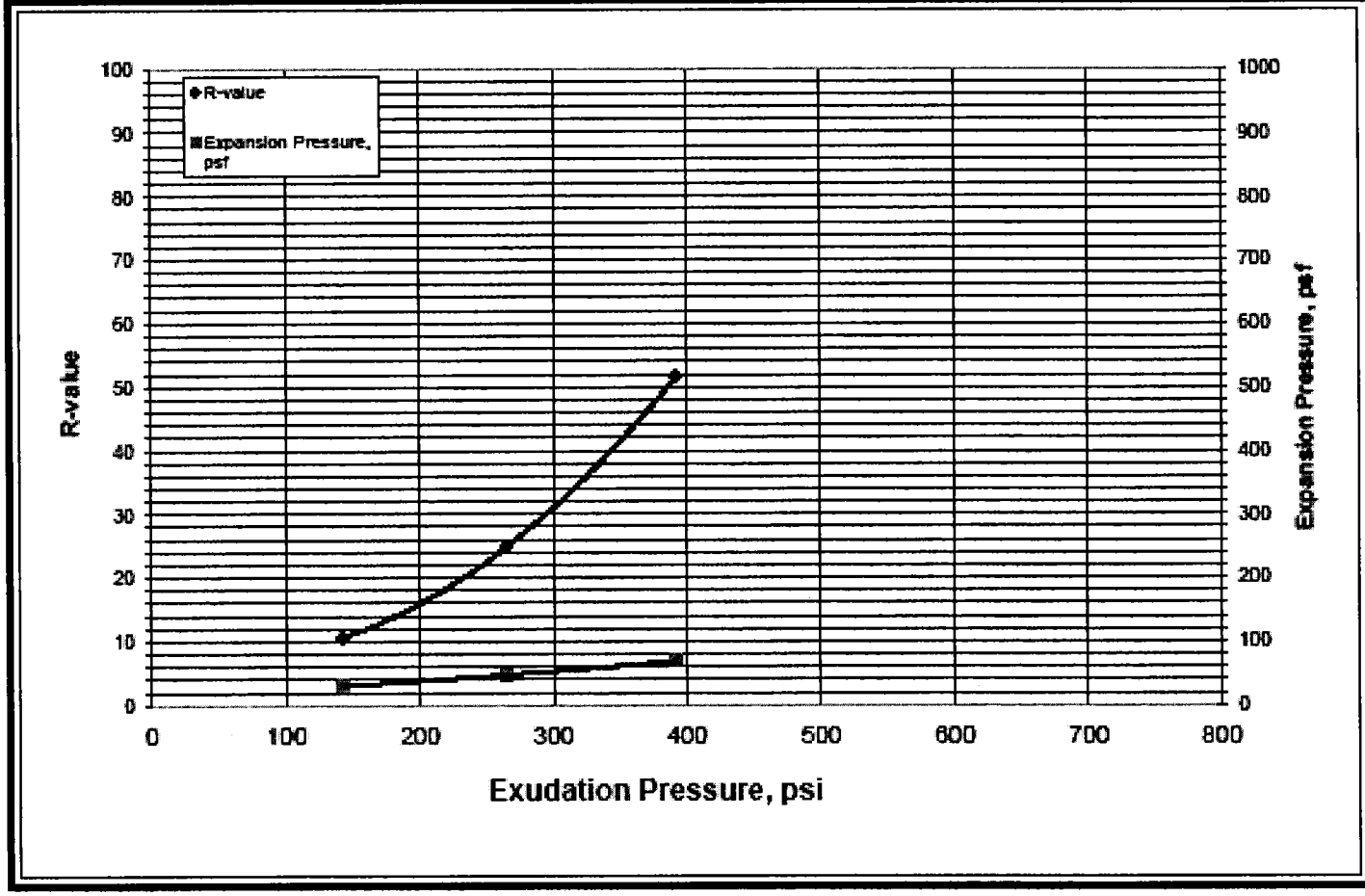
ATTACHMENT 4

R-value Test Report (Caltrans 301)

Job No.:	060-2109	Date:	01/30/12	Initial Moisture,	12.9%
Client:	GeoForensics	Tested	MD	R-value by Stabilometer	31
Project:	Castle Rock - 212001	Reduced	RU		
Sample	Bulk# 2	Checked	DC	Expansion Pressure	55 psf
Soil Type:	Very Dark Grayish Brown Clayey SAND				

Specimen Number	A	B	C	D
Exudation Pressure, psi	142	265	392	
Prepared Weight, grams	1200	1200	1200	
Final Water Added, grams/cc	74	45	26	
Weight of Soil & Mold, grams	3133	3034	3088	
Weight of Mold, grams	2065	2104	2077	
Height After Compaction, in.	2.67	2.34	2.39	
Moisture Content, %	19.9	17.1	15.4	
Dry Density, pcf	101.0	102.7	111.0	
Expansion Pressure, psf	30.1	47.3	68.8	
Stabilometer @ 1000				
Stabilometer @ 2000	132	102	53	
Turns Displacement	4.85	3.74	4.22	
R-value	11	25	51	

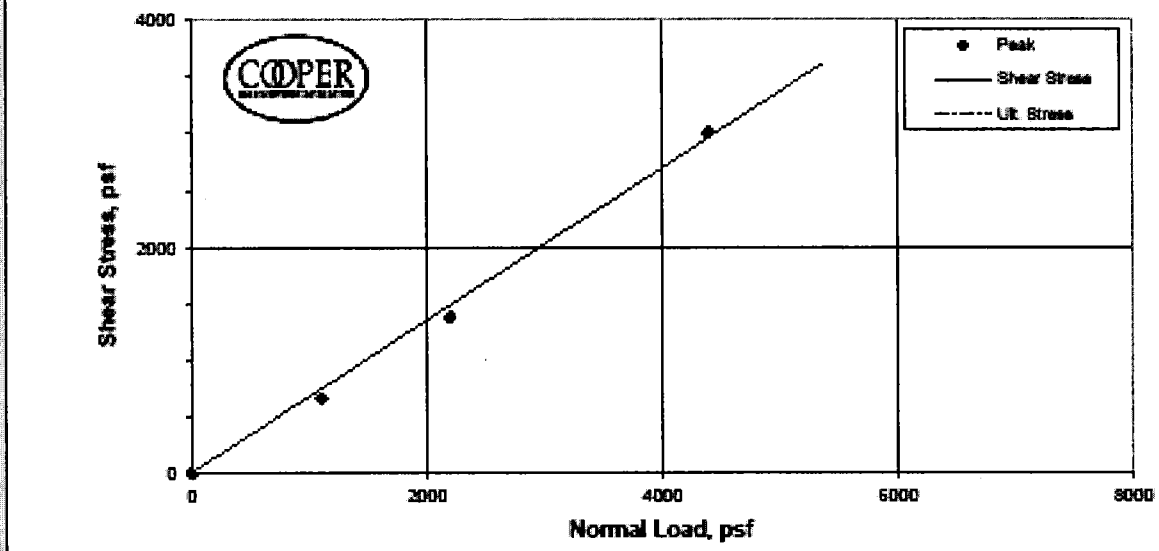
Remarks:



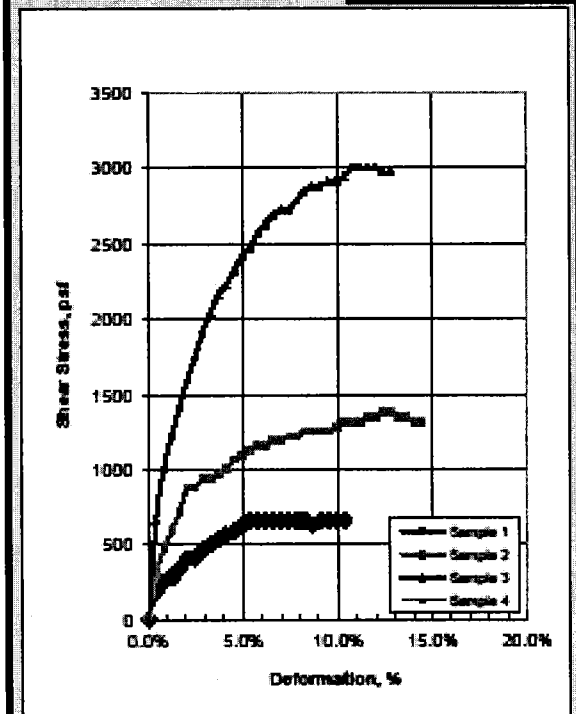
ATTACHMENT 7

Direct Shear

(Consolidated-Undrained)



P. Phi (degrees)	33.9	Ult. Phi (degrees)	
P. Cohesion (psf)	-2.27374E-13	Ult. Cohesion (psf)	



	Sample Data: Initial			
	1	2	3	4
Moisture %	13.8%	13.1%	13.4%	
Dry Dens., pcf	88.6	90.5	92.7	
Void Ratio	0.903	0.862	0.819	
Saturation %	41.3	41.0	44.2	
Diameter	2.42	2.42	2.42	
Height	1.00	1.00	1.00	
	Sample Data: At Test			
Moisture %	24.3%	22.9%	21.4%	
Dry Dens., pcf	101.9	104.2	107.0	
Void Ratio	0.655	0.618	0.576	
Saturation %	100.0	100.0	100.0	
Diameter	2.42	2.42	2.42	
Height	0.869	0.868	0.866	
Normal Stress, psf	1100	2200	4400	
Shear Stress, psf	657	1378	3005	
Strengths picked at	Peak	Peak	Peak	
Ult. Stress, psf				
Strain Rate, %/min.	1.0	1.0	1.0	

CTL #	060-2109
Client:	GeoForensics
Project	Castle Rock - 212001
Tested By:	MD
Reduced By:	RU
Date:	2/2/2012

Specimen #	Boring:	Sample:	Depth, ft:	Visual Soil Classification
1	5-1		2	Dark Brown Clayey SAND w/ Gravel
2	5-1		2	Dark Brown Clayey SAND w/ Gravel
3	5-1		2	Dark Brown Clayey SAND w/ Gravel

Remarks:

"DS-CU" A fully undrained condition may not be attained in this test.

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

January 23, 2013

Don Neuwirth
PO Box 460173
San Francisco, CA 94146-0173

Subject: Review of Geotechnical Investigation by GeoForensics, Inc. Dated February 14, 2012: Project: 212001

"Erosion Supplement", Dated August 20, 2013

"Review of Erosion and Relandscaping Plans", Dated August 27, 2013

APN 088-081-12, Application #: REV131025

Dear Mr. Neuwirth,

The purpose of this letter is to inform you that the Planning Department has accepted the subject report and the following items shall be required:

1. All construction shall comply with the recommendations of the report.

2. Final plans shall reference the report and include a statement that the project shall conform to the report's recommendations.

3. After building and grading permit plans are prepared that are acceptable to all reviewing agencies, please submit a signed and stamped *Soils (Geotechnical) Engineer Plan Review Form* to Environmental Planning. *Please note that the plan review form must reference the final plan set by last revision date.* Any updates to report recommendations necessary to address conflicts between the report and plans must be provided via a separate addendum to the soils report.

   The author of the report shall sign and stamp the completed form. An electronic copy of this form may be found on our website: www.sccoplanning.com, under "Environmental", "Geology & Soils", "Assistance & Forms", "Soils Engineer Plan Review Form".

4. Please submit three copies of the soils report and addendums with the building/grading permit application.

After building permit issuance the soils engineer *must remain involved with the project* during construction. Please review the *Notice to Permits Holders* (attached). Please note: Electronic

(over)

ATTACHMENT

copies of all forms required to be completed by the Geotechnical Engineer may be found on our website: www.sccoplanning.com, under "Environmental", "Geology & Soils", "Assistance & Forms".

Our acceptance of the report is limited to its technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please note that this determination may be appealed within 14 calendar days of the date of service. Additional information regarding the appeals process may be found online at: http://www.sccoplanning.com/html/devrev/plnappeal_bldg.htm

Please call the undersigned at (831) 454-5121 if we can be of any further assistance.

Sincerely,

Carolyn Burke
Civil Engineer

Cc: Annette Olson, Environmental Planning
GeoForensics, Inc.
Callander Associates: Attn: Amy McNamara 311 Seventh Ave. San Mateo, CA

ATTACHMENT 3

GEOFORENSICS INC. **Consulting Soil Engineering**

561-D Pilgrim Drive, Foster City, CA 94404 Phone: (650) 349-3369 Fax: (650) 571-1878

File: 212001
August 27, 2013

Callander Associates
311 Seventh Avenue
San Mateo, CA 94401

Attention: A. McNamara

Subject: **Castle Rock State Park**
Santa Cruz County, California
REVIEW OF EROSION AND RELANDSCAPING PLANS

Ms. McNamara:

This letter has been prepared to document that we have reviewed the plans prepared for the erosion protection and re-landscaping work to be performed during the construction of the proposed new improvements at the park. These plans consist of 2 sheets identified as L9 and L10, prepared by your office. The plans are dated 8/23/13 and do not have any revision dates indicated.

We have reviewed the above-listed plans for their conformance with the geotechnical recommendations and parameters provided in our report (dated 2/16/12), our erosion control update letter (8/20/13) and good geotechnical engineering practice.

Based upon our review, we find that these plans appear to have been prepared in substantial conformance with the intents of the recommendations within our report and good geotechnical engineering practice.

These plans may be submitted to the building department without further review by our office.

It is the addressee's responsibility to provide this letter to the proper building officials, design professionals, *and contractors*. Delays and additional expenses may result if the proper people are not notified of our comments.

Respectfully Submitted;
GeoForensics, Inc.

Daniel F. Dyckman, PE, GE
Senior Geotechnical Engineer, GE 2145
cc: 4 to addressee

ATTACHMENT 9

GEOFORENSICS INC.

Consulting Soil Engineering

561-D Pilgrim Drive, Foster City, CA 94404 Phone: (650) 349-3369 Fax: (650) 571-1878

File: 212001
August 20, 2013

Callander Associates
311 Seventh Avenue
San Mateo, CA 94401

Attention: Amy McNamara

Subject: **Castle Rock Park**
15435 Skyline Boulevard
Santa Cruz County, California
EROSION SUPPLEMENT

Ms. McNamara:

This letter has been prepared to provide our commentary on the potential for erosion for areas to be cleared for the proposed site improvements. We have previously issued a report (dated 2/14/12) which summarized our subsurface investigation and laboratory testing for the site, and presented recommendations for the design and construction of the proposed improvements. However, our report did not specifically address the potential for erosion of the near surface soils during construction.

Soil Conditions

Our borings at the site found that the near surface site soils are generally in a moderately dense condition, but are comprised of silty sands with minimal if any clay binder. As a result, the soils will be readily susceptible to erosion where they are located in areas of moderate to steep slope, or where surface water flows are concentrated over the surface of disturbed exposed soils.

We would consider soils on slope steeper than 10:1 (H:V) to be moderately subject to erosion, and those on slopes steeper than 5:1 to be highly subject to erosion. Where the soils are moderately subject to erosion, the soils should be protected from concentrated surface water flows (i.e. require lined channels). Where the soils are highly subject to erosion, we would recommend that the entire denuded soil surface be temporarily protected from surface water flows using erosion control netting over the soils until vegetative growth can be established.

Respectfully Submitted;
GeoForensics, Inc.

Daniel F. Dyckman, PE, GE
Senior Geotechnical Engineer, GE 2145
Cc: 1 to addressee (via email)

ATTACHMENT 3

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131055

APN 088-081-12

Accessibility Review

Routing No: 2 Review Date: 08/13/2013

LAURA BRINSON (LBRINSON) : Complete

Complete

Yes

Compliance

No compliance issues

Building Permit Requirements

·The drinking fountain shall be detailed and shown to be located in an alcove or within wing walls. CBC 1117B.1

·The accessible nature trails shall be a minimum 48 inches wide, with continuous gradients shall be provided with 5'x5' rest areas for every 400 feet. CBC 1133B.7.5

·The parking pay stations in the area of accessible parking spaces shall be shown to be accessible.

·There shall be assistive listening devices provided for the meeting/assembly area. CBC 1104B.2

·Signage at restrooms, parking, directional, entries, exits, etc. shall be detailed on the construction documents. Include Type II Braille with character signage. CBC 1117B.5

·Curb cuts and detectable warnings shall be detailed on the construction documents. CBC 1127B.5

·Restroom details for access required to include dimensions, elevations of fixtures and manuevering clearances. CBC 1115B

If you have any questions regarding these building plan check comments, please contact Laura Brinson at 831-454-3151 or email laura.brison@co.santa-cruz.ca.us .

Cal Trans Review

Routing No: 2 Review Date: 08/23/2013

ANNETTE OLSON (AOLSON) : Complete

Drainage Review

Routing No: 1 Review Date: 03/07/2013

ALYSON TOM (ATOMS) : Complete

App# 131055 APN: 08808112

Application with background and draft initial study dated January 2013 and civil plans dated 2/15/13 has been received. The following items should be addressed prior to building permit issuance:

Compliance/Informational:

ATTACHMENT 13

Drainage Review

Routing No: 1 Review Date: 03/07/2013
ALYSON TOM (ATOMS) : Complete

1) Provide a final stormwater management plan and design. Provide a final analysis demonstrating that the proposed design meets the CDC requirements including mitigation requirements for both the 2 and 10 year storms.

2) Since this project is a complete redevelopment (altering more than 50% of the original impervious areas) mitigation credit is not given for the existing impervious areas. Design of the mitigation facilities must also consider additional impervious area added to Highway 35 as part of this project.

3) Does this site receive upstream runoff? If so, please describe how this runoff will continue to be accommodated and provide a recorded document that: acknowledges the parcel does and will continue to receive upstream runoff, identify who is responsible for maintenance, and that the County is not responsible for the upstream runoff or for maintenance of the drainage pathway.

4) All inlets should be marked with "No Dumping Drains to Bay" or equivalent.

5) If the final design includes mitigations that rely of infiltration of stormwater please include additional notes on the grading plan to avoid/minimize disturbance of infiltration areas and/or provide for decompaction of infiltration areas after grading is complete. The construction scheduling should be designed so that infiltration areas are not compacted nor clogged during construction.

6) Provide a recorded maintenance agreement(s) for proposed mitigation facility(ies). See Figures SWM25-A and B in the CDC for examples.

7) Depending on the timing of application/approval this project may be subject to meeting "Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region, California" which is currently in a draft review form.

8) Construction of the drainage related items may be inspected by Public Works staff. Once all other agencies have approved of the building permit application plans provide a copy of reproducible final civil plan sheets with DPW signature block along with the engineer's estimate for the drainage related items (a 2% inspection fee will be assessed at permit issuance). A hold will be placed on the building permit for final drainage inspection and receipt of engineered as-built plans.

Environmental Health Review

Routing No: 1 Review Date: 03/06/2013
JIM SAFRANEK (JSafranek) : Complete

RE Septic/Graywater Disposal:

Environmental Health Review

Routing No: 1 Review Date: 03/06/2013
JIM SAFRANEK (JSafranek) : Complete

The preliminary septic work completed by the applicant's sewage consultant demonstrates suitable onsite sewage disposal conditions for the proposed visitor center restroom. An approved septic permit application will be required at time of BP. Leachfields must be installed in undisturbed soil; it's critical to protect the proposed septic disposal field 'envelopes' from any disturbance during the site preparation phase.
Any graywater irrigation systems will need EH permit approval prior to BP.
RE Drinking Water Supply
An EH approved well application will be required at time of BP. However, the onsite water system permit is currently administered by CA DPH--Monterey District (Contact: Jan Sweigert @ 831-655-6934). The applicant will need to provide CA DPH with a new/updated water system application which must be approved prior to BP approval.
RE Proposed Catering Kitchen:
No EH food facility permit, plans or fees will be required as long as 1) all food service for special events is prepared offsite by a licensed caterer (w/ food prep at an approved kitchen) and 2) all special event food service plates, utensils, etc., are imported onto the site and cleaned and sanitized offsite.

Environmental Planning

Routing No: 2 Review Date: 09/26/2013
CAROLYN BURKE (CBURKE) : Complete

Grading Completeness Comments:

1. Due to the depth of loose material on the slopes and in the area of the amphitheater, deeper excavations will be required for fill slope keyways which will in turn affect the limits of grading/disturbance. While this is an important consideration, the amphitheater is not in a particularly sensitive area of the site; we therefore agree to defer the submission of grading cross-sections to the building/grading permit application

2. Comment addressed.

3. Comment addressed.

4. We defer the submittal of plans stamped/signed by the civil engineer until the building/grading permit application. Please be aware that if final plans vary substantially from those considered during Preliminary Grading Review it may require an amendment of your discretionary permit.

5. Comment addressed

Environmental Planning

Routing No: 2 Review Date: 09/26/2013
CAROLYN BURKE (CBURKE) : Complete

6. Comment Addressed.

7. Comment Addressed.

8. Comment addressed

9. Comment addressed

Fire Review

Routing No: 2 Review Date: 08/01/2013
COLLEEN BAXTER (CBAXTER) : Complete

OFFICE OF THE FIRE MARSHAL

SANTA CRUZ COUNTY FIRE DEPARTMENT / *CALFIRE*

CAL FIRE
SAN MATEO-SANTA CRUZ UNIT

6059 HIGHWAY 9
P.O. DRAWER F-2
FELTON, CA 95018
Phone (831) 335-6748
Fax # (831) 335-4053

SCOTT JALBERT
FIRE CHIEF

Date: 8/1/13

Planning Department
County of Santa Cruz
Attention: ANNETTE OLSON
701 Ocean Street
Santa Cruz, CA 95060

Subject: APN: 088-081-12 / Appl # 131055
Address: 15435 SKYLINE BLVD

Fire Review

Routing No: 2 Review Date: 08/01/2013
COLLEEN BAXTER (CBAXTER) : Complete

Dear Name:

The Santa Cruz County Fire Marshals Office has reviewed the plans for the above cited project and has no objections as presented.

- **Any other requirements will be addressed in the Building Permit phase.**

- Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.

In order to obtain building application approval, recommend you have the DESIGNER add appropriate NOTES and DETAILS showing the following information **on the plans that are submitted for BUILDING PERMIT.**

Each APN (lot) shall have separate submittals for building and sprinkler system plans.

NOTE on the plans "the job copies of the building and fire systems plans and permits must be on-site during inspections."

Note: As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source, and, to hold harmless and without prejudice, the reviewer and reviewing agency.

Should you have any additional concerns, you may contact our office at (831) 335-6748.

Project Review

Routing No: 2 Review Date: 08/23/2013
ANNETTE OLSON (AOLSON) : Complete

County of Santa Cruz, PLANNING DEPARTMENT

Discretionary Application Comments 131055

APN 088-081-12

Project Review

Routing No: 2 Review Date: 08/23/2013

ANNETTE OLSON (AOLSON) : Complete

See Environmental Planning comments.

DEPARTMENT OF TRANSPORTATION
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
http://www.dot.ca.gov/dist05/

Flex your power!
Be energy efficient!

August 15, 2013

PM: SCr 35-14.10

Ms. Annette Olson
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060

Dear Ms. Olson:

COMMENTS ON THE CASTLE ROCK STATE PARK COMMERCIAL DEVELOPMENT PERMIT APPLICATION RESUBMITTAL PACKAGE

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the second routing of the above referenced project and offers the following comments.

1. In most circumstances, Caltrans prefers development specific retaining walls to be constructed outside of the State's right of way. Depending on the type of wall, approval may require additional review time from our Structures Department located at headquarters.

2. It appears the project applicant is assuming that the drainage for the proposed parking lot will be addressed completely with underdrains because of the use of porous asphalt. However it is likely that there will still be additional runoff from the paved areas than there is currently in the existing condition. As such, please provide documentation showing that the 100-year flow towards State Route (SR) 35 will not increase.

3. The project proposes to carry an existing swale under the new driveway, with rip rap at the outlet. Please provide hydrology and hydraulics calculations demonstrating that the pipe can carry a 25-year flow, including mapping of the drainage area. In addition, please provide calculations showing that the rip rap is sized adequately for the outlet velocity of the pipe.

4. Please note that any drainage facilities proposed to be installed within the clear recovery zone may require approval under a Design Exception and/or mitigated for traffic safety.

5. Although the conceptual plans overall appear acceptable; the "finer" details of the plans will need to be addressed during the Encroachment Permit Process.

If you have any questions or need further clarification on any of the items discussed above, please contact me at (805) 549-3099, or by e-mail at: Jennifer.calate@dot.ca.gov.

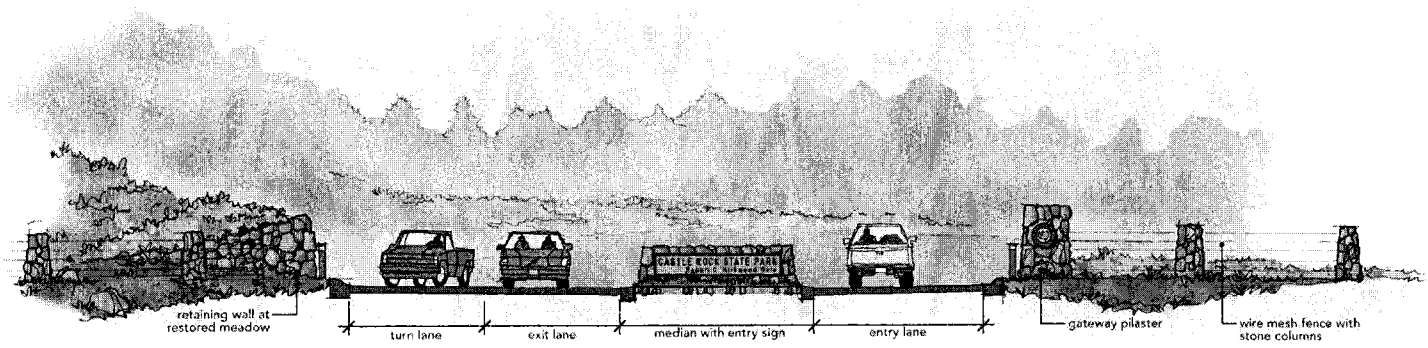
Sincerely,

JENNIFER CALATE
Associate Transportation Planner
District 5 Development Review Coordinator

ASCENT ENVIRONMENTAL

Proposed Castle Rock State Park Entrance Project

Biological Resources Evaluation to Support an Initial Study



PREPARED FOR:

Sempervirens Fund (for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640

April 2014

ATTACHMENT 1.1

Proposed Castle Rock State Park Entrance Project

Biological Resources Evaluation to Support an Initial Study

PREPARED FOR:

Sempervirens Fund
(for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640
Contact:
Amy McNamara

Callander Associates Landscape Architecture, Inc.
311 Seventh Avenue
San Mateo, CA 94401-4259
650.375.1313

PREPARED BY:

Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, CA 95814
www.ascentenvironmental.com

Contact:
Mike Parker
Project Manager
916.444.7301

April 2014

ATTACHMENT 4

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ATTACHMENT 3

ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Number
California State Parks	State of California Department of Parks and Recreation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	Santa Cruz County
CWA	Clean Water Act
ESA	Federal Endangered Species Act
IPHCP	Interim Programmatic Habitat Conservation Plan
RWQCB	Regional Water Quality Control Board
SR	State Route
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1 INTRODUCTION

Ascent Environmental, Inc., on behalf of Sempervirens Fund, conducted a biological resources study to document the existing site conditions and prepared this biological resources technical report for the proposed Castle Rock State Park Entrance Project, Santa Cruz County, California. Sempervirens Fund is submitting an application to Santa Cruz County (County) for the development of an open space facility on a 32.8-acre private parcel located at the north-eastern boundary of Santa Cruz County on Skyline Boulevard (State Route [SR] 35). As a part of this effort, the County must comply with the California Environmental Quality Act (CEQA). The purpose of this report is to review the potential for occurrence and describe the existing biological resources within and adjacent to the proposed project site, assess the potential impacts to these biological resources associated with the proposed project, and recommend mitigation for impacts that may be considered significant as required under CEQA.

1.1 PROJECT DESCRIPTION

The project site is located along the west side of Skyline Boulevard, which is also SR 35, adjacent to Castle Rock State Park (See Exhibit 1). The project site is identified by the following Assessor's Parcel Number (APN): 088-081-12. The project area's physical address is 15435 Skyline Boulevard, Los Gatos, CA 95033.

The proposed project includes re-landscaping with native plants and trees, along with a variety of visitor and recreational amenities developed over multiple phases. The proposed project would be implemented in two phases. The first phase includes the new access point off of Skyline Boulevard with an entry feature, access gate, parking area, amphitheater, ecological restoration, trails, and picnic areas. The visitor center complex (visitor center, restroom, climbing wall, patio, and ranger offices and parking) would be implemented in a second phase.

The facility is intended to be joined to the existing Castle Rock State Park. After completion, the open space facility and property would be transferred to the State of California Department of Parks and Recreation (California State Parks) and would function as an entrance feature, visitor center, parking area, and recreational area for the state park.

2 METHODS

Potential biological constraints for the planned development area within the project site were evaluated by Ascent biologists during surveys conducted on January 31, February 15, February 24, and September 19, 2012 and March 20, 2014. Information on sensitive biological resources previously recorded in the project site was collected through review of U.S. Fish and Wildlife Service (USFWS) species lists, a search of the California Natural Diversity Database (CNDDB), and other existing documentation pertaining to biological resources in the region as listed below.

- CNDDB record search for the Castle Rock Ridge, Cupertino, San Jose West, Los Gatos, Laurel, Felton, Davenport, Big Basin, and Mindego Hill 7.5 minute quadrangles (California Department of Fish and Wildlife [CDFW] 2014).
- USFWS Online Species List of Federal Endangered and Threatened Species that occur in or may occur within the Castle Rock Ridge 7.5 minute USGS topographic quadrangle.

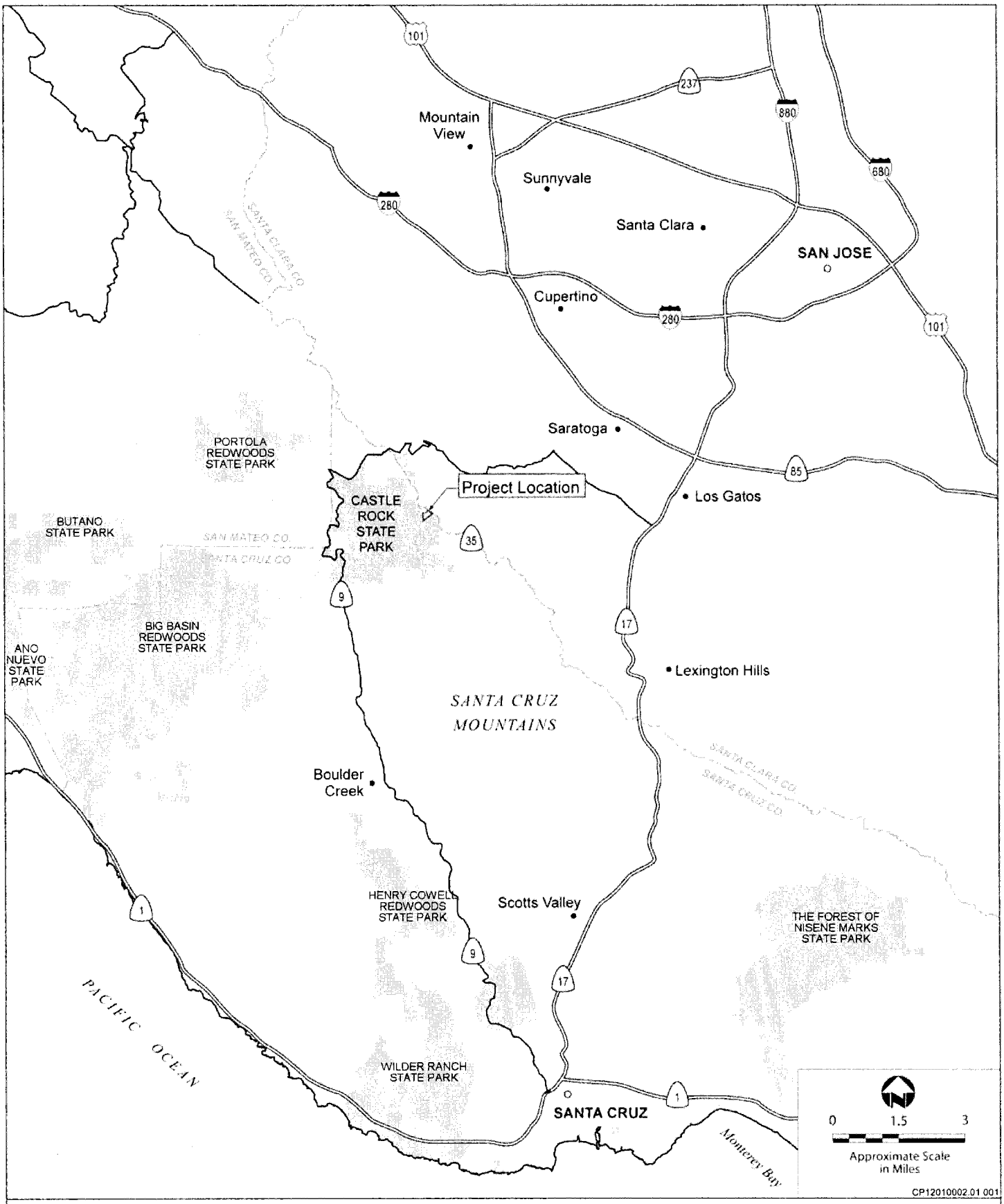

Exhibit 1

Project Vicinity

- USFWS National Wetlands Inventory (http://www.fws.gov/wetlands/index.html) Updated October 2012.
- California Native Plant Society (CNPS), Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [(accessed March 2014).
- North American Digital Flora: National Wetland Plant List, version 2.4.0 https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC. August 2012.
- Aerial photographs of the project site.

A list of special-status plant and wildlife species was compiled from these queries and is presented in Appendix A. This table describes the common and scientific names of each of the species identified in the above queries, along with their legal status, habitat requirements and a brief assessment of the likelihood that the species would occur on the project site.

While a formal wetland delineation was not conducted for the subject property, a preliminary assessment of the potential for wetlands or other waters as defined by the U.S. Army Corps of Engineers (USACE) was completed. The project site was inspected for evidence of a dominance of wetland vegetation and hydrologic conditions that result in periods of inundation or saturation on the surface as a result of flooding or ponding. Per the USACE regulatory notice dated May 10, 2012, the draft North American Digital Flora: National Wetland Plant List (Lichvar 2012) was used to determine the wetland indicator status of plants identified in the project site. The entire site was inspected for hydrology and ordinary high water mark indicators. Evidence of hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, benches, drift, exposed root hairs, and change in particle size distribution.

The results of this analysis are documented in the *Assessment of Potential Waters of the United States for the Proposed Castle Rock State Park Entrance Project* (Appendix B).

The CNDDB is a statewide database, managed by the California Department of Fish and Wildlife (CDFW) that is continually updated with the location and condition of the state's rare and declining species and habitats. Although the CNDDB is the most current and reliable tool available for tracking occurrences of special-status species, it contains only those records that have been reported to CDFW. Therefore, it is possible that a rare plant or animal could be present on the project site but not documented in the CNDDB.

Sensitive biological resources are protected and/or regulated by federal, state, and/or local laws and policies. Sensitive biological resources include special-status species and sensitive natural communities.

Special-status species are plants and animals in the following categories:

- listed or proposed for listing as threatened or endangered under ESA or candidates for possible future listing;
- listed or candidates for listing by the State of California as threatened or endangered under CESA;
- listed as rare under the California Native Plant Protection Act;
- listed as Fully Protected under the California Fish and Game Code;
- identified by CDFW as species of special concern;

ATTACHMENT 1

- considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR).The CDFW system includes six rarity ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2A - Plants that are presumed extirpated in California, but more common elsewhere;
  - CRPR 2B - Plants that are rare threatened, or endangered in California, more common elsewhere;
  - CRPR 3: Plants About Which More Information is Needed (review list)
  - CRPR 4: Plants of limited distribution (watch list)
- considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); or
- otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

Sensitive natural communities are of limited distribution statewide or within a county or region that provide important habitat value to native species. Most types of wetlands and riparian communities are considered sensitive natural communities due to their limited distribution in California. In addition, sensitive natural communities include habitats that are subject to USACE jurisdiction under Section 404 of CWA, Section 1602 of the California Fish and Game Code, and the state's Porter-Cologne Water Quality Control Act, which protects waters of the state. Sensitive natural communities have high potential to support special-status plant and animal species. Sensitive natural communities can also provide other important ecological functions, such as enhancing flood and erosion control and maintaining water quality.

3 RESULTS

The project site was previously a "cut-your-own" Christmas tree farm with some small buildings and undeveloped areas. Approximately 12.5 acres agricultural land is planted with young conifer species commonly used for Christmas trees.

Approximately 3.2 acres of the site are developed consisting of roads, buildings, landscaping and structures. Unpaved access roads loop around and through the Christmas tree farm providing access for tree customers and farm maintenance operations. The majority of the Christmas tree farm area is highly disturbed due to the historic tree farming and road maintenance, which substantially ceased in 2011. The topography of this area is flat to moderately sloped along the ridgeline of the Santa Cruz Mountains. An abandoned single family house and outbuilding are located at the southern end of the Christmas tree farm. Access to these buildings is provided by unpaved driveways that loop through the tree farm. Several old apple trees line the access roads. These buildings are connected to onsite springs for potable water and they utilize septic systems. The proposed development footprint consists of approximately 10 acres and is primarily contiguous with the Christmas tree farm area.

Native vegetation in the tree farm area is sparse, with a narrow strip of shrubs and small trees along the northern fenceline near Skyline Boulevard, as well as annual grasses and a small area of yellow star-thistle (*Centaurea solstitialis*).

The southern portion of the site consists of steep slopes that form the headwater of an ephemeral drainage, which flows to Kings Creek. Vegetation in the southern portion of the project site is characterized as montane hardwood woodland (cismontane woodland) with a mixed tree canopy of oaks (*Quercus spp.*), madrone (*Arbutus menziesii)*, California bay (*Umbellularia californica*), with Douglas fir (*Pseudotsuga menziesii*) trees. The woodland community within the project site is continuous with the surrounding woodland in Castle Rock State Park. A list of plant species observed within the project site is included in Appendix C.

The project site has an elevation of approximately 2,950 ft above sea level. Soils on the project site are classified by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service Web Soil Survey (USDA 2012) as Ben Lomond sandy loam and Madonna loam, and consists generally of loose to very dense silty sand with underlain material ranging from dense to very dense siltstone (GeoForensics 2012). This type of soil is derived from shale and/or residuum weathered from mudstone.

These soils are generally well drained, occur at elevations of 400 to 4,500 feet from sea level and are characterized by having gently to steeply ground slopes of 5 to 30 percent. The ground surface on the project area has a general downward sheet flow to the north (GeoForensics 2012).

The project site is currently zoned Commercial Agriculture (CA-P), and the Santa Cruz County General Plan designates the site Agriculture (AG).

3.1 HABITATS

Habitats observed within the project site are outlined in Exhibit 2. The majority of the proposed development footprint is developed as a Christmas tree farm, with 5- to 12-foot conifers including Scotch pine (*Pinus sylvestris L.*), white fir (*Abies concolor*), and Douglas fir. Native vegetation is sparse, with a narrow strip of shrubs and small- to medium-sized trees along the northern fenceline with Highway 35, including scrub oak (*Quercus dumosa*), madrone, bigberry manzanita (*Arctostaphylos glauca*), California yerba santa (*Eriodictyon californicum*), toyon (*Heteromeles arbutifolia*), and coffeeberry (*Rhamnus californica* ssp. *californica*). Understory vegetation in the tree farm and along the access road consists of annual grasses such as California oat grass (*Danthonia californica*) California cudweed (*Gnaphalium californicum*), and hedgehog dogtail (*Cynosurus echinatus*). A small area of yellow star-thistle is present where soils are compacted and highly disturbed.

In this southern portion of the project site, the vegetation is characterized as montane hardwood woodland with a mixed tree canopy of canyon live oak (*Quercus chrysolepis*), tanoak (*Lithocarpus densiflorus*), madrone, and California bay. The shrub layer is open and herbaceous vegetation is a sparse. A few Douglas fir and black oak (*Quercus kelloggii*) are also present in the woodland. The woodland community on the project site is continuous with the surrounding woodland in Castle Rock State Park.

3.2 SPECIES WITH THE POTENTIAL TO OCCUR

A complete list of plant species analyzed, and the potential for occurrence based on field surveys, habitat types, and existing information, is included in Appendix A, Table 1. Two special-status plants have potential to occur on the project site, both are mosses a potential habitat is limited to the damp locations near the well site in the intermittent drainage area. It is unlikely for special-status plants to occur in the portion of the project site that is developed as a Christmas tree farm or former residence due to the lack of natural habitat and past disturbance to soils and vegetation. Natural habitat that could support special-status plants is limited to the intermittent drainage area adjacent to the existing well site where mesic habitats, including damp rock and soil, could support special status moss species. . No special-status plant species were observed during non-protocol level surveys.

ATTACHMENT 1

A complete list of animal species analyzed, and the potential for occurrence based on field surveys, habitat types, and existing information, is included in Appendix A, Table 2.

The project site provides limited suitable nesting habitat for migratory songbirds and raptors (i.e., hawks and owls). No special-status raptors are expected to nest on the project site due to a lack of suitable specialized nesting and foraging habitat~~;~~. The site lacks tall natural or man-made structures suitable Cliffs and tall, man-made structures surrounded by open landscape, grasslands and marshlands typical of the special-status raptors that occur in the greater vicinity. Common raptors, such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), American kestrel (*Falco sparverius*), and great-horned owl (*Bubo virginianus*), could nest on or adjacent to the project site, however, the site provides poor foraging habitat given the density of the trees in the Christmas tree farm area. Two special-status songbirds, olive-sided flycatcher (*Contopus cooperi*) and loggerhead shrike (*Lanius ludovicianus*) have potential to nest on the project site. In addition, marbled murrelet (*Brachyramphus marmoratus)*, a state and federally listed seabird, could occur in the region. The project site does not include suitable nesting habitat for murrelets because none of the trees exhibit old-growth characteristics, but murrelets could fly over the site during foraging flights to the ocean from suitable nesting habitat elsewhere. The project site is federally designated as critical habitat for marbled murrelet.

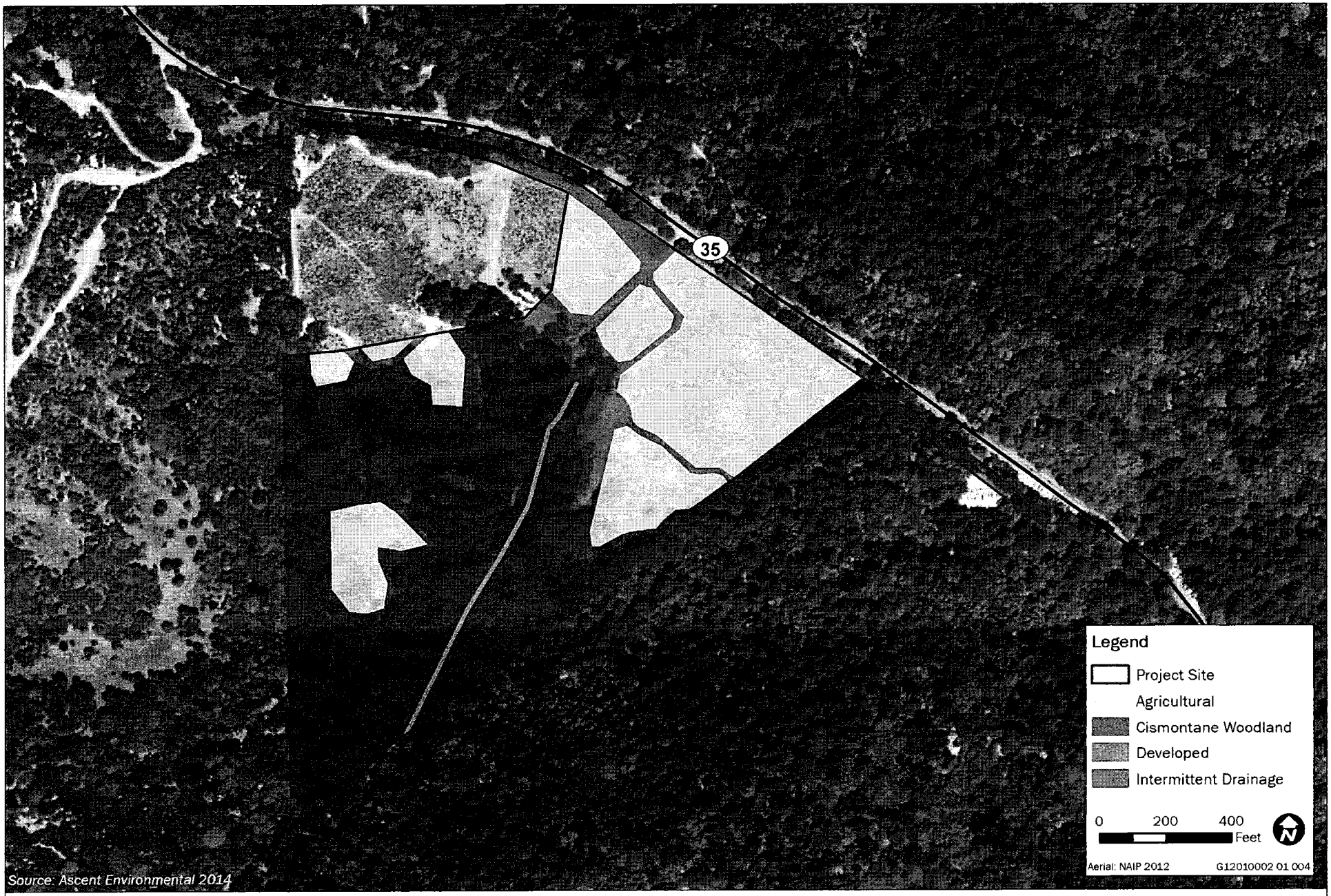

Exhibit 2

Habitat Types

ASCENT ENVIRONMENTAL

Special-status bats that could roost on site include pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*). The vacant house and other structure on the project site, as well as large trees with snags and hollows, could provide day roosts, maternity colony roosts, and/or hibernation roosts for several bat species.

3.3 WETLANDS AND OTHER WATERS OF THE US

Outside the proposed development footprint, the southern portion of the site consists of steep slopes that form the headwater tributary of Kings Creek. According to Ascent's wetland specialist that surveyed the site in September 2012, this tributary is the only feature on the project site that qualifies as a "waters of the United States." This drainage does not contain vegetated wetlands, and USACE jurisdiction would be limited to the area within the ordinary high water mark (OHWM) of the drainage channel, which begins approximately 125 feet downslope of the dirt access road. A drainage OHWM typically corresponds with characteristics such as shelving, scour lines, and other natural linear features that define the bed and bank portion of the channel that floods under normal conditions. The feature is intermittent rather than ephemeral in nature as it is typically fed by a small flow of groundwater seepage resulting in a continuous seasonal flow, rather than an ephemeral stream which is rainwater fed and flows only during and after rain events. The feature lacks a clear riparian buffer, and is consistent with the surrounding woodland habitats. Because the intermittent drainage is hydrologically connected to the San Lorenzo River, a traditional navigable water of the United States, via Kings Creek, intermittent drainage would be considered a water of the United States.

Based on a request by the County, Ascent's wetland specialist also conducted a wetland survey at a location north of the culvert that exhibited some hydrophitic vegetation. To determine whether the location is a wetland Ascent's specialist used the USACE multi-parameter methodology, which involves collection of soils, vegetation, and hydrologic data to establish the jurisdictional boundaries of wetland features. According to the USACE's three parameter approach, an area must support positive indicators of hydrophytic vegetation (adapted to saturated soil conditions), hydric soils (soils that pond or frequently flood during growing season), and wetland hydrology to be considered a jurisdictional wetland.

The hydrophytic vegetation criterion requires that greater than 50 percent of the dominant vegetation at the sample site be hydrophytic (adapted to saturated soil conditions). Diagnostic features of hydric soils include a depleted matrix, hydrogen sulfate odor, or the presence of concretions or oxidized rhizospheres (redoximorphic features). Positive indicators of wetland hydrology include presence of surface water or saturation in the upper 12 inches of the soil, drainage patterns, cracked soil surface, water stained leaves, and sediment or drift deposits.

Ascent's wetland specialist found that this location (SP1 in Appendix C) does not support positive indicators of hydrophytic vegetation, hydric soils, or wetland hydrology. While two hydrophytic plant species, mugwort (*Artemisia douglasiana*) and creeping wild rye (*Elymus triticoides*) were present at SP1, they comprised only 13% of the total herbaceous cover and, therefore, the 50% hydrophytic vegetation criterion was not met.

The soils at SP1 did not exhibit redoxymorphic features or other positive indicators of hydric soils. Soils on the project area are classified by the NRCS as Ben Lomond sandy loam and Madonna loam; these soils are not listed as hydric on the list of hydric soils of the United States. Although the culvert under the road indicates that water flows through this area at times, there were no positive indicators of wetland hydrology observed. Therefore, it was determined that this area (SP1) is not a wetland. There were no other potential wetland areas identified on the project site. Ascent's wetland specialist prepared a memorandum included as Appendix B of this Report.

3.4 IMPACT ANALYSIS AND MITIGATION MEASURES

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect related to terrestrial biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- 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; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

3.4.1 Special-Status Plants and Wildlife

Based on habitats present on the project area and species ranges and requirements, two special-status plant and six special-status wildlife species have a moderate or higher potential to occur on the project site.

PLANT SPECIES

Natural habitat that could support special-status plants is limited to moist areas around the existing well site, that provide potential habitat for Slender silver moss (*Anomobryum julaceum*) and Norris' beard moss (*Didymodon norrisii*). Moss populations adjacent to the well site will be avoided and are not anticipated to be affected directly or indirectly by pump installation. Therefore, no impacts to special-status plants would occur.

NESTING BIRD SPECIES

The project site provides limited suitable nesting habitat for migratory songbirds and raptors (i.e., hawks and owls). No special-status raptors are expected to nest on the project site due to a lack of suitable nesting and foraging habitat specific to these species, such as large nesting trees. The site lacks they typ however, common raptors, such as red-tailed hawk, red-shouldered hawk, American kestrel, and great-horned owl, could nest on or adjacent to the project site. Special-status songbirds olive-sided flycatcher and loggerhead shrike have potential to nest on the project site. In addition, marbled murrelet, a state and federally listed seabird, could occur in the region. The project site does not include suitable nesting habitat because trees

ATTACHMENT 1

with old-growth characteristics are not present on the site, but murrelets could fly over the site during foraging flights to the ocean from suitable nesting habitat elsewhere. The project site is federally designated as critical habitat for marbled murrelet.

Vegetation removal associated with trail construction or other ground-disturbing activities to construct the new facilities on the project site could result in the loss of nests, eggs or individuals during the nesting season for special-status birds. Construction related noise could also disturb marbled murrelet foraging patterns if they are nesting nearby. Marbled murrelet has been observed flying in the Kings Creek drainage approximately 4 miles south of the project site during the breeding season, but the nest location was unknown (CNDDB 2014). Disturbance to nesting birds could result in nest abandonment by the adults and mortality of chicks and eggs. Loss of special-status bird nests would be a significant impact. The following mitigation measure is recommended reduce potential impacts.

Mitigation Measure BIO-1

To minimize potential disturbance to nesting birds, project activities, including vegetation removal and building demolition, shall occur during the non-breeding season (September 16-February 14), unless it is not feasible to do so, in which case the following measures shall also be applied.

During trail construction, road improvements, and other activities, removal of trees greater than 6 inches diameter at breast height shall be limited to the greatest degree possible.

If construction activity is scheduled to occur during the nesting season (February 15 to September 15), a qualified biologist shall conduct preconstruction surveys and to identify active nests on and within 500 feet of the project site that could be affected by project construction. The surveys shall be conducted before the approval of grading and/or improvement plans (as applicable) and no less than 14 days and no more than 30 days before the beginning of construction in a particular area. If no nests are found, no further mitigation is required.

If active nests are found, impacts on nesting raptors and songbirds shall be avoided by establishment of appropriate buffers around the nests. No project activity shall commence within the buffer area until a qualified biologist confirms that any young have fledged or the nest is no longer active. A 500-foot buffer around raptor nests and 50-foot buffer around songbird nests are generally adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with CDFW depending on site specific conditions. For trail construction, use of non-power hand-tools may be permitted within the buffer area if the behavior of the nesting birds would not be altered as a result of the construction. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has potential to adversely affect the nest.

Mitigation Measure BIO-1b

To minimize potential disturbance to marbled murrelets at potential nesting sites and traveling to coastal foraging areas, the following measures shall be implemented:

- During the marbled murrelet breeding season (March 24 to September 15), noise generating construction activity shall be restricted to 2 hours after sunrise to 2 hours before sunset to minimize disturbance of potential nesting murrelets using forest habitat as a travel corridor between inland nesting and coastal habitat.

OCCUPIED BAT ROOSTS

The proposed project includes removal of and alterations to existing structures in the project site. The vacant house and other structure on the project site could provide day roosts, maternity colony roosts, and/or hibernation roosts for several bat species. Special-status bats that could roost on site include pallid and Townsend's big-eared bat.

Demolition of buildings, sealing of openings or cracks, removal of roosting trees, or other construction activities that cause noise, vibration, or physical disturbance to these structures, could affect the survival of adult or young bats if they are present within the structures or trees identified for removal at the time of the activity. Loss of a colony of special-status bats would be considered a significant impact. The following mitigation measure is recommended reduce potential impacts from the loss of an active bat colony resulting from demolition or modification of structures.

Mitigation Measure BIO-2

Surveys for roosting bats on the project site shall be conducted by a qualified biologist. Surveys shall consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergence survey to note the presence or absence of bats. The type of survey shall depend on the condition of the buildings and specific trees to be removed. If no bat roosts are found, then no further study shall be required. If evidence of bat use is observed, the number and species of bats using the roost shall be determined.

If roosts of pallid or Townsend's big-eared bats are determined to be present and must be removed, the bats shall be excluded from the roosting site before the facility or tree is removed. A program addressing compensation, exclusion methods, and roost removal procedures shall be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) shall be replaced in consultation with CDFW and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement shall be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the structures may be removed or sealed.

3.4.2 Sensitive Natural Community

The majority of project site is located on land that is developed as a Christmas tree farm and otherwise previously disturbed. The natural plant community on the remainder of the project site is characterized as montane hardwood woodland. The site is located on along the ridgeline of the Santa Cruz Mountains and although drainages convey water downstream to offsite creeks, the project site does not contain any riparian vegetation. No sensitive natural communities occur on the site.

3.4.3 Federally Protected Wetlands or Other Waters

The project site is located along the ridgeline of the Santa Cruz Mountains and contains the headwaters of Kings Creek, which is tributary to the San Lorenzo River. An existing culvert collects water from the uplands where the Christmas tree farm is located and conveys it under a dirt access road to the headwaters of Kings Creek. Removal, replacement or repair of this culvert would result modification to the bed and bank of the headwaters of Kings Creek. In addition, the proposed trail connection from the proposed parking area to the existing state park trail system to the east (Kirkwood Trail) would require a bridge crossing over Kings Creek and could require placement of footings or bridge supports within the bed or bank of the creek. The proposed project also includes construction of a new well pump at an existing spring and well to provide potable water for the restroom and limited irrigation near the proposed parking. These proposed activities could result in fill or modification of wetlands and other waters of the United States that are regulated by USACE under Section 404 of the CWA. Fill of federally protected wetlands or other waters of the United States would be a significant impact. Implementation of Mitigation Measures BIO-4 would reduce impacts to wetlands and other waters of the United States by avoiding effects from construction and use of recreational facilities where feasible and providing replacement, restoration or enhancement of wetland habitats to compensate on a no-net-loss basis for impacts that cannot be avoided

Mitigation Measure BIO-3

The applicant shall implement the following measures to minimize impacts to wetlands and other waters of the U.S.:

- All recreational facilities and trails on the site shall be constructed at least 30-feet from Kings Creek (measured from the top of bank) to minimize indirect effects to aquatic habitat, except where the trail crosses the creek.

- Where wetlands or other Waters other waters could be affected by culvert maintenance or replacement, trail crossings, well construction, or other project-related activities, a preliminary wetland delineation shall be submitted to USACE for verification. The wetlands may also be subject to CDFW regulation under Section 1602 of the Fish and Game Code. No grading, fill, or other ground disturbing activities shall occur until all required permits, regulatory approvals, and permit conditions for effects on wetland habitats are secured.

- If the wetlands are determined to be subject to USACE jurisdiction, projects such as minor maintenance, may qualify for a Nationwide Permit if certain criteria are met. For those wetlands that cannot be avoided, Sempervirens Fund shall commit to replace, restore, or enhance on a "no net loss" basis (in accordance with USACE, the Regional Water Quality Control Board (RWQCB), and CDFW) the acreage of all wetlands and other waters of the U.S. that would be removed, lost, and/or degraded with project implementation. Wetland habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods agreeable to USACE, RWQCB, and CDFW, as appropriate, depending on agency jurisdiction, and as determined during the permitting processes.

3.4.4 Wildlife Movement Corridors

Wildlife corridors are features that provide connections between two or more areas of habitat that would otherwise be isolated and unusable. Often drainages, creeks, or riparian areas are used by wildlife as movement corridors as these features can provide cover and access across a landscape. The project site does not contain any important wildlife corridors or native wildlife nursery sites as it is currently developed as a Christmas tree farm and contains woodland contiguous with the state park. The proposed project would restore a portion of the site to native habitats and provide parking and interpretative facilities for park visitors. These future uses would not substantially alter the ability of wildlife to move through the site.

3.4.5 Local Policies and Ordinances

The Santa Cruz County General Plan (1994) addresses protection of biological diversity and sensitive habitats throughout the County. These areas include, but are not limited to, riparian corridors, wetlands, lagoons, lakes, woodlands, marine resources and habitat for rare, threatened or endangered species resource protection includes limiting development for disturbance, encouraging restoration, and requiring appropriate performance standards in these areas. The proposed project does not conflict with County General Plan objectives, policies, or program. Implementation of Mitigation Measure Bio-3 is consistent with Policies 5.2.1 and 5.2.2, which define and protect riparian corridors by establishing a 30-foot buffer from the top of a distinct channel of an intermittent stream to ensure that no net loss of riparian corridors and riparian wetlands occur.

Acceptance of the proposed project site into Castle Rock State Park may require an amendment to the State Park General Plan (2000). The proposed project does not conflict with existing goals established by the State Park General Plan to protect biological resources within the Park.

3.4.6 Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Santa Cruz County has an Interim Programmatic Habitat Conservation Plan (IPHCP) for the Sandhills region of unincorporated Santa Cruz County and the City of Scotts Valley. However, the project site does not contain sandhills habitat and is not included in the IPHCP. The project site is not within a planning area for a Habitat Conservation Plan, Natural Community Conservation Plan or other habitat conservation plan. The project would result in no impact related to conflicts with an adopted conservation plan.

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Appendix A

Special-status Species List

Table A-1 Special-Status Plants That Have Potential to Occur on the Castle Rock Ranch Project Site

Common and Scientific Name	Legal Status[1] Federal/State/ Rare Plant Rank	Geographic Distribution and Habitat Requirements	Potential for Occurrence
San Francisco onion *Allium peninsulare var. franciscanum*	-/-/1B.2	Central Coast, San Francisco Bay region, Santa Clara, San Mateo, and Sonoma Counties. Clay and often serpentinite soils of cismontane woodland, valley and foothill grassland, below 1,000 feet. Blooms from May - June	Low, Site lacks soils and elevation typical of habitat.
Anderson's manzanita *Arctostaphylos andersonii*	-/-/1B.2	Western San Francisco Bay region, Santa Cruz Mtns. Santa Clara, Santa Cruz, and San Mateo Counties. In chaparral and edges of broad-leaved upland forest, chaparral, north coast coniferous forest, below 2,300 feet. Blooms from November-April.	Not present. Assessment level surveys were conducted during the blooming season. Additionally species has distinctive leaves that make identification possible year round.
Kings Mountain manzanita *Arctostaphylos regismontana*	-/-/1B.2	Western San Francisco Bay region, northern Santa Cruz Mtns. Santa Cruz and San Mateo Counties. Found in broad-leaved upland forest, chaparral, North Coast coniferous forest, on granitic or sandstone-derived soils. Blooms from January – April.	Not present. Assessment level surveys were conducted during the blooming season.
western leatherwood *Dirca occidentalis*	-/-/1B.2	San Francisco Bay region, Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma Counties. Found in moist areas in broad-leaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland, 165-1,300 feet. Blooms from January-March.	Not present. Assessment level surveys were conducted during the blooming season.
San Mateo woolly sunflower *Eriophyllum latilobum*	E/E/1B.1	Three known occurrences. Open areas in coast live oak woodland, often on roadsides, sometimes on serpentine, 150-500 feet. Blooms May-June	Unlikely to occur, no known occurrences in the site vicinity (quadrangle). Site is above typical elevation and lacks exposed serpentine soils. Not observed during assessment level surveys conducted outside of the blooming period.
Loma Prieta Hoita *Hoita strobilina*	-/-/1B.1	Alameda, Contra Costa, Santa Clara, and Santa Cruz Counties. Chaparral, cismontane woodland, riparian woodland, especially serpentine or mesic sites. Blooms May-Oct.	Unlikely to occur, no known occurrences in the site vicinity (quadrangle). Site lacks typical serpentine/mesic soils.
Woolly-headed lessingia *Lessingia hololeuca*	-/-/3	Alameda, Monterey, Marin, Napa, Santa Clara, San Mateo, Solano, and Yolo Counties. Broadleafed upland forest, coastal scrub, lower montane coniferous forest, and grasslands, especially on clay and serpentine soils. Blooms Jun-Oct.	Unlikely to occur, no known occurrences in the site vicinity (quadrangle) and site lacks typical clay and serpentinite soils. Assessment level surveys were conducted during the blooming season.
Arcuate bush mallow *Malacothamnus arcuatus*	-/-/1B.2	Santa Clara, Santa Cruz, and San Mateo Counties. Cismontane woodland and chaparral. Blooms Apr-Sep	Assessment level surveys were conducted during the blooming season.
Indian Valley bush mallow *Malacothamnus aboriginum*	-/-/1B.2	Fresno, Kings, Monterey, San Benito, Santa Clara and San Mateo Counties. Cismontane woodland and chaparral, especially on rocky, granitic soils and in burned areas. Blooms from Apr-Oct.	Not present. No known occurrences in the site vicinity (quadrangle). Site lacks favorable burning regime. Assessment level surveys were conducted during the blooming season.
Davidson's bush mallow Malacothamnus *davidsonii*	-/-/1B.2	Los Angeles, Monterey, Santa Clara, Santa Cruz, San Luis Obispo, and San Mateo Counties. Openings in chaparral, cismontane woodlands, coastal scrub and riparian woodlands. Blooms from Jun-Jan.	Not present. No known occurrences in the site vicinity (quadrangle). Assessment level surveys were conducted during the blooming season.
Woodland woolythreads *Monolopia gracilens*	-/-/1B.2	Alameda, Contra Costa, Monterey, Santa Clara, Santa Cruz, San Luis Obispo and San Mateo Counties. Broadleafed upland forest, chaparral, cismontane forest, coniferous forest, and grasslands, especially on serpentine soils. Blooms Feb-Jul	Not present. No known occurrences in the site vicinity (quadrangle) and site lacks serpentine soils. Assessment level surveys were conducted during the blooming season.

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Table A-1 Special-Status Plants That Have Potential to Occur on the Castle Rock Ranch Project Site

Common and Scientific Name	Legal Status[1] Federal/State/ Rare Plant Rank	Geographic Distribution and Habitat Requirements	Potential for Occurrence
Kellman's bristle moss *Orthotrichum kellmanii*	-/-/1B.2	Montery, Santa Cruz, and San Mateo Counties. Chaparral and cismontane woodland, on sandstone and carbonate. Blooms Jan-Feb.	Unlikely to occur, site lacks suitable soils.
Dudley's lousewort *Pedicularis dudleyi*	-/R/1B.2	Monterey, Santa Cruz, San Luis Obispo, and San Mateo Counties. Maritime chaparral, cismontane woodland, coniferous forest, valley and foothill grassland. Blooms Apr-Jun	Unlikely to occur, no known occurrences in the site vicinity (quadrangle). Closest locations in the Portola Redwoods State Park.
White-rayed pentachaeta *Pentachaeta bellidiflora*	E/E/1B.1	One occurrence in San Mateo County,historically known also from Marin and Santa Cruz Counties. Cismontane woodland, grasslands (often serpentinite). Blooms Mar-May.	Not present. Assessment level surveys were conducted during the blooming season.
White-flowered rein orchid *Piperia candida*	-/-/1B.2	Humboldt, Mendocino, Santa Clara, Santa Cruz, Siskiyou, Sonoma, and Trinity Counties. Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest, sometimes serpentine. Blooms Mar-Sep	Not present. Assessment level surveys were conducted during the blooming season.
Santa Cruz microseris *Stebbinsoseris decipiens*	-/-/1B.2	Monterey, Marin, Santa Cruz, San Francisco, San Luis Obispo, and San Mateo Counties. Open areas in broad-leaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and grasslands; sometimes serpentinite. Blooms Apr-May.	Unlikely to occur, no known occurrences in the site vicinity (quadrangle). Site is above typical elevation.
Slender silver moss *Anomobryum julaceum*	-/-/2.B2	Butte, Contra Costa, Humboldt, Los Angles, Mariposa, Santa Barbara, Santa Cruz, Shasta, and Sonoma Counties. Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest damp rock and soil on outcrops, usually on roadcuts.	Could occur in intermittent drainage area adjacent to well site. No known occurrences in the site vicinity (quadrangle), however, species is not well documented. Site lacks typical damp rock and soils, particularly on road cuts. Minimal potential habitat present adjacent to well site.
Norris' beard moss *Didymodon norrisii*	-/-/2B.2	Butte, Contra Costa, Colusa, Humboldt, Lake, Los Angles, Madera, , Monterey, Mariposa, Nevada, Plumas, San Benito, Santa Cruz, Shasta, Sierra, Sonoma, Tehama, Tulare, and Tuolumne Counties. Cismontane woodland, lower montane coniferous forest, intermittently mesic, rock.	Could occur in intermittent drainage area adjacent to well site. No known occurrences in the site vicinity (quadrangle), however, species is not well documented. Minimal suitable mesic habitats present adjacent to well site.

[1] Status definitions:

Federal:
E = listed as Endangered under the federal Endangered Species Act
T = listed as Threatened under the federal Endangered Species Act
- = no listing or legal protection

State:
E = listed as Endangered under the California Endangered Species Act
R = listed as Rare under the California Native Plant Protection Act. This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation
T = listed as Threatened under the California Endangered Species Act
- = no listing or legal protection

California Rare Plant Rank:
1A Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B Rare, Threatened, or Endangered in California and Elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2A Presumed Extirpated in California, But More Common Elsewhere2B Rare Threatened, or Endangered in California, More Common Elsewhere
3 Plants About Which More Information is Needed (review list)
4 Plants of limited distribution (watch list)

Extensions:
0.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
0.2 Fairly endangered in California (20 to 80% of occurrences are threatened)
0.3 Not very endangered in California

Sources: CNPS 2012 and CNDDB 2012; Cupertino, Mindego Hill, Big Basin, and Castle Rock Ridge Quads. Updated to reflect updates to rare plant ranks (June 2013).

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Table A-2 Special-Status Animals That Have Potential to Occur on the Castle Rock Ranch Project Site

Species	Status[1] FESA/CESA/Other			Distribution and Habitat Requirements	Potential for Occurrence
Invertebrates					
Bay checkerspot butterfly *Euphydryas editha bayensis*	T	-	-	Serpentine grassland containing oviposition and larval food plant *Plantago erecta*	Unlikely to occur. No known serpentine outcrops or soils on the site. The project site does not contain designated critical habitat.
Fish					
Coho salmon-Central CA Coast ESU *Oncorhynchus kisutch*	E	E	-	Clear, cool, perennial sections of relatively undisturbed low gradient streams, with high dissolved oxygen levels. Prefer streams with dense canopy cover (generally conifers) without rooted or aquatic vegetation. Require stream temperatures between 40°F-58°F. Gravel substrates are optimum for spawning habitat.	Unlikely to occur as Castle Rock Falls downstream of the project site is a natural barrier. Historically occurred in Kings Creek and other tributaries to San Lorenzo River, but extirpated around 1978. Hatchery population has been reintroduced to the watershed.
Steelhead Trout – central California coast DPS *Oncorhynchus mykiss irideus*	T	-	-	Clear, cool, perennial sections of relatively undisturbed streams. Prefer streams with dense canopy cover without rooted or aquatic vegetation and water temperatures ranging between 40°F-58°F. Gravel substrates are optimum for spawning habitat. Ideal rearing habitat contains pools formed by logjams and loose woody debris.	Unlikely to occur as Castle Rock Falls downstream of the project site is a natural barrier. Tributaries to the San Lorenzo River are designated as critical habitat approximately 0.5 mile downstream from the project stie.
Amphibians and Reptiles					
California Red-legged Frog *Rana draytonii*	T	-	CSC	Pools (generally >3 feet deep) in creeks and rivers, and ponds below 4,500 feet. Pools must have emergent or dense riparian vegetation, such as willows, tules or cattails. Can survive in temporarily dry seasonal bodies of water when permanent water bodies or dense vegetation is nearby.	Unlikely to occur on the project site. Headwaters of Kings Creek does not contain suitable breeding habitat. The project site does not contain federally designated critical habitat.
California Tiger Salamander *Ambystoma californiense*	T	T	-	Vernal pools and seasonal wetlands with a minimum 10-week inundation period and surrounding uplands, primarily grasslands, with burrows and other below ground refugia (e.g., rock or soil crevices).	Unlikely to occur. No suitable breeding or upland habitat on site.
San Francisco Garter Snake *Thamophis sirtalis tetrataenia*	E	E	FP	Natural sag ponds or artificial waterways with dense vegetative cover, basking sites, and large amphibian populations. Require adjacent upland areas with small mammal burrows for hibernation. Endemic to San Mateo County.	Unlikely to occur. No suitable habitat present. Not known to occur in Santa Cruz County.
Western Pond Turtle *Emys marmorata*	-	-	CSC	Permanent or nearly permanent water in a variety of habitats.	Unlikely to occur. No permanent aquatic habitat on the project site.
Birds					
American peregrine falcon *Falco peregrinus anatum*(nesting)	D	D	FP BCC	Cliffs and tall, man-made structures surrounded by open landscapes with nearby riparian areas	Unlikely to nest on the project site due to lack of suitable nesting habitat, but could nest in the vicinity.
Burrowing Owl *Athene cunicularia* (nesting)	-	-	CSC BCC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils.	Unlikely to nest on project site due to lack of suitable nesting and foraging habitat.

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Table A-2 Special-Status Animals That Have Potential to Occur on the Castle Rock Ranch Project Site

Species	Status[1] FESA/CESA/Other			Distribution and Habitat Requirements	Potential for Occurrence
Golden Eagle *Aquila chrysaetos*	-	-	FP BGEPA BCC	Nests in large trees in open woodlands. Forages in large open areas of foothill woodlands and grassland habitats and occasionally croplands.	Unlikely to nest on project site, due to lack of suitable nesting and foraging habitat in open woodlands and grasslands.
Long-eared Owl *Asio otus* (nesting)	-	-	CSC	Woodlands, especially dense riparian areas or thickets, with nearby open meadows for foraging.	Unlikely to nest in project site due to lack of dense riparian woodlands and open meadows.
Loggerhead Shrike *Lanius ludovicianus* (nesting)	-	-	CSC	Forages and nests in grasslands, shrublands, and open woodlands.	Could nest in project site. Potentially suitable breeding and foraging habitat is present.
Marbled Murrelet *Brachyramphus marmoratus*	T	E	-	Nests along the Pacific Coast high in old growth conifer forest. Forages in the nearshore ocean.	Unlikely to nest in project site. The project site is federally designated critical habitat, but trees on the project site do not provide suitable nesting habitat. Marbled murrelet has been observed flying in the Kings Creek drainage, approximately 4 miles south of the project site (CNDDB 2014).
Northern Harrier *Circus cyaneus* (nesting)	-	-	CSC	Nests and forages in grasslands, agricultural fields, and marshes.	Unlikely to nest on project site due to lack of suitable nesting habitat.
Olive-sided Flycatcher *Contopus cooperi* (nesting)	-	-	CSC BCC	Montane forests dominated by Douglas fir, but also tan oak, live oak and madrone	Likely to nest in the woodland on the project site. Breeds widely in Santa Cruz Mountains (Bousman 2007, p. 272)
Tricolored Blackbird *Agelaius tricolor* (nesting)	-	-	CSC BCC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	Unlikely to occur. No suitable foraging or breeding habitat on the project site.
Vaux's Swift *Chaetura vauxi* (nesting)	-	-	CSC	Mature coniferous forests, with snags or cavities for nesting. Also in chimneys.	Unlikely to occur. All known breeding records in the region are in residential chimneys (Bousman 2007, p. 244)
White-tailed Kite *Elanus leucurus* (nesting)	-	-	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Unlikely to nest on project site due to lack of suitable foraging habitat in the vicinity.
Yellow-breasted Chat *Icteria virens* (nesting)	-	-	CSC	Well developed riparian habitats with cottonwoods, willows, and thick understory of brambles and brush	Unlikely to nest in project site. No suitable breeding habitat in the project site.
Yellow Warbler *Dendroica petechia* (nesting)	-	-	CSC BCC	Streams supporting willow, alder, and bigleaf maple with thick shrub understory	Unlikely to occur. No suitable breeding habitat on the project site.
Mammals					
Pallid Bat Antrozous pallidus	-	-	CSC	Found foraging along rivers, lakes, streams, estuaries, ponds, lakes, chaparral, and woodlands below 6,000 feet with nearby man-made structures or natural features suitable for roosting. Intolerant of roosts with temperatures greater than 104°F.	Could occur in abandoned buildings on project site.

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Table A-2 Special-Status Animals That Have Potential to Occur on the Castle Rock Ranch Project Site

Species	Status[1] FESA/CESA/Other			Distribution and Habitat Requirements	Potential for Occurrence
Townsend's big-eared bat Corynorhinus townsendii	-	-	CSC*	Require areas with high insect activity, such as rivers, lakes, streams, estuaries, ponds, lakes, chaparral, and woodlands with nearby man-made structures or natural features suitable for roosting.	Could occur in abandoned buildings on project site.
Western red bat Lasiurus blossevillii	-	-	CSC	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	Unlikely to occur as preferred roost trees with adjacent open foraging areas are not present on project site.

[1] Status definitions:
Federal Endangered Species Act (FESA):
D Delisted
E Endangered
T Threatened
California Endangered Species Act (CESA):
D Delisted
E Endangered
Other:
BCC Considered Bird of Conservation Concern by USFWS (no formal protection other than CEQA consideration)
BGEPA Legally protected under the Bald and Golden Eagle Protection Act
CSC Considered California species of special concern by DFG (no formal protection other than CEQA consideration)
FP Fully protected (legally protected under Fish and Game Code)
[2] Potential for Occurrence Definitions
Unlikely to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.
Could occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.
Likely to occur: Habitat conditions, behavior of the species, known occurrences in the project vicinity, or other factors indicate a relatively high likelihood that the species would occur at the project site.
Known to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Source: DFW 2012 and USFWS 2012, updated to reflect updated occurrences (2014).

* Townsend's big-eared bat has been petitioned for listing under CESA (2014)

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Appendix B

Assessment of Potential Waters of the United States

Memo

ASCENT ENVIRONMENTAL
455 Capitol Mall, Suite 205
Sacramento, CA 95814
916.444-7301

Date: October 31, 2012

To: Callendar Associates

From: Mike Parker, Ascent Environmental

Subject: **Assessment of Potential Waters of the United States for the Proposed Castle Rock State Park Entrance Project**

This memorandum summarizes the methods and results of reconnaissance-level assessment of potential waters of the United States for the for the Proposed Castle Rock State Park Entrance project conducted on September 20, 2012. In particular, the survey focused on the evaluation of an area on the upslope side of a culvert under the dirt drive between the Christmas tree farm and the headwater ravine that drains to Kings Creek. The County received comments indicating that this area becomes saturated in winter and may contain hydrophytic plant species. Therefore, the County requested an investigation of this area be completed to determine if it meets the U.S Army Corps of Engineers (USACE) definition of a wetland. This potential wetland area is labeled SP1 in Attachment 1.

Methods

An Ascent wetland specialist evaluated the potential wetland area on the upslope side of the culvert (SP1) using the USACE multi-parameter methodology, which involves collection of soils, vegetation, and hydrologic data to establish the jurisdictional boundaries of wetland features, and completed a USACE wetland determination data form (Attachment 2). According to the USACE's three parameter approach, an area must support positive indicators of hydrophytic vegetation, hydric soils, and wetland hydrology to be considered a jurisdictional wetland.

The hydrophytic vegetation criterion requires that greater than 50 percent of the dominant vegetation at the sample site be hydrophytic (adapted to saturated soil conditions). All plant species present at SP1 were identified and their hydrophytic status determined from the USACE 2012 National Wetland Plant List.

Soils were evaluated by digging a soil test pit to determine whether positive hydric soil indicators exist in SP1. Soils are considered hydric if they pond or flood frequently for long durations during the growing season. Diagnostic features of hydric soils include a depleted matrix, hydrogen sulfate odor, or the presence of concretions or oxidized rhizospheres (redoximorphic features). A review of the U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey (USDA 2009) was also conducted for the project site.

Wetland hydrology was assessed by recording positive indicators of wetland hydrology such as presence of surface water or saturation in the upper 12 inches of the soil, drainage patterns, cracked soil surface, water stained leaves, and sediment or drift deposits. In addition, all potential jurisdictional areas were evaluated in

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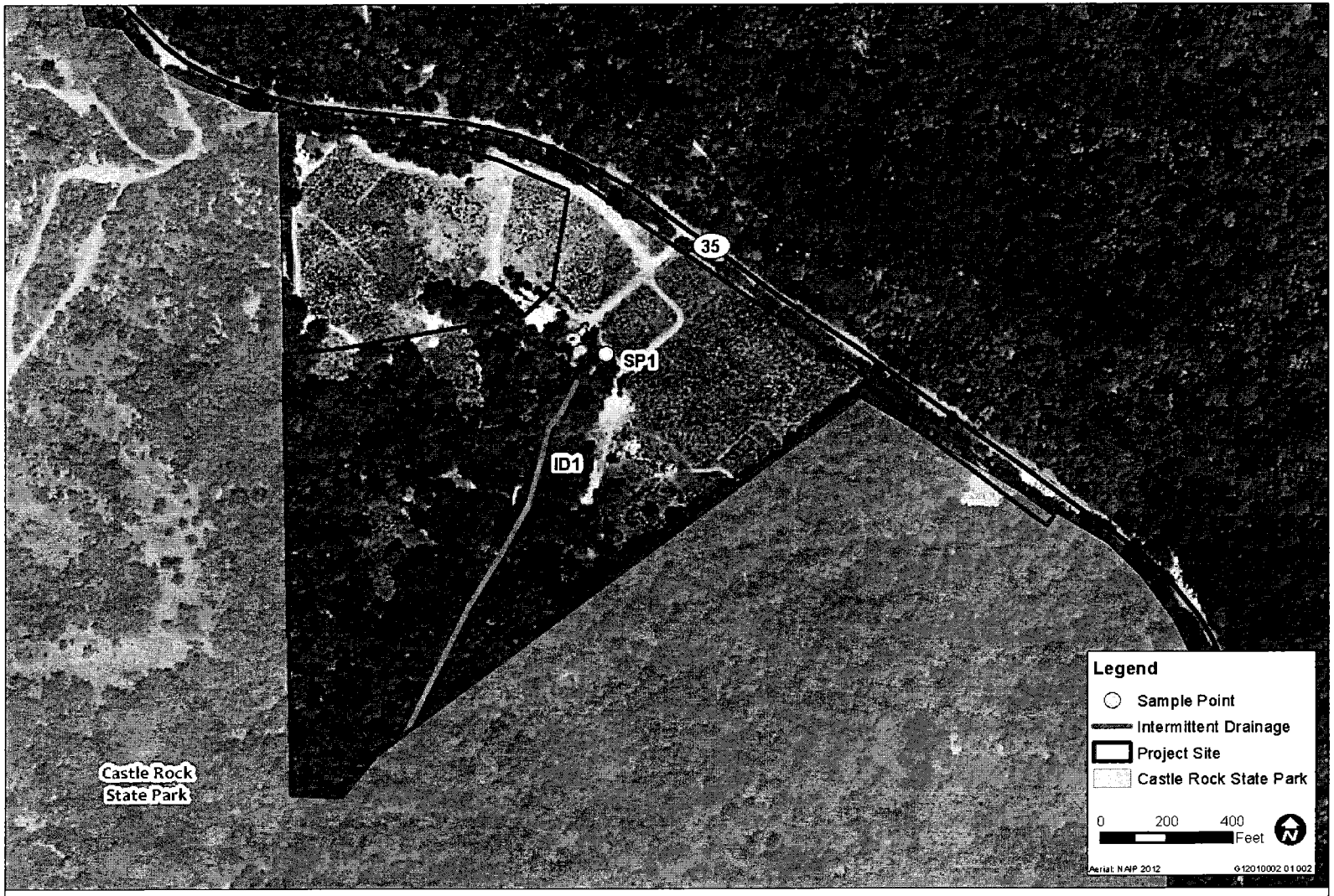
terms of their status as a navigable waterway or their adjacency or hydrological connection to a navigable waterway.

Results

Features qualifying as waters of the United States on the project site are limited to the intermittent headwater tributary of Kings Creek (ID1 on Attachment 1). This drainage does not contain vegetated wetlands and USACE jurisdiction would be limited to the area within the ordinary high water mark (OHWM) of the drainage channel, which begins approximately 125 feet downslope of the dirt access road. A drainage's OHWM typically corresponds with characteristics such as shelving, scour lines, and other natural linear features that define the bed and bank portion of the channel that floods under normal conditions. Because ID1 is hydrologically connected to the San Lorenzo River, a traditional navigable water of the United States, via Kings Creek, ID1 would be considered a water of the United States.

As indicated in the wetland determination form (Attachment 2), SP1 does not support positive indicators of hydrophytic vegetation, hydric soils, or wetland hydrology. While two hydrophytic plant species, mugwort (*Artemisia douglasiana*) and creeping wild rye (*Elymus triticoides*) were present at SP1, they comprised only 13 percent of the total herbaceous cover and, therefore, the hydrophytic vegetation criterion was not met.

The soils at SP1 did not exhibit redoxymorphic features or other positive indicators of hydric soils. Soils on the project site are classified by the NRCS as Ben Lomond sandy loam and Madonna loam; these soils are not listed as hydric on the list of hydric soils of the United States. Although the culvert under the road indicates that water flows through this area at times, there were no positive indicators of wetland hydrology observed. Therefore, it was determined that this area (SP1) is not a wetland. There were no other potential wetland areas identified on the project site.



Source: Adapted by Ascent Environmental in 2012

Attachment 1

Attachment 2

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

Project/Site: Castle Rock State Park City/County: Santa Cruz Sampling Date: 9/20/12
Applicant/Owner: State: CA Sampling Point: SP1
Investigator(s): Tammie Beyerl Section, Township, Range:
Landform (hillslope, terrace, etc.): ridgeline Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): CRRC Lat: Long: Datum:
Soil Map Unit Name: Madonna loam NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Site is at upslope end (inlet) of culvert under dirt access road. Culvert is plugged and buried on downslope end (outlet). Located within Christmas tree plantation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Avena barbata	25	Y	NL
2. Cynosurus echinatus	20	Y	NL
3. Bromus diandrus	15	N	NL
4. Bromus hordeaceus	15	N	FACU
5. Elymus triticoides	10	N	FAC
6. Vulpia myuros	5	N	FACU
7. Artemisia douglasiana	3	N	FACW
8. Epilobium brachycarpum	2	N	NL
9.			
10.			
11.			
	95 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No ✓

Remarks:

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SOIL

Sampling Point: SP1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	10YR 3/2						Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

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ATTACHMENT 11

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ATTACHMENT

Appendix C

Plant Species Observed within the Project Area

Table C-1 Plant Species Observed within the Project Area

Family	Scientific Name	Common Name
Amaryllidaceae	*Narcissus pseudonarcissus*	daffodil
Anacardiaceae	*Toxicodendron diversilobum*	poison oak
Asteraceae	*Asrtemisia douglasiana*	California Mugwort
Asteraceae	*Baccharis pilularis*	coyote brush
Asteraceae	*Centaurea solstitialis*	yellow star thistle
Asteraceae	*Centaurea* sp.	unk thistle
Asteraceae	*Conyza canadensis*	Canadian horseweed
Asteraceae	*Gnaphalium californicum*	cudweed
Asteraceae	*Leontodon* sp.	hawkbit
Asteraceae	*Matricaria discoidea*	pineapple weed
Boraginaceae	*Eriodictyon californicum*	California yerba santa
Boraginaceae	*Nemophila* sp.	baby blue eyes
Brassicaceae	*Athysanus pusillus*	common sandweed
Brassicaceae	*Capsella bursa-pastoris*	shepherd's purse
Brassicaceae	*Cardamine* sp.	bitter cress
Caprifoliaceae	*Lonicera* sp.	twinberry sp.
Caryophyllaceae	*Stellaria* sp.	chickweed
Ericaceae	*Arbutus menziesii*	madrone
Ericaceae	*Arctostaphylos glauca*	bigberry manzanita
Euphorbiaceae	*Euphorbia* sp.	spurge sp.
Fabaceae	*Acmispon americanus*	Spanish lotus
Fabaceae	*Ascmispon brachycarpus*	short podded lotus
Fabaceae	*Cytisus scoparius*	scotch broom
Fabaceae	*Lupinus* sp.	Lupine
Fabaceae	*Vicia tetrasperma*	four seeded vetch
Fagaceae	*Lithocarpus densiflorus*	tanoak
Fagaceae	*Notholithocarpus densiflorus*	tanoak
Fagaceae	*Quercus chrysolepis*	canyon live oak
Fagaceae	*Quercus dumosa*	scrub oak
Fagaceae	*Quercus kelloggii*	Black oak
Fagaceae	*Quercus wislizeni*	interior live oak
Geraniaceae	*Erodium brachycarpum*	short fruited filaree
Geraniaceae	*Geranium carolinianum*	Caroline geranium
Geraniaceae	*Geranium robertianum*	Robert's geranium
Iridaceae	*Iris* sp.	Iris sp.
Juncaceae	*Juncus balticus*	baltic rush
Lamiaceae	*Clinopodium douglasii*	Yerba buena
Lamiaceae	*Lamium amplexicaule*	henbit deadnettle

ATTA[illegible]

Table C-1 Plant Species Observed within the Project Area

Family	Scientific Name	Common Name
Lamiaceae	*lamium amplexicaule*	henbit deadnettle
Lauraceae	*Umbellularia californica*	California bay
Malvaceae	*Malva* sp.	mallow
Melanthiaceae	*Trillium chloropetalum*	common trillium
Montiaceae	*Claytonia* sp.	miners lettuce
Pinaceae	*Abies concolor*	white fir
Pinaceae	*Pinus* sp.	mixed pines
Pinaceae	*Pinus sylvestris L.*	Scotch pine
Pinaceae	*Pseudotsuga menziesii*	Douglas fir
Plantaginaceae	*Plantago lanceolata*	english plantain
Plantaginaceae	*Plantago maritima*	Pacific seaside plantain
Plantaginaceae	*Veronica arvensis*	speedwell
Poaceae	*Agrostis capillaris*	colonial bentgrass
Poaceae	*Arrhenatherum elatius*	tall oatgrass
Poaceae	*Bromus hordeaeceus*	soft brome
Poaceae	*Calamagrostis keolerioides*	fire reedgrass
Poaceae	*Cynodon dactylon*	bermudagrass
Poaceae	*Cynosurus echinatus*	hedgehog dogtail
Poaceae	*Danthonia californica*	California oatgrass
Poaceae	*Deschampsia* sp.	hairgrass
Poaceae	*Elymus glaucus*	blue wildrye
Poaceae	*Fescuta bromoides*	brome fescue
Poaceae	*Fescuta myuros*	rattail sixweek grass
Poaceae	*Hordeum murinum* ssp.	foxtail barley
Poaceae	*Poa annua*	annual blue grass
Poaceae	*Poa pratensis*	bluegrass
Polygonaceae	*Rumex* sp.	dock
Rhamnaceae	*Rhamnus californica* ssp. *californica*	coffeeberry
Rosaceae	*Duchesnea indica*	mock strawberry
Rosaceae	*Fragaria vesca*	california strawberry
Rosaceae	*Heteromeles arbutifolia*	Toyon
Rosaceae	*Potentilla anserina* ssp.	Cinquefoil sp
Rosaceae	*Rubus armeniacus*	Himalayan blackberry
Rubiaceae	*Galium* sp.	bedstraw

ATTACHMENT

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

Sempervirens Fund
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640

April 11, 2014

Subject: Proposed Castle Rock State Park Entrance Project Biological Resources Evaluation and Site Assessment

On Thursday, March 20, 2014, the Environmental Coordinator for the County of Santa Cruz, accompanied by the County's biological consultant, Ecosystems West, conducted a site assessment of the property proposed for development as the new entrance to Castle Rock Park. Subsequent to that we have reviewed the revised Project Biological Resources Evaluation in order to determine its adequacy as a supporting document for the initial study of potential impacts as required under the California Environmental Quality Act (CEQA).

Regarding plant species, the County concurs with the report determination that no special status species of plants will be impacted as a result of the proposed development.

Regarding animal species, the site is mapped as critical habitat for the Marbled Murrelet (*Brachyramphus marmoratus*), a species listed federally as threatened. The murrelet nests in old growth redwood and fir trees on large, moss-covered branches. While the report identifies as a potential impact to passing murrelets construction-related noise, the preponderance of literature identifies the impacts of noise on nesting murrelets, and there is no evidence that noise has a significant impact on passing birds. The primary factor affecting breeding success in murrelets has been identified as high nest predation by corvids - Steller's jays and common ravens. In order to ensure the use of the proposed facility does not have a significant negative impact on nesting marbled murrelets in the Castle Rock Park vicinity, prior to Issuance of a building permit, the entrance facility shall prepare and submit to the County Planning Department for review and approval a corvid management plan that includes at a minimum educational outreach to park users, permanent signage regarding the threats to murrelets, and a trash management program.

With the replacement of the noise-related mitigation with the mitigation above, the proposed project will have a less than significant effect on the environment.

Please call me at 831-454-3201 if you have any questions.

A copy of this letter will be sent to your project planner so that she or he is aware of any biotic conditions on the parcel.

Sincerely,

Matthew Johnston
Environmental Coordinator

Cc: Annette Olsen

ATTACHMENT 5

AGRICULTURAL POLICY ADVISORY COMMISSION

County of Santa Cruz

BRUCE DAU, Chairperson
KEN KIMES, Vice Chairperson
MARY LOU NICOLETTI, Executive Secretary

MINUTES OF REGULAR MEETING

December 19, 2013
1:30 PM
Agricultural Extension Auditorium
1432 Freedom Boulevard
Watsonville, California

Present: Ken Kimes, Frank "Lud" McCrary, Mike Manfre, Bruce Dau
Excused Absence: Sam Earnshaw
Unexcused Absence: None
Others: Samantha Haschert, Mary Lou Nicoletti, Sheila McDaniel, Juan Hidalgo, John Alaga, Norman Black, Lezanne Jeffs, Charlie Eadie, Annette Olson, Steven Wyckoff, Fred Keeley, Reed Holderman, Brian Fletcher, Miles Sanich, Catherine Howard, Andrew Vought, Rob Spiker, Cliff Hodges, Robin Musitelli, Mark Park, Eric Isaacson

1. The meeting was called to order at 1:35 PM

2. (a) Approved minutes from the September 19, 2013 hearing.

   MOTION/SECONDED: McCrary/Manfre
   AYES: McCrary/Manfre/Dau
   NOES: None
   ABSTAIN: None
   ABSENT: Earnshaw, Kimes

   (b) Additional agenda items: None

3. Commissioner's Presentations: None

4. Staff Presentations:

(a) Update from Agricultural Commissioner: None
(b) Update from Planning Department: No agenda items are scheduled for January therefore there will not be a meeting. Meetings will continue on the 3rd Thursday of the month. Policy updates for the agricultural ordinance will be available in draft form at the beginning of the year. The report to the Board of Supervisors is due at the end of January and commissioners will be receiving a copy to review. The

ATTACHMENT 1

Planning Department will be closed from December 23rd to January 1st.

5. Oral Communications: None.

6. Project **131277. APN: 108-181-22**:
Applicant, Norman Black commented that currently there is a six foot chain link fence with wooden slats on the west end of the property.
John Alaga operator of the property to the west commented that the fence is on his property.
Approved staff recommendations for project 131277 with the following conditions:

a. Should the fence on the property to the west be removed in the future the owner of APN 108-181-22 will be required to put up solid board fencing.
b. A fence and a vegetative buffer are required from the end of the house along the property line to the west and along the property line to the north to the northeast corner of the driveway. The use of the wooden slated chain link fence will be allowed in those areas where it exists but any new required fencing must be solid board.

MOTION/SECONDED: Kimes/McCrary
AYES: Kimes, McCrary, Manfre, Dau
NOES: None
ABSTAIN: None
ABSENT: Earnshaw

7. Project **121180. APN: 058-131-19**:
Applicant, Charlie Eadie commented that he would like the proposal approved and has no objections with the requirements of the Planning Department.
Approved staff recommendation for project 121180.

MOTION/SECONDED: Manfre/McCrary
AYES: Kimes, McCrary, Manfre, Dau
NOES: None
ABSTAIN: None
ABSENT: Earnshaw

8. Project **131055. APN: 088-081-12**:

- Joel Dixon, close family friend of the Whalen Family, contacted the planning department in support of the project.
- Bridget Bronstein, a neighbor of Castle Rock State Park, submitted a letter and follow up e-mail supporting the project.
- Bonny Holly, executive director of Friends of Santa Cruz Parks, submitted a letter supporting the project.
- A support letter for the project was received from Judy Groat and Inmar Harrison.
- Steven Wyckoff, Sempervirens board member, commented there is currently an incomplete deer fence separating said property from the Whalen property. Efforts will be made to restore native plants in the areas where the Christmas tree plantings were.

ATTACHMENT 1

- Fred Keeley, Vice-President of Sempervirens, spoke in support of the project.
- Reed Holderman, Executive Director of Sempervirens Fund, spoke in support of the project.
- Brian Fletcher, Callander Associates, proceeded to present a master plan of the proposed development on the property and urged support of the project.
- Miles Sanich, former resident Ranger of Castle Rock State Park, spoke in support of the project.
- Catherine Howard, president of the Santa Cruz Mountains Trail Association, spoke in support of the project.
- Andrew Vought, President of the Portola and Castle Rock Foundation, read a statement of support for the project.
- Rob Spiker, Santa Cruz Mountains Trail Association member, spoke in support of the project.
- Cliff Hodges, owner of Adventure Out, spoke in support of the project.
- Robin Musitelli, analyst to Supervisor Bruce Mcpherson spoke in support for this project.
- Mark Park, president/CEO of United Camps, Conferences and Retreats, spoke in support of the project.
- Eric Isaacson, neighbor, spoke in support of the project to help solve the parking situation.

Approved staff recommendation for project 131055.

MOTION/SECONDED: McCrary/Kimes
AYES: Kimes, McCrary, Manfre, Dau
NOES: None
ABSTAIN: None
ABSENT: Earnshaw

The meeting was adjourned at 2:47 PM

Respectfully submitted,

Juan Hidalgo
Agricultural Commissioner's Office
Santa Cruz County

ATTACHMENT

Staff Report to the Agricultural Policy Advisory Commission

Application Number: 131055

Applicant: Don Neuwirth
Owner: Sempervirens Fund
APN: 088-081-12

Date: 12/19/13
Agenda Item #: 8
Time: 1:30 p.m.

Project Description: Proposal to relocate the entrance to Castle Rock State Park and construct a gateway to the Park in two phases. Phase One to consist of: demolition of existing structures; grading; construction of a new driveway and entrance, including deceleration and acceleration lanes; construction of a parking lot, amphitheater, restrooms, picnic areas and trails; and installation of landscaping. Phase Two to consist of: construction of a visitors center complex of about 6,000 square feet and related improvements.

Requires a General Plan re-designation from Agriculture (AG) to Parks, Recreation and Open Space (O-R), a rezoning from Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P) to Park, Recreation and Open Space with an Open Space Easement Combining District (PR-O), the simultaneous rescission of the existing Agricultural Land Conservation Contract and the simultaneous entrance into an Open Space Easement, and an Agricultural Buffer Reduction from the required 200 feet to 100 feet

Location: Property located on the southwest side of Highway 35, about 2.3 miles southeast of its intersection with Highway 9 (15435 Skyline Blvd., Los Gatos).

Staff Recommendation:

Recommend to the Board of Supervisors the re-designation from Agriculture (AG) to Parks, Recreation and Open Space (O-R), rezoning from Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P) to Park, Recreation and Open Space with an Open Space Easement Combining District (PR-O), and the simultaneous rescission of the Agricultural Land Conservation Contract recorded on April 29, 2008 and entry into an Open Space Easement; and the reduction of the required Agricultural Buffer from 200 to 100 feet.

Exhibits

A. Project plans
B. Findings
C. Conditions
D. Assessor's, Location, Zoning, and General Plan maps
E. Comments & Correspondence
F. Williamson Act Contract
G. Agriculture Viability Study

ATTACHMENT 1

Parcel Information

Parcel Size:	33 acres
Existing Land Use - Parcel:	Christmas tree farm and open space
Existing Land Use - Surrounding:	Christmas tree farm, Residential, Castle Rock State Park, Sanborn County Park
Project Access:	Highway 35 (Skyline Blvd.)
Planning Area:	Skyline
Land Use Designation:	AG (Agriculture), to be re-designated as O-R (Park, Recreation and Open Space)
Zone District:	CA-P, to be rezoned to PR-O
Supervisorial District:	Fifth (District Supervisor: Bruce McPherson)
Within Coastal Zone:	__ Inside _X_ Outside
Appealable to Calif. Coastal Comm.	__ Yes _X_ No

Services Information

Inside Urban/Rural Services Line:	__ Yes _X_ No
Water Supply:	Well
Sewage Disposal:	Septic
Fire District:	CalFire
Drainage District:	Outside of zone

Project Setting and Background

The subject parcel is located on the Santa Cruz side of Highway 35 (Skyline Blvd.), which runs along the crest of the Santa Cruz Mountains, dividing Santa Clara and Santa Cruz counties. Sanborn County Park is located across Highway 35 from the subject parcel. On the Santa Cruz County-side of Highway 35, Castle Rock State Park surrounds the subject parcel on all but one side. The subject parcel is 33 acres in size and is developed with about nine acres of Christmas trees and an abandoned single-family dwelling.

The adjacent parcel to the north is privately owned by Robert and Mary Ann Whalen and is developed with their home, a second unit under construction, and a Christmas tree farm. Prior to the approval of Permit 06-0589 for a lot line adjustment, the Christmas trees on the Whalen's parcel and the subject parcel were all located on one parcel and operated together.

After the lot line adjustment, the Christmas tree farm became divided by the new property line. As a part of that lot line adjustment, the Williamson Act contract on the subject parcel, which was originally entered into in 1974, was revised to reflect the new property boundaries. In August 2010, the Whalen family sold the subject parcel to Sempervirens Fund, a local nonprofit, for the development of a new entrance to Castle Rock State Park.

The existing entrance to Castle Rock State Park, which is located about 500 feet southeast of the subject property, lacks basic amenities, including potable water and permanent restroom facilities. California State Parks does not currently have the resources to improve or develop the existing entrance. Sempervirens purchased the subject parcel from the Whalen family in order to

develop a new entrance with substantially improved amenities and with the ultimate intent to transfer the property to State Parks. The proposed amenities include a new entrance, driveway, parking area, restrooms, amphitheater, picnic areas, and the eventual construction of a 6,000 square foot visitor center and related amenities. These improvements will cover about 1.8 acres, leaving the remaining 31.2 acres in a natural state.

This proposal requires both a General Plan Amendment and rezoning to reflect the change in use from agriculture to a park use. Because the parking lot and picnic areas are proposed to be within 200 feet of the adjacent parcel, which has Type 1A soils, an agricultural buffer reduction is required. In addition, because the use of the property is changing from agriculture to an open space/recreational use, the existing Williamson Act Agriculture Land Conservation Contract is proposed to be rescinded while simultaneously entering into an Open Space Easement.

General Plan Amendment and Rezoning

This application proposes to re-designate the parcel from the Agriculture (AG) General Plan designation to Parks, Recreation and Open Space (O-R), and rezone it from its current Commercial Agriculture with an Agriculture Preserve and Farmland Security Combining District (CA-P) to Parks, Recreation and Open Space with an Open Space Easement Combining District (PR-O).

The County's General Plan is protective of commercial agriculture land and has numerous policies restricting its development and division. General Plan Policy 5.13.3, however, specifically allows for the conversion of Agriculture designated lands into the Parks, Recreation and Open Space designation. It states, "All lands designated as Agriculture Resource shall be maintained as Agriculture Land Use designation unless the property is included in a public park....and [assigned] as Parks, Recreation, and Open Space [O-R]." This policy allows the subject parcel, which will be developed with a public park, to be re-designated as O-R despite being mapped as having a Type 1A soils.

Re-designating the parcel as O-R facilitates its development as the new Castle Rock State Park entrance. The proposed new entrance is a public benefit which will enhance visitors' experience of Castle Rock State Park; will protect important habitat and watershed lands; provide ecological and recreational connectivity; and safeguard the headwaters of the San Lorenzo River, a critical source of water for Santa Cruz.

Since Castle Rock State Park and Sanborn County Park in Santa Clara County border the subject property and are both park lands, the proposed O-R General Plan designation is not only consistent with the proposed public park use, but is consistent with surrounding land uses. Although Sempervirens Fund is a nonprofit organization, the new park entrance will be open to the public during the same hours and days of operation as Castle Rock State Park.

The proposed rezoning from CA-P to PR-O will reflect the end of the Christmas tree operation and the development of a new park entrance. PR implements the O-R General Plan Designation and General Plan Policy 5.13.4 specifically allows parcels with Agriculture Resources to be zoned PR when they are used for a public park. Parks with improvements such as the proposed visitors center are an allowed use in the PR zone district, and the proposed development is consistent with the PR use chart and site standards.

The O Combining District is reserved for those parcels that are restricted by an Open Space Easement in accordance with Section 51050 (the State Government Code regulating Open Space Easements). With the rescission of the existing Williamson Act Contract and the simultaneous entry into an Open Space Easement contract (discussed below), this project will meet the requirement of the O Combining District.

Williamson Act Contract / Open Space Easement

The California Land Conservation Act of 1965--commonly referred to as the Williamson Act--enables local governments to enter into contracts with private landowners for the purpose of restricting the land to agricultural or related open space uses. As noted above, the subject parcel is currently restricted by a Williamson Act Agriculture Land Conservation Contract, which was initially entered into on February 27, 1976, and re-entered into on December 11, 2007. This contract restricts the property to agricultural uses. Sempervirens Fund proposes to rescind the Williamson Act Land Conservation Contract and simultaneously enter into an Open Space Easement contract consistent with the Open Space Easement Act of 1974.

The Williamson Act provides for this type of conversion in Government Code Sections 51223 and 51255 when the parcel is large enough to provide open-space benefits, by providing wildlife habitat, or preserving the parcel's natural characteristics, beauty or openness for the benefit and enjoyment of the public. In this case, given that the parcel is 33 acres in size, the parcel is large enough to provide wildlife habitat benefits. Because Castle Rock State Park is adjacent to the subject property, the restriction of the property will expand the existing wildlife habitat within the park, improving ecological connectivity. In addition, the proposed new structures will occupy about 1.8 acres of the parcel, leaving 31.2 acres in a natural state, preserving the parcel's natural characteristics, beauty and openness for the benefit and enjoyment of the public.

The Open Space Easement will not permit new development except the improvements shown in Exhibit A (Project Plans) which are compatible with and directly related to the open-space use. The subject parcel, proposed improvements and use, and contract are consistent with the requirements of the Open Space Easement section of the State Government Code. The contract will be for a minimum of 10 years.

The fiscal impact to the County of this conversion from Williamson Act contract to Open Space Easement would be minimal. The property's 2013/2014 assessment under the current Williamson Act contract is $883,201. Under an Open Space Easement, the estimated assessed value would be $785,737. The difference between the two calculations is based on the assumption that the commercial farming operations would end under the Open Space Easement. The Sempervirens Fund has been granted an Organizational Clearance Certificate by the Board of Equalization. The certificate establishes Sempervirens' eligibility for a Welfare Exemption on any property it owns which is put to the exempt purpose. The Assessor determines whether all or a portion of the use of the property qualifies for the exemption. The assessment is reduced based on the percentage that is determined to be exempt. If 100% exempt, the assessment would be zero ($0.00) and no property tax would be due to the County. When the property and improvements are transferred to State Parks, taxes will no longer be paid as State Parks is exempt from paying property tax.

Agricultural Buffer Reduction

As noted above, the subject parcel is adjacent to a parcel with a "choose and cut" Christmas tree operation (APN 081-088-11, owned by the Whalen's). The adjacent parcel is designated as having Type 1A soil. County Code 16.50.095(D) requires an Agricultural Buffer of 200 feet between parcels with a Type 1 agricultural resource and new development such as the proposed public parking lot and picnic areas. In this case, a 100-foot buffer is proposed to allow part of the parking lot to encroach 100 feet into the 200-foot buffer. In addition, the restrooms and "Welcome Plaza" with interpretive signs will also encroach about 80 feet into the buffer, and the northern accessible picnic area will encroach about 33 feet into the buffer. These encroachments require an Agricultural Buffer Reduction approval.

Christmas tree operations are a relatively non-intensive form of agriculture, requiring little in the way of inputs or maintenance once established. They have a limited high season; sales are typically concentrated on the four or five weekends between Thanksgiving and Christmas. Typically, tree farm operations are located on relatively low quality soils. The Farmland Mapping and Monitoring Program of the Department of Conservation has categorized the subject parcel and the Whalen's parcel as being Farmland of Local Importance, which is a category reserved for Christmas tree farms and nurseries. This category falls below Prime, Statewide Importance, and Unique Farmland categories (Source: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scr10.pdf, November 25, 2013)

To ensure that conflicts between the Christmas tree operation and visitors to Castle Rock State Park are minimized, the applicant proposes to create a dense vegetative buffer between two fences to separate the park and agriculture uses. This will provide a buffer between the parking lot and restrooms/visitor welcome feature, and the Christmas tree farm. One fence would be located along the edge of the parking lot. This three-foot tall, split-rail fence is intended to discourage visitors from entering the buffer area. A condition of approval is included, at the request of the neighbor, to require that signs be placed along this fence prohibiting entrance into the buffer as an added deterrent. The second fence is to be located along the shared property line, and is proposed to be eight-feet tall and constructed of wire mesh. Although Sempervirens Fund was willing to provide a solid board fence, the adjacent property owners' representative requested the wire mesh material.

The proposed vegetative buffer between the two fences would be composed of the following trees and shrubs which are identified with their height at maturity: coast live oak (70'), Douglas Fir Tree (100'), Coffeeberry shrub (15'), Lemonade Berry (10'), Hollyleaf Cherry (30'), Toyon (25'), Blue Blossom Ceanothus (20'), Big Leaf Maple (90'). These plants were selected based upon their low water needs and their screening potential. The trees will have the additional benefit of blocking dust and debris from the Christmas tree operation. All but the Hollyleaf Cherry and Big Leaf Maple are evergreen trees/shrubs, and will provide screening throughout the year.

A shadow study was submitted to document the effect of the vegetative screen on the Christmas trees' solar access once the trees and shrubs have matured. The shadow study for the summer solstice (June 21) shows virtually no solar impacts the entire day. During winter solstice (December 21), there will be shading impacts at 10 AM, but by 2 PM, the Christmas trees will not be shaded.

The northern accessible picnic area, located further south beside Kings Creek, will be buffered by the riparian area itself, which includes topographic changes and dense vegetation. This picnic area is about 167 feet from the shared property line, about 400 feet from the edge of the tree crop, and separated by about 50 feet of elevation. Because Kings Creek separates the two uses, no conflicts are anticipated to occur in this location.

At the request of the Whalen's representative, a condition is included requiring the addition of a fence along the subject parcel's frontage to west of the new entrance to match the one proposed on the eastern side. This condition is in response to a concern that visitors arriving by foot may attempt to take a shortcut through this area, instead of entering the park at the driveway, and may become stuck in the Whalen's easement over the subject parcel. Fencing the frontage will ensure that pedestrians enter through the main entrance.

In addition to the fences, vegetation, and signs, the applicant will also be required to record a Statement of Acknowledgement regarding the issuance of a building permit in an area determined by the County of Santa Cruz to be subject to Agricultural-Residential use conflicts.

Interestingly, a similar situation with the same mix of agriculture and park uses exists at Skyline Ridge Open Space Preserve, which is located about eight miles north on Highway 35. There, the park and Christmas tree farm uses are integrated as trails go through an existing Christmas tree farm located on the Preserve's property. According to Brian Malone, Superintendent of the Preserve, there have been no significant use conflicts resulting from this, despite visitors regularly using the trails through the tree farm. In this situation, where the uses will not be integrated and will be separated by a minimum of 100 feet, a vegetative buffer, and fencing, no conflicts between the two uses are anticipated to result from the proposed Agriculture Buffer Reduction.

Finally, it is worth noting that an Agricultural Viability study was completed as a part of Lot Line Adjustment 06-0589. That study found that the adjacent tree farm would continue to be a viable agricultural operation following the lot line adjustment when the deed was revised to reflect the current parcel boundaries. This suggests that the elimination of the tree farm on the subject parcel will not impinge upon the viability of the adjacent tree farm.

Recommendation

Staff recommends that your Commission recommend to the Board of Supervisors: the re-designation of the APN 088-081-12 to Parks, Recreation and Open Space, rezoning to Parks, Recreation and Open Space with an Open Space Easement Combining District (PR-O), and the simultaneous rescission of the Agricultural Land Conservation Contract recorded on April 29, 2008 and entry into an Open Space Easement; and the reduction of the required Agricultural Buffer from 200 to 100 feet.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

Report Prepared By: Annette Olson
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3134
E-mail: annette.olson@co.santa-cruz.ca.us

Report Reviewed By: Steven Guiney, AICP
Principal Planner
Development Review

Dale W. Rush, Ph.D.
Edwin E. Sieckert, M.S.
Neil H. Phillips, Sr.
Jay Liggett, B.S.

RUSH and ASSOCIATES

AN ASSOCIATION OF INDEPENDENT AGRICULTURAL CONSULTANTS

1948 Del Monte Avenue
Salinas, California 93908
Office: (831) 484-4834
Fax: (831) 484-4837

ATTACHMENT 3

0593

File No. 6009.07

May 1, 2006

Agricultural Viability Report

This document was prepared for Mr. Robert and Mrs. Mary Ann Whalen, 15435 Skyline Boulevard, Los Gatos, CA 95033.

The subject property is located at and about the above address, listed as APNs 088-081-07 and 08, within Section 17, Township 8S, Range 2W, Mt. Diablo B/M, Santa Cruz County, CA (Exhibit 1). The issue at hand is whether a property lot line adjustment to APN 088-081-07 toward the east and south to expand it from approximately 2.6 acres to approximately 13.5 acres will affect the agricultural viability of the remaining area within the subject APN 088-081-08. The change would reduce the subject parcel from approximately 46.3 acres to 32.8 acres.

The current use of both properties is mainly as a "Choose and Cut" Christmas tree farm that also contains two residences, a maintenance building and equipment storage. In addition to those uses there are approximately 20 acres of standing timber (mostly Douglas fir) and other naturally occurring hardwood species. Following the proposed lot line adjustment, approximately 11 acres of APN 088-081-08 would remain as an existing Christmas tree farm, with approximately 4-6 acres of land suitable for expansion of that enterprise. The remaining area contains a mix of open and brushy areas, harvestable timber (Douglas fir) and hardwood species, mostly deciduous oaks, Madrone, California Bay, and tanoak. A substantial part of APN 088-081-07 (approximately 2 acres) is currently planted to Christmas trees, with the remainder used as a residence.

History

The area currently in Christmas trees was originally cleared around the turn of the twentieth century and planted with pear or apple trees, with the remainder used for timber production as a commercial enterprise. The first experimental Christmas tree plantings on the property were made in 1949. By the early 1960's tree fruit production was no longer a viable enterprise and the land was completely converted to commercial Christmas tree production starting in 1963, and has since been in continuous use for that purpose. APN 088-081-08 is enrolled in the Williamson Act, designated as agricultural land for assessment purposes.

Environmental Review Inital Study
2. 17

Current agricultural use

The current agricultural use of the majority of both parcels (approximately 24 acres) is for Christmas tree production, with a range of tree age and variety from recently planted hybrid Douglas fir and White fir, to trees that are of a size and maturity for cutting in the upcoming season (Exhibit 2). The remainder of the parcels is used for limited timber production and firewood on a maintenance basis.

ATTACHMENT 14

Agricultural viability

The basis for evaluating agricultural viability includes several factors such as current use(s), land use capability, parcel size, related enterprises, local and adjacent land use, environmental conditions, potential economic return, and in this instance historical productivity and potential for continued productivity. Those issues were evaluated to determine appropriateness of the intended use following the proposed lot line adjustment.

Land capability

Review of the current U.S. Soil Conservation Service (USSCS) Soil Survey for Santa Cruz County revealed four soil series mapped within the subject property boundaries. Specific uses (listed and observed), and acreage are delineated below for a combined total of 46.3 acres (Exhibit 3). They are:

110-Ben Lomond sandy loam (Land Capability Class 3e-1) 13.2 acres (29%). Agricultural uses include timber production, apple/pear orchards, Christmas tree farms, tree nurseries and pasture.

143-Lompico-Felton complex (LCC 6e) 17.7 acres (38%). Agricultural uses include timber and firewood production and pasture.

144-Lompico-Felton complex (LCC 7e) 4.8 acres (10%). Agricultural uses include timber and firewood production and grazing.

149-Madonna loam (LCC 4e-1) 10.6 acres (23%). Agricultural uses include timber and firewood production, apple/pear orchards and Christmas tree farms.

Of the listed soil units mapped on the subject property, three (110, 143, and 149) of the four support farmed Christmas trees, including essentially all of both Ben Lomond and Madonna units, with areas within the Lompico unit (143) also planted for seasonal sales.

Local and surrounding land uses

The subject property is essentially surrounded by Castle Rock State Park, managed as mostly natural lands with mature timber, mixed hardwood forests, and variably open areas of native shrubbery and grasslands, formerly used for timber production, grazing and orchards. The general area also contains numerous homes in forest and pasture settings, as well as other Christmas tree farms. Access is by an adequately maintained two-lane blacktop all weather road identified as both California State Highway 35 and as Skyline Blvd. (ref: Exhibit 1). There is considerable visitation of the park, which assures a high degree of visibility of the Christmas tree farm, and thereby a sustainable business potential.

Environmental conditions

The subject location lies at a North latitude of 37° 14 minutes and West longitude of 122° 6 minutes, at an elevation of 2,800- 3,000 feet above sea level as determined by GPS measurements and review of topographical maps. Rainfall as reported by Mr. Whalen over the last five decades and confirmed by other sources averages approximately 55 inches of precipitation per year, mostly rainfall during fall, winter, and spring periods. In addition to seasonal rainfall, additional moisture is derived from fog drip during otherwise dry months. The frost-free period is 220-245 days per year, based upon information from the soil survey report.

Those conditions have been adequate to supply the moisture needs and growing days for the existing Christmas tree farm since inception (1949), and no additional regular irrigation has been required for establishment and growth of trees of either Douglas or White fir species. However, Irrigation facilities remain from previous use as pear and apple orchards, production of which terminated in 1963.

Economic viability

Continued economic viability is a key issue in the analysis. Historically, the property has been both occupied and operated continuously as a "Choose and Cut" Christmas tree farm since the first trees matured in the mid 1960's. Continuous operation to the present (more that 40 years) supports long-term viability and reported profitability of the enterprise. Review of Whalen IRS/state filing documents for the last five years (2001-05) revealed reported income averaging approximately $76,000 per annum from tree farm sales (Exhibit 4).

The issue is: If the lot line is adjusted, can the remaining area (33 acres) within APN 088-081-08 continue to be a viable agricultural enterprise. Evaluation of current and projected economic factors and expected returns are provided below. It should be noted that the significant issue in such matters is not whether such an enterprise will produce adequate revenue to be a sole source of income, but rather, will it produce more income than required costs to sustain the operation, e.g. produce a reasonable expectation of a significant profit above operating expenses.

The University of California Cooperative Extension Service (UCCE) publishes cost studies on production of various agricultural commodities including Christmas trees. The most recent study on a "Choose and Cut" Christmas tree farm was published in 2005 (Exhibit 5). Published information can be used as a guideline and modified as necessary to conform to site-specific data to predict performance potential. Using such a guideline and inputting relevant data can predict profit potential. This approach was used in evaluating the profit potential of the subject parcel after a lot line adjustment that would change the area of production within the 08 APN, although the overall area of Christmas tree production within both the 07 and 08 APNs would not be reduced.

Production parameters, data and assumptions

The Christmas tree spacing on the subject property is primarily a 4-5' by 4-6' grid spacing with 5' x 5' being the most common. This is consistent with the UCCE cost study parameters. The two species grown are Douglas and White fir, also consistent with the UCCE cost study. Historic harvest schedule is 6-9 years depending upon species, and whether the trees are grown from seedlings or by regrowing new trees from cut stumps. This harvest schedule is similar to and consistent with the UCCE cost study. Tree value at cutting is currently $45 for the subject and other nearby Christmas tree farms, but likely to escalate with time. By comparison the UCCE study uses $34/tree as the likely return, with the location of the farm in relatively less affluent areas of the Sierra Nevada foothills.

The size of the farmed area used in the UCCE study is 16 gross acres, substantially smaller than the currently planted area before lot line adjustment. The planted area remaining within APN 088-081-08 after lot line adjustment is approximately 11 acres, plus 4-6 additional plantable acres, not including approximately 16-18 additional acres of steeper areas of standing timber. The farmed area within APN 07 would expand to approximately 13 acres.

There are also significant differences between the UCCE cost study and the subject area that impact costs and net return, and favor the existing Santa Cruz County sites. Variances include location (Sierra Nevada Foothills vs. coastal mountains), i.e. dryer, warmer vs. wetter, cooler, and higher tree value at sale: $45/tree vs. $34/tree for the SN site.

There are also substantial reductions in production costs such as lack of need for irrigation, (including establishment and maintenance of a system, labor, and power costs), not required for the subject tree farm, initial establishment costs such as land preparation, large volume tree purchases, planting costs, and lag time before first harvest; none of which are required for the subject existing tree farm(s).

While cost differences can be considered in any comparison of profitability, essentially all of those differences favor the existing Santa Cruz tree farm. However, important similarities include time to maturity for initial and continuing harvests, planting density, planted species, expected plant survival and marketability of mature trees.

Comparison of listed UCCE parameters for growing, input costs, and returns, revealed the subject Santa Cruz Christmas tree farm(s) produce superior returns (higher value for mature trees) and lower cash and overhead costs. While the projected return per tree and per acre in the UCCE study provides a profit and an incentive to establish and maintain a Christmas tree farm operation, continuing and/or moderate expansion of the Santa Cruz farms provides a better potential rate of return.

For instance, in the UCCE cost study, a viable operation scenario is a realistic expected net return of approximately $12 per tree at an 80% productivity index and a sales price of $34 per tree, mostly toward the end of a growing cycle of 7-12 years. However, there is a net return expectation of approximately $23 per tree at the sales price of $45 from the existing subject farm, and sales are current and ongoing due to variable maturity of existing trees and lower input costs.

Review of Whalen IRS/State filing data revealed revenues from the existing tree farm have averaged approximately $76,000 per annum for the period 2001-2005. Assuming 23 acres of production, then the average return is at least $3,300 per acre. Annual overhead costs for labor and property maintenance have averaged approximately $900 per acre. Reported average harvest from the mixed age plantings is 100+ trees per acre per year. If the historic sales value has been similar to that used in the UCCE of $34 per tree, then the gross return would have been $78,000 per year for the existing plantings. This is close to the actual average reported annual income of $76,000 from the subject property, assuming lower historical pricing, and that all cash sales were reported.

If tree sales for the remaining planted and plantable area within APN 088-081-08 after lot line adjustment are projected using a similar approach and the current sales price of $45 per tree, 80% productivity index and plant density of 5' x 5' over approximately 15 planted acres, then the annual projected return for the property for a 10 year period for 1,394 harvestable trees at a net return of a minimum of $23 per tree is approximately $3,200 per acre, or $48,000 per year. It should be noted that timely planting of replacement trees as necessary, and intensity of management may affect final return.

Conclusion

Based upon the current condition of the subject property with a mix of trees from newly planted to ready to sell, and current planted acreage plus limited expansion to plantable land, the remaining area within APN 088-081-08 will continue to be a viable agricultural enterprise. Similarly, the expansion of APN 088-081-07 will create a profitable agricultural enterprise.

Dale W. Rush

Dale W. Rush, Ph.D., CPAg/SSc.

DWR:kei
Enclosures: Exhibits 1-5

CONFIDENTIAL

Revised Cultural Resources Survey Report
Proposed Open Space Facility
Castle Rock State Park
Santa Cruz County, California

ECORP Project No. 2012-011

Prepared For:
Ascent Environmental
455 Capitol Mall, Suite 205
Sacramento, California 95714

Prepared By:
Stephen Pappas and Lisa Westwood, RPA
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, California 95677

January 2013

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ATTACHMENT 1

found within the Christmas tree farm area and may have been placed there due to cultivation of the soil.

Figure 7. Detail of ceramic crockery (ISO-001).

In addition to the isolate, several modern resources were observed throughout the Project Area consisting of: an abandoned residence (Figure 8), pool, and yard constructed in 1976 (DataQuick 2012), and many areas of dumped refuse consisting of broken concrete, sewer/water pipe, milled wood with nails, wooden poles, food packaging, cans, and other domestic products and building material.

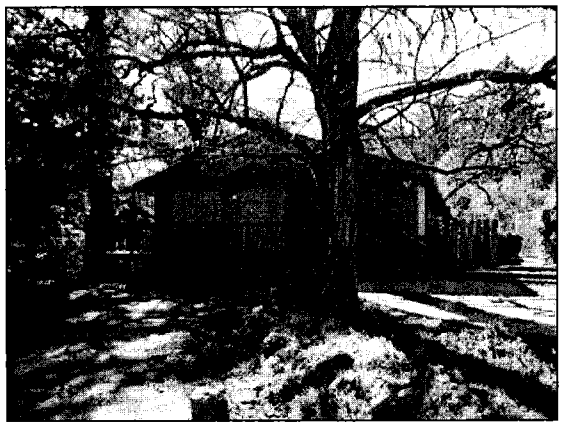

Figure 8. Front of 1976 residence (view southwest).

6.0 MANAGEMENT CONSIDERATIONS

6.1 Summary

As a result of the records search and pedestrian survey of the Project Area, one isolated ceramic fragment (ISO-001) was identified. A single isolated artifact does not have the potential to yield important information and is not eligible for the California Register of Historical Resources (CRHR) under Criterion 4 and is not eligible for the National Register of Historic

ATTACHMENT 1

Places (NRHP) under Criterion D. Due to lack of context and associations, the isolate is also not eligible for the CRHR under Criterion 1 or 2, and is not eligible for the NRHP under Criterion A or B. This artifact does not represent the work of a master and is not otherwise distinctive, and therefore, is not eligible under CRHR Criterion 3 or NRHP Criterion C.

The abandoned residence located in the southern portion of the Project Area is not considered historic in age (constructed in 1976) and the refuse deposits located along the slope south of the residence contained building material and domestic refuse that were most likely from the 1980s and 1970s. Thus, both the house and the refuse are less than 50 years old.

The area where a building is indicated on the 1955 USGS topographic map is now occupied by the 1976 house. No historic artifacts or building foundations are present at this location. It is likely that the 1950s house was demolished when the 1976 house was built.

As a result of the records search and field survey, no Historical Resources, as defined by CEQA, and no historic properties (eligible for the NRHP) were identified in the Project Area.

6.2 Potential for Subsurface Cultural Resources

Both prehistoric and historic sites have been recorded in the project vicinity. Therefore, there is the possibility that subsurface archaeological material is present in the Project Area.

6.3 Unanticipated Discovery

Due to the sensitivity of the Project Area, there remains a possibility that unrecorded cultural resources are present beneath the ground surface, and that such resources could be exposed during project construction. Both CEQA and Section 106 of the National Historic Preservation Act require the lead agency to address any unanticipated cultural resource discoveries during project construction. Therefore, ECORP recommends the following mitigation measures be adopted and implemented by the lead agency to reduce potential adverse impacts to less than significant.

> Mitigation Measure #1: Unanticipated Discovery
> If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required.
>
> Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR.
>
> If a potentially-eligible resource is encountered, then the archaeologist, lead

ATTACHMENT

agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA/NEPA for managing unanticipated discoveries have been met.

In the event that evidence of human remains is discovered, construction activities within 200 feet of the discovery will be halted or diverted and the requirements of Mitigation Measure #1 will be implemented. In addition, the provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. When human remains are discovered, state law requires that the discovery be reported to the County Coroner (Section 7050.5 of the Health and Safety Code) and that reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner notifies the Native American Heritage Commission which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

The Lead Agency is responsible for ensuring compliance with these mitigation measures because damage to significant cultural resources is in violation of CEQA and Section 106. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, *Mitigation Monitoring or Reporting*, "the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."

ATTACHMENT 1

ATTACHMENT A

Records Search Confirmation

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
Email: leigh.jordan@sonoma.edu
http://www.sonoma.edu/nwic

INFORMATION CENTER ACCESS AGREEMENT

FILE NO.: 11-0824

I, the undersigned, have been granted access to historical resources information on file at the Northwest Information Center (NWIC) of the California Historical Resources Information System.

I understand that any CHRIS Confidential Information I receive shall not be disclosed to individuals who do not qualify for access to such information, as specified in Section III (A-E) of the CHRIS Information Center Rules of Operation Manual, or in publicly distributed documents without written consent of the Information Center Coordinator.

I agree to submit historical Resource Records and Reports based in part on the CHRIS information released under this Access Agreement to the Information Center within sixty (60) calendar days of completion.

I agree to pay for CHRIS services provided under this Access Agreement within sixty (60) calendar days of receipt of billing.

I understand that failure to comply with this Access Agreement shall be grounds for denial of access to CHRIS Information.

*** **PLEASE SIGN AND RETURN THIS FORM. SEE ATTACHED INVOICE** ***

Print Name: Stephen Pappas Date: 2/3/2012

Signature: [signature]

Affiliation: ECORP Consulting

Address: 2525 Warren Drive City/State/Zip: Rocklin CA 95826

Billing Address (if different than above):

Special Billing Instructions:

Telephone: (916) 782-9100 Fax: Email: spappas@ecorpconsulting.com

Purpose of Access: Record Search

Reference (project name or number, title of study, and street address if applicable):

Castle Rock State Park 2012-011 ph. 001

County: Santa Cruz Township/Range/UTMs:

USGS 7.5' Quad: Castle Rock Ridge

ATTACHMENT 15

----------STAFF USE ONLY----------

INFORMATION CENTER ACCESS AGREEMENT BILLING ITEMIZATION

CLIENT NAME: S. Pappas NWIC FILE NO.: 11-0834

Date request rec'd: Mail_____ Phone_____ Fax_____ In person 2-3-12

Date of response: Mail_____ Phone_____ Fax_____ In person_____

CHECK IN: 9:35 CHECK OUT: 11:50

CHECK IN: _____ CHECK OUT: _____

Staff Processing:	_____ hour(s) @ $150/hour	$_____
In Person Research:	2.50 hour(s) @ $100/hour/person	$250.00
Digitized Features On Map:	Number: _____	$_____
Quads:	Number: _____	$_____
Address-mapped Flat Fee:		$_____
Xerox/Computer Pages($0.15/page):	Page(s): 337	$50.55
Labor Charge:	Hour(s): _____	$_____
PDF pages($0.15/page)	Page(s): _____	$_____
PDP Flat Fee:		$_____
Other:		$_____
	SUBTOTAL	$_____
	SUBTOTAL Date: _____	$_____
	SUBTOTAL Date: _____	$_____
	SUBTOTAL Date: _____	$_____

Rapid Response surcharge of 50% of total cost: SURCHARGE $_____

Emergency Response surcharge of 100% of total cost: SURCHARGE $_____

L. Black
Information Center Staff

Invoice N14988 TOTAL $300.55

ATTACHMENT

Cont 11-5-2

File No.:_____

RECORD SEARCH DOCUMENT LIST

Referenced Document Number or Name	No. of Copies Made
4897, 5620, 17181	6 + 23 + 17
*22734, *26371	70 + 34 + 5
26410	20
P-22-257, -258 - 259	18 + 46 + 15
P-22-260, -262, -356, -357	21 + 16 + 3 + 5
P-22-358, -360, -403, -703	6 + 5 + 4 + 4
CA-SLU-703/H, -704/H, -399/H	9 + 6 + 2
GLO Maps	2

Name of Researcher: Stephen Pappas

TOTAL: 337

ATTACHMENT 1

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

February 28, 2012

Saratoga Historical Foundation
20450 Saratoga-Los Gatos Road
Saratoga, California 95070-5935

RE: Cultural Resources Identification Effort for Castle Rock State Park, Santa Cruz County, California T6S, R2W, Sections 16 and 17 (ECORP Project No. 2012-011).

Dear Saratoga Historical Foundation:

ECORP Consulting, Inc. has been retained to assist in the planning of the development on the project indicated above. As part of the identification effort, we are seeking information from all parties that may have knowledge of or concerns with historic properties or cultural resources in the area of potential effect.

Included are maps showing the project area outlined. We would appreciate input on this undertaking from the historical society with concerns about possible cultural properties or potential impacts within or adjacent to the area of potential effect. If possible, please fax your response to my attention at (916) 782-9134. If you have any questions, please contact me at (916) 782-9100 or LWestwood@ecorpconsulting.com.

Thank you in advance for your assistance in our cultural resource management study.

Sincerely,

Lisa Westwood

Lisa Westwood, RPA
Cultural Resource Manager

Attachment(s)

2525 Warren Drive, Rocklin, California 95677 • Tel: (916) 782-9100 • Fax: (916) 782-9134 • Web: www.ecorpconsulting.com

ATTACHMENT

ATTACHMENT B

Native American Consultation

ATTACH

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

January 26, 2012

Ms. Debbie Pilas-Treadway
Associate Governmental Program Analyst
Native American Heritage Commission
915 Capital Mall, Room 364
Sacramento, CA 95814

RE: Cultural Resources Identification Effort at Castle Rock State Park Entrance, Santa Cruz County, California T8S, R2W, Sections 16, 17 (ECORP Project No. 2012-011).

Dear Ms. Pilas-Treadway:

ECORP Consulting, Inc. has been retained to assist in the planning of the development on the project indicated above. As part of the identification effort, we are seeking information from all parties that may have knowledge of or concerns with historic properties or cultural resources in the area of potential effect.

Included is a map showing the project area outlined. We would appreciate input on this undertaking from the Native American community with concerns about possible traditional cultural properties or potential impacts within or adjacent to the area of potential effect. Please understand that this is not a request for location, data or any other information that may be deemed sensitive or confidential to individual Native Americans, Native American organizations, or Federally Recognized Tribes. Information on other parties that may have interests or concerns in the undertaking would be appreciated. Please fax your response to my attention at (916) 782-9134. If you have any questions, please contact me at (916) 782-9100.

Thank you in advance for your assistance in our cultural resource management consultation.

Sincerely,

Lisa Westwood

Lisa Westwood, RPA
Cultural Resource Manager

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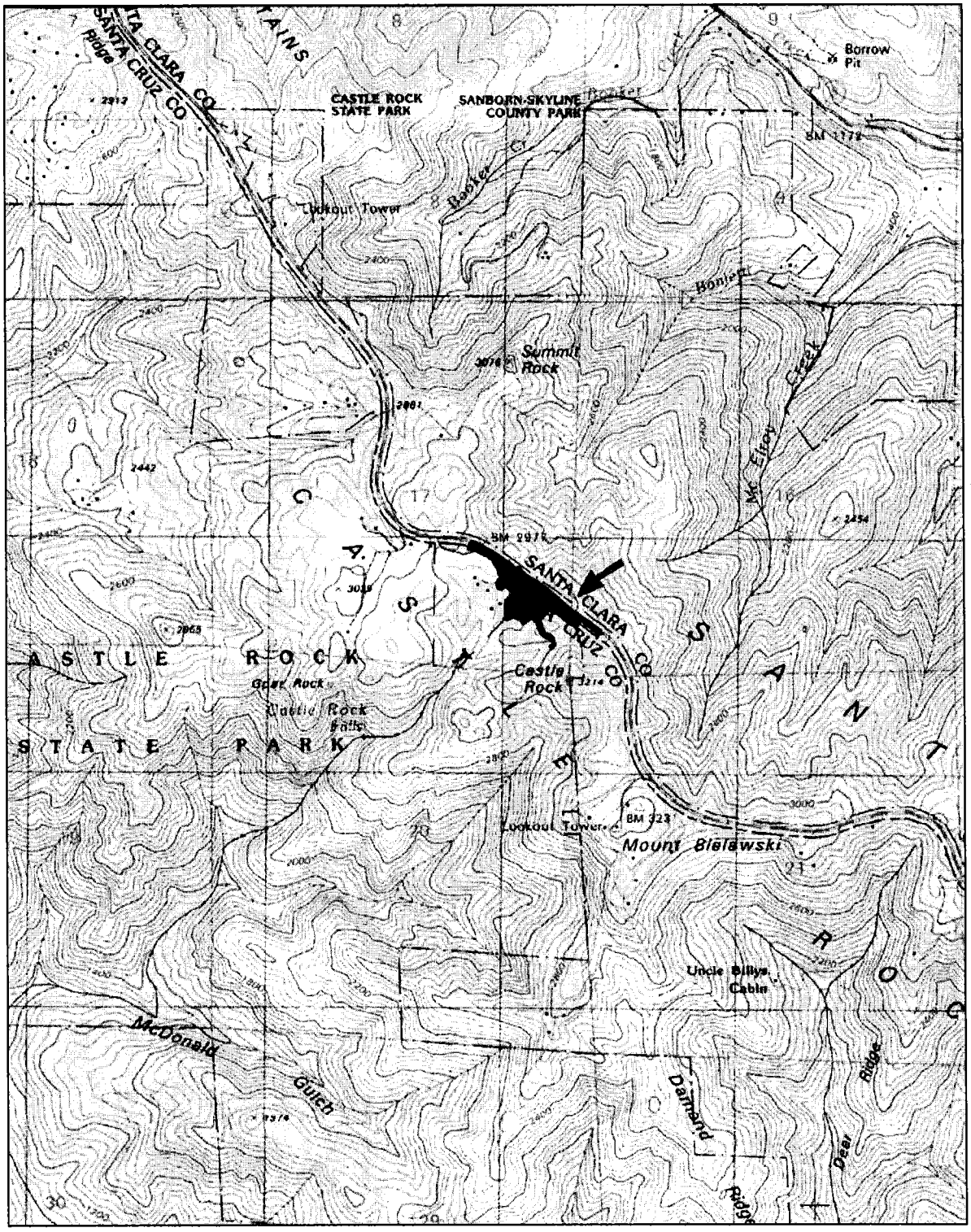

Project: Castle Rock State Park Entrance ECORP Project No. 2012-011

Castle Rock Ridge, CA 7.5-minute Quadrangle
Township 8 South; Range 2 West; Sections 16 and 17 MDBM

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
916 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

February 1, 2012

Lisa Westwood
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, CA 95677

Sent by Fax: 916-782-9134
Number of Pages: 2

Re: Proposed Castle Rock State Park Entrance, Santa Cruz County.

Dear Ms. Westwood:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Santa Cruz County
January 31, 2012

Jakki Kehl
720 North 2nd Street
Patterson , CA 95363
jakki@bigvalley.net
(209) 892-1060

Ohlone/Costanoan

Costanoan Ohlone Rumsen-Mutsen Tribe
Patrick Orozco
644 Peartree Drive
Watsonville , CA 95076
yanapvoic@earthlink.net
(831) 728-8471
(831) 728-8471

Ohlone/Costanoan

Amah MutsunTribal Band
Valentin Lopez, Chairperson
PO Box 5272
Galt , CA 95632
vlopez@amahmutsun.org
(916) 481-5785

Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
831-637-4238

Ohlone/Costanoan

Amah MutsunTribal Band
Edward Ketchum
35867 Yosemite Ave
Davis , CA 95616
aerieways@aol.com

Ohlone/Costanoan
Northern Valley Yokuts

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
2574 Seaboard Avenue
San Jose , CA 95131
muwekma@muwekma.org
408-205-9714
510-581-5194

Ohlone / Costanoan

Amah/MutsunTribal Band
Irene Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
amah_mutsun@yahoo.com
(650) 851-7747 - Home
(650) 851-7489 - Fax

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City , CA 94587
soaprootmo@msn.com
510-972-0645-home
209-688-4753-cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

Amah/MutsunTribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding , CA 96003
jmfgmc@sbcglobal.net
530-243-1633

Ohlone/Costanoan

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Castle Rock State Park Entrance project, Santa Cruz County

ATTACHMENT 1

Whitlock & Weinberger Transportation, Inc.

490 Mendocino Avenue
Suite 201
Santa Rosa, CA 95401
voice (707) 542-9500
fax (707) 542-9590

475 14th Street
Suite 290
Oakland, CA 94612
voice (510) 444-2600

website www.w-trans.com

Castle Rock State Park Transportation Impact Analysis

for the

County of Santa Cruz

March 4, 2014

ATTACHMENT 1

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C Turn Lane Warrant Calculations
D CEQA Checklist

ATTACHMENT

Traffic Impacts

Setting

Vehicular access to the Castle Rock State Park is currently taken from a driveway on State Route (SR) 35 (Skyline Boulevard), approximately 2.5 miles south of the intersection of SR 35/SR 9, leading to an unpaved parking lot. Off-street parking is controlled by California State Parks and a daily use fee is required. On-street parking is currently allowed along SR 35 south of the Park driveway, and is free. Parking both in the parking lot and on-street is prohibited between sunset and 6:00 a.m. SR 35 serves as the boundary between Santa Cruz County and Santa Clara County, with the Park's entrance and parking areas within Santa Cruz County, while the road is owned and operated by the California Department of Transportation (Caltrans). The Park and adjacent transportation facilities are shown in Figure 1.

Data Collection

The first of several field surveys were conducted on Thursday, February 9, 2012, and Sunday, February 12, 2012; during these surveys, traffic volume data was collected for the peak period, which on Thursday is 4:00 p.m. to 6:00 p.m. and Sunday is 11:00 a.m. to 1:00 p.m. Both surveys were conducted during typical operating conditions, on days with good weather and without any special events. Since it is common for drivers to park along SR 35, the driveway turning movement counts include all parking maneuvers adjacent to the Park entrance to account for all vehicles driven to/from the Park.

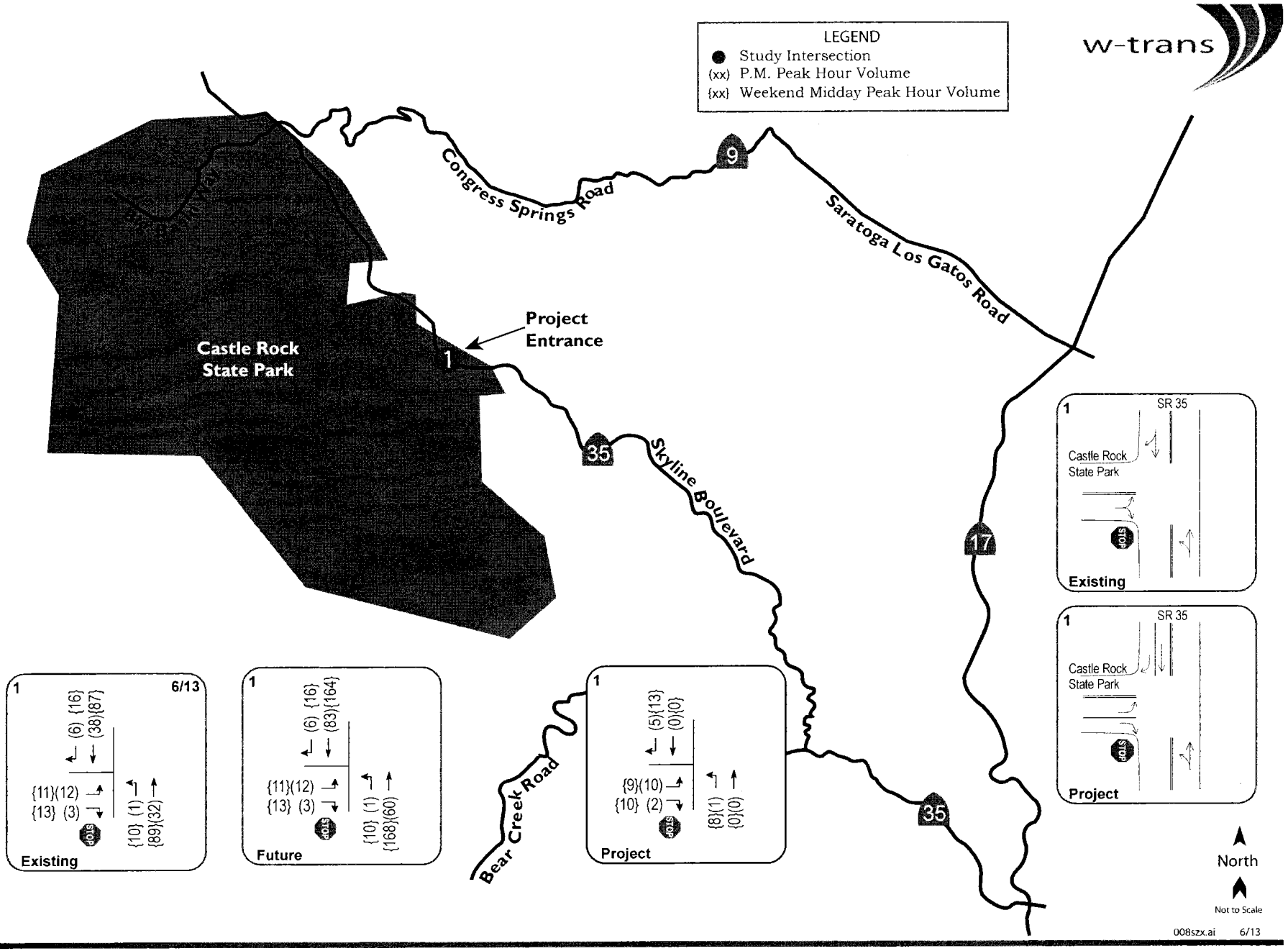
Additional traffic volume data for SR 35 were obtained from Caltrans District 4; these data were collected quarterly (approximately one week each quarter) between December 2010 and September 2012. An average was calculated for the respective peak periods to represent an annual average traffic volume traveling through on SR 35 past the Park entrance. Turning movement volumes entering and exiting the Park driveway collected during field visits were applied directly to the analysis. Since the parking areas were observed to be at or near capacity during the weekend observations, it is expected that these volumes represent typical operations. Existing traffic volumes are shown in Figure 1.

To ensure that traffic volume data applied to this analysis represent peak conditions, a third field survey was conducted on Saturday, June 8, 2013, during the Park's peak operating season. This survey was on a day with good weather and without any special events. During this field survey, it was noted that at peak all available parking was occupied. The traffic count data obtained during this survey was similar to, but slightly lower than the traffic volume counts obtained in February 2012 and also those provided by Caltrans. Therefore, to ensure a conservative analysis, the higher recorded traffic volumes were applied to this analysis.

Trip Generation

Generally, the total number of vehicle trips that would be generated by a proposed project would be estimated utilizing on published trip generation data; however, limited data are available for trip generation of a state park. Therefore, the operations of the Park were analyzed to determine the potential increase in traffic that would be associated with the proposed project.

The proposed project would not increase the size of the park, but would include development amenities such as enhanced parking and access, a new visitor's center, picnic areas and an amphitheater. For the most part it is expected that these new amenities would support the existing park uses and improve the visitor experience; however, it is acknowledged that the presence of additional amenities may draw more visitors to the Park.



Traffic Impact Study

Castle Rock State Park

Figure 1

Study Area, Lane Configurations and Traffic Volumes

During observations of existing Park operations during peak periods it was determined that not all Park users are able to find available parking either within the parking lot or on the street, resulting in an unmet demand. Therefore, the capacity limiting factor at the Park is the availability of parking. It is anticipated that the increase in parking supply would primarily satisfy this unmet demand; however, for the purpose of ensuring a conservative analysis, it was assumed that the percentage increase in the parking supply would result in an equal percentage increase in peak hour traffic. With the development of the new parking facilities, and including all on-street parking near to the Park as part of the parking supply, there would be an 80.4 percent increase in parking capacity. Therefore, to represent peak project conditions, turning movements entering and exiting the site were increased by 80.4 percent while through movements on SR 35 were assumed to be unchanged due to the project. During the weekday p.m. peak hour, this would result in 18 additional vehicle trips, and during the weekend midday peak hour the project would generate an estimated 40 additional vehicle trips as shown on Figure 1. The project is also not expected to result in any change in the distribution of traffic accessing the site.

Level of Service

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

SR 35 is operated by Caltrans, so the Department's significance standard was applied to the park entrance. Caltrans indicates that they endeavor to maintain operation at the transition from LOS C to LOS D.

Existing Conditions

The level of service for SR 35 at the Castle Rock State Park driveway was calculated for existing and existing plus project conditions. The level of service calculations are in Appendix A and are summarized in Table 1.

Table 1
Existing and Existing plus Project
Peak Hour Intersection Level of Service Calculations

Study Intersection *Approach*	Existing Conditions				Existing plus Project			
	PM Peak		Mid Peak		PM Peak		Mid Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. SR 35/Castle Rock State Park	1.5	A	1.3	A	2.3	A	2.0	A
Westbound Stop-Controlled Approach	*8.9*	*A*	*9.2*	*A*	*8.9*	*A*	*9.2*	*A*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* PM = Weekday PM Peak Hour; Mid = Weekend Midday Peak Hour

It was found that the intersection of SR 35/Castle Rock State Park currently operates acceptably at LOS A and would continue to operate at LOS A with the addition of project generated traffic.

Future Conditions

Due to its rural location, limited traffic demand forecasting modeling data are available for SR 35. The Caltrans *Transportation Planning Fact Sheet* for SR 35 (Caltrans, September 2007), indicates that Caltrans estimates annual growth to range between 1.3 and 3.6 percent per year for the segment located along the Santa Cruz-Santa Clara County border. To ensure a conservative analysis an annual growth rate of 3.6 percent per year was applied for a period of 18 years to reach the horizon year of 2030 for this analysis. No growth was applied to turning movements at the Park driveway since the project would not alter Park operations. The future level of service calculations are in Appendix A and are summarized in Table 2.

Projected future traffic volumes are shown in Figure 1.

Table 2
Future and Future plus Project
Peak Hour Intersection Level of Service Calculations

Study Intersection *Approach*	Future Conditions				Future plus Project			
	PM Peak		Mid Peak		PM Peak		Mid Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. SR 35/Castle Rock State Park	0.9	A	0.8	A	1.5	A	1.4	A
Westbound Stop-Controlled Approach	*9.2*	*A*	*10.1*	*B*	*9.2*	*A*	*10.2*	*B*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* PM = Weekday PM Peak Hour; Mid = Weekend Midday Peak Hour.

It was found that under future conditions the study intersection would continue to operate acceptably at LOS A or B and would also do so with the addition of project-generated traffic. It is noted that under future conditions the overall intersection delay slightly decreases compared to existing conditions. This is attributed to the fact that all projected growth in traffic was assumed to occur on the uncontrolled through movements on SR 35 which have no delay, and not on movements exiting the Park which have the highest delay for the intersection. This results in a reduction of the overall average delay.

Congestion Management Analysis

The project is not expected generate a sufficient amount of new traffic to warrant a congestion management analysis for either Santa Clara or Santa Cruz County.

Impact: The project's impacts to traffic would be less than significant.

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Parking

There are approximately 43 unmarked parking spaces currently available to Park users in on-site parking lots. An additional 30 on-street parking spaces are available adjacent to the Park and 39 on-street parking spaces available on the opposite side of the street, for a total of 112 existing parking spaces. However, it should be noted that as these parking spaces are unmarked, the actual capacity may vary depending on how efficiently the vehicles are spaced apart when parked.

The proposed project would create a new parking area and Park entrance approximately 85 yards to the north of the existing Park entrance. The new parking lot would include 90 parking spaces. The existing 43-space parking lot would remain in place, but would be restricted for use for scheduled visits only, including backcountry hikers who request overnight parking permits, special event guests, Park staff and other permitted visitors. At full utilization there would be a total of supply of 133 on-site parking spaces. The breakdown of the proposed parking supply is shown in Table 3.

Table 3
Parking Supply

Parking Location	Existing Conditions	Project Conditions
Existing Parking lot*	43	0
New Parking Lot	0	90
Parking designated for scheduled visits	0	43
On-street parking (adjacent to Park)	30	30
On-street parking (opposite of the Park)	39	39
Total Parking	112	202
Net increase in parking	--	90
Percentage increase in parking	--	80.4%

Note: *Plus one parking space that is designed for use by Park Rangers

It should be noted that the on-street parking on the east side of SR 35 opposite of the Castle Rock State Park is intended for use by visitors of the Sanborn County Park; however, there are no legal restrictions that would stop a Castle Rock State Park visitor from parking in these spaces. Therefore, all on-street parking spaces in the vicinity of the Park entrance were included in the total supply.

The Santa Cruz Zoning Regulations, as incorporated in the County's Code, establish minimum parking requirements for developments in Chapter 13.10.552. However, no standard is established for uses such as Castle Rock State Park and no similar use is available for comparison. As discussed above, the proposed project would increase the overall parking supply and accommodate the parking on-site. In total, the project would result in an increase of 90 parking spaces, an 80.4 percent increase in parking, as shown in Table 3. This increase in supply would alleviate the demand for overflow parking and would result in more defined parking areas, both of which are beneficial compared to existing conditions.

The exiting parking lot would be retained for use by scheduled visitors only. These scheduled visitors would include backcountry hikers who received an overnight parking permit and the guests of special events or organized tours. As noted in parking analysis (Appendix B) it is recommended that a parking management plan be implemented by Castle Rock State Park to ensure that special event parking demand can fully be accommodated on-site or by other means without impacting the general use

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parking lot or on-street parking. The new parking lot would therefore be reserved for day use only by general park visitors.

Impact: The project's impact to parking would be less than significant.

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Sight Distance

At unsignalized intersections, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distance should be measured from a 3.5-foot height at the location of the driver on the minor road to a 4.25-foot object height in the center of the approaching lane of the major road. Setback for the driver on the crossroad shall be a minimum of 15 feet, measured from the edge of the traveled way.

Sight distance along SR 35 at the approximate driveway location was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance at intersections of public streets is based on corner sight distances, while recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance. Both use the approach travel speeds as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

In the project vicinity, SR 35 does not have a posted speed limit, resulting in a prima facie speed limit of 55 miles per hour (mph); however, this is increased by five mph to 60 mph for an analysis speed. For speeds of 60 mph, a stopping sight distance of 580 feet is recommended while 660 feet of corner sight distance is recommended. Sight distance at the driveway location was measured based on topographic plans provided by Callander Associates. It was determined that sight distance at the new driveway would be impeded by the presences of trees along SR 35; however, acceptable sight lines could be achieved by either removing trees or modifying the driveway entrance. Details on achieving acceptable sight lines are outlined in a separate *Castle Rock State Park – Roadside Hazards Report.*

Left-Turn Lane Warrants

The need for left-turn lanes on SR 35 at the Castle Rock State Park Driveway was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as a more recent update of the methodology developed by the Washington State Department of Transportation. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes in order to determine the need for a left-turn pocket based on safety issues. Based on our research and discussions with Caltrans staff, this methodology is consistent with the "Guidelines for Reconstruction of Intersections," August 1985, which is referenced in Section 405.2, Left-turn Channelization, of Caltrans' *Highway Design Manual.*

The need for left-turn channelization in the form of a left-turn pocket on SR 35 was evaluated based on existing and projected future peak hour volumes as well as safety criteria. Under both conditions, and with the addition of new traffic generated at the Park, a left-turn lane is not warranted on SR 35 at the Castle Rock State Park Entrance during either of the peak periods evaluated (See Appendix C for calculations).

Although not warranted, the proposed project includes the installation of a southbound right turn lane as well as an existing right turn acceleration lane. These lanes will ease access to the Park and reduce impacts to through traffic on SR 35 and are an improvement over existing conditions. To minimize the

potential for conflicting vehicle movements adjacent to the acceleration and deceleration lanes, it is recommended that on-street parking be prohibited along these lanes.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Records were obtained from the California Highway Patrol as published in their *Statewide Integrated Traffic Records System* (SWITRS) reports. For the seven-year period of 2004 through 2010, a total of nine collisions were reported along the segment of SR 35 between SR 9 and Bear Creek Road; however, none of these collisions appear to be related to turning movements at the Park entrance or the on-street parking adjacent to the Park, indicating no historic safety issue at the Park entrance.

Emergency Access

The proposed project would enhance parking areas and driveway access which will ease access for all drivers, including those of emergency vehicles. Detailed design of the Park's access is not available at the time of this analysis, though the parking area and driveways will need to be designed to meet all applicable codes and requirements established by the State of California and Santa Cruz County.

Impact: The project's impact to safety is potentially significant unless mitigation measures are incorporated. Recommendations to achieve acceptable sight lines are provided in the *Castle Rock State Park – Roadside Hazards Report.* If these recommended improvement measures are implemented, it is expected that the project's impact would be less than significant.

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Alternative Modes

Transit

Transit service is provided by the Santa Cruz Metropolitan Transit District and the Santa Clara Valley Transportation Authority for their respective counties. Neither agency provides service to the Park site or along SR 35 in the vicinity of the Park.

Pedestrian

SR 35 does not have sidewalks in the vicinity of the Park and shoulder widths in the area vary. These conditions are consistent with the rural nature of SR 35. Pedestrian activity was observed during the two field visits and generally consisted of pedestrians walking between on-street parking areas and the Park entrance or between the Park entrance and another trail-head located on the east side of SR 35.

By creating an enhanced on-site parking area to alleviate the overflow parking that currently occurs on the street, the proposed project would reduce the need for pedestrians to cross SR 35 or walk along the street, which is beneficial to pedestrian safety.

Bicycle

There are no bicycle facilities along SR 35 in the vicinity of the Castle Rock State Park entrance. In some areas, bicyclists can use paved shoulders; however, for the most part bicyclists must ride in the vehicle lanes. During field observations, several bicyclists were observed riding along SR 35, ranging from zero to four bicyclists per hour; however, none appeared to be destined for the Park.

Both the *Santa Cruz County Bicycle Plan* (County of Santa Cruz, March 2011) and the *Santa Clara Countywide Bicycle Plan* (Santa Clara Valley Transportation Authority, August 2008) were reviewed and it was determined that neither Plan identifies any future bicycle facilities on SR 35 in the vicinity of Castle Rock State Park.

The proposed removal of on-street parking would reduce conflicting vehicle movements near the Park which is beneficial for bicyclist safety. Other improvements to the project frontage would either improve bicycle conditions where widening occurs for turn lanes or shoulders, or leave conditions unchanged for bicyclists.

Plan Conformance

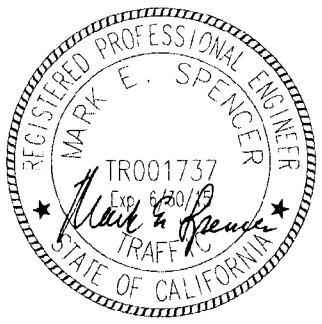
The proposed project would not conflict with the *Santa Clara Countywide Bicycle Plan* or the *Santa Cruz County Bicycle Plan*, nor would it decrease the performance of transit, bicycle or pedestrian facilities.

Impact: The project's impact to alternative modes of transportation would be less than significant.

Study Participants

Principal in Charge:	Mark E. Spencer, PE
Traffic Engineer:	Tony Henderson, PE, PTOE
Technician/Graphics:	Deborah J. Mizell
Editing/Formatting:	Angela McCoy

SZX008



Appendix A

Intersection Level of Service Calculations

PM Peak Hour - Existing Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[8.9]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 1!	0	0	0 0 0	0	0
Volume Module:	>> Count Date: 9 Feb 2012 << 4:00 - 5:00 pm											
Base Vol:	1 32	0	0	38	6	12	0	3	0	0	0	
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	1 32	0	0	38	6	12	0	3	0	0	0	
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.92 0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
PHF Volume:	1 35	0	0	41	7	13	0	3	0	0	0	
Reduct Vol:	0 0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	1 35	0	0	41	7	13	0	3	0	0	0	
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	
FollowUpTim:	2.2 xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	
Capacity Module:												
Cnflict Vol:	48 xxxx	xxxxx	xxxx	xxxx	xxxxx	82	82	45	xxxx	xxxx	xxxxx	
Potent Cap.:	1572 xxxx	xxxxx	xxxx	xxxx	xxxxx	926	813	1031	xxxx	xxxx	xxxxx	
Move Cap.:	1572 xxxx	xxxxx	xxxx	xxxx	xxxxx	925	812	1031	xxxx	xxxx	xxxxx	
Volume/Cap:	0.00 xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.00	xxxx	xxxx	xxxx	
Level Of Service Module:												
2Way95thQ:	0.0 xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
Control Del:	7.3 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
LOS by Move:	A *	*	*	*	*	*	*	*	*	*	*	
Movement:	LT - LTR - RT		LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			
Shared Cap.:	xxxx xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	944	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:	0.0 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:	7.3 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	A *	*	*	*	*	*	A	*	*	*	*	
ApproachDel:	xxxxxx		xxxxxx			8.9			xxxxxx			
ApproachLOS:	*		*			A			*			

Note: Queue reported is the number of cars per lane.

Weekend Midday Peak Hour - Existing Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.3]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 1!	0	0	0 0 0	0	0
Volume Module:	>> Count Date: 12 Feb 2012 << 12:00 noon - 1:00 pm											
Base Vol:	10 89	0	0	87	16	11	0	13	0	0	0	
Growth Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	10 89	0	0	87	16	11	0	13	0	0	0	
User Adj:	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	0.92 0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
PHF Volume:	11 97	0	0	95	17	12	0	14	0	0	0	
Reduct Vol:	0 0	0	0	0	0	0	0	0	0	0	0	
FinalVolume:	11 97	0	0	95	17	12	0	14	0	0	0	
Critical Gap Module:												
Critical Gp:	4.1 xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	
FollowUpTim:	2.2 xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	
Capacity Module:												
Cnflict Vol:	112 xxxx	xxxxx	xxxx	xxxx	xxxxx	222	222	103	xxxx	xxxx	xxxxx	
Potent Cap.:	1490 xxxx	xxxxx	xxxx	xxxx	xxxxx	771	680	957	xxxx	xxxx	xxxxx	
Move Cap.:	1490 xxxx	xxxxx	xxxx	xxxx	xxxxx	767	675	957	xxxx	xxxx	xxxxx	
Volume/Cap:	0.01 xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01	xxxx	xxxx	xxxx	
Level Of Service Module:												
2Way95thQ:	0.0 xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
Control Del:	7.4 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
LOS by Move:	A *	*	*	*	*	*	*	*	*	*	*	
Movement:	LT - LTR - RT		LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			
Shared Cap.:	xxxx xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	859	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:	0.0 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:	7.4 xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	A *	*	*	*	*	*	A	*	*	*	*	
ApproachDel:	xxxxxx		xxxxxx			9.3			xxxxxx			
ApproachLOS:	*		*			A			*			

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing plus Project Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[8.9]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1	0 1	1	0	0 0 1	0	0 0	0 0
Volume Module: >> Count Date: 9 Feb 2012 << 4:00 - 5:00 pm												
Base Vol:	1	32	0	0	38	6	12	0	3	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	32	0	0	38	6	12	0	3	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Vol:	1	0	0	0	0	5	10	0	2	0	0	0
Initial Fut:	2	32	0	0	38	11	22	0	5	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	35	0	0	41	12	24	0	5	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	35	0	0	41	12	24	0	5	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	53	xxxx	xxxxx	xxxx	xxxx	xxxxx	80	xxxx	41	xxxx	xxxx	xxxxx
Potent Cap.:	1565	xxxx	xxxxx	xxxx	xxxx	xxxxx	927	xxxx	1035	xxxx	xxxx	xxxxx
Move Cap.:	1565	xxxx	xxxxx	xxxx	xxxx	xxxxx	926	xxxx	1035	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.0	xxxx	8.5	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	A	*	A	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

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Weekend Midday Peak Hour - Existing plus Project Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: A[9.3]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1	0 1	1	0	0 0 1	0	0 0	0 0
Volume Module: >> Count Date: 12 Feb 2012 << 12:00 noon - 1:00 pm												
Base Vol:	10	89	0	0	87	16	11	0	13	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	89	0	0	87	16	11	0	13	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Vol:	8	0	0	0	0	13	9	0	10	0	0	0
Initial Fut:	18	89	0	0	87	29	20	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	20	97	0	0	95	32	22	0	25	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	97	0	0	95	32	22	0	25	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	126	xxxx	xxxxx	xxxx	xxxx	xxxxx	230	xxxx	95	xxxx	xxxx	xxxxx
Potent Cap.:	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx	762	xxxx	968	xxxx	xxxx	xxxxx
Move Cap.:	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx	754	xxxx	968	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	0.03	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	xxxx	8.8	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	A	*	A	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.3			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

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PM Peak Hour - Future Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.2]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0	0	0	0 1	0	0	1! 0	0	0	0 0
Volume Module: >> Count Date: 9 Feb 2012 << 4:00 - 5:00 pm												
Base Vol:	1	60	0	0	72	6	12	0	3	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	60	0	0	72	6	12	0	3	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	1	65	0	0	78	7	13	0	3	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	65	0	0	78	7	13	0	3	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	85	xxxx	xxxxx	xxxx	xxxx	xxxxx	149	149	82	xxxx	xxxx	xxxxx
Potent Cap.:	1525	xxxx	xxxxx	xxxx	xxxx	xxxxx	848	746	984	xxxx	xxxx	xxxxx
Move Cap.:	1525	xxxx	xxxxx	xxxx	xxxx	xxxxx	847	746	984	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	872	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

Weekend Midday Peak Hour - Future Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[10.1]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0	0	0	0 1	0	0	1! 0	0	0	0 0
Volume Module: >> Count Date: 12 Feb 2012 << 12:00 noon - 1:00 pm												
Base Vol:	10	168	0	0	164	16	11	0	13	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	168	0	0	164	16	11	0	13	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	11	183	0	0	178	17	12	0	14	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	183	0	0	178	17	12	0	14	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	196	xxxx	xxxxx	xxxx	xxxx	xxxxx	391	391	187	xxxx	xxxx	xxxxx
Potent Cap.:	1389	xxxx	xxxxx	xxxx	xxxx	xxxxx	617	548	860	xxxx	xxxx	xxxxx
Move Cap.:	1389	xxxx	xxxxx	xxxx	xxxx	xxxxx	613	543	860	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.02	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	726	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.1			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

PM Peak Hour - Future plus Project Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[9.2]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1	0 1	1	0	0 0 1	0	0	0 0 0
Volume Module: >> Count Date: 9 Feb 2012 << 4:00 - 5:00 pm												
Base Vol:	1	60	0	0	72	6	12	0	3	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	60	0	0	72	6	12	0	3	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Vol:	1	0	0	0	0	5	10	0	2	0	0	0
Initial Fut:	2	60	0	0	72	11	22	0	5	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	2	65	0	0	78	12	24	0	5	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	65	0	0	78	12	24	0	5	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	90	xxxx	xxxxx	xxxx	xxxx	xxxxx	148	xxxx	78	xxxx	xxxx	xxxxx
Potent Cap.:	1518	xxxx	xxxxx	xxxx	xxxx	xxxxx	849	xxxx	988	xxxx	xxxx	xxxxx
Move Cap.:	1518	xxxx	xxxxx	xxxx	xxxx	xxxxx	848	xxxx	988	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.4	xxxx	8.7	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	A	*	A	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

Weekend Midday Peak Hour - Future plus Project Conditions
Traffic Impact Study for Castle Rock State Park
County of Santa Cruz

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR 35/Castle Rock State Park

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[10.2]

Street Name:	SR 35						Castle Rock State Park					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0	0 1	0 1	1	0	0 0 1	0	0	0 0 0
Volume Module: >> Count Date: 12 Feb 2012 << 12:00 noon - 1:00 pm												
Base Vol:	10	168	0	0	164	16	11	0	13	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	168	0	0	164	16	11	0	13	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Vol:	8	0	0	0	0	13	9	0	10	0	0	0
Initial Fut:	18	168	0	0	164	29	20	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	20	183	0	0	178	32	22	0	25	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	183	0	0	178	32	22	0	25	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	210	xxxx	xxxxx	xxxx	xxxx	xxxxx	400	xxxx	178	xxxx	xxxx	xxxxx
Potent Cap.:	1373	xxxx	xxxxx	xxxx	xxxx	xxxxx	610	xxxx	870	xxxx	xxxx	xxxxx
Move Cap.:	1373	xxxx	xxxxx	xxxx	xxxx	xxxxx	603	xxxx	870	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	0.03	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.1	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.2	xxxx	9.3	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	B	*	A	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.2			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Appendix B

Parking Analysis Memo

ATTACHMENT 6

memorandum

Whitlock & Weinberger Transportation, Inc.

475 14th Street
Suite 290
Oakland, CA 94612

voice (510) 444-2600

website www.w-trans.com
email mspencer@w-trans.com

Date: September 25, 2013

To: **Mr. Mike Parker**
Ascent Environmental, Inc.

From: Mark Spencer
Tony Henderson

Project: SZX008

Subject: Castle Rock State Park - Parking

County of Santa Cruz staff identified parking demand for the proposed Castle Rock State Park entrance enhancement project as a critical issue for the project given the park's remote location and the lack of alternative transportation modes that might alleviate some of the parking demand. This analysis supplements the *Draft Traffic Impact Study for Castle Rock State Park*, and focuses on parking demand for Castle Rock State Park.

To observe existing parking demand, three field surveys were performed by W-Trans and Callander Associates personnel to document the existing demand, which is summarized below. Assumptions about the proposed use were made using the Semperviren's program statement dated August 2013, and the County Code. The ITE Parking Generation 4th Edition was reviewed, but was found to be unsuitable for the proposed project because of the size of the project and the unique mix of uses.

Existing Parking Demand

During weekday and weekend field surveys conducted in on Thursday, February 9, 2012, Sunday, February 12, 2012 and on Saturday, June 6, 2013, it was observed that weekend, midday parking demand exceeded on-site parking supply, resulting in drivers using on-street parking for overflow parking and walking into the park. On weekdays, it was observed that there was sufficient on-site parking availability to accommodate park users; however, some users chose to park on the street and walk into the Park, presumably to avoid paying the fee to park within the parking lot. The traffic volume data collected during these field surveys are attached.

Peak Seasons, Days and Times

Given the outdoor nature of the park, peak parking demand varies seasonally and depending on the weather. The surveys were performed in February and June, all on days with nice weather. Both weekend surveys yielded similar peak parking demands. Based on these field surveys, peak parking demand currently occurs on weekends generally occurring between the late morning and early afternoon. Weekday parking demand was found to be lower that weekend parking demand.

Parking Demand for New Facility

The Santa Cruz Zoning Regulations, as incorporated in the County's Code section 13.10.551 (Off-street parking facilities required) states that, "For any major alteration or enlargement affecting a nonresidential structure or use for which the existing parking is or would become nonconforming, additional off-street parking shall be required only for the additional increment of square footage or

use." This means that the project must only provide additional parking for the anticipated new uses, which include the visitor center and amphitheater.

While the County of Santa Cruz parking ordinance does not explicitly have requirements for a state park, it does establish required parking ratios for offices and places of public assembly such as the areas designated as public gathering areas in the visitor center. As shown in Table 1, applying these County Code parking requirements would result in a need for 93 new parking spaces.

Table 1
County of Santa Cruz Parking Requirements

Use	Area	Parking Ratio	Required Parking
Public Gathering: Visitor Center	1,949 s.f.	30 per 1000 s.f.	58
Office/Retail: Visitor Center	1,447 s.f.	1 per 300 s.f.	5
Amphitheater	1,000 s.f.	30 per 1000 s.f.	30
Total			93

Notes: Parking Requirements per Santa Cruz County Code §13.10.552; s.f. = square feet

The County-based parking requirement provides a generalized number, but does not provide the specificity of parking demand outlined in the Program Statement which limits the numbers of attendees and the days/times of special events and activities. For example, although the County Code requires 58 parking spots for the public gathering areas in the Visitor Center, the Program Statement limits the public gatherings to 60 people. With an assumed vehicle occupancy of 2.5 people per vehicle, 24 parking spaces would be required instead of the 58 required by the County Code. In addition, because a special event may occur simultaneously with other activities such as classes and nature walks, the parking demand is not fully captured by using just the County Code parking ratios. Furthermore, it is acknowledged that the use of public gathering space and office/retail does not provide an exact proxy for the proposed uses on the site.

Since it was determined that the parking ratios established in the County Code do not directly apply to the proposed project site, the program statement was reviewed to determine a site-specific peak parking demand. The program statement lists the proposed uses of the facility (see Program Statement). These include the special events noted above as well as nature talks/walks, classes such as bouldering, day retreats for team building, school field trips, summer camps, volunteer restoration groups. A conservative analysis was done which assumes that all of the listed activities which occur in the same timeframe (e.g. weekdays/non-peak season weekends) occur simultaneously. Although this is unlikely, the intent was to capture the "worst case scenario." Two scenarios are tabled below, a Weekday and a Peak Season Weekend, and each assumes that a special event with 60 participants is occurring at the same time as the other uses. Given Castle Rock's remote location, it is assumed that all attendees will arrive in a vehicle so no mode split is provided. Based on engineering judgment and experience with other recreational facilities, an average vehicle occupancy of 2.5 people per vehicle was applied for most trip types.

Peak weekday operations are summarized in Table 2. During this peak period, it is expected that there would be a maximum demand for 64 parking spaces.

Table 2
Weekday Peak Parking Needs

Use	Visitors	Vehicle Occupancy	Required Parking
Special Event	60	2.5	24
Docent-led nature walks/adult club outings	20	2.5	8
Classes/workshops, e.g. bouldering	20	2.5	8
Day retreats for team building	20	2.5	8
School field trip	60	bussed in	4
Summer day camps	20	dropped off	2
Volunteer Restoration Groups	20	2.5	8
Rangers	2	1	2
Total			64

As noted above, the parking demand values presented in Table 2 reflects all activities occurring at once which is unlikely. Big Basin State Park, a much larger and more visited park, for example, has the following scheduled activities for a weekday in July. The schedule indicates that events are staggered throughout the day. It is expected that there would be turnover of parking throughout the day, both for special event uses and general day use visitors. This would reduce the parking demand at any one point in time. It is expected that events at Castle Rock State Park would similarly be staggered throughout the day.

3:00 p.m. Junior Rangers
4:30 p.m. Big Basin Nature Club
6:30 p.m. Campfire
7:30 Twilight Hike (only on Mondays)
Source: http://www.bigbasin.org/activitiesmain.html

In addition to a staggered scheduling of events, it is expected that there would be a turnover of day use parking throughout the day. In general, on a peak day, it is expected that a parking space could be used several times per day, thereby accommodating multiple users throughout the day.

Presented in Table 3 is the scenario is for a peak weekend. Again, for a conservative analysis, two 60-person events are assumed to be occurring at the same time. These could be, for example, a lecture at the amphitheater and a reception for an educational exhibit in the Visitor Center.

Table 3
Weekend Peak Parking Needs

Use	Visitors	Vehicle Occupancy	Required Parking
Special Event	60	2.5	24
Docent-led nature walks/adult club outings	60	2.5	24
Classes/workshops, e.g. bouldering	20	2.5	8
Day retreats for team building	20	2.5	8
Volunteer Restoration Groups	20	2.5	8
Rangers	2	1	2
Total			74

Weekend events during the peak season would result in a peak parking demand of 74 which can be accommodated within the proposed 90 new parking spaces. Because the use of the entrance facilities will be managed in the short-term by Sempervirens and in the long-term by State Parks, special events and other activities will be scheduled to ensure that the 90 spaces allotted for the new uses is never exceeded at any one time.

Parking Demand for the Existing and Proposed Uses

The existing parking lot provides 43 spaces. An additional 30 parking spaces are available on the south side of Highway 35, and 39 parking spaces are available on the north side, but cannot count towards fulfilling the project's parking requirement as County Code requires that applications provide their parking on-site unless a parking agreement is made with the owner of another parcel. In this case, the parking is within the Caltrans right-of-way and cannot be dedicated to the project. Also some of the parking is used by Sanborn County Park visitors.

The project proposes to provide the existing 43 spaces plus 90 new parking spaces, for a total of 133 spaces. As noted above in the two parking scenarios, the proposed new uses do not exceed 90 new parking spaces. Furthermore, these uses will be managed as described below so that the parking demand generated by the new uses would not exceed the 90 new spaces at any one time. Since the parking for the new uses at Castle Rock State Park would be accommodated within the 90 new parking spaces, any excess supply would be available for existing uses and to help alleviate the need for overflow parking.

Parking Demand Management

A parking management plan would be implemented by Castle Rock State Park such that special event parking demand can fully be accommodated on-site. As part of this transportation demand management plan, events would be scheduled such that the event parking demand could be accommodated within the available parking. This would include parking demand for all persons associated with the event: event attendees, rangers, event staff, caterers, and so on.

The parking demand management plan would include establishment of event scheduling, parking and enforcement policies to manage the demand for permitted users (events, classes and so on), while retaining availability of parking for general, day-use visitors. Additionally, the plan would establish

procedures to manage special events where the expected parking demand would exceed onsite capacity. These procedures would include the use of on-site parking management techniques, such as valet parking for event guests. Implementation of the parking management plan would be integrated with event scheduling policies and managed by park staff.

Conclusion

The proposed project would provide 90 new parking spaces for the Castle Rock State Park to support the proposed new facilities at the park. Based on the planned operations, the proposed amphitheater and visitor center would generate a maximum demand of 74 additional parking spaces on a peak, weekend day. This peak demand would be accommodated within the proposed parking supply.

MES/tdh/SZX008.M1.doc

Attachments: Field Survey Data Collected

W-Trans
475 14th Street Suite 290
Oakland, CA 94612

PM Peak
Castle Rock State Pk/SR 35-Skyline Blvd
SZX008
County of Santa Cruz

File Name : Castle Rock PM
Site Code : 00000501
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted

	Skyline Blvd Southbound						Westbound					SR 35 Northbound						Castle Rock State Park Eastbound					
Start Time	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	3	2	0	0	6	11	0	0	0	0	0	0	2	0	0	10	12	0	0	2	0	2	25
04:15 PM	3	10	0	0	8	21	0	0	0	0	0	0	0	1	0	4	5	2	0	7	0	9	35
04:30 PM	0	2	0	0	2	4	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0	2	8
04:45 PM	0	3	0	1	1	5	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0	2	8
Total	6	17	0	1	17	41	0	0	0	0	0	0	5	1	0	14	20	3	0	12	0	15	76
05:00 PM	0	8	0	0	1	9	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	1	14
05:15 PM	1	5	0	0	5	11	0	0	0	0	0	0	3	0	0	2	5	2	0	1	0	3	19
05:30 PM	0	7	0	0	6	13	0	0	0	0	0	0	5	0	0	0	5	1	0	1	0	2	20
05:45 PM	0	7	0	0	2	9	0	0	0	0	0	0	3	0	0	0	3	0	0	3	0	3	15
Total	1	27	0	0	14	42	0	0	0	0	0	0	15	0	0	2	17	3	0	6	0	9	68
Grand Total	7	44	0	1	31	83	0	0	0	0	0	0	20	1	0	16	37	6	0	18	0	24	144
Apprch %	8.4	53	0	1.2	37.3		0	0	0	0		0	54.1	2.7	0	43.2		25	0	75	0		
Total %	4.9	30.6	0	0.7	21.5	57.6	0	0	0	0	0	0	13.9	0.7	0	11.1	25.7	4.2	0	12.5	0	16.7	

	Skyline Blvd Southbound						Westbound					SR 35 Northbound						Castle Rock State Park Eastbound					
Start Time	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 04:00 PM																							
04:00 PM	**3**	2	0	0	6	11	0	0	0	0	0	0	**2**	0	0	**10**	**12**	0	0	2	0	2	25
04:15 PM	3	**10**			**8**	**21**	0	0	0	0	0	0	0	**1**	0	4	5	**2**		**7**	0	**9**	**35**
04:30 PM	0	2	0	0	2	4	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0	2	8
04:45 PM	0	3	0	**1**	1	5	0	0	0	0	0	0	1	0	0	0	1	**1**	0	1	0	2	8
Total Volume	6	17	0	1	17	41	0	0	0	0	0	0	5	1	0	14	20	3	0	12	0	15	76
% App. Total	14.6	41.5	0	2.4	41.5		0	0	0	0		0	25	5	0	70		20	0	80	0		
PHF	.500	.425	.000	.250	.531	.488	.000	.000	.000	.000	.000	.000	.625	.250	.000	.350	.417	.375	.000	.429	.000	.417	.543

W-Trans
475 14th Street Suite 290
Oakland, CA 94612

Sunday Midday Peak
Castle Rock State Pk/SR 35-Skyline Blvd
SZX008
County of Santa Cruz

File Name : castle rock weekend mid
Site Code : 00000802
Start Date : 2/12/2012
Page No : 1

Groups Printed- Unshifted

	Skyline Blvd Southbound						Westbound					SR 35 Northbound						Castle Rock State Park Eastbound					
Start Time	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	9	8	0	1	1	19	0	0	0	0	0	0	2	0	0	7	9	1	0	3	0	4	32
11:15 AM	1	5	0	3	1	10	0	0	0	0	0	0	2	2	0	19	23	0	0	1	0	1	34
11:30 AM	7	6	0	0	4	17	0	0	0	0	0	0	4	1	0	19	24	2	0	1	0	3	44
11:45 AM	3	6	0	0	7	16	0	0	0	0	0	0	5	2	1	16	24	0	0	2	0	2	42
Total	20	25	0	4	13	62	0	0	0	0	0	0	13	5	1	61	80	3	0	7	0	10	152
12:00 PM	1	11	0	1	5	18	0	0	0	0	0	0	3	3	0	16	22	0	0	0	0	0	40
12:15 PM	5	7	0	0	2	14	0	0	0	0	0	0	2	3	0	10	15	3	0	1	0	4	33
12:30 PM	3	5	0	0	8	16	0	0	0	0	0	0	10	3	3	16	32	3	0	6	0	9	57
12:45 PM	7	5	0	1	12	25	0	0	0	0	0	0	7	1	0	10	18	5	0	6	0	11	54
Total	16	28	0	2	27	73	0	0	0	0	0	0	22	10	3	52	87	11	0	13	0	24	184
Grand Total	36	53	0	6	40	135	0	0	0	0	0	0	35	15	4	113	167	14	0	20	0	34	336
Apprch %	26.7	39.3	0	4.4	29.6		0	0	0	0		0	21	9	2.4	67.7		41.2	0	58.8	0		
Total %	10.7	15.8	0	1.8	11.9	40.2	0	0	0	0	0	0	10.4	4.5	1.2	33.6	49.7	4.2	0	6	0	10.1	

	Skyline Blvd Southbound						Westbound					SR 35 Northbound						Castle Rock State Park Eastbound					
Start Time	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Bikes	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 12:00 PM																							
12:00 PM	1	**11**		**1**	5	18	0	0	0	0	0	0	3	**3**	0	**16**							
12:15 PM	**5**	**7**	**0**	**0**	**2**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**10**	**15**	**3**	**0**	**1**	**0**	**4**	**33**
12:30 PM	**3**	**5**	**0**	**0**	**8**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	3	**3**	16	**32**	3	0	**6**	0	9	**57**
12:45 PM	7	5	0	1	**12**	**25**	0	0	0	0	0	0	7	1	0	10	18	**5**				**11**	54
Total Volume	16	28	0	2	27	73	0	0	0	0	0	0	22	10	3	52	87	11	0	13	0	24	184
% App. Total	21.9	38.4	0	2.7	37		0	0	0	0		0	25.3	11.5	3.4	59.8		45.8	0	54.2	0		
PHF	.571	.636	.000	.500	.563	.730	.000	.000	.000	.000	.000	.000	.550	.833	.250	.813	.680	.550	.000	.542	.000	.545	.807

Castle Rock State Park
Skyline BLVD Entrance
Saturday, June 08, 2013
11:00 a.m - 2:00 p.m

Time	Movement						Cyclists	Ped In	Ped Out	15-min total	Hour Total
	EBR	EBL	SBR	SBT	WBT	WBR					
	1	2	3	4	5	6					
11:00:00 AM	4	1	4	9	4	2	0	13	0	24	
11:15:00 AM	3	1	3	11	7	2	2	11	0	27	
11:30:00 AM	1	0	2	8	8	0	2	13	9	19	
11:45:00 AM	1	0	0	4	6	1	2	5	0	12	82
12:00:00 PM	1	0	2	8	4	0	0	2	7	15	73
12:15:00 PM	1	0	2	9	3	1	0	16	4	16	62
12:30:00 PM	1	0	0	13	1	0	3	1	6	15	58
12:45:00 PM	0	4	1	16	6	3	3	6	8	30	76
1:00:00 PM	2	8	3	10	6	2	0	1	1	31	92
1:15:00 PM	0	2	2	8	7	1	0	3	11	20	96
1:30:00 PM	0	2	3	7	17	0	0	2	7	29	110
1:45:00 PM	1	1	1	21	11	0	1	4	0	35	115
Total	15	19	23	124	80	12	13	77	53		

Peak Hour Total						
1:00-2:00 pm	3	13	9	46	41	3

Appendix C

Turn Lane Warrant Calculations

ATTACHMENT 10

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: State Route 35/Castle Rock State Park
Study Scenario: Existing plus Project Weekend Midday Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

State Route 35

Southbound Volumes (veh/hr)

Through Volume = 95

Right Turn Volume = 32

State Route 35

Northbound Volumes (veh/hr)

97 = Through Volume

20 = Left Turn Volume

Southbound Speed Limit: 55 mph
Southbound Configuration: 2 Lanes - Undivided

Castle Rock State Park

Northbound Speed Limit: 55 mph
Northbound Configuration: 2 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	127
If AV<Va then warrant is met		-

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	380
Advancing Volume	Va =	127
If AV<Va then warrant is met		No

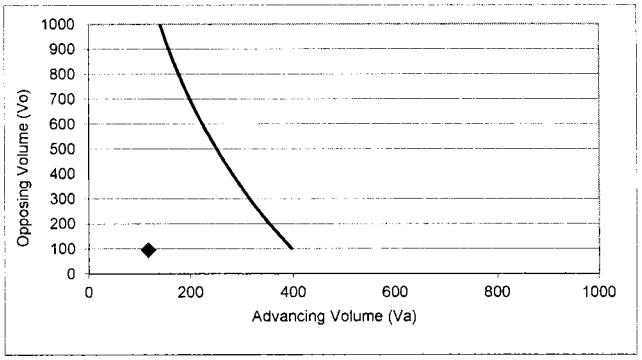
Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 17.1 %

Advancing Volume Threshold AV 399 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 55 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: State Route 35/Castle Rock State Park
Study Scenario: Existing plus Project Weekday p.m. Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

State Route 35

Southbound Volumes (veh/hr)

Through Volume = 41

Right Turn Volume = 12

Southbound Speed Limit: 55 mph
Southbound Configuration: 2 Lanes - Undivided

Castle Rock State Park

State Route 35

Northbound Volumes (veh/hr)

35 = Through Volume

2 = Left Turn Volume

Northbound Speed Limit: 55 mph
Northbound Configuration: 2 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	53
If AV<Va then warrant is met		-

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	53
If AV<Va then warrant is met		-

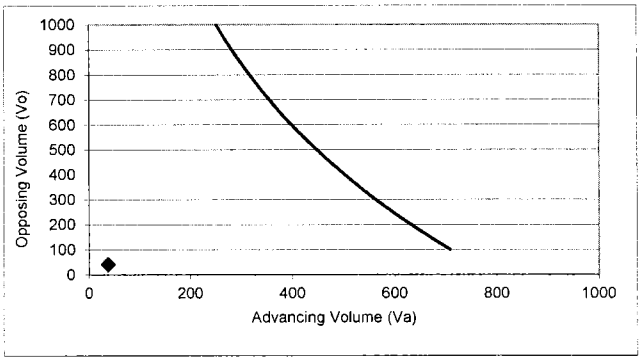
Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 5.4 %

Advancing Volume Threshold AV 758 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 55 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: State Route 35/Castle Rock State Park
Study Scenario: Future plus Project Weekend Midday Peak Hour

Direction of Analysis Street: North/South
Cross Street Intersects: From the West

State Route 35
Southbound Volumes (veh/hr)
Through Volume = 178
Right Turn Volume = 32

State Route 35
Northbound Volumes (veh/hr)
183 = Through Volume
20 = Left Turn Volume

Southbound Speed Limit: 55 mph
Southbound Configuration: 2 Lanes - Undivided

Castle Rock State Park

Northbound Speed Limit: 55 mph
Northbound Configuration: 2 Lanes - Undivided

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	210
If AV<Va then warrant is met		-

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

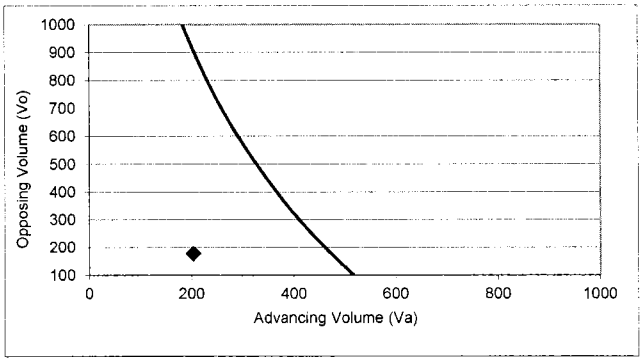
Advancing Volume Threshold	AV =	380
Advancing Volume	Va =	210
If AV<Va then warrant is met		No

Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt	9.9 %
Advancing Volume Threshold AV	472 veh/hr

If AV<Va then warrant is met



◆ Study Intersection
——— Two lane roadway warrant threshold for: 55 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: State Route 35/Castle Rock State Park
Study Scenario: Future plus Project Weekday p.m. Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West

State Route 35

Southbound Volumes (veh/hr)

Through Volume = 78

Right Turn Volume = 12

Southbound Speed Limit: 55 mph
Southbound Configuration: 2 Lanes - Undivided

State Route 35

Northbound Volumes (veh/hr)

65 = Through Volume

2 = Left Turn Volume

Northbound Speed Limit: 55 mph
Northbound Configuration: 2 Lanes - Undivided

Castle Rock State Park

Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	90
If AV<Va then warrant is met		-

Right Turn Lane Warranted: NO

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

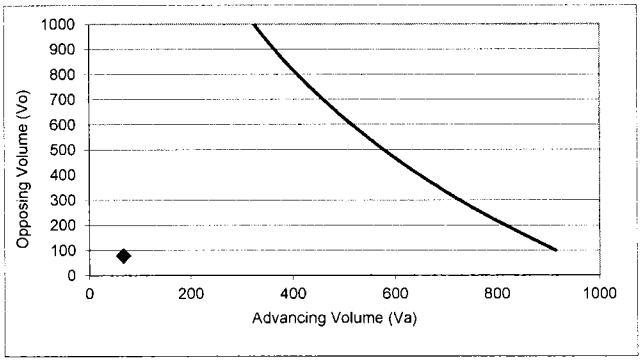
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	90
If AV<Va then warrant is met		-

Right Turn Taper Warranted: NO

Northbound Left Turn Lane Warrants

Percentage Left Turns %lt	3.0 %
Advancing Volume Threshold AV	939 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

——— Two lane roadway warrant threshold for: 55 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

ATTACHMENT

Appendix D

CEQA Checklist

TRANSPORTATION AND TRAFFIC **Would the project:**	**Potentially Significant Impact**	**Potentially Significant Unless Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	☐	☐	☒	☐
b. Conflict with an applicable congestion management program, including, but not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e. Result in inadequate emergency access?	☐	☐	☒	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

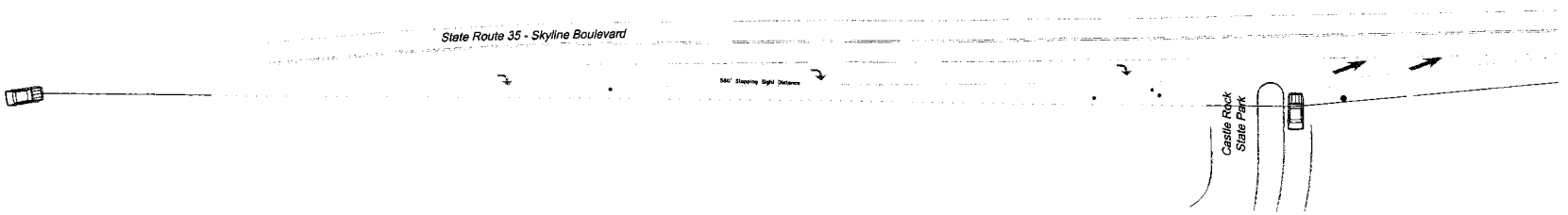
Principal

MS/tdh/SZX008.L2

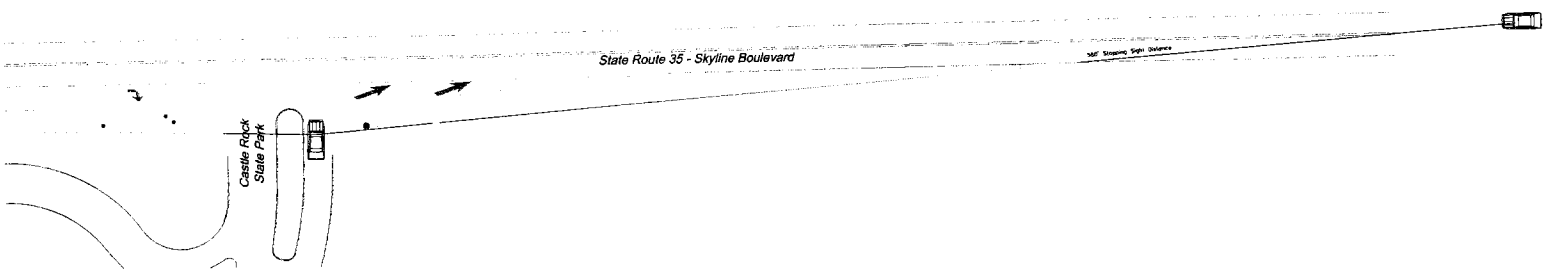
Enclosure: Sight Distance Exhibit

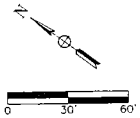
ATTACHMENT 16

Sight Lines of Driver Exiting the Park - Looking to the North



Sight Lines of Driver Exiting the Park - Looking to the South





SCALE: 1"=30'

LEGEND

Tree

● Tree to be removed

Off-Street Clear Sight Area

Note: These plans are accurate for sight lines only.

Whitlock & Weinberger Transportation, Inc.
475 14th Street, Suite 290
Oakland, CA 94612
(510) 444-2600
w-trans

DRAWN BY:

DESIGNED BY:

CHECKED BY:

DATE

MARK E. SPENCER, R.T.E. NO. 1337 Exp 6/30/13

Castle Rock State Park

Entrance Sight Lines

Date	Revision	By

SCALE

DATE

JOB NO.

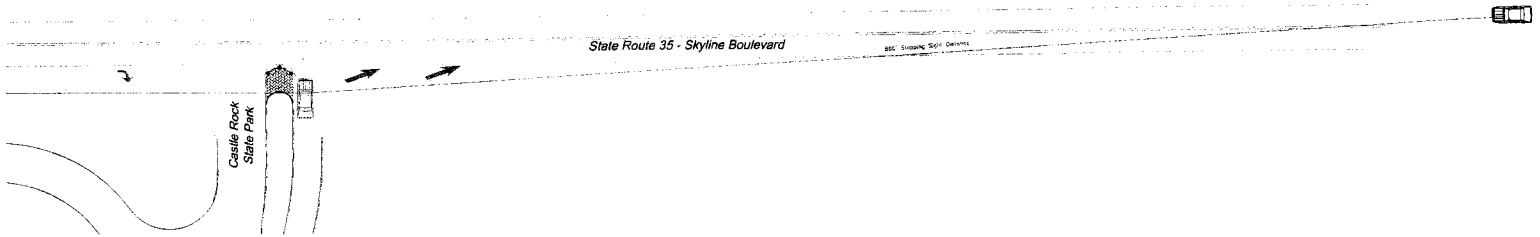
DRAWING NUMBER

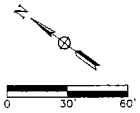
1 OF 3

FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES 0 1 2 3

Sight Lines of Driver Exiting the Park - Looking to the North

Sight Lines of Driver Exiting the Park - Looking to the South





SCALE: 1"=30'

LEGEND

Extended median island

Reflective Marker (approx. location)

Note: These plans are accurate for sight lines only.

Whitlock & Weinberger Transportation, Inc.
415 14th Street, Suite 290
Oakland, CA 94612
(510) 444-2600

w-trans

DRAWN BY

DESIGNED BY

CHECKED BY

DATE

MARK E. SPENCER, R.T.E. NO. 1737 Exp. 6/30/13

Castle Rock State Park

Alternative Entrance Sight Lines

Date	Revision	By

SCALE

DATE

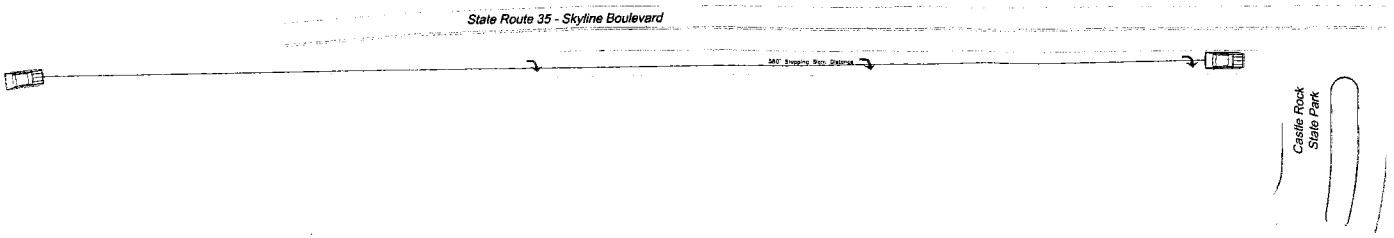
JOB NO.

DRAWING NUMBER

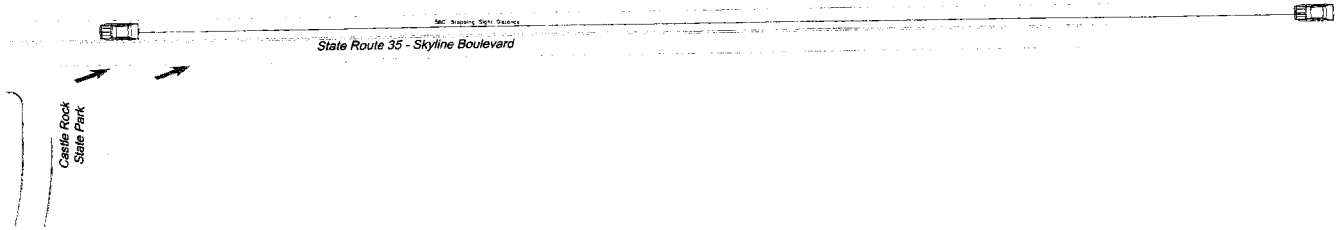
2 OF 3

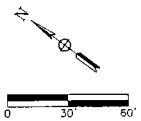
FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES 0 1 2 3

Sight Lines of Driver Approaching the Park - Traveling Southbound



Sight Lines of Driver Approaching the Park - Traveling Northbound





SCALE: 1"=30'

LEGEND

Tree

● Tree to be removed

Off-Street Clear Sight Area

Note: These plans are accurate for sight lines only.

Whitlock & Weinberger Transportation, Inc.
475 14th Street, Suite 290
Oakland, CA 94612
(510) 444-2600

w-trans

DRAWN BY

DESIGNED BY

CHECKED BY

DATE

MARK E. SPENCER, R.T.E. NO. 1737 EXP. 6/30/13

Date	Revision	By

Castle Rock State Park

Entrance Sight Lines

SCALE

DATE

JOB NO.

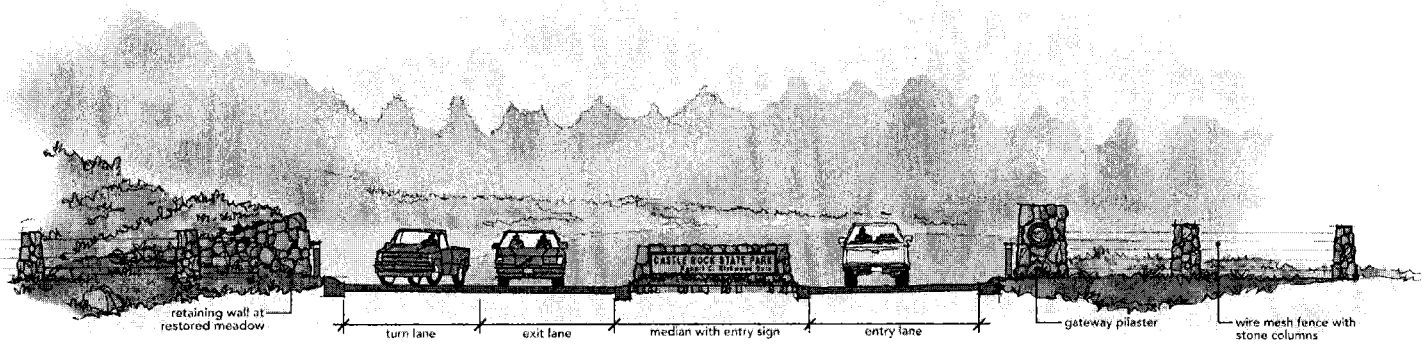
DRAWING NUMBER

3 OF 3

FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES 0 1 2 3

Proposed Castle Rock State Park Entrance Project

Noise Evaluation to Support an Initial Study



PREPARED FOR:

Sempervirens Fund (for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640

January 2013

ATTACHMENT 1

Proposed Castle Rock State Park Entrance Project

Noise Evaluation to Support an Initial Study

PREPARED FOR:

Sempervirens Fund
(for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640
Contact:
Amy McNamara

Callander Associates Landscape Architecture, Inc.
311 Seventh Avenue
San Mateo, CA 94401-4259
650.375.1313

PREPARED BY:

Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, CA 95814
www.ascentenvironmental.com

Contact:
Mike Parker
Project Manager
916.444.7301

January 2013

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ATTACHMENT 1

ACRONYMS AND ABBREVIATIONS

ADT	average daily traffic
ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CNEL	community noise equivalent level
dB	A-weighted decibels
in/sec	inches per second
LDL	Larson Davis Laboratories
L_{dn}	day-night noise level
L_{eq}	energy-equivalent noise level
L_{max}	maximum noise level
L_{min}	minimum noise level
SLM	sound level meter
SR	State Route
VdB	vibration decibels

ATTACHMENT 7

1 NOISE EVALUATION

1.1 ENVIRONMENTAL SETTING

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. Common sources of environmental noise and noise levels are presented in Table 1.

Existing conditions are governed by the presence of noise-sensitive receptors, the location and type of noise sources, and overall ambient levels. Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where a quiet setting is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship and transit lodging, and other places where low interior noise levels are essential are also considered noise-sensitive. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

Table 1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck moving at 50 mph at 50 feet	80	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	60	
Quiet urban daytime	50	Large business office, Dishwasher in next room
Quiet urban nighttime	40	Theater, Large conference room (background)
Quiet suburban nighttime	30	Library, Bedroom at night, Concert hall (background)
Quiet rural nighttime	20	Broadcast/Recording Studio
	10	
Threshold of Human Hearing	0	Threshold of Human Hearing

Notes: dB=A-weighted decibels; mph=miles per hour

Source: Caltrans 2009

The project site is located in eastern Santa Cruz County in the Santa Cruz mountains along the west side of Skyline Boulevard, which is also State Route (SR) 35, adjacent to Castle Rock State Park. The nearest existing noise- and vibration- sensitive receptor is a residence located 1,350 feet from to the west of the project site. The existing noise environment in the project area is primarily influenced by transportation noise from vehicle traffic on the local roadway system (e.g., SR 35). Other noise sources that contribute to the existing noise environment include birds chirping, aircraft flyover, and noises associated with park usage such as people talking, hiking, and horseback riding.

An ambient noise survey was conducted on October 7, 2012. The purpose of the survey was to establish existing noise conditions in the project vicinity. One long-term noise measurement was taken near the entrance of the site, in close proximity to the adjacent property line (See Exhibit 1). Noise level measurements were taken in accordance with American National Standards Institute (ANSI) standards using a Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter (SLM). The SLM was calibrated before and after use with an LDL Model CAL200 acoustical calibrator. The equipment used meets all pertinent specifications of the ANSI for Type 1 SLMs (ANSI S1.4-1983[R2006]). Meteorological conditions during the measurement period were adequate for reliable noise measurements, with clear blue skies, temperatures ranging from 48 °F to 74 °F, and light winds averaging one mile per hour (mph). Refer to Exhibit 1 for the specific location in relation to the project site. Refer to Table 2 and Exhibit 2 for a summary of the measurement data. Noise modeling data is provided in Appendix G.

Existing traffic noise levels were modeled for roadway segments in the project vicinity based on Caltrans' traffic noise analysis protocol and the technical noise supplement (California Department of Transportation [Caltrans] 2006 and 2009) and project-specific traffic data (W-Trans 2012).

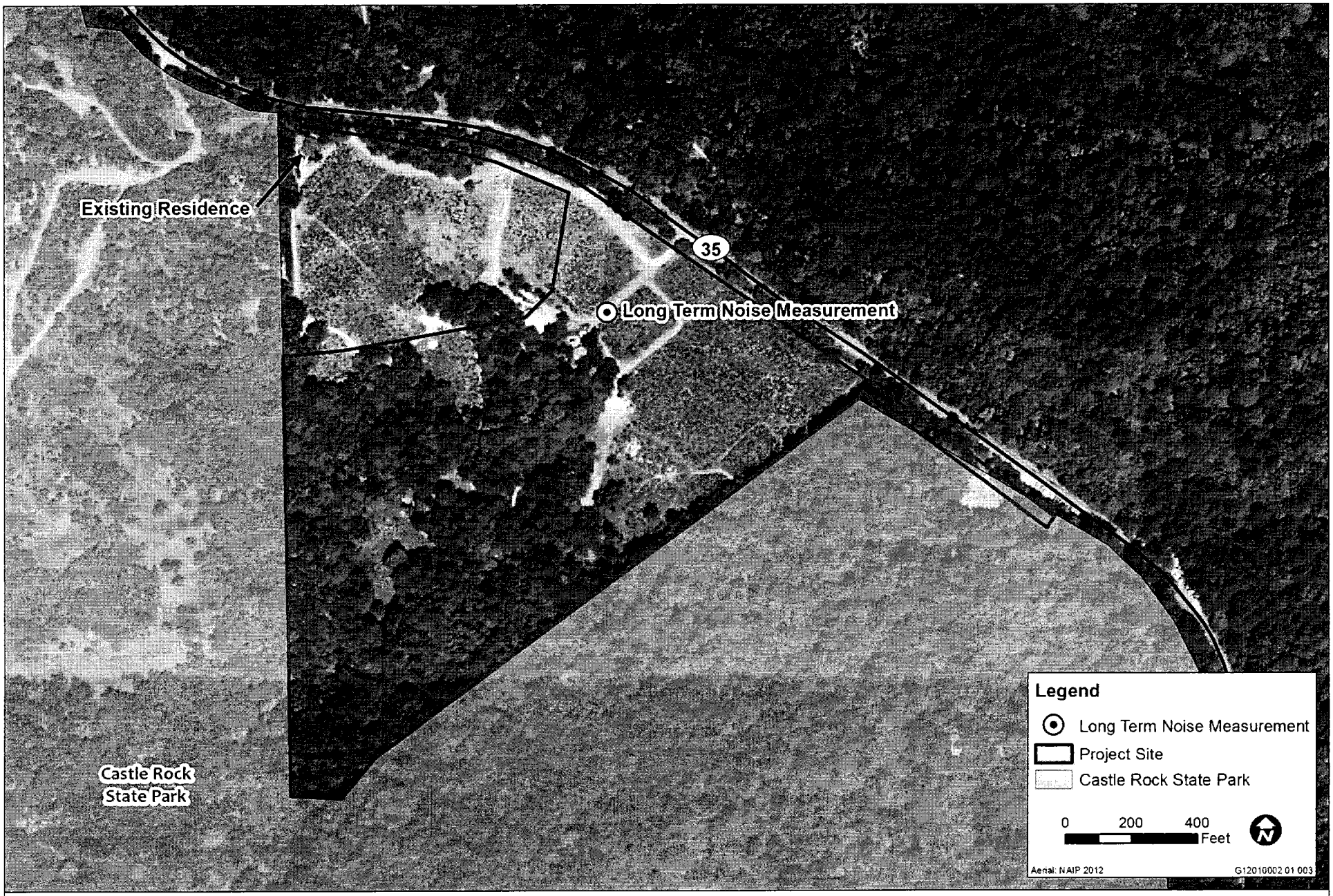
Table 2 Summary of Existing Ambient Noise Level Measurements

Location	Start (Date/Time)	Stop (Date/Time)	dB						
			CNEL/L_{dn}	Daytime			Nighttime		
				L_{eq}	L_{max}	L_{min}	L_{eq}	L_{max}	L_{min}
Site 1	October 7, 2012/ 12:00 pm	October 8, 2012/ 12:00 pm	44.1/43.9	40.9	65.4	19.6	28.4	59.1	19.3

Notes: dB = A-weighted decibels; CNEL = community noise equivalent level; L_{dn} = day-night noise level; L_{eq} = energy-equivalent noise level; L_{max} = maximum noise level; L_{min} = minimum noise level.

Site 1 corresponds to the location shown in Exhibit 1

Source: Monitoring performed by Ascent Environmental, Inc. October, 2012.



Source: Ascent Environmental 2012

Exhibit 1

Noise Monitoring Location

ASCENT ENVIRONMENTAL

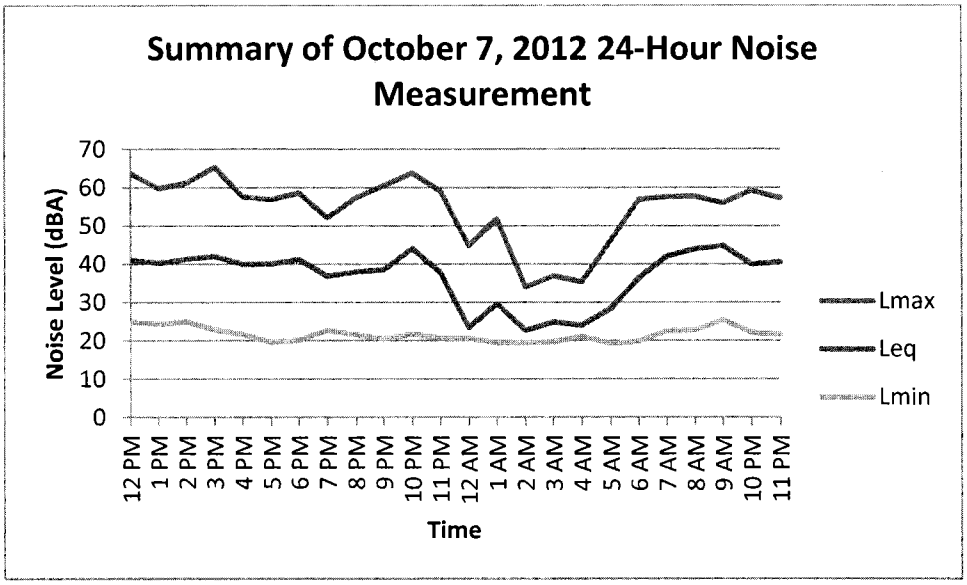


Exhibit 2 **Summary of October 7, 2012 24-Hour Noise Measurement**

Table 3 summarizes the modeled existing traffic noise levels at 50 feet from the centerline of Highway 35 in the project vicinity and lists distances from the centerline to the 65-dB, 60-dB, and 55-dB CNEL/L_{dn} traffic noise contours. Traffic noise modeling results are based on existing average daily traffic (ADT) volumes and speeds from the project-specific traffic analysis and assumes no natural or human-made shielding (e.g., vegetation, berms, walls, buildings). The extent to which existing land uses in the project vicinity are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise.

Various private and public agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise. Applicable policies and regulations are contained in the Public Health and Noise Element of the Santa Cruz County General Plan (Santa Cruz County 1994).

Table 3 Summary of Modeled Existing Traffic Noise Levels

Roadway Segment	Location	CNEL/L_{dn} (dB) at 50 feet from Roadway Centerline	Distance (feet) from Roadway Centerline to CNEL/L_{dn}(dB)		
			65	60	55
Highway 35	Castle Rock State Park	56	13	27	58

Notes: CNEL = Community Noise Equivalent Level; dB = A-weighted decibels; L_{dn} = day-night average noise level

Refer to Appendix G for detailed modeling input data and output results.

Source: Data modeled by Ascent Environmental, Inc. 2012

ATTACHMENT 12

1.2 SANTA CRUZ COUNTY GENERAL PLAN

1.2.1 Chapter 6 Public Health and Noise

Chapter 6 Public Health and Noise of the Santa Cruz County General Plan provide the noise standards applicable to the proposed project. Table 4 below summarizes these standards.

Table 4 Maximum Allowable Noise Exposure Stationary Noise Sources[1]

	Daytime[5] (7 a.m. to 10 p.m.)	Nighttime[2,5] (10 p.m. to 7 a.m.)
Hourly L_{eq}-average hourly noise level, dB[3]	50	45
Maximum level, dB[3]	70	65
Maximum level dB, Impulsive Noise[4]	65	60

Notes: dB=A-weighted decibel

1. As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
2. Applies only where the receiving land use operated or is occupied during nighttime hours
3. Sound level measurements shall be made with "slow" meter response
4. Sound level measurements shall be made with "fast" meter response
5. Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly L_{eq} is at least 10 dB lower than the allowable level.

Source: Santa Cruz County 1994

SHORT-TERM CONSTRUCTION SOURCE NOISE

Construction noise levels in the vicinity of the proposed project would fluctuate depending on the particular type, number, and duration of usage for the varying equipment. The effects of construction noise largely depend on the type of construction activities occurring on any given day, noise levels generated by those activities, distances to noise sensitive receptors, and the existing ambient noise environment in the receptor's vicinity. Construction generally occurs in several discrete stages, each phase requiring a specific complement of equipment with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect they have on the noise environment of the project site and in the surrounding community for the duration of the construction process.

To assess noise levels associated with the various equipment types and operations, construction equipment can be considered to operate in two modes, mobile and stationary. Mobile equipment sources move around a construction site performing tasks in a recurring manner (e.g., loaders, graders, dozers). Stationary equipment operates in a given location for an extended period of time to perform continuous or periodic operations. Operational characteristics of heavy construction equipment are additionally typified by short periods of full-power operation followed by extended periods of operation at lower power, idling, or powered-off conditions.

Additionally when construction-related noise levels are being evaluated, activities that occur during the more noise-sensitive evening and nighttime hours are of increased concern. Because exterior ambient noise levels typically decrease during the late evening and nighttime hours as traffic volumes and commercial activities decrease, construction activities performed during these more noise-sensitive periods of the day can result in increased annoyance and potential sleep disruption for occupants of nearby residential uses.

The site preparation phase typically generates the most substantial noise levels because of the onsite equipment associated with grading, compacting, and excavation are the noisiest. Site preparation equipment typically includes backhoes, bulldozers, loaders, and excavation equipment.

The proposed project would involve the construction of a new park entrance gate, parking facilitates, new driveway, amphitheater, and visitor center. Construction of this type generally requires certain noise producing equipment such as those listed in Table 5. It is expected that maximum noise levels would be associated with site preparation activities from the use of graders. Noise emission levels at 50 feet from graders and other typical construction equipment are shown in Table 5 below.

Table 5 Typical Reference Noise Emission Levels from Construction Equipment

Equipment Type	Reference Level (L_{max} dBA) @ 50 feet
Grader	85
Loader	85
Backhoe	80
Excavator	85
Crane	85
Asphalt Paver	85
Roller	85
Manlift	85

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacture-specified noise levels for each piece of heavy construction equipment.

Source: FHWA 2006

Based on the information provided in Table 5 and accounting for typical usage factors of individual pieces of equipment and activity types along with standard attenuation rates, onsite construction-related activities could result in hourly average noise levels of approximately 81 dBA L_{eq} (88 dBA L_{max}) at 50 feet and approximately 46 dBA L_{eq} (50 dBA L_{max}) at the nearest sensitive receptors (e.g., residence located 1,350 feet from the acoustical center of the project site; note that the acoustical center of the project site is farther away than the proposed parking lot, which is approximately 1,000 feet away from the residence).

These modeled noise levels would not exceed the daytime standard of 50 dBA L_{eq} or 70 dB L_{max}, but could exceed the nighttime performance standards if construction activities took place from 10:00 p.m. to 7:00 a.m.

Recommended Mitigation Measure Noise-1

The project proponent shall ensure that all demolition and construction activities would be restrained to the less sensitive times so as not to disturb nearby sensitive receptors and therefore:

- all demolition and construction activities must be performed between 7:00 a.m. and 10:00 p.m., daily.

Implementation of Recommended Mitigation Measure Noise-1 would ensure that all construction related activity be restrained to daytime hours and, thus, short-term construction would not be anticipated to result in a substantial increase in noise levels during more sensitive evening and nighttime hours or exposure of sensitive receptors to excessive noise levels. In addition, because construction would be limited to daytime hours, project-related construction noise would not result in a violation of applicable noise standards.

LONG-TERM OPERATIONAL NOISE SOURCES

Operational noise from development projects can be attributed to additional stationary noise sources and from increases in vehicular traffic on nearby roadways. As a result of the proposed project, new recreational facilities (e.g., amphitheater, visitor center, parking areas, picnic areas, restrooms) would be constructed and operated. Noise from these sources is described separately below.

Traffic Noise

The proposed facilities would improve user experience due to added amenities (e.g., restroom, picnic areas) and increase safety (i.e., cars would be able to park in lots and not along the roadside). These recreational facilities would not attract a substantial increase in visitors and; therefore, would not result in a substantial increase in vehicular traffic. Typically a doubling of a noise source results in a 3 dB increase in noise, which is barely perceptible to the human ear. With respect to traffic noise, existing traffic volumes would need to double to result in a 3 dB increase in noise. Because the proposed project is not anticipated to result in an increase in traffic, traffic-related noise on nearby roadways would not increase above levels existing without the project.

Parking Lot

Noise generated from parking lots is associated with horns honking, engines starting, doors slamming, engines idling, car alarms sounding, and various other sounds associated with moving vehicles. These noise sources are typically short in duration, intermittent throughout the day, and vary as a function of the number of vehicles present throughout the day (i.e. peak hours would result in more noise).

The project would include the construction of one new paved 81-space parking lot that would provide parking to meet existing parking demand. The parking lot would be located at the northern end of the project site just inside the proposed gate feature, approximately 1,000 feet to the east of the existing nearest sensitive receptor (See Exhibit 1).

Based on the estimated traffic and usage demand, described in the Transportation and Traffic section, a total of 81 parking spaces would be required to adequately accommodate all park users on a peak-season weekend day. For this noise analysis, it was conservatively assumed that the parking lot would be full all day long and; therefore, the parking lot could have a peak traffic demand of up to 81 cars per hour during the day time hours (i.e., 6:00 a.m. – 10:00 p.m.). The parking lot would also provide parking for overnight visitors (e.g., campers, backpackers) and therefore night time peak traffic demand could reach up to 26 cars per hour during the nighttime hours (i.e., 10:00 p.m. – 6:00 a.m.).

Noise associated with proposed parking lots was calculated using FTA's noise and vibration impact methodology for a parking lot. It is anticipated that the proposed parking lot would result in daytime noise levels of 52 dBA L_{eq} at 50 feet from the edge of the proposed lot and 26 dBA L_{eq} at the nearest sensitive receptor (i.e., residence located approximately 1,000 feet to the west of the parking lot). Although the park would close at 10:00 p.m., night time noise levels were evaluated due to the fact that there may be minimal noise associated with overnight campers accessing their vehicles. Night time noise levels would reach a level of 47 dBA L_{eq} at 50 feet from the edge of the proposed lot and 21 dBA L_{eq} at the sensitive receptor (i.e., residence located approximately 1,000 feet to the west of the parking lot). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 a.m. – 7:00 a.m.) or 50 dBA L_{eq} during the daytime (7:00 a.m. – 10:00 p.m.) hours at the nearest sensitive receptor.

Amphitheater

The proposed project includes the construction of a small amphitheater that would be used primarily for environmental educational purposes. For purposes of conducting a conservative analysis, it was assumed that the amphitheater could be located as near as 1,000 from the nearest existing sensitive receptor (i.e., residence located to the north west of the Castle Rock State Park property).The approximate location of the amphitheater is 1,400 feet from the nearest residence.

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As described in the project description, though the amphitheater would primarily be used for education events, other potential events held there could include weddings, picnics, unamplified (i.e., acoustic) musician performances, and rock climbing classes. The amphitheater would not include any electronic amplification or a public address (PA) system. Auxiliary lighting for any event will also be prohibited. Quiet hours for the entire park will be 10:00 p.m. to 6:00 a.m. daily. All events at the park would comply with these times and end by 10:00 p.m. No more than 60 attendees will be allowed at any future event.

Noise sources from the amphitheater and events that could take place there consist of a number of outdoor activities. These outdoor activities could involve children and adults talking, laughing, and playing, with the sound of human voices sometimes traveling off-site. In addition, non-amplified musical instruments (e.g., guitar) could be used during special events such as weddings or small outdoor concerts.

A group of 20 people (including children and adults) engaged in outdoor activities could result in noise levels of approximately 54 dBA L_{eq} at 50 feet (Mariposa County 2003). No more than 60 people would be allowed to attend events at Castle Rock State Park. However, for a conservative analysis, it was assumed that up to 80 people could be on the site at once, which based on the measurements above would result in a noise level of 60 dBA L_{eq} at 50 feet. The sound levels from an acoustic guitar would result in approximately 52 dBA L_{eq} at 45 feet from the guitar (Berger 2010). It was assumed that these two noise sources could occur simultaneously during the daytime hours of park operation (i.e., 6:00 a.m. - 10:00 p.m.). Therefore, accounting for typical attenuation rates and based on these reference noise levels, the combined noise from the amphitheater activities could result in levels of up to 61 dBA L_{eq} at 50 feet from the source and up to 29 dBA L_{eq} at the nearest offsite sensitive receptor (i.e., residence located approximately 1,000 feet to the north west of the proposed facilities). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 p.m. - 7:00 a.m.) or 50 dBA L_{eq} during the daytime (7:00 a.m. -10:00 p.m.) hours at the nearest sensitive receptor.

Total Operational Noise Sources

As described above, the project would not result in an increase in traffic volumes and therefore there would be no increase in traffic-related noise. The proposed parking lot would operate all the time but peak activity would occur during a weekend day. Amphitheater noise could consist of people congregating, people talking, children playing, and the occasional event involving an unamplified musical instrument, such as a guitar. Assuming a peak weekend day (i.e., the parking lot is at capacity all day) and an event is taking place with up to 80 people, including an acoustic guitar, combined noise levels could reach up to 61 dBA L_{eq} at 50 feet during the daytime and 47 dBA L_{eq} during the nighttime from the source of the activities. Accounting for typical attenuation rates, the total combined noise from these activities could reach up to 29 dBA L_{eq} during the daytime and 21 dBA L_{eq} at the nearest off-site sensitive receptor (i.e., residence located approximately 1,000 feet to the north west of the proposed facilities). These noise levels would not exceed Santa Cruz County noise standards of 45 dBA L_{eq} during the nighttime (10:00 p.m. - 7:00 a.m.) or 50 dBA L_{eq} during the daytime (7:00 a.m. -10:00 p.m.) hours at the nearest sensitive receptor.

GROUND VIBRATION

Construction of the proposed project may result in varying degrees of temporary ground vibration and noise, depending on the specific construction equipment used and activities involved. Ground vibration and noise levels associated with various types of construction equipment and activities are summarized in Table 6. Based on the information provided in the project description and on the types of construction activities associated with the proposed project (e.g., site preparation and paving) it is expected that maximum ground vibration and noise levels would be associated with the use of trucks to haul materials to and from the construction site.

According to Federal Transit Administration, levels associated with the use of trucks are 0.076 inches per second (in/sec) and 86 vibration decibels (VdB) at 25 feet. Based on FTA's recommended procedure for applying a propagation adjustment to these reference levels, construction-related project activities would not result in levels at the nearest sensitive receptor (i.e., residences located 1,350 feet from the acoustical

center of the project site) that exceed Caltrans's recommended level of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum acceptable level of 80 VdB with respect to human response for residential uses (i.e., annoyance). Long-term operation of the proposed project would not result in any major sources of vibration. Thus, implementation of the proposed project would not result in the exposure of existing offsite sensitive receptors to excessive ground vibration levels.

Table 6 Representative Groundborne Vibration and Noise Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)[1]	Approximate L_v (VdB) at 25 feet[2]
Blasting	1.13	109
Large Dozer	0.089	87
Caisson Drilling	0.089	87
Trucks	0.076	86
Rock Breaker	0.059	83
Jackhammer	0.035	79
Small Dozer	0.003	58

Notes:

[1] Where PPV is the peak particle velocity

[2] Where Lv is the root mean square velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.

Source: FTA 2006

AIRCRAFT NOISE

The proposed project is not located within an airport land use plan or within two miles of an airport or private airstrip. Additionally, the proposed project would not result in any additional people living or residing in close proximity to an airport or private airstrip. Therefore, the proposed project would not expose people to excessive noise levels from airports or private airstrips.

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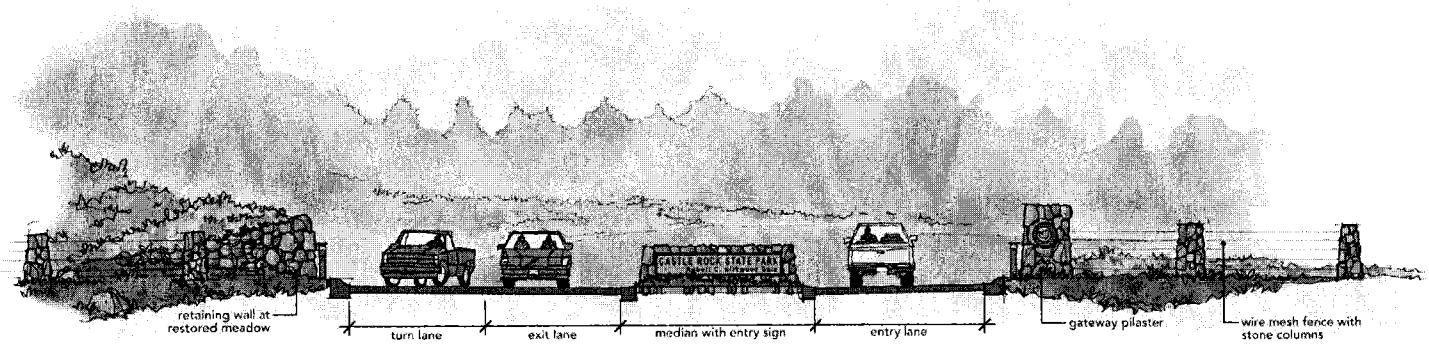
Proposed Castle Rock State Park Entrance Project

Air Quality and Greenhouse Gas Evaluation to Support an Initial Study



PREPARED FOR:

Sempervirens Fund (for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640

January 2013

ATTACHMENT 1.8

Proposed Castle Rock State Park Entrance Project

Air Quality and Greenhouse Gas Evaluation to Support an Initial Study

PREPARED FOR:

Sempervirens Fund
(for submittal to Santa Cruz County)
419 South San Antonio Road, Suite 211
Los Altos, CA 94022-3640
Contact:
Amy McNamara

Callander Associates Landscape Architecture, Inc.
311 Seventh Avenue
San Mateo, CA 94401-4259
650.375.1313

PREPARED BY:

Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, CA 95814
www.ascentenvironmental.com

Contact:
Mike Parker
Project Manager
916.444.7301

January 2013

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AQMP	1991 Air Quality Management Plan for the Monterey Bay Area
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
CAA	federal Clean Air Act
CAAA	federal Clean Air Act Amendments of 1990
CalEEMod	California Emission Estimator Model
CCAA	California Clean Air Act
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
EPA	U.S. Environmental Protection Agency
GHGs	greenhouse gases
IPCC	Intergovernmental Panel on Climate Change
lbs/day	pounds per day
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MT CO_2e/yr	metric tons carbon dioxide equivalent per year
N_2O	nitrous oxide
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
PM_{10}	particulate matter
ROG	reactive organic gases
SB	Senate Bill
SO_X	sulfur oxides
VMT	vehicle miles traveled

1 AIR QUALITY EVALUATION

1.1 ENVIRONMENTAL SETTING

The project site is located in Santa Cruz County, which lies in the North Coast Air Basin and is under the jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). With respect to ozone, Santa Cruz County is currently designated as a nonattainment area for the 1-hour state ambient air quality standard and unclassified for the 8-hour state and national ambient air quality standards (California Air Resources Board [ARB] 2010). Santa Cruz County is designated as nonattainment for the state PM_{10} (i.e., respirable particulate matter with an aerodynamic diameter of 10 micrometers or less) standard and unclassified for the national PM_{10} standard; and the County is designated as attainment for the state and unclassifiable for the national $PM_{2.5}$ (i.e., respirable particulate matter with an aerodynamic diameter of 2.5 micrometers or less) standards, respectively (ARB 2010a).

Air quality within Santa Cruz County is regulated by such agencies as the U.S. Environmental Protection Agency (EPA), and California Air Resources Board (ARB) at the federal and state levels, respectively, and locally by the MBUAPCD. The MBUAPCD seeks to improve air quality conditions in Santa Cruz County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the MBUAPCD includes the development of programs for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. MBUAPCD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the federal Clean Air Act (CAA), federal Clean Air Act Amendments of 1990 (CAAA), and the California Clean Air Act (CCAA).

The 1991 Air Quality Management Plan for the Monterey Bay Area (AQMP) was the first plan prepared in response to the California Clean Air Act of 1988 that established specific planning requirements to meet the ozone standard. The Act requires that the AQMP be updated every three years. The 2008 AQMP is the fifth and most recent. The AQMP addresses only attainment of the State ozone standard. Attainment of the State PM10 standard is addressed in the District's plan "Senate Bill 656 Implementation Plan" which was adopted in December 2005. Maintenance of the National eight-hour standard for ozone is addressed in the District's "Federal Maintenance Plan for the Monterey Bay Region", which was adopted in March 2007.

The MBUAPCD has also adopted thresholds of significance for evaluating projects. The threshold of significance for construction impacts is 82 pounds per day (lbs/day) or greater of PM_{10}. Construction activity may result in a significant impact if the emissions exceed this level. The thresholds of significance for direct and indirect operational impacts are shown below. The MBUAPCD has not published a specific threshold of significance for $PM_{2.5}$.

- reactive organic gases (ROG): 150 lbs/day,
- nitrogen oxides (NO_X): 150 lbs/day,
- particulate matter (PM_{10}): 82 lbs/day,
- carbon monoxide (CO): 550 lbs/day, and
- sulfur oxides (SO_X): 150 lbs/day.

1.2 PROJECT CONSISTENCY WITH AIR QUALITY PLANS

The emission inventories used to develop a region's air quality attainment plans are based primarily on projected population growth and vehicle miles traveled (VMT) for the region, which are based, in part, on the planned growth identified in regional and community plans. Therefore, projects that would result in increases in population or employment growth beyond that projected in regional or community plans could result in

increases in VMT above that planned in the attainment plan, further resulting in mobile source emissions that could conflict with a region's air quality planning efforts. Increases in VMT beyond that projected in area plans generally would be considered to have a significant adverse incremental effect on the region's ability to attain or maintain state and federal ambient air quality standards.

The proposed project would not generate demand for any new permanent employees. Temporary construction activities would result in the peak employment of 20 construction workers and an average employment of 10 construction workers over the 7-month construction period. The project would not result in any new employment opportunities or new housing and, therefore, it would not change the amount of development projected for Santa Cruz County, and it would be consistent with the population growth and VMT projections contained in the MBUAPCD's AQMP. The project would not interfere with the region's ability to attain or maintain state and national ambient air quality standards. Thus, implementation of the proposed project would not conflict with or obstruct implementation of any air quality planning efforts.

1.3 PROJECT POTENTIAL TO VIOLATE AIR QUALITY STANDARDS

The proposed project includes the construction of various recreational-related facilities such as a visitor center, parking areas, access roads, trail connections, picnic areas, and a new entrance gateway. These facilities are intended to improve safety and user experience for existing demand. The project would not result in a substantial increase in mobile sources of air pollutants (i.e., emissions associated with vehicular travel) or consist of any new area or stationary sources of air pollutant emissions. Therefore, emissions associated with the proposed project would result primarily from construction-related activities and thus, only construction-related emissions were modeled.

The proposed project includes the construction of various recreational-related facilities as well as the removal of the existing Christmas tree farm and demolition of the existing structures onsite. The construction is expected to last approximately 7 months. During construction of the proposed project, criteria air pollutant (and precursor) emissions would be temporarily and intermittently generated from a variety of sources. Project-related excavation and site grading activities would generate fugitive particulate matter (PM) dust emissions. Fugitive PM dust emissions are primarily associated with ground disturbance and material transport and vary as a function of parameters such as soil silt content and moisture, wind speed, acreage of disturbance area, and the intensity of activity performed with construction equipment. Exhaust emissions from diesel equipment, material transport trips, and construction worker-commute trips also contribute to short-term increases in PM dust emissions, but to a lesser extent. Exhaust emissions from these construction-related mobile sources would also include ROG and NO_X. In addition, the application of architectural coatings (i.e., interior and exterior surface painting) would result in off-gas emissions of ROG.

Construction-related emissions of PM_{10} (exhaust and fugitive dust) were modeled in accordance with MBUAPCD-recommended methodologies using project specifications (e.g., construction schedule, and duration), and default settings and parameters contained in the California Emission Estimator Model (CalEEMod), which was developed in collaboration with the air districts of California. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) is built into the model and provided by the various California air districts to account for local requirements and conditions. CalEEMod allows for the input of project-specific information to estimate emissions generated by worker commute trips, onsite equipment, and haul truck trips. Input parameters were based on project-specific information, default model settings, and reasonably conservative assumptions. Modeling was conducted for the construction of the proposed recreational-related facilities. As described in the project description, construction would take place in two separate phases. Emissions were calculated based on the construction activities proposed for each phase. The modeled daily emissions are summarized in Table 1 and described in more detail in Appendix A.

Table 1 Summary of Modeled Emissions from Short-Term Construction Activities

Construction Activity	PM_{10} (lb/day)
Phase 1 (2013) Totals	8.6
Phase 2 (2015) Totals	2.0
MBUAPCD Thresholds of Significance	82

Notes:

lb/day = pounds per day; PM_{10} = particulate matter with aerodynamic diameter less than 10 microns.

Values for both construction phases represent maximum daily emission estimates of PM_{10} from exhaust and fugitive dust

Detailed assumptions and modeling output files are included in Appendix A.

Source: Modeling Conducted by Ascent Environmental 2012.

Based on the modeling conducted, project-generated short-term construction-related emissions would not exceed MBUAPCD's applicable thresholds of significance for PM_{10}. Emissions of ROG and ozone precursor NO_X were not modeled because temporary emissions of these ozone precursors have been accommodated for in State- and federally-required air plans (MBUAPCD 2008). Additionally, typical construction equipment would be used (e.g., loaders, graders, scrapers, rollers, tractors, dozers), minimal site grading would take place, and construction activity would be relatively short (i.e., 7 months). For these reasons, construction activities associated with the proposed project would not have the potential to result in localized concentrations of criteria air pollutants and precursors that would exceed applicable ambient air quality standards. Thus, project-generated emissions would not violate or contribute substantially to an existing or projected air quality violation.

1.3.1 Long-Term Operational-Related Local Mobile-Source Carbon Monoxide Emissions

CO concentration is a direct function of vehicle idling time and, thus, traffic flow conditions. Under specific meteorological conditions, CO concentrations near congested roadways and/or intersections may reach unhealthy levels with respect to local sensitive land-uses such as residential areas, schools, and hospitals. As a result, it is recommended that CO not be analyzed at the regional level, but at the local level.

MBUAPCD provides a list of scenarios that if any of which were to occur as a result of the proposed project, could result in a potentially significant impact from increased concentrations of CO on roadway intersections of segments. According to the MBUAPCD CEQA Guidelines, the following would represent a potentially impact from CO:

- intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic;
- intersections or road segments that operate at LOS E or F where the volume-to capacity (V/C) ratio would increase 0.05 or more with the project's traffic;
- intersections or road segments that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic;
- un-signalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic (this criterion is based on the turning movement with the worst reserve capacity); or

- the project would generate substantial heavy-duty truck traffic, substantial traffic along urban street canyons, or substantial traffic near a major stationary source of CO.

The proposed project would not increase the population or bring new employees to the area. All proposed facilities (e.g., parking areas, visitor center, picnic areas) are intended to provide improved safety and visitor experience for the existing users of the project site. Therefore, the proposed project would not substantially increase traffic on the surrounding roadways or intersections and therefore would not result in CO concentrations that would cause an exceedance of State or national ambient air quality standards.

1.4 PROJECT POTENTIAL TO INCREASE A CRITERIA POLLUTANT FOR WHICH THE REGION IS NON-ATTAINMENT

Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. As explained in MBUAPCD's CEQA Guidelines, and consistent with CEQA, if a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant (MBUAPCD 2008).

In developing thresholds of significance for air pollutants, MBUAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Thus, as discussed in the analysis under item "b" above, project-generated emissions would not exceed applicable thresholds and, therefore, would not violate an existing air quality standard. Additionally, the proposed project would not result in a substantial increase in mobile source emissions, or any new stationary or area emission sources. As a result, project-generated emissions of criteria air pollutants and precursors would not be cumulatively considerable.

1.5 PROJECT POTENTIAL TO EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

1.5.1 Criteria Air Pollutants and Precursors

The closest sensitive receptor to the project site is a residence located approximately 1,100 feet to the northwest. As discussed in "b" above, project implementation would not result in regional (e.g., NO_X, PM_{10}) or local (e.g.CO) emissions of criteria air pollutant or precursors from construction or operational-related activities.(e.g., NO_X, PM_{10}) that would exceed applicable MBUAPCD thresholds of significance. Thus, project-generated criteria air pollutant and precursor emissions would not expose sensitive receptors to substantial pollutant concentrations.

1.5.2 Toxic Air Contaminants

The project would result in short-term diesel exhaust emissions from onsite construction equipment. Particulate exhaust emissions from diesel-fueled engines (diesel PM) were identified as a TAC by the ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential for all other health impacts (ARB 2003), so diesel PM is the focus of this discussion. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a

substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed project (OEHHA 2001).

The primary source of diesel PM from the proposed project would be from construction-related activities (e.g., exhaust from off-road heavy-duty diesel equipment). Sensitive receptors surrounding the project site include a residence located over 1,000 feet to the northwest of the project site. Based on the emission modeling shown above under item "b", the highest level of PM_{10} (combined dust and diesel exhaust) that would occur on the worst construction day would be 8.6 lbs/day. This level is substantially lower than the threshold of 82 lbs/day established by the MBUAPCD. Additionally, the construction phase is estimated to last approximately 7 months with the peak construction for only 4 months. Construction would only take place during daytime hours, as described by Mitigation Measure Noise-1, from 7:00 A.M. to 10:00 P.M., daily. Typically, there are fewer people in their homes during the time when construction would take place. Thus, considering the highly dispersive properties of diesel PM (Zhu and Hinds 2002), the substantially low amount of emissions predicted from this project, and the short duration and daily timing of construction activities, construction-related activities would not be anticipated to result in the exposure of sensitive receptors to substantial pollutant concentrations.

AIRBORNE ENTRAINMENT OF ASBESTOS

Demolition and removal of the existing structures could potentially result in the airborne entrainment of asbestos due to the disturbance of asbestos-containing materials. Asbestos is listed as a TAC by the ARB. The risk of disease is dependent upon the intensity and duration of exposure. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs) (ARB 2010b).

Several agencies such as the Federal government, the California Operational Safety and Health Administration, and the local air district, MBAPCD, regulate asbestos. MBUAPCD Rule 424 adopts the National Emission Standards for Hazardous Air Pollutants (NESHAP), which regulates asbestos removals and building demolitions. NESHAP is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. It requires that building surveys be conducted to determine the presence of asbestos, a written notification be filed with the applicable air district to inform them of the demolition or renovation activity, contains basic minimum standards for emission controls, and requires that handling and disposal of asbestos containing material be handled by licensed haulers and disposed of in landfills certified to handle hazardous asbestos waste. Therefore, projects that comply with Rule 424 would ensure that asbestos-containing materials would be disposed of appropriately and safely. Compliance with MBAPCD Rule 424 would minimize the release of airborne asbestos emissions, as abatement will be performed by experienced/trained personnel, using appropriate protective measures (i.e., masks, vests, etc.).

1.6 PROJECT POTENTIAL TO CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE

The proposed project includes the construction of various visitor amenities, a parking lot, and improvements to existing trails. Implementation of the proposed project would not result in any major sources of odor (i.e., the project is not one of the common types of facilities nor includes activities that are known to produce odors [landfill, coffee roaster, wastewater treatment facility]). Minor odors from the use of onsite equipment

during construction activities would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance. In addition, operation of the project would not result in locating sensitive receptors' near an existing odor source. Thus, project implementation would not create objectionable odors affecting a substantial number of people.

2 GREENHOUSE GAS EVALUATION

2.1 ENVIRONMENTAL SETTING

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. GHGs are responsible for "trapping" solar radiation in the earth's atmosphere, a phenomenon known as the greenhouse effect. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is extremely unlikely that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change [IPCC] 2007). By adoption of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, and Senate Bill (SB) 97, the state of California has acknowledged that the effects of GHG emissions cause adverse environmental impacts. AB 32 mandates that emissions of GHGs must be capped at 1990 levels by the year 2020 (H&SC section 38530).

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of one single project will not cause global climate change, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change.

Legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs, even relatively small (on a global basis) additions. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and therefore significant.

While MBUAPCD, the local agency in charge of air quality considerations in Santa Cruz County, has not established specific thresholds applicable to GHG emissions, CEQA still requires an evaluation of GHGs. CEQA also specifies that thresholds adopted by other agencies may also be considered by lead agencies when determining project significance. Additionally, the Bay Area Air Quality Management District (BAAQMD) is the only air district in California that has established a CEQA significance threshold for GHGs of 1,100 metric tons carbon dioxide equivalent per year (MT CO_2e/yr) (BAAQMD 2010). The BAAQMD's threshold is specific to that district, and is not meant to apply to construction-related GHG emissions (rather, it is applicable to operational emissions), but it is still useful to compare the estimated GHG emissions from this project to the magnitude of emissions considered substantial by the neighboring BAAQMD.

2.2 GREENHOUSE GAS GENERATION

GHG emissions generated by the proposed project would predominantly be in the form of CO_2 and would occur during project construction. Operation of the proposed project is not expected to result in a substantial increase in mobile sources of GHG (i.e., emissions associated with vehicular travel) to the project site and

therefore construction activities would result in the greatest amount of GHG emissions. Thus, GHG emissions were calculated for the construction phase of the project only.

Emissions would be associated with mobile-source exhaust from construction worker commute trips, haul truck trips, and equipment used onsite (e.g., grader, pavers, loaders). While emissions of other GHGs such as methane (CH_4) and nitrous oxide (N_2O) are important with respect to global climate change, the emission levels of these GHGs for the sources associated with project activities are nominal compared with CO_2 emissions, even considering their higher global warming potential. Therefore, all GHG emissions for construction are reported as CO_2.

GHG emissions associated with the project were calculated using applicable portions of the CalEEMod, which was developed in collaboration with the air districts of California. Default data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) is built into the model and provided by the various California air districts to account for local requirements and conditions. CalEEMod allows for the input of project-specific information to estimate emissions generated by worker commute trips, onsite equipment, and haul truck trips. Input parameters were based on project-specific information, default model settings, and reasonably conservative assumptions. Modeling was conducted for the construction of the proposed recreational-related features (e.g., entrance way, parking areas, trail improvements, picnic areas, amphitheater, and visitor complex).The modeled yearly emissions are summarized in Table 2 and described in more detail in the Appendix.

Table 2 Summary of Modeled GHG Emissions Associated with Building Construction

Construction Activity	CO_2 MT/yr
Phase 1 (2013) Totals	275
Phase 2 (2015) Totals	136
BAAQMD Thresholds of Significance	1,100

Notes: CO_2 = carbon dioxide; GHG = greenhouse gas; MT/yr = metric tons per year.

See Appendix A for detailed modeling results.

Source: Modeling Conducted by Ascent Environmental 2012.

Although the MBUAPCD has not established levels of significance for GHG emissions, the BAAQMD has established a level of 1,100 MT CO_2e/yr as its significance threshold for GHG emissions. The BAAQMD threshold is specific to that district and not meant to be applicable to construction (rather, applicable to long-term project operation). Nonetheless, it is still useful to note that the estimated short-term GHG emissions from this project would be well-below the level considered substantial by the neighboring air district, BAAQMD. As shown from the emission estimate in Table 3.7-1, emissions from this project would not be substantial (i.e., would not exceed applicable thresholds of significance).

Construction would be expected to last approximately 7 months with the peak construction occurring for 4 months. The construction phase would be relatively short, and the associated emissions would not be substantial. The proposed project would not result in a substantial increase in mobile sources, and no new area, or stationary sources of GHGs would be associated with the proposed project. For these reasons, it is unlikely that this project would conflict with the goals of AB 32.

2.3 CONSISTENCY WITH GREENHOUSE GAS REDUCTION PLANS

As discussed under item a) above, the total GHG emissions associated with this project would be below the 1,100 MT CO_2e/yr threshold established by the BAAQMD. As these GHG emissions would result primarily from the construction phase of the project and there would be no new area or stationary sources of GHGs

associated with the proposed project, implementation of the proposed project would not result in a net increase of long-term operation-related GHG emissions from mobile, stationary, or area sources. For these reasons, as stated above in a) the proposed project would not generate substantial GHG emissions, and therefore, would not conflict with AB 32 or any other applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

3 REFERENCES

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CASTLE ROCK STATE PARK MASTER SITE PLAN

Description of All Proposed Uses:

The purpose of this project is to provide improved facilities for uses that already occur within Castle Rock State Park. The first phase of the project will include the development of an off-highway parking area containing a total of 90 parking spaces for public access to Castle Rock State Park. Electronic pay stations will be located around the parking lot to facilitate revenue generation for the park, free rangers for other visitor services, and prevent congestion at a single entry kiosk.

The first phase will also include a prefabricated restroom building, constructed adjacent to the parking lot for public use.

A trail system will connect various site elements. Accessible trails will lead to the existing parking lot, proposed accessible picnic areas and a new 60 seat amphitheater. Trail connections to popular off-site trails within Castle Rock State Park will be constructed as well.

A future phase of the project includes the development of a visitor center building which will include office space for park rangers, additional restroom facilities, a room for caterer's kitchen for special events and meetings, flexible gallery/exhibit space, permanent interpretive exhibits, an area to distribute park information, as well as exterior bike parking facilities and patio spaces.

The public will be able to rent facilities and spaces such as the amphitheater, visitor center building or picnic areas within the park for special events such as wedding receptions, educational lectures, picnics, memorials, graduations, birthday parties and other gatherings.

Site Improvement Phasing:

The proposed project will be developed in three phases:

1. The first phase will include the construction of a new access point off of Skyline Boulevard with entry monument sign, access gate, access drive and gate to neighboring property, 100' planted vegetated buffer along neighboring property, 90 space parking area, 60 seat amphitheater, ecological restoration of the development footprint, on-site trails and trail connections to existing Castle Rock State Park trails, a freestanding, prefabricated restroom building adjacent to the parking lot, trash enclosure, electronic pay stations, outdoor interpretive features, bicycle rack, water fountain, and an accessible picnic area.

2. The second phase of this project includes the construction of an approximately 6,000 sq. ft. visitor center building, water tanks, associated access drive, and continued ecological restoration of the hillside area. Phase 1 and Phase 2 have the potential to occur at the same time if funding becomes available.

3. The third phase of the project will involve the transfer and conveyance of the land and improvements from Semperviren Funds to the California Department of Parks and Recreation for long-term management and stewardship.

A description of landscape restoration phasing is included under "Management Plan".

Anticipated Future Boundary Expansions

It is anticipated that the site will be transferred to California State Parks and incorporated in the larger Castle Rock State Park property boundaries after the implementation of the second phase of the project.

Provisions For Adequate Access And Public Services

The current plan will create enormous public benefit by making the park more attractive and useable, adding amenities, parking, and increasing revenue generation through parking fees and rental income to help Castle Rock State Park remain open. Moreover, by providing essential sanitation facilities and water for hikers and climbers it meets an urgent public health need. Additionally, the site will provide a variety of outdoor recreation opportunities for people of all abilities. Four accessible parking spaces including one van accessible space will be located so that the path of travel to the restroom building and future visitor center is the shortest possible route. Accessible trails will provide access to the outdoor amphitheater and various picnic areas. The proposed 60 seat amphitheater will be constructed to accommodate fourwheelchair accessible seating areas.

Management Plan

The current project site is 33 acres in total, of which only 10 will be improved, and 6 of those 10 acres will be restored to open space habitat. The project site is currently used as a Christmas tree farm. Most of the Christmas trees within the development footprint will be removed and the footprint will be graded. Following grading, the disturbed project site area will be planted with native plants and endemic tree plantings to create a "hillside and open meadow" setting. Below is a description of each restoration phase:

Restoration "A" Phase is to be implemented concurrent with Phase 1 park improvements construction.

- Implement construction-period BMPs per the project's SWPPP.
- Implement semi-permanent and permanent erosion control measures.

- Plant all trees per the Planting Plan.
- Plant all irrigated areas, septic leach field, rain garden, and bioswales.
- Seed all areas disturbed by grading and construction activity (as shown on plan).
- Selectively remove invasive species in areas outside of grading and construction activities.
- Augment riparian buffer vegetation.

Restoration "B" Phase is to be implemented at conclusion of a two-year plant establishment period.

- Perform a Post-Establishment Audit of plantings, erosion control measures, irrigation system, and invasive species; update plant palette and menu of erosion control measures accordingly.
- Repair/replace/replant "A" Phase plantings, erosion control measures, and irrigation components as identified in the Post-Establishment Audit.
- Remove remaining Christmas trees except those on slopes greater than 30% (as shown on plan).
- Replenish compost and mulch in all irrigated areas (modified for stormwater treatment areas). Leave green waste (clippings, fallen leaves) in place to decompose or, if collected from pavement, move to designated compost location on site.
- Implement measures to address areas dominated by invasive species.

Restoration "C" Phase is to be implemented annually after "B" Phase is complete.

- Perform annual audit to identify eroding areas, permanent measures that require repair, unacceptable levels of invasive species, and success of plant materials.
- Annually remove a portion of remaining Christmas trees, followed by localized erosion control measures. The exact number of tree removals each year may vary, with the goal that most Christmas trees be removed by the tenth year of implementation. There should be flexibility in this phase to allow some Christmas trees on the steepest slopes or near existing drainage ways to remain growing indefinitely if it is predicted that removal would undermine the slope's stability.

Prior to the conveyance of the land and improvements to the California Department of Parks and Recreation, Sempervirens Fund will steward the property and its resources using best management practices. With the transfer of the land and improvements to the California Department of Parks and Recreation for long-term management, Sempervirens Funds will help to develop a stewardship fund to assist State Parks in park management and the protection of open space resources.

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- Implement semi-permanent and permanent erosion control measures.

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