COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT MITIGATED NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: *Harbor Village Recreational Vehicle (RV) Park*, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2017-00320

OWNER: Point Pillar Project Developer, PO Box 158, Half Moon Bay, CA 94019

APPLICANT: Ron Stefanick, Pillar Point Project Developers, PO Box 158, Half Moon Bay, CA 94019

ASSESSOR'S PARCEL NO.: 047-081-430

LOCATION: 240 Capistrano Road, Princeton

PROJECT DESCRIPTION

The applicant requests Coastal Development Permit (CDP), Use Permit, Mobile Home Permit, and Grading Permit for the construction of a new 50 space RV park, plus a 869 sq. ft. shower and laundry facility located on a legal 3.356-acre parcel (legality confirmed via Lot Line Adjustment: LLA94-0014). The construction of the RV park involves 4,500 cubic yards of cut and 4,575 cubic yards of fill. No trees are proposed for removal. The project is appealable to the California Coastal Commission.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. The project will not adversely affect water or air quality or increase noise levels substantially.

2. The project will not have adverse impacts on the flora or fauna of the area.

3. The project will not degrade the aesthetic quality of the area.

4. The project will not have adverse impacts on traffic or land use.

5. In addition, the project will not:

    a. Create impacts which have the potential to degrade the quality of the environment.

b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

c. Create impacts for a project which are individually limited, but cumulatively considerable.

d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project is insignificant.

MITIGATION MEASURES included in the project to avoid potentially significant effects:

Mitigation Measure 1: All exterior lights shall be designed and located so as to confine direct rays to the subject property and prevent glare in the surrounding area. A photometric plan shall be reviewed by the Planning Section during the building permit process to verify compliance with this condition. Prior to the final approval of the building permit, lighting shall be inspected and compliance with this requirement shall be verified.

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure 3: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit "hard card" or building permit that, at a minimum, includes the "Basic Construction Mitigation Measures" as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour(mph).

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

i. Minimize the idling time of diesel-powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 4: Pre-Construction Nesting Bird Surveys. Prior to any Project construction-related activities (such as tree removal, grubbing, grading or other land disturbing activities), the Project proponent shall take the following steps to avoid direct losses of active nests, eggs, and nestlings and indirect impacts to avian breeding success:

If construction-related activities occur only during the non-breeding season, between August 31 and February 1, no nest surveys will be required.

During the breeding bird season (February 1 through August 31), a qualified biologist shall survey areas intended for construction-related activities in the Project Area for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys shall include all potential habitats within 250 feet of activities for raptors, and 50 feet of activities for passerines. If results are positive for nesting birds, a qualified biologist shall advise as to whether avoidance procedures are necessary, subject to review and approval by the Community Development Director. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and minimum 250-foot buffer for most raptors) or seasonal avoidance. Once established, buffer areas around active nests may be reduced on a case-by-case basis based on guidance from a qualified biologist. The biologist shall consider factors such as topography, land use, Project activities, visual screening or line-of-site to active nest, and background noise levels when establishing a reduced nest buffer. The biologist shall advise whether full-time biological monitoring should be required during all activities that occur within reduced nest buffers in order to monitor the active nest(s) for signs of disturbance or "take."

Mitigation Measure 5: Environmental Training. All crewmembers shall attend an Environmental Awareness Training presented by a qualified biologist. The training shall include a description of the special-status species that may occur in the region, the project Avoidance and Minimization Measures, Mitigation Measures, the limits of the project work areas, applicable laws and regulations, and penalties for non-compliance. Upon completion of training, crewmembers shall sign a training form indicating they attended the program and understood the measures. Completed training form(s) shall be provided to the Project Planner before the start of project activities.

Mitigation Measure 6: Ground Disturbing Construction Activities. Ground disturbing construction-related activities shall occur during the dry season (June 1 to October 15) to facilitate avoidance of California red-legged frog. Regardless of the season, no construction shall occur within 24 hours following a significant rain event defined as greater than 1/4 inches of precipitation in a 24-hour period. Following a significant rain event and the 24-hour drying-out period, a qualified biologist shall conduct a preconstruction survey for California red-legged frog prior to the restart of any Project activities.

Mitigation Measure 7: Wildlife Encounters. If any wildlife is encountered during Project activities, said encounter shall be reported to a qualified biologist and wildlife shall be allowed to leave the work area unharmed. Animals shall be allowed to leave the work area of their own accord and without harassment. Animals shall not be picked up or moved in any way.

Mitigation Measure 8: Vegetation Disturbance. Disturbance to vegetation shall be kept to the minimum necessary to complete the Project activities. Prior to the Current Planning Section's approval of the building permit for the project, the applicant shall submit a Biological Protection Plan, subject to Community Development Director review and approval, showing areas to remain undisturbed by construction-related activities and protected with recommended measures (such as temporary fencing with the type to be specified by a qualified biologist). To minimize impacts to vegetation, a qualified biologist shall work with the contractor to designate work areas (including all staging areas) and designate areas to remain undisturbed and protected.

Mitigation Measure 9: Vehicle Fueling and Maintenance. All fueling, maintenance of vehicles and other equipment, and staging areas should occur at least 50 feet from the drainage swale on the northeastern edge of the project area. The edge of the 50 feet buffer zone shall be marked using visible markers by a biologist no sooner than 30 days prior to the start of construction. Equipment operators and fueling crews shall ensure that contamination of the swale does not occur during such operations by restricting all activities to outside of the buffer zone. Prior to the start of construction-related activities, a plan to allow for prompt and effective response to any accidental spills shall be submitted and subject to review and approval by the Community Development Director. All workers should be informed of the importance of preventing spills, and of the appropriate measures to take should a spill occur.

Mitigation Measure 10: Erosion and Sediment Control BMPs. Prior to the Current Planning Section's approval of a building permit, the applicant shall revise and submit the Erosion and Sediment Control Plan, subject to review and approval by the project planner. The plan shall have been reviewed by a qualified biologist prior to submittal to the County. The plan shall include measures to prevent runoff to the drainage swale on the northeastern edge of the project area and demonstrate compliance with other erosion control requirements and mitigation measures. This shall include the installation of silt fences or straw wattles between work areas and any water sources such as the drainage swale, and around any spoil piles (e.g., loose asphalt, dirt, debris, construction-related materials) that could potentially discharge sediment into habitat areas. If straw wattles are used, they shall be made of biodegradable fabric (e.g., burlap) and free of monofilament netting.

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director, subject to review and approval, a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 12: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified immediately. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 13: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Mitigation Measure 14: At the time of building permit and encroachment permit application, the applicant shall revise as necessary and submit for review and approval the Erosion and Sediment Control Plan such that it shows how the transport and discharge of soil and pollutants from and within the project site would be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly, and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts per Mitigation Measure 10.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Mitigation Measure 15: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project, if the project has not yet been implemented.

Mitigation Measure 16: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 17: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

INITIAL STUDY

The San Mateo County Current Planning Section has reviewed the Environmental Evaluation of this project and has found that the probable environmental impacts are insignificant. A copy of the initial study is attached.

REVIEW PERIOD: September 18, 2019 to October 18, 2019

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., October 18, 2019**.

CONTACT PERSON

Ruemel Panglao
Project Planner, 650/363-4582
rpanglao@smcgov.org.

Ruemel Panglao, Project Planner

RSP:cmc – RSPDD0169_WCH.DOCX

County of San Mateo
Planning and Building Department

INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST

(To Be Completed by Planning Department)

1. **Project Title:** Harbor Village Recreational Vehicle (RV) Park

2. **County File Number:** PLN 2017-00320

3. **Lead Agency Name and Address:** San Mateo County Planning and Building Department, 455 County Center, 2nd Floor, Redwood City, CA 94063

4. **Contact Person and Phone Number:** Ruemel Panglao, Project Planner, 650/363-4582

5. **Project Location:** 240 Capistrano Road, unincorporated Princeton area of San Mateo County

6. **Assessor's Parcel Number and Size of Parcel:** 047-081-430 (3.356 acres)

7. **Project Sponsor's Name and Address:** Ron Stefanick, Pillar Point Project Developers, P.O. Box 158, Half Moon Bay, CA 94019

8. **Name of Person Undertaking the Project or Receiving the Project Approval (if different from Project Sponsor):** N/A

9. **General Plan Designation:** Coastside Commercial Recreation (Urban)

10. **Zoning:** CCR/DR/CD (Coastside Commercial Recreation/Design Review/Coastal Development)

11. **Description of the Project:** The applicant requests a Coastal Development Permit (CDP), Use Permit, Mobile Home Permit, and Grading Permit for the construction of a new 50 parking space RV park, plus a 869 sq. ft. shower and laundry building and landscaping, located on a legal 3.356-acre parcel (legality confirmed via Lot Line Adjustment: LLA94-0014). The construction of the RV park involves earthwork of 4,500 cubic yards of cut and 4,575 cubic yards of fill. No trees are proposed for removal. The project is located within the Cabrillo Highway (Highway 1) County Scenic Corridor. The project is appealable to the California Coastal Commission.

12. **Surrounding Land Uses and Setting:** The undeveloped site is located at the corner of Cabrillo Highway and Capistrano Road. The area to the north contains commercial uses in the unincorporated community of El Granada. The area to the west contains agricultural land. A parking lot for Pillar Point Harbor is located to the east. The areas to the south contains commercial uses, anchored by the Oceano Hotel.

13. **Other Public Agencies Whose Approval is Required:** California Department of Housing and Community Development, California Department of Transportation, Regional Water Quality Control Board.

14. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?:** No, see Section 18.a.ii. *(NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see Public Resources Code Section 21080.3.2.). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality).*

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

X	Aesthetics		Energy		Public Services
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Recreation
X	Air Quality	X	Hydrology/Water Quality		Transportation
X	Biological Resources		Land Use/Planning	X	Tribal Cultural Resources
X	Climate Change		Mineral Resources		Utilities/Service Systems
X	Cultural Resources	X	Noise		Wildfire
X	Geology/Soils		Population/Housing	X	Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

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

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

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

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).

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

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

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

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

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

7. Supporting Information Sources. Sources used, or individuals contacted should be cited in the discussion.

1. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
1.a. Have a substantial adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?			X	

Discussion: Due to the presence of mature Monterey Cypress trees along Cabrillo Highway and the one- and two-story commercial structures to the south, public views of the Pacific Ocean are substantially blocked from viewing locations at the site and the portion of Cabrillo Highway which fronts the project site. When driving along Cabrillo Highway closer to the corner of Capistrano Road and Cabrillo Highway, there is a brief portion of the road with a view of the Pacific Ocean which may be impacted by the project. To ensure minimal blockage of this view, the proposed landscaping is limited to groundcover and low-growing shrubs at the corner of Capistrano Road and Cabrillo Highway and along the entire stretch of Capistrano Road adjacent to the property. In addition, no RV parking spaces are proposed along the Capistrano Road side of the property. As part of the project scope, the existing grade level would be lowered by approximately 1-foot relative to the elevation of the adjacent Cabrillo Highway, further minimizing the effects of any views being blocked by vertical elements.

The project is within the Cabrillo Highway County Scenic Corridor. There is an existing RV park approximately a half mile east of the project site. Additionally, RV parks are a common sight along Cabrillo Highway within other municipalities, such as Pacifica and Half Moon Bay. The applicant does not propose any additional signage, other than the use of small signs informing visitors of the rules of the RV Park. Such signs would be located at the center of the RV Park and would not be significantly visible from off-site viewing locations. Signage for the RV Park would be a panel located on an existing multi-tenant monument sign for the Harbor Village property.

Based on the foregoing, the proposed use would result in visual impacts which are less than significant.

Source: Project Plans, Project Location, County GIS Maps.

1.b.	Substantially damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X

Discussion: The project parcel does not contain and is not located in close proximity to any rock outcroppings. One historic structure, the former Ocean Shore Railroad North Granada Station is located on the east side of Highway 1 but not within the immediate project vicinity.

Source: Project Plans, Project Location, County GIS Maps, Holman & Associates Archaeological Report.

1.c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, such as significant change in topography or ground surface relief features, and/or development on a ridgeline? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	

Discussion: The project parcel is located in an urbanized area within a Design Review (DR) District as it is zoned CCR/DR/CD (Coastside Commercial Recreation / Design Review / Coastal Development) and is within the Cabrillo Highway County Scenic Corridor. In addition, the Mobile Home (MH) ordinance applies to this project despite not offering spaces for long term residence. Based on the discussion in Sections 1.a. and 1.d., the project, as proposed and conditioned, is in compliance with the applicable design review standards of the DR Zoning District and the Community Design Manual. The project meets all applicable MH Ordinance, Zoning District, General Plan, and Local Coastal Program provisions. For a discussion of potential impacts to the County Cabrillo Highway Scenic Corridor, see Section 1.a, above.

An RV park is a conditionally permitted use in the CCR Zoning District. The proposal meets the development standards of the respective zoning district.

Source: Project Plans, Project Location, San Mateo County Zoning Regulations.

1.d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?		X		

Discussion: The project would increase nighttime ambient lighting within an area that contains existing ambient light sources. The RV park proposes ten (10) 16 feet high lamp posts with downward directed lamp heads and would not create a new source of substantial light or glare. While the property does not currently contain any light sources, it is located immediately adjacent to the Ocean Hotel and the Shoppes at Harbor Village, which contains light sources and is visible from the Cabrillo Highway.

The applicant has agreed to remove the five (5) 20-foot-high lamp posts previously proposed along the southwestern edge of the property which would have resulted in light spilling offsite. The RV park would be screened by existing, mature Monterey Cypress trees along Cabrillo Highway and existing structures from neighboring properties to the south. In addition, the majority of the lamp posts in the interior of the park would be located adjacent to one to three proposed strawberry trees *(Arbutus 'Marina')* which, per the County Arborist, would likely reach a mature height of 25 to 30 feet based on the proposed growing conditions. These trees would also provide further screening of the light. Any light produced from the habitation of the RV park would also be screened. However, to further reduce any potential impact, the following mitigation is recommended:

Mitigation Measure 1: All exterior lights shall be designed and located so as to confine direct rays to the subject property and prevent glare in the surrounding area. A photometric plan shall be reviewed by the Planning Section during the building permit process to verify compliance with this condition. Prior to the final approval of the building permit, lighting shall be inspected and compliance with this requirement shall be verified.

Source: Project Plans, Project Location.

1.e.	Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?		X		

Discussion: See the discussion provided for Sections 1.a. through 1.e, above.

Source: Project Plans, Project Location.

1.f.	If within a Design Review District, conflict with applicable General Plan or Zoning			X	

<table>
<tr><td>Ordinance provisions?</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5">Discussion: See the discussion provided for Section 1.c.
Source: Project Plans, Project Location, San Mateo County Zoning Regulations.</td></tr>
<tr><td>1.g. Visually intrude into an area having natural scenic qualities?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td colspan="5">Discussion: See the discussion provided for Sections 1.a. through 1.e, above.
Source: Project Plans, Project Location.</td></tr>
</table>

<table>
<tr><td colspan="5">2. AGRICULTURAL 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:</td></tr>
<tr><td></td><td>Potentially Significant Impacts</td><td>Significant Unless Mitigated</td><td>Less Than Significant Impact</td><td>No Impact</td></tr>
<tr><td>2.a. For lands outside the Coastal Zone, 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?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The project site is located within the Coastal Zone. The parcel is not within an area that is mapped or designated as Prime or Unique Farmland or Farmland of Statewide Importance.
Source: Project Location, County GIS Maps, California Department of Conservation Farmland Mapping and Monitoring Program.</td></tr>
<tr><td>2.b. Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The project site is zoned Coastside Commercial Recreation (CCR). The zoning does not allow for agriculture uses. The parcel is also not subject to an existing Open Space Easement or Williamson Act contract.
Source: Project Location, County Zoning Regulations, County GIS Maps, County Williamson Act</td></tr>
</table>

Contracts.				
2.c. 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 forestland to non-forest use?				X
Discussion: The project site is undeveloped. It does not contain Farmland. It should be noted that the property has been used in the past as a pumpkin patch for sale of pumpkins for annual fall holidays, but the property was not used for the cultivation of any agricultural commodities. Also, the site does not contain forestland (defined as land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits). Therefore, the project would not convert Farmland to a non-agricultural use or forestland to non-forest use. Project Location, County GIS Maps, California Department of Conservation Farmland Mapping and Monitoring Program. **Source:** Project Location, County GIS Maps, California Department of Conservation Farmland Mapping and Monitoring Program.				
2.d. For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?			X	
Discussion: The subject parcel is located in the Coastal Zone. The Natural Resources Conservation Service has classified the project site as containing soils that have a Class III rating (non-irrigated). The entire parcel contains prime soils, as well as the developed area of Princeton and a large portion of the Harbor District property to the southeast. The areas that are proposed to be converted have not been used in the recent past for agricultural purposes and have been disturbed previously. The property has been used as a pumpkin patch for sale of pumpkins for annual holidays, but the property was not used for the cultivation of any agricultural commodities. It has also been used historically as a staging area for temporary events and as unpaved overflow parking for the adjacent commercial development. No division of land is proposed. Therefore, while the project would result in the conversion of prime soils, the area has been continually disturbed over time for commercial purposes and is not zoned for agriculture. Thus, the project poses minimal impact. **Source:** Project Location, Natural Resources Conservation Service Web Soil Survey - California Revised Storie Index, County Zoning Regulations.				
2.e. Result in damage to soil capability or loss of agricultural land?			X	
Discussion: See the discussion provided for Section 2.d. **Source:** Project Location, Natural Resources Conservation Service Web Soil Survey - California Revised Storie Index, County Zoning Regulations.				

2.f. Conflict with existing zoning for, or cause rezoning of, forestland (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))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				X

Discussion: The project site does not contain forestland or timberland; therefore, there is no conflict with existing zoning or cause for rezoning.

Source: Project Location, County GIS Maps, County Zoning Regulations.

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
3.a. Conflict with or obstruct implementation of the applicable air quality plan?		X		

Discussion: The Bay Area 2010 Clean Air Plan (CAP), developed by the Bay Area Air Quality Management District (BAAQMD), is the applicable air quality plan for San Mateo County. The CAP was created to improve Bay Area air quality and to protect public health and climate.

The project would not conflict with or obstruct the implementation of the BAAQMD's 2010 CAP. The project and its operation involve minimal hydrocarbon (carbon monoxide; CO2) air emissions, whose source would be from trucks and equipment (whose primary fuel source is gasoline) during its construction. The impact from the occasional and brief duration of such emissions would not conflict with or obstruct the Bay Area Air Quality Plan.

The construction of the RV park involves earthwork of 4,500 cubic yards of cut and 4,575 cubic yards of fill. As proposed grading would largely be balanced on-site, there would be no off-haul and minimal truck trips for import of materials.

Regarding emissions from construction vehicles (employed at the site during the project's construction), the following mitigation measure is recommended to ensure that the impact from such emissions is less than significant:

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Source: Project Plans, Bay Area Air Quality Management District.

3.b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?		X		

Discussion: As of December 2012, San Mateo County is a non-attainment area for PM-2.5. On January 9, 2013, the Environmental Protection Agency (EPA) issued a final rule to determine that the Bay Area attains the 24-hour PM-2.5 national standard. However, the Bay Area will continue to be designated as “non-attainment” for the national 24-hour PM-2.5 standard until the BAAQMD submits a “re-designation request” and a “maintenance plan” to EPA and the proposed re-designation is approved by the EPA. A temporary increase in the project area is anticipated during construction since these PM-2.5 particles are a typical vehicle emission. The temporary nature of the proposed construction and California Air Resources Board vehicle regulations reduce the potential effects to a less than significant impact. The following mitigation measure would minimize increases in non-attainment criteria pollutants generated from project construction to a less than significant level:

Mitigation Measure 3: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit “hard card” or building permit that, at a minimum, includes the “Basic Construction Mitigation Measures” as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour(mph).

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications.

i. Minimize the idling time of diesel-powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations.

Source: Project Plans, Bay Area Air Quality Management District.

3.c. Expose sensitive receptors to substantial pollutant concentrations, as defined by the Bay Area Air Quality Management District?			X	

Discussion: The project site is located in an urban area with no sensitive receptors, such as schools, located within the project vicinity. The closet residence is over 20 feet to the north of the parcel. Therefore, the project would not expose sensitive receptors to significant levels of pollutant concentrations.

Source: Project Plans, Bay Area Air Quality Management District.

3.d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Discussion: The project, once operational, would not create or generate any significant odors. Potential odors which may be generated include exhaust odors associated with typical vehicle parking uses. The project has the potential to generate more odors associated with construction activities. However, any such odors would be temporary and would not have a significant impact on large numbers of people over an extended duration of time. Thus, the impact would less than significant.

Source: Project Plans.

4. BIOLOGICAL RESOURCES. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
4.a.	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 Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion: A biological resources evaluation (SWCA evaluation) was prepared by SWCA Environmental Consultants, dated November 2017, which analyzed potential project impacts to biological resources on the subject parcel. SWCA Evaluation is included as Attachment C.

According to the SWCA evaluation, SWCA biologist Jessica Henderson-McBean conducted a reconnaissance-level field survey of the study area on October 17, 2017, to document the existing biological conditions and determine the potential for special-status species to occur in the study area. One northern harrier *(Circus cyaneus)*, a California Department of Fish and Wildlife (CDFW) species of special concern was observed foraging within the study area. No other special-status species were observed within the study area during the biological field survey. A drainage swale was observed along the northeastern edge of the project area, which is unlikely in SWCA's opinion to be considered jurisdictional by CDFW, US Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Coastal Commission (CCC). No other jurisdictional wetlands, water features, or riparian corridors were observed within the project area.

The project area is bordered by a commercial development to the north and southwest, by actively-cultivated agricultural land to the north and west, and by Cabrillo Highway to the northeast. The SWCA evaluation states that developed, agricultural, and disturbed/ruderal habitats do not typically provide suitable habitat for sensitive wildlife species. In addition, infrastructure and other man-made facilities surrounding the project area (e.g., roads and dense development) present potential barriers to dispersal of wildlife into and across the project area.

The drainage swale along the northeast edge of the project area, which conveys surface flows into a culvert pipe with a presumed terminus in the Pacific Ocean, may provide marginal, suitable aquatic habitat for sensitive wildlife species such as California red-legged frog *(Rana draytonii)*, a federally listed threatened species and California species of special concern, and San Francisco garter snake *(Thamnophis sirtalis tetrataenia)*, a federally and state listed endangered species and CDFW fully protected species. Although the project area lacks suitable natural habitat conditions for these species, the project area could be used by these species for dispersal. However, due to the lack of emergent vegetation cover and development surrounding the project area, the potential for these species to occur within the Project Area is low.

Additionally, the drainage swale does not meet the LCP definition of a riparian corridor due to the lack of riparian vegetation.

The project area does contain habitat for nesting migratory birds, including northern harrier (Circus cyaneus), a CDFW species of special concern that is protected under the Migratory Bird Treaty Act and/or the California Fish and Game Code.

Due to the potential for these species to occur within the project area, it is recommended that the following mitigation measures be implemented to avoid potential impacts to California red-legged frog, San Francisco garter snake, and nesting migratory birds (during the breeding season):

Mitigation Measure 4: Pre-Construction Nesting Bird Surveys. Prior to any Project construction-related activities (such as tree removal, grubbing, grading or other land disturbing activities), the Project proponent shall take the following steps to avoid direct losses of active nests, eggs, and nestlings and indirect impacts to avian breeding success:

If construction-related activities occur only during the non-breeding season, between August 31 and February 1, no nest surveys will be required.

During the breeding bird season (February 1 through August 31), a qualified biologist shall survey areas intended for construction-related activities in the Project Area for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys shall include all potential habitats within 250 feet of activities for raptors, and 50 feet of activities for passerines. If results are positive for nesting birds, a qualified biologist shall advise as to whether avoidance procedures are necessary, subject to review and approval by the Community Development Director. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and minimum 250-foot buffer for most raptors) or seasonal avoidance. Once established, buffer areas around active nests may be reduced on a case-by-case basis based on guidance from a qualified biologist. The biologist shall consider factors such as topography, land use, Project activities, visual screening or line-of-site to active nest, and background noise levels when establishing a reduced nest buffer. The biologist shall advise whether full-time biological monitoring should be required during all activities that occur within reduced nest buffers in order to monitor the active nest(s) for signs of disturbance or “take.”

Mitigation Measure 5: Environmental Training. All crewmembers shall attend an Environmental Awareness Training presented by a qualified biologist. The training shall include a description of the special-status species that may occur in the region, the project Avoidance and Minimization Measures, Mitigation Measures, the limits of the project work areas, applicable laws and regulations, and penalties for non-compliance. Upon completion of training, crewmembers shall sign a training form indicating they attended the program and understood the measures. Completed training form(s) shall be provided to the Project Planner before the start of project activities.

Mitigation Measure 6: Ground Disturbing Construction Activities. Ground disturbing construction-related activities shall occur during the dry season (June 1 to October 15) to facilitate avoidance of California red-legged frog. Regardless of the season, no construction shall occur within 24 hours following a significant rain event defined as greater than 1/4 inches of precipitation in a 24-hour period. Following a significant rain event and the 24-hour drying-out period, a qualified biologist shall conduct a preconstruction survey for California red-legged frog prior to the restart of any Project activities.

Mitigation Measure 7: Wildlife Encounters. If any wildlife is encountered during Project activities, said encounter shall be reported to a qualified biologist and wildlife shall be allowed to leave the work area unharmed. Animals shall be allowed to leave the work area of their own accord and without harassment. Animals shall not be picked up or moved in any way.

Mitigation Measure 8: Vegetation Disturbance. Disturbance to vegetation shall be kept to the minimum necessary to complete the Project activities. Prior to the Current Planning Section’s approval of the building permit for the project, the applicant shall submit a Biological Protection Plan, subject to Community Development Director review and approval, showing areas to remain undisturbed by construction-related activities and protected with recommended measures (such as temporary fencing with the type to be specified by a qualified biologist). To minimize impacts to vegetation, a qualified biologist shall work with the contractor to designate work areas (including all staging areas) and designate areas to remain undisturbed and protected.

Mitigation Measure 9: Vehicle Fueling and Maintenance. All fueling, maintenance of vehicles and other equipment, and staging areas should occur at least 50 feet from the drainage swale on the northeastern edge of the project area. The edge of the 50 feet buffer zone shall be marked using visible markers by a biologist no sooner than 30 days prior to the start of construction. Equipment operators and fueling crews shall ensure that contamination of the swale does not occur during such operations by restricting all activities to outside of the buffer zone. Prior to the start of construction-related activities, a plan to allow for prompt and effective response to any accidental spills shall be submitted and subject to review and approval by the Community Development Director. All workers should be informed of the importance of preventing spills, and of the appropriate measures to take should a spill occur.

Mitigation Measure 10: Erosion and Sediment Control BMPs. Prior to the Current Planning Section's approval of a building permit, the applicant shall revise and submit the Erosion and Sediment Control Plan, subject to review and approval by the project planner. The plan shall have been reviewed by a qualified biologist prior to submittal to the County. The plan shall include measures to prevent runoff to the drainage swale on the northeastern edge of the project area and demonstrate compliance with other erosion control requirements and mitigation measures. This shall include the installation of silt fences or straw wattles between work areas and any water sources such as the drainage swale, and around any spoil piles (e.g., loose asphalt, dirt, debris, construction-related materials) that could potentially discharge sediment into habitat areas. If straw wattles are used, they shall be made of biodegradable fabric (e.g., burlap) and free of monofilament netting.

Source: Project Plans, Project Location, County GIS Maps, SWCA Biological Resources Evaluation (dated November 2017).

4.b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X

Discussion: Per the SWCA evaluation, there are no areas of riparian habitat or sensitive natural communities identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, in the project area.

Source: Project Plans, Project Location, County GIS Maps, SWCA Biological Resources Evaluation (dated November 2017).

4.c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X

Discussion: The SWCA evaluation found no wetlands in the entire study area, as defined either by Section 404 or in the County Local Coastal Program. As a result, the project poses no impact to these resources.

Source: Project Plans, Project Location, County GIS Maps, SWCA Biological Resources Evaluation

(dated November 2017).				
4.d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
Discussion: According to the SWCA evaluation, the project area is located within an area of commercial and agricultural development and therefore it is unlikely that the project area serves as a wildlife movement corridor. Due to the presence of marginal aquatic habitat for California red-legged frog and San Francisco garter snake, it is possible that the Project Area may be used as seasonal dispersal habitat for these species. With the implementation of the Mitigation Measures in Section 4.a, impacts to wildlife corridors would be minimized. **Source:** Project Plans, Project Location, County GIS Maps, SWCA Biological Resources Evaluation (dated November 2017).				
4.e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?			X	
Discussion: The project does not propose to remove or impact any significant or heritage trees. The existing, mature Monterey Cypress trees along Cabrillo Highway would be retained and protected during construction. As noted in the Mayne Arborist Report, a protective barrier of six-foot chain-link fence shall be installed around the dripline of affected trees and no work shall be performed in the tree protection zone unless supervised by the project arborist. No trees proposed to remain should be significantly impacted by the proposed construction. **Source:** Project Plans, Mayne Arborist Report.				
4.f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?				X
Discussion: The site is not located in an area with an adopted Habitat Conservation Plan or Natural Conservation Community Plan, other approved regional or State habitat conservation plan. **Source:** Project Plans, Project Location, County GIS Map.				
4.g. Be located inside or within 200 feet of a marine or wildlife reserve?				X
Discussion: The project site is not located inside or within 200 feet of a marine or wildlife reserve. **Source:** Project Plans, Project Location, County GIS Map, National Wildlife Refuge System Locator.				

<table>
<tr><td>4.h. Result in loss of oak woodlands or other non-timber woodlands?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The project site includes no oak woodlands or other timber woodlands.
Source: Project Plans, Project Location.</td></tr>
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<table>
<tr><td colspan="5">5. CULTURAL RESOURCES. Would the project:</td></tr>
<tr><td></td><td><i>Potentially Significant Impacts</i></td><td><i>Significant Unless Mitigated</i></td><td><i>Less Than Significant Impact</i></td><td><i>No Impact</i></td></tr>
<tr><td>5.a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The project site does not host any known historical resources, by either County, State, or Federal listings. Thus, the project poses no impact to these resources.
Source: California Register of Historical Resources.</td></tr>
<tr><td>5.b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td colspan="5">Discussion: Based on the project parcel’s existing surrounding land uses, it is not likely that the project parcel and surrounding area would host any archaeological resources. The California Historical Resources Information System’s Northwest Information Center at Sonoma State University (Sonoma State), in a letter dated April 10, 2019, notes that there was a previous cultural resource study for the project area in 1994 that identified no cultural resources. However, the Sonoma State letter notes that the project area has the possibility of containing unrecorded archaeological sites. Native American resources in this part of San Mateo County have been recorded in the foothill to valley floor interface, at the mouths of drainage canyons, in Holocene alluvial fan deposits, and in coastal terraces or adjacent to intermittent or perennial watercourses. The proposed project area is situated within Holocene alluvial fan deposits approximately 160 meters from Half Moon Bay; additionally, according to a review of historic maps, the proposed project area was once adjacent to a perennial watercourse.
Due to the passage of time since the previous survey (Clark 1994) and the changes in archaeological theory and method since that time, Sonoma State recommends a qualified archaeologist conduct further archival and field study for the entire project area to identify archaeological resources.
Per the Archaeological Report, prepared by Holman & Associates and dated June 2019, the project area contains no evidence of prehistoric archaeological resources by archival search or field survey. Historic topographic maps show no prior development around and within the project area, so it is quite unlikely historic archaeological deposits or features could exist in or around the currently developed property.
The following mitigation measure is provided in the event that any cultural, paleontological, or</td></tr>
</table>

archeological resources are encountered during project construction and excavation activities:

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director, subject to review and approval, a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Source: Project Location, County GIS Maps, California Historical Resources Information System Review Letter (dated April 10, 2019), Holman & Associates Archaeological Report (dated June 2019).

5.c. Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion: No known human remains are located within the project area or surrounding vicinity. In case of accidental discovery, the following mitigation measure is recommended:

Mitigation Measure 12: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified immediately. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Source: Project Location, County GIS Maps.

6. ENERGY. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
6.a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	

Discussion: The project involves the construction of a small 869 sq. ft. laundry and restroom facility. The size of the proposed building is appropriate to the proposed use. The proposed lighting would be LED and, therefore, energy efficient. The project includes landscaping that would minimize heat island effects. Overall, the site would be constructed in compliance with all relevant building codes and regulations. In addition, per the discussion in Section 17.b, the project would cause a less than significant impact on vehicles miles traveled (VMT), which indicates that there will be a minimal impact on air pollutants and greenhouse gases (GHG) and congestion.

In terms of the use of electrical power, the RV park would use power mainly for the small laundry and restroom facility and for any customer utilizing the electrical hookups for their respective RV. These represent a necessary consumption of resources for the operation of the RV park.

Source: Project Plans, Project Location, Hexagon Transportation Consultants, Inc. 100 Capistrano Road Harbor Village RV Park Draft Traffic Impact Analysis (dated January 18, 2019).

6.b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.			X	

Discussion: Per the discussion in Section 6.a., the project would pose a less than significant impact.

Source: Project Plans.

7. GEOLOGY AND SOILS. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
7.a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*		X		

Discussion: A geotechnical report was prepared by Sigma Prime Geosciences, Inc. (Sigma Prime), dated May 17, 2019, included as Attachment F. Sigma Prime determined the closest mapped active fault zone to the site is the San Gregorio-Seal Cove fault, located offshore about 1 kilometer (km) to the west. Other faults in the region most likely to produce significant seismic ground motions include the San Andreas, Hayward, Rodgers Creek, and Calaveras faults.

According to Sigma Prime, the site is not located in an active Alquist-Priolo special studies area or zone where fault rupture is considered likely. Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is low. Although it is highly probable that the proposed project would experience very strong ground shaking during a moderate to large nearby earthquake, Sigma Prime states that the proposed project can be developed as planned, provided that the geotechnical recommendations from their report be implemented.

Since the project location and its distance from the cited fault zone can result in strong seismic ground shaking in the event of an earthquake, the following mitigation measure is recommended to ensure that such impacts are less than significant:

Mitigation Measure 13: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

ii. Strong seismic ground shaking?		X		

Discussion: Pursuant to the discussion in Section 7.a.i., strong seismic ground shaking may occur in the event of an earthquake. However, the mitigation measure provided in Section 6.a.i. would minimize impacts to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

iii. Seismic-related ground failure, including liquefaction and differential settling?		X		

Discussion: According to Sigma Prime, soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. The 4.5-foot thick layer of loose silty sand at a depth of 13.5 feet underlying the site is likely to liquefy during a design earthquake. Sigma Prime estimates up to 1.8 inches of settlement. An existing thick clay cap should reduce this amount at the ground surface to about 1-inch of total settlement and 0.5 inches of differential settlement.

However, pursuant to the discussion in Section 7.a.i., its respective mitigation measure is provided to minimize any impacts to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

iv. Landslides?		X		

Discussion: The site is moderately sloped, so the likelihood of a landslide impacting the site is low.

However, pursuant to the discussion in Section 7.a.i., its respective mitigation measure is provided to minimize any impacts to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7*				X

(Climate Change).				

Discussion: The project site is located about 500 feet from the coastline. Therefore, there would be no project impact on coastal cliff or bluff instability or erosion.

Source: Project Location.

7.b. Result in substantial soil erosion or the loss of topsoil?		X		

Discussion: The construction of the RV park involves 4,500 cubic yards of cut and 4,575 cubic yards of fill. Total land disturbance is 2.9-acres. The project is subject to coverage under a State General Construction Permit. The mitigation measures in Sections 3.a. and 3.b., and the following mitigation measure are included to control erosion during both project construction activities.

With these mitigation measures, the project impact would be less than significant.

Mitigation Measure 14: At the time of building permit and encroachment permit application, the applicant shall revise as necessary and submit for review and approval the Erosion and Sediment Control Plan such that it shows how the transport and discharge of soil and pollutants from and within the project site would be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program “General Construction and Site Supervision Guidelines,” including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly, and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts per Mitigation Measure 10.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018), San Mateo Countywide Stormwater Pollution Prevention Program.

7.c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?		X		

Discussion: Pursuant to the discussion to Sections 7.a. and 7.b., the associated mitigation measures would assure that the project does not result in an on-site or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse. Therefore, the mitigation measures would minimize project impacts in these areas to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

7.d.	Be located on expansive soil, as defined in Table 18-1-B of Uniform Building Code, creating substantial direct or indirect risks to life or property?		X		

Discussion: According to Sigma Prime, subsurface clayey soils at the site have a high potential for expansion. Expansive soils tend to swell with increases in moisture content and shrink with decreases in moisture content. These moisture fluctuations typically occur during seasonal variations in precipitation, but can also occur from irrigation, changes in site drainage, or the presence of tree roots. As the soil shrinks and swells, improvements supported on the expansive soils may fall and rise. These movements may cause cracking and vertical deformations of improvements, which can be addressed by regular maintenance of parking areas and structures.

However, pursuant to the discussion in Section 7.a.i., its respective mitigation measure is provided to minimize any impacts to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime

Geotechnical Study (dated May 17, 2018).

7.e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Discussion: The proposed RV park would have sanitary sewer service connections from the Granada Community Services District and therefore does not require or include any septic tanks or wastewater disposal systems. Thus, the project poses no impact in this area.

Source: Project Plans, Project Location, County GIS Maps, Granada Sanitary District.

7.f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion: Based on the project parcel’s existing surrounding land uses, it is not likely that the project parcel and surrounding area would host any paleontological resource or site or unique geologic feature. However, Mitigation Measure 11 in Section 5.b. is provided to ensure that the impact is less than significant if any resources are encountered.

Source: Project Location, County GIS Maps.

8. CLIMATE CHANGE. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
8.a.	Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?		X		

Discussion: Greenhouse Gas Emissions (GHG) include hydrocarbon (carbon monoxide; CO2) air emissions from vehicles and machines that are fueled by gasoline. Project-related grading and construction of the RV park would result in the temporary generation of GHG emissions along travel routes and at the project site. In general, construction involves GHG emissions mainly from exhaust from vehicle trips (e.g., construction vehicles and personal vehicles of construction workers). Even assuming construction vehicles and workers are based in and traveling from urban areas, the potential project GHG emission levels from construction would be considered minimal considering the temporary duration of construction (approximately 10 to 12 month). Although the project scopes for the current and potential future projects are not likely to generate a significant cumulative amount of construction-related greenhouse gases, the mitigation measure is provided in Section 3.b. to minimize any impact to a less than significant level.

In terms of operational GHG, GHGs would be produced by the RVs travelling to and from the site. The trips to the proposed RV park would be along the typical shoreline route that many travelers in

RVs take when visiting the California coast; therefore, the project itself will not create new GHGs that would not already be generated by the RVs as they travel along the California coast. **Source:** Project Plans, Project Location.				
8.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X
Discussion: The proposed project does not conflict with the County of San Mateo Energy Efficiency Climate Action Plan (EECAP). As new construction, the project complies with the applicable measures regarding green building, landscaping, and water efficiency. **Source:** Project Plans, 2013 San Mateo County Energy Efficiency Climate Action Plan, EECAP Development Checklist.				
8.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
Discussion: The project parcel and surrounding area are not considered forest land, nor do they host any such forest canopy. Therefore, the project poses no impact to such resources. **Source:** Project Plans, Project Location, County GIS Maps.				
8.d. Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?				X
Discussion: As discussed in Section 7.a.v., the project site and remaining vacant parcels are located about 500 feet from the coastline. Therefore, the project would not be impacted by coastal cliff/bluff erosion due to rising sea levels. **Source:** Project Location.				
8.e. Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
Discussion: As discussed in Section 7.a.v., the project site and remaining vacant parcels are located about 500 feet from the coastline. Therefore, the project would not be impacted by coastal cliff/bluff erosion due to rising sea levels. **Source:** Project Location.				
8.f. Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood			X	

	hazard delineation map?				

Discussion: The project site is not located in an anticipated 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA). The project site and associated parcels are located in FEMA Flood Zone X, which is considered a minimal flood hazard (Panel No. 06081C0138F, effective August 2, 2017). FEMA Flood Zone X areas have a 0.2% annual chance of flooding, with areas with one (1) percent annual chance of flooding with average depths of less than 1-foot. Therefore, the project impact would be less than significant.

Source: Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0138F, effective August 2, 2017.

8.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?				X

Discussion: The project site is not located in an anticipated 100-year flood hazard area as mapped by FEMA. Pursuant to the discussion in Section 7.f., the project poses no impact.

Source: Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0138F, effective August 2, 2017.

9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
9.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X

Discussion: The project does not involve the use, transport, or disposal of hazardous materials.

Source: Project Plans.

9.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X

Discussion: The use of hazardous materials is not proposed for this project.

Source: Project Plans.

9.c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within				X

<table>
<tr><td></td><td>one-quarter mile of an existing or proposed school?</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="6">Discussion: The emission of hazardous materials, substances, or waste is not proposed for this project. The project parcel is also not located within one-quarter mile of an existing or proposed school.
Source: Project Plans, Project Location.</td></tr>
<tr><td>9.d.</td><td>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?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="6">Discussion: The project site and the remaining vacant parcels are not included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and therefore would not result in the creation of a significant hazard to the public or the environment.
Source: Project Location, California Department of Toxic Substances Control.</td></tr>
<tr><td>9.e.</td><td>For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td colspan="6">Discussion: The project site is located approximately 900 feet east of the easterly boundary of the Half Moon Bay Airport, a public airport operated by the County Department of Public Works. Development within certain proximities of the airport are regulated by applicable policies and requirements of the Final Half Moon Bay Airport Land Use Compatibility Plan (ALUCP), as adopted by the City/County Association of Governments (C/CAG) on October 9, 2014. The overall objective of the ALUCP safety compatibility guidelines is to minimize the risks associated with potential aircraft accidents for people and property on the ground in the event of an aircraft accident near an airport and to enhance the chances of survival of the occupants of an aircraft involved in an accident that occurs beyond the runway environment. The ALUCP has safety zone land use compatibility standards that restrict land use development that could pose particular hazards to the public or to vulnerable populations in case of an aircraft accident.
A large majority of the project site is located in the Airport Influence Area (Runway Safety Zone 7), where accident risk level is considered to be low. The bathroom/laundry facility would be located within this zone.
A small portion of the west corner of the project site (approximately .13 acre of the 3.356 acres of the total site) is located in the Airport Influence Area (Zone 2), the Inner Turning Zone (ITZ), where accident risk level is considered to be moderate to high encompassing approximately seven percent of general aviation aircraft accidents. The ITZ Zone does not prohibit uses such as RV parks. Furthermore, the bathroom/laundry facility would be located outside of this zone. Additionally, the proposed use complies with the other ITZ development conditions in the Safety Criteria Matrix of the ALUCP such as locating the structure a maximum distance from extended runway centerline and maintaining a less than 35-ft. building height. No project structures are proposed within the ITZ.</td></tr>
</table>

The maximum height of any RVs parked in the ITZ zone would not exceed the height limit of the CCR zoning district (28 feet).

Based on the discussion above, staff has determined that the proposed project complies with the safety compatibility criteria and poses a less than significant impact.

Source: Project Plans, Project Location, 2014 Final Half Moon Bay Airport Land Use Compatibility Plan.

9.f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	

Discussion: The project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. The proposed project would not impede, change the configuration of, or close any roadways that could be used for emergency purposes. However, as discussed in Section 17, the project would contribute additional traffic to existing roadways, but the level of impact is considered less than significant and does not require mitigation. Therefore, the project poses no impact.

Source: Project Plans, Project Location, County GIS Maps.

9.g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

Discussion: The project site is not located within a Fire Hazard Severity Zone (State Responsibility Area). The project site is currently vegetated, undeveloped land which is located within an urban, developed area. Project implementation would result in the construction of a paved and landscaped site that would reduce risk of wildland fire in the area. Additionally, the project was reviewed by Coastside Fire Protection District (CFPD) and received conditional approval subject to compliance with the California Building Code for hard wired smoke detectors, an automatic fire sprinkler system, and ignition resistant construction and materials, among other fire prevention requirements. No further mitigation, beyond compliance with the standards and requirements of the CFPD, is necessary.

Source: Project Location, California State Fire Severity Zones Maps, Coastside Fire Protection District.

9.h.	Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X

Discussion: While no housing is proposed as part of this project, the project includes a total of 50-parking spaces for overnight stays within recreational vehicles. The project would not place structures within a 100-year flood hazard area as the project site is not located within a flood hazard zone that will be inundated by a 100-year flood.

Source: Project Plans.

9.i. Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: As discussed in Section 8.f., the project site is located in Flood Zone X, an area of minimal flood hazard. The project would not place structures within a 100-year flood hazard area as the project site is not located within a flood hazard zone that will be inundated by a 100-year flood. **Source:** Project Location, County GIS Maps, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0138F, effective August 2, 2017.				
9.j. 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?				X
Discussion: In addition to the discussion Section 9.i., no dam or levee is located in close proximity to the project site or remaining vacant parcels. Therefore, there is no risk of flooding due to failure of a dam or levee. **Source:** Project Plans, Project Location, County GIS Maps, San Mateo County Hazards Maps.				
9.k. Inundation by seiche, tsunami, or mudflow?			X	
Discussion: While no housing is proposed as part of this project and the bathroom and laundry facility building is the only structure, the project includes a total of 50-parking spaces for overnight stays within recreational vehicles. According to the San Mateo County General Plan Hazards Map, only a small portion of landscaping in the southwest area of the project parcel is located within a San Mateo County General Plan tsunami and seiche inundation area. Furthermore, the project site is not located in an area of high landslide susceptibility (which could contribute to mudflow). **Source:** Project Plans, Project Location, County GIS Maps, San Mateo County Hazards Maps.				

10. HYDROLOGY AND WATER QUALITY. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
10.a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?			X	

Discussion: As the proposed project would result in 1.17 acres of new or replaced impervious surface, the project has the potential to generate polluted stormwater runoff during project operation. The project would be required to comply with the County's Drainage Policy requiring post-construction stormwater flows to be at, or below, pre-construction flow rates. Drainage analysis for the RV park was prepared by Sigma Prime, dated November 2018, detailing the proposed drainage system. The drainage reports state that the proposed detention system is designed such that post-development runoff would be less than or equal to the pre-development runoff, and no runoff is diverted from one drainage area to another. The reports state that there would be no appreciable downstream impacts and that current drainage patterns indicate minimal runoff from adjacent impervious surfaces onto the subject property. Runoff from the RV park would be filtered through and be detained by the proposed bioretention areas. This would result in a net decrease of the volume of runoff that ultimately reaches the Pacific Ocean through the existing storm drainage system.

The proposed project, including the discussed drainage report and plans, were reviewed and approved by the Department of Public Works. Based on these findings, the project impact will be less than significant.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated November 2018).

10.b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	

Discussion: The project site is currently vegetated, undeveloped land which allows surface water to infiltrate into the groundwater basin. The proposal includes creation of 34,967 sq. ft. of new impervious surface. Run-off from these new surfaces would be directed to on-site bio-retention systems that would allow surface water to infiltrate into the groundwater basin. The project site does not contain any wells nor does the project involve any new wells. The project would connect to Coastside County Water District (CCWD).

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

10.c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
i. Result in substantial erosion or siltation on- or off-site;		X		

Discussion: The proposed project does not involve the alteration of the course of a stream or river. The project involves the construction of 1.17 acres of impervious area. The proposed development on the project parcel would include drainage features that have been reviewed and approved by the Department of Public Works. With Mitigation Measures 2 and 3 to address potential impacts during construction activities, the project would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	

Discussion: Pursuant to the discussion in Sections 10.a. and 10.c.i., the proposed project would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	

Discussion: Pursuant to the discussion in Section 10.a., the proposed project would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

iv. Impede or redirect flood flows?			X	

Discussion: Pursuant to the discussion in Sections 10.a. and 10.c.i, the proposed project would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

10.d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	

Discussion: Pursuant to the discussion in Section 9.k., the proposed project will have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, San Mateo County Hazards Maps.

10.e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion: Pursuant to the discussion in Sections 10.a. and 10.b, the proposed project would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

10.f. Significantly degrade surface or ground-water water quality?			X	

Discussion: As discussed in Section 10.b, the project site does not contain any wells nor does the project involve any new wells. Thus, the project would pose a less than significant impact.

Source: Project Plans, Project Location, San Mateo County Hazards Maps, Sigma Prime Geotechnical Study (dated May 17, 2018).

10.g. Result in increased impervious surfaces and associated increased runoff?		X		

Discussion: Pursuant to the discussion in Section 10.c. and the cited mitigation measures, the proposed project would create new impervious surfaces but would not result in increased runoff and would have a less than significant impact.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

11. LAND USE AND PLANNING. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
11.a. Physically divide an established community?				X

Discussion: The proposed RV park would result in infill development of a parcel on the boundary of an urban area surrounded by existing commercial uses to the north, south, and east, single-family residential uses to the north, and agricultural land to the west. The project does not include a proposal to divide lands or include development that would result in the division of an established community.

Source: Project Plans, Project Location.

11.b. Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

Discussion: Staff has reviewed the project and has not found a conflict with applicable policies of the County's Local Coastal Program (LCP) and applicable CCR, MH, and Design Review (DR) District Zoning regulations as discussed in Section 1.f that would cause a significant environmental impact. Based on the discussion provided in Section 1.f, the project is in compliance with all

<table>
<tr><td colspan="5">applicable Design Review standards. Therefore, the project impact would be less than significant.
Source: San Mateo County LCP; County Zoning Regulations.</td></tr>
<tr><td>11.c. Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td colspan="5">Discussion: The project would not serve to encourage off-site development of presently undeveloped areas. The project scope includes the construction of an RV park, a commercial recreation use. An RV park already exists within the vicinity of the project site, as well as restaurants and stores in the area to serve visitors. The project would be connected to already available municipal water from the Coastside County Water District and sewer services from the Granada Community Services District.
Source: Project Plans, Project Location, Coastside County Water District, Granada Community Services District.</td></tr>
</table>

<table>
<tr><td colspan="5">12. MINERAL RESOURCES. Would the project:</td></tr>
<tr><td></td><td><i>Potentially Significant Impacts</i></td><td><i>Significant Unless Mitigated</i></td><td><i>Less Than Significant Impact</i></td><td><i>No Impact</i></td></tr>
<tr><td>12.a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The proposed project neither involves nor results in any extraction or loss of mineral resources. Therefore, the project poses no impact.
Source: Project Plans.</td></tr>
<tr><td>12.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: There are no known mineral resources on the project parcel; therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site as delineated on a local general plan, specific plan, or other land use plan.
Source: Project Plans.</td></tr>
</table>

13. **NOISE**. Would the project result in:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
13.a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	

Discussion: The proposed project would not produce any long-term significant noise source. The project would generate short-term noise associated with grading and construction activities. The project site is not adjacent to any noise sensitive uses, such as residential uses, hospitals or schools. Additionally, the short-term noise from grading and construction activities will be temporary, where volume and hours are regulated by Section 4.88.360 (Exemptions) of the San Mateo County Ordinance Code for Noise Control which limits noise sources associated with demolition, construction, repair, remodeling, or grading of any real property to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. The Section prohibits such activities on Sundays, Thanksgiving, and Christmas and limits noise levels produced by construction activities to a maximum of 80-dBA level at any one moment. Therefore, the County's noise regulations would limit potential temporary noise impacts to a less than significant level.

Source: Project Plans, Project Location, San Mateo County Ordinance Code.

13.b. Generation of excessive ground-borne vibration or ground-borne noise levels?		X		

Discussion: Generation of excessive ground-borne vibration or noise levels is expected during grading and construction activities. However, construction activities that typically generate the most severe vibrations, such as blasting and pile driving, would not occur for the project. Mitigation Measure 14 in Section 13.a. is provided to ensure that the impact is less than significant.

Source: Project Plans, Project Location, San Mateo County Ordinance.

13.c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?			X	

Discussion: The project site is located approximately 0.2 miles east of the eastern boundary of the Half Moon Bay Airport, a public airport operated by the County Department of Public Works. The project site is not located within the airport's noise exposure contours. Thus, visitors to the RV Park would not be exposed to excessive noise levels. Therefore, the project poses a less than significant impact.

Source: Project Plans, Project Location, 2014 Final Half Moon Bay Airport Land Use Compatibility Plan.

<table>
<tr><td colspan="5">14. POPULATION AND HOUSING. Would the project:</td></tr>
<tr><td></td><td><i>Potentially Significant Impacts</i></td><td><i>Significant Unless Mitigated</i></td><td><i>Less Than Significant Impact</i></td><td><i>No Impact</i></td></tr>
<tr><td>14.a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The proposed RV park is a visitor-serving use that is accessible using existing roads and would be served by existing utility infrastructure and would therefore not induce any significant population growth. Therefore, the project poses no impact.
Source: Project Plans, Project Location.</td></tr>
<tr><td>14.b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The proposed RV park would be located on an undeveloped parcel; therefore, no existing housing would be displaced. Therefore, the project poses no impact.
Source: Project Plans, Project Location.</td></tr>
</table>

<table>
<tr><td colspan="5">15. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the 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:</td></tr>
<tr><td></td><td><i>Potentially Significant Impacts</i></td><td><i>Significant Unless Mitigated</i></td><td><i>Less Than Significant Impact</i></td><td><i>No Impact</i></td></tr>
<tr><td>15.a. Fire protection?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>15.b. Police protection?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td>15.c. Schools?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>15.d. Parks?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>15.e. Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply</td><td></td><td></td><td></td><td>X</td></tr>
</table>

systems)?				

Discussion: The proposed project is to construct an RV park in a commercial area. The proposed project does not involve and is not associated with the provision of new or physically altered government facilities, nor will it generate a need for an increase in any such facilities. Stays at the RV Park would be limited to 28 days and would not increase the demand for schools in the area or significantly increase the demand for parks in the area, as discussed in Section 16, below. The project may result in increased calls to the Sheriff's Office due to the potential for increased noise, parties, trash, and alcohol consumption associated with commercial recreation uses. Additionally, the applicant proposes to have an on-site manager present at all times to monitor the RV Park and to enforce applicable policies relating to excessive noise, partying, trash, and alcohol consumption. The RV Park will also have an established quiet time between 10:00. P.M. and 8:00 A.M. In addition, the County Sherriff regularly patrols the area and the nearby Pillar Point RV Park. The on-site manager will only contact the Sheriff's Office if they cannot control a given situation.

Per the review of the Coastside Fire Protection District, the project would not disrupt acceptable service ratios, response times or performance objectives of the Coastside Fire Protection District. Therefore, the project poses no impact.

Source: Project Plans, Project Location, Coastside Fire Protection District.

16. RECREATION. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
16.a. Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X

Discussion: Stays at the RV Park would be limited to 28 days and would not significantly increase the demand for parks in the area. The RV Park would add to existing motels, hotels, camping options in the area and may increase visitation to existing State and local parks. The property owner would be required to pay a Transient Occupancy Tax (TOT Tax) for each stay which would contribute to the County's General Fund which can be used to off-set of the cost of maintaining the County's tourism infrastructure.

Source: Project Plans, Project Location.

16.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Discussion: Pursuant to the discussion in Section 16.a., the proposed project would have a less than significant impact.

Source: Project Plans.

17. **TRANSPORTATION**. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
17.a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and parking?			X	

Discussion: A Traffic Impact Analysis (Hexagon analysis), dated January 18, 2019, was prepared by Hexagon Transportation Consultant, Inc., was peer-reviewed for the County by DKS Associates, and was subsequently found to be sufficient by DKS associates. According to the Hexagon analysis, the proposed development would generate a total of 20 trips (7 incoming and 13 outgoing) during the AM peak hour, 25 trips (16 incoming and 9 outgoing) during the PM peak hour, and 24 trips (11 incoming and 13 outgoing) during the Saturday midday peak hour. Per the Screening Thresholds for Land Use Projects section of the Technical Advisory on Evaluating Transportation Impacts in CEQA document published by the Governor's Office of Planning and Research, the proposed project "may be assumed to cause a less-than significant transportation impact" because it generates or attracts fewer than 110 trips per day.

With respect to compliance with the Department of Public Works' 2013 Traffic Impact Study Requirements, the project does not meet the threshold of a significant adverse impact on traffic conditions in San Mateo County. The Hexagon analysis determined that under all scenarios with and without the project, the signalized study intersection, Cabrillo Highway (SR 1)/Capistrano Road, would operate at an acceptable level of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours. In addition, the analysis results show that under all scenarios with and without the project, the two-way stop-controlled study intersection would operate at LOS C or better during all peak hours. The analysis indicates that vehicles on the stop-controlled approaches (the Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.

According to the Hexagon analysis, the proposed development would provide compliant standard and emergency access to and circulation around the RV park. The traffic trips (comprised of guests/visitors to) generated by the new RV Park would not result in a significant increase in vehicles on Capistrano Road, and thus would pose no significant safety impact to other vehicles, pedestrians or bicycles. The Hexagon analysis notes that the overall network of sidewalks and crosswalks in the study area has good connectivity and provides pedestrians with safe routes to buses and other points of interest in the vicinity of the project site and that the sidewalks and bikeways in the vicinity of the project site are adequate to serve the proposed RV park.

The adequacy of access, along Capistrano Road, to and from the site has been reviewed by both the County's Department of Public Works and the Coastside Fire Protection District, who have concluded that such access complies with their respective policies and requirements.

Source: Project Plans, Project Location, Hexagon Transportation Consultants, Inc. 100 Capistrano Road Harbor Village RV Park Draft Traffic Impact Analysis (dated January 18, 2019), Screening Thresholds for Land Use Projects section of the Technical Advisory on Evaluating Transportation Impacts in CEQA, DKS Associates Draft Peer Review of Princeton Harbor RV Park TIA (dated

November 30, 2018), Coastside Fire Protection District.				
17.b. Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) *Criteria for Analyzing Transportation Impacts*?				X
Discussion: Per CEQA Guidelines Section 15064.3, Subdivision (c) *Applicability*, the use of Vehicle Miles Traveled (VMT) will apply statewide on July 1, 2020; however, the project is consistent. **Source:** CEQA Guidelines Section 15064.3, Subdivision (c) *Applicability*.				
17.c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
Discussion: Pursuant to the discussion in Section 17.a., the proposed project would have a less than significant impact. **Source:** Project Plans, Project Location, Hexagon Transportation Consultants, Inc. 100 Capistrano Road Harbor Village RV Park Draft Traffic Impact Analysis (dated January 18, 2019), Coastside Fire Protection District.				
17.d. Result in inadequate emergency access?			X	
Discussion: Pursuant to the discussion in Section 17.a., the proposed project would have a less than significant impact. **Source:** Project Plans, Project Location, Coastside Fire Protection District.				

18. TRIBAL CULTURAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
18.a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).				X

Discussion: The project is not listed in a local register of historical resources, pursuant to any local ordinance or resolution as defined in Public Resources Code Section 5020.1(k), the project poses no impact.

Source: Project Location, California Register of Historical Resources.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. (In applying the criteria set forth in Subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)		X		

Discussion: A Sacred Lands File and Native American Contacts List Request was sent to the Native American Heritage Commission on March 22, 2019. A record search of the Native American Heritage Commission Sacred Lands File was completed, and the results were negative. Although the project is not subject to Assembly Bill 52 (Tribal Consultation), as the County has no records of written requests for formal notification of proposed projects within the County from any traditionally or culturally affiliated California Native American tribes, the County seeks to satisfy the Native American Heritage Commission's best practices to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project to avoid inadvertent impacts on tribal cultural resources. On April 3, 2019, a letter was mailed via certified mail to the tribes identified by the Native American Heritage Commission. To date, no request for consultation was received. Therefore, while the project is not expected to cause a substantial adverse change to any potential tribal cultural resources pursuant to discussion in Sections 5.a. and 5.b., the following mitigation measures are recommended to minimize any potential significant impacts to unknown tribal cultural resources:

Mitigation Measure 15: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project, if the project has not yet been implemented.

Mitigation Measure 16: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 17: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Source: Project Plans, Project Location, Native American Heritage Commission, State Assembly Bill 52, California Historical Resources Information System Review Letter (dated March 26, 2019).

19. UTILITIES AND SERVICE SYSTEMS. Would the project:

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
19.a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	

Discussion: The proposed RV park would connect to and receive sewage services from the Granada Community Services District and water service from the Coastside County Water District. The proposed project does not involve or require any water or wastewater treatment facilities that would exceed any requirements of the Regional Water Quality Control Board. In addition, the project would connect to PG&E infrastructure for electric power.

As discussed in Section 10.a., as the proposed project would result in 1.17 acres of impervious surface and has the potential to generate polluted stormwater runoff during project operation, the permanent project would be required to comply with the County's Drainage Policy requiring post-construction stormwater flows to be at, or below, pre-construction flow rates. The proposed drainage system design, reviewed and approved by the Department of Public Works, would accommodate the proposed project, and ensure pre-construction runoff levels are maintained or reduced. Based on these findings, the project impact is expected to be less than significant.

Source: Project Plans, Project Location, County GIS Maps, Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018).

19.b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X

Discussion: The proposed RV park would have adequate water service connections from the Coastside County Water District. Therefore, the project poses no impact.

Source: Project Plans, Project Location, Coastside County Water District.

<table>
<tr><td>19.c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</td><td></td><td></td><td></td><td>X</td></tr>
<tr><td colspan="5">Discussion: The Granada Community Services District has indicated that they have adequate capacity to serve the project's sanitary sewerage demands. Therefore, the project poses no impact.
Source: Project Plans, Project Location, Granada Sanitary District.</td></tr>
<tr><td>19.d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td colspan="5">Discussion: The construction of the project would generate some solid waste, both during construction and after completion (on an ongoing basis typical for that generated by the RV park use). Stays at the RV Park would be limited to 28 days. Similar to all other properties in the Midcoast area, the RV park would receive municipal trash and recycling pick-up service by Recology. The County's local landfill facility is the Corinda Los Trancos (Ox Mountain) Landfill, located at 12310 San Mateo Road (State Highway 92), a few miles east of Half Moon Bay. This landfill facility has permitted capacity/service life until 2034. Therefore, the project impact is less than significant.
Source: San Mateo County Environmental Health Services.</td></tr>
<tr><td>19.e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?</td><td></td><td></td><td>X</td><td></td></tr>
<tr><td colspan="5">Discussion: Solid waste generated by the RV Park is expected to be minimal. Stays at the RV Park would be limited to 28 days. The project site would receive solid waste service by Recology. The landfill cited in Section 19.d. is licensed and operates pursuant to all Federal, State and local statutes and regulations as overseen by the San Mateo County Health System's Environmental Health Services. Therefore, the project impact would be less than significant.
Source: County Environmental Health Services.</td></tr>
</table>

<table>
<tr><td colspan="5">20. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</td></tr>
<tr><td></td><td><i>Potentially Significant Impacts</i></td><td><i>Significant Unless Mitigated</i></td><td><i>Less Than Significant Impact</i></td><td><i>No Impact</i></td></tr>
<tr><td>20.a. Substantially impair an adopted emergency response plan or emergency evacuation plan?</td><td></td><td></td><td></td><td>X</td></tr>
</table>

Discussion: The project parcel is approximately half a mile south of a state responsibility area classified as a very high fire hazard severity zone. Therefore, the project poses no impact. **Source:** Project Location, County GIS Maps.				
20.b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
Discussion: Pursuant to the discussion in Section 20.a., the proposed project would not exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. **Source:** Project Location, County GIS Maps.				
20.c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
Discussion: The project does not involve a new road, fuel break, emergency water source, power line or other associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. **Source:** Project Location, County GIS Maps.				
20.d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X
Discussion: Pursuant to the discussion in Section 20.a., the proposed project will have no impact. Additionally, the site is relatively flat. **Source:** Project Location, County GIS Maps.				

21. MANDATORY FINDINGS OF SIGNIFICANCE.

	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
21.a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause		X		

<table>
<tr><td>a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="5">Discussion: The project, as proposed and with implementation of all recommended mitigation measures discussed in the previous sections, would result in potential impacts that are less than significant.
Source: All Applicable Sources Previously Cited in This Document.</td></tr>
<tr><td>21.b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td colspan="5">Discussion: Based on the discussions in the previous sections where the project impact was determined to be less than significant or required mitigation measures to ensure a less than significant impact, the proposed project would not have impacts that are cumulatively considerable. This project would have a less than significant cumulative impact upon the environment and no evidence has been found that the project would result in broader regional impacts. The Big Wave Wellness Center and Office Park, which has not yet started construction, is the only other major project proposed for the area. The proposed RV Park is a smaller scale project which will take significantly less time to construct at approximately 10 to 12 months. Additionally, traffic patterns associated with this recreation use are likely to be different than traffic patterns generated by the Office Park, which may follow standard commute times.
Source: All Applicable Sources Previously Cited in This Document.</td></tr>
<tr><td>21.c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td colspan="5">Discussion: As discussed in the previous sections, the proposed project is to construct a new RV park. Based on the discussions in the previous sections where project impacts were determined to be less than significant, or mitigation measures were required to result in an overall less than significant impact, the proposed project would not cause significant adverse effects on human beings, either directly or indirectly.
Source: All Applicable Sources Previously Cited in This Document.</td></tr>
</table>

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
Bay Area Air Quality Management District		X	
Caltrans	X		Encroachment Permit
City		X	
California Coastal Commission (CCC)		X	No separate permit required; local decision is appealable to CCC
County Airport Land Use Commission (ALUC)		X	
Other: California Department of Housing and Community Development	X		Special Occupancy Park Permit
Regional Water Quality Control Board	X		Coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity
San Francisco Bay Conservation and Development Commission (BCDC)		X	
Sewer/Water District:		X	
State Department of Fish and Wildlife		X	
State Department of Public Health		X	
State Water Resources Control Board		X	
U.S. Army Corps of Engineers (CE)		X	
U.S. Environmental Protection Agency (EPA)		X	
U.S. Fish and Wildlife Service		X	

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.	X	
Other mitigation measures are needed.	X	

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: All exterior lights shall be designed and located so as to confine direct rays to the subject property and prevent glare in the surrounding area. A photometric plan shall be reviewed by the Planning Section during the building permit process to verify compliance with this condition. Prior to the final approval of the building permit, lighting shall be inspected and compliance with this requirement shall be verified.

Mitigation Measure 2: The applicant shall implement dust control measures, as listed below. Measures shall be included on plans submitted for the Building Permit and encroachment permit applications. The measures shall be implemented for the duration of any grading, demolition, and construction activities that generate dust and other airborne particles. The measures shall include the following:

a. Water all active construction areas at least twice daily.

b. Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind.

c. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.

d. Apply water three times daily or apply (non-toxic) soil stabilizers on all unpaved access roads, parking, and staging areas at the construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

e. Sweep daily (preferably with water sweepers) all paved access roads, parking, and staging areas at the construction sites.

f. Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.

g. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads within the project parcel to 15 miles per hour (mph).

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure 3: The applicant shall submit an Air Quality Best Management Practices Plan to the Planning and Building Department prior to the issuance of any grading permit “hard card” or building permit that, at a minimum, includes the “Basic Construction Mitigation Measures” as listed in Table 8-1 of the BAAQMD California Environmental Quality Act (CEQA) Guidelines (May 2011). The following Bay Area Air Quality Management District Best Management Practices for mitigating construction-related criteria air pollutants and precursors shall be implemented prior to beginning any grading and/or construction activities and shall be maintained for the duration of the project grading and/or construction activities:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour(mph).

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. Roadways and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

g. Idling times shall be minimized either by shutting equipment or vehicles off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485, of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications.

i. Minimize the idling time of diesel-powered construction equipment to two minutes.

j. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure 4: Pre-Construction Nesting Bird Surveys. Prior to any Project construction-related activities (such as tree removal, grubbing, grading or other land disturbing activities), the Project proponent shall take the following steps to avoid direct losses of active nests, eggs, and nestlings and indirect impacts to avian breeding success:

If construction-related activities occur only during the non-breeding season, between August 31 and February 1, no nest surveys will be required.

During the breeding bird season (February 1 through August 31), a qualified biologist shall survey areas intended for construction-related activities in the Project Area for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys shall include all potential habitats within 250 feet of activities for raptors, and 50 feet of activities for passerines. If results are positive for nesting birds, a qualified biologist shall advise as to whether avoidance procedures are necessary, subject to review and approval by the Community Development Director. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and minimum 250-foot buffer for most raptors) or seasonal avoidance. Once established, buffer areas around active nests may be reduced on a case-by-case basis based on guidance from a qualified biologist. The biologist shall consider factors such as topography, land use, Project activities, visual screening or line-of-site to active nest, and background noise levels when establishing a reduced nest buffer. The biologist shall advise whether full-time biological monitoring should be required during all activities that occur within reduced nest buffers in order to monitor the active nest(s) for signs of disturbance or "take."

Mitigation Measure 5: Environmental Training. All crewmembers shall attend an Environmental Awareness Training presented by a qualified biologist. The training shall include a description of the special-status species that may occur in the region, the project Avoidance and Minimization Measures, Mitigation Measures, the limits of the project work areas, applicable laws and regulations, and penalties for non-compliance. Upon completion of training, crewmembers shall sign a training form indicating they attended the program and understood the measures. Completed training form(s) shall be provided to the Project Planner before the start of project activities.

Mitigation Measure 6: Ground Disturbing Construction Activities. Ground disturbing construction-related activities shall occur during the dry season (June 1 to October 15) to facilitate avoidance of California red-legged frog. Regardless of the season, no construction shall occur within 24 hours following a significant rain event defined as greater than 1/4 inches of precipitation in a 24-hour period. Following a significant rain event and the 24-hour drying-out period, a qualified biologist shall conduct a preconstruction survey for California red-legged frog prior to the restart of any

Project activities.

Mitigation Measure 7: Wildlife Encounters. If any wildlife is encountered during Project activities, said encounter shall be reported to a qualified biologist and wildlife shall be allowed to leave the work area unharmed. Animals shall be allowed to leave the work area of their own accord and without harassment. Animals shall not be picked up or moved in any way.

Mitigation Measure 8: Vegetation Disturbance. Disturbance to vegetation shall be kept to the minimum necessary to complete the Project activities. Prior to the Current Planning Section's approval of the building permit for the project, the applicant shall submit a Biological Protection Plan, subject to Community Development Director review and approval, showing areas to remain undisturbed by construction-related activities and protected with recommended measures (such as temporary fencing with the type to be specified by a qualified biologist). To minimize impacts to vegetation, a qualified biologist shall work with the contractor to designate work areas (including all staging areas) and designate areas to remain undisturbed and protected.

Mitigation Measure 9: Vehicle Fueling and Maintenance. All fueling, maintenance of vehicles and other equipment, and staging areas should occur at least 50 feet from the drainage swale on the northeastern edge of the project area. The edge of the 50 feet buffer zone shall be marked using visible markers by a biologist no sooner than 30 days prior to the start of construction. Equipment operators and fueling crews shall ensure that contamination of the swale does not occur during such operations by restricting all activities to outside of the buffer zone. Prior to the start of construction-related activities, a plan to allow for prompt and effective response to any accidental spills shall be submitted and subject to review and approval by the Community Development Director. All workers should be informed of the importance of preventing spills, and of the appropriate measures to take should a spill occur.

Mitigation Measure 10: Erosion and Sediment Control BMPs. Prior to the Current Planning Section's approval of a building permit, the applicant shall revise and submit the Erosion and Sediment Control Plan, subject to review and approval by the project planner. The plan shall have been reviewed by a qualified biologist prior to submittal to the County. The plan shall include measures to prevent runoff to the drainage swale on the northeastern edge of the project area and demonstrate compliance with other erosion control requirements and mitigation measures. This shall include the installation of silt fences or straw wattles between work areas and any water sources such as the drainage swale, and around any spoil piles (e.g., loose asphalt, dirt, debris, construction-related materials) that could potentially discharge sediment into habitat areas. If straw wattles are used, they shall be made of biodegradable fabric (e.g., burlap) and free of monofilament netting.

Mitigation Measure 11: In the event that cultural, paleontological, or archaeological resources are encountered during site grading or other site work, such work shall immediately be halted in the area of discovery and the project sponsor shall immediately notify the Community Development Director of the discovery. The applicant shall be required to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The cost of the qualified archaeologist and of any recording, protecting, or curating shall be borne solely by the project sponsor. The archaeologist shall be required to submit to the Community Development Director, subject to review and approval, a report of the findings and methods of curation or protection of the resources. No further grading or site work within the area of discovery shall be allowed until the preceding has occurred. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 12: The applicants and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified immediately. Disposition of Native American remains shall comply with CEQA Guidelines Section 15064.5(e).

Mitigation Measure 13: The design of the proposed development (upon submittal of the Building Permit) on the subject parcel shall generally follow the recommendations cited in the Geotechnical Study prepared by Sigma Prime Geosciences, Inc. and its subsequent updates regarding seismic criteria, grading, slab-on grade construction, and surface drainage. Any such changes to the recommendations by the project geotechnical engineer cited in this report and subsequent updates shall be submitted for review and approval by the County's Geotechnical Engineer.

Mitigation Measure 14: At the time of building permit and encroachment permit application, the applicant shall revise as necessary and submit for review and approval the Erosion and Sediment Control Plan such that it shows how the transport and discharge of soil and pollutants from and within the project site would be minimized. The plans shall be designed to minimize potential sources of sediment, control the amount of runoff and its ability to carry sediment by diverting incoming flows and impeding internally generated flows, and retain sediment that is picked up on the project site through the use of sediment-capturing devices. The plans shall include measures that limit the application, generation, and migration of toxic substances, ensure the proper storage and disposal of toxic materials, and apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Sequence construction to install sediment-capturing devices first, followed by runoff control measures and runoff conveyances. No construction activities shall begin until after all proposed measures are in place.

b. Minimize the area of bare soil exposed at one time (phased grading).

c. Clear only areas essential for construction.

d. Within five (5) days of clearing or inactivity in construction, stabilize bare soils through either non-vegetative Best Management Practices (BMPs), such as mulching, or vegetative erosion control methods, such as seeding. Vegetative erosion control shall be established within two (2) weeks of seeding/planting.

e. Construction entrances shall be stabilized immediately after grading and frequently maintained to prevent erosion and to control dust.

f. Control wind-born dust through the installation of wind barriers such as hay bales and/or sprinkling.

g. Soil and/or other construction-related material stockpiled on-site shall be placed a minimum of 200 feet, or to the extent feasible, from all wetlands and drain courses. Stockpiled soils shall be covered with tarps at all times of the year.

h. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drains by using earth dikes, perimeter dikes or swales, or diversions. Use check dams where appropriate.

i. Provide protection for runoff conveyance outlets by reducing flow velocity and dissipating flow energy.

j. Use silt fence and/or vegetated filter strips to trap sediment contained in sheet flow. The maximum drainage area to the fence should be 0.5 acres or less per 100 feet of fence. Silt fences shall be inspected regularly, and sediment removed when it reaches 1/3 the fence height. Vegetated filter strips should have relatively flat slopes and be vegetated with erosion-resistant species.

k. Throughout the construction period, the applicant shall conduct regular inspections of the condition and operational status of all structural BMPs required by the approved erosion control plan.

l. No erosion or sediment control measures will be placed in vegetated areas.

m. Environmentally-sensitive areas shall be delineated and protected to prevent construction impacts per Mitigation Measure 10.

n. Control of fuels and other hazardous materials, spills, and litter during construction.

o. Preserve existing vegetation whenever feasible.

Mitigation Measure 15: Should any traditionally or culturally affiliated Native American tribe respond to the County's issued notification for consultation, such process shall be completed and any resulting agreed upon measures for avoidance and preservation of identified resources be taken prior to implementation of the project, if the project has not yet been implemented.

Mitigation Measure 16: In the event that tribal cultural resources are inadvertently discovered during project implementation, all work shall stop until a qualified professional can evaluate the find and recommend appropriate measures to avoid and preserve the resource in place, or minimize adverse impacts to the resource, and those measures shall be approved by the Current Planning Section prior to implementation and continuing any work associated with the project.

Mitigation Measure 17: Any inadvertently discovered tribal cultural resources shall be treated with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

_____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.

__X__ 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 of the mitigation measures in the discussion have been included as part of the proposed project. 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.

____
(Signature)

September 18, 2019	Project Planner
Date	(Title)

RSP:cmc – RSPDD0168_WCV.DOCX

ATTACHMENTS

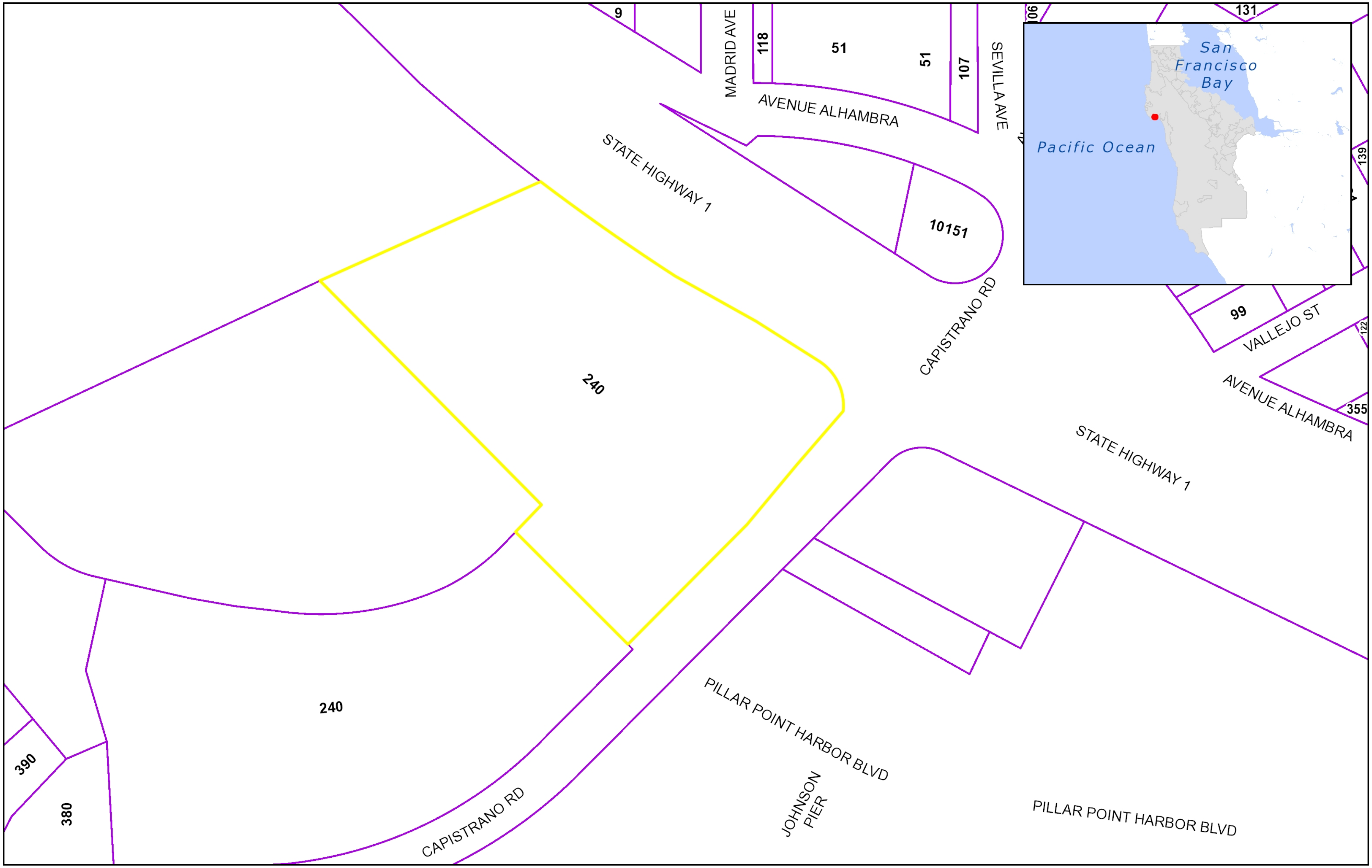
A. Location Map
B. Project Plans/Proposed RV Park Rules
C. SWCA Biological Resources Evaluation (dated November 2017)
D. California Historical Resources Information System Review Letter (dated April 10, 2019)
E. Holman & Associates Archeological Resources Reconnaissance Report for the Harbor Village RV Park Project
F. Sigma Prime Geotechnical Study (dated May 17, 2018)
G. Sigma Prime Geosciences, Inc. Harbor Village RV Park Drainage Report (dated March 2018)
H. Hexagon Transportation Consultants, Inc, 100 Capistrano Road Harbor Village RV Park Draft Traffic Impact Analysis (dated January 18, 2019)
I. DKS Associates Draft Peer Review of Princeton Harbor RV Park TIA (dated November 30, 2018)
J. Project EECAP Development Checklist

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

San Mateo County

PLN2017-00320 (APN: 047-081-430) / Pillar Point Project Developer



WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 2,256

San Mateo County Planning & Building Dept.

Owner/Applicant: **Pillar Point Developers/Stefanick**

Attachment: **A**

PLN2017-00320

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

PRINCETON HARBOR RV PARK
PLAN SUMMARY

August 2nd, 2017

As per suggested in the staff summary letter dated June 24th, 2015 in order to reduce the visual impact along the entrance to Capistrano road, the tent sites and the bath/laundry building have been relocated to the front of the project along side Capistrano road accompanied with an adjacent three foot high berm with shrubs that will reach a maximum hight of six feet and trees to grow a maximum of fifteen to eighteen feet. With the RV site being one to two feet lower than Capistrano road and the RV height's being between eight and ten feet high this landscape buffer will help shield the RV's from the public entering into the Princeton area.

As the site lighting photometry plan shows we are installing the minimal amount of lighting to allow the RV's and autos to navigate the park safely at night. The plan also shows that there will be very little, if any off site light spill. The lights will be equipped with motion sensors to turn on and off as vehicles pass by further reducing night time light spill. The lights will also have the ability to be dimmed or brightened by means of a hand held remote control unit.

The project signage will be located both on the existing primary sign at the corner of Cabrillo Highway and Capistrano Road, and the smaller existing sign located at the entrance to the Oceano Hotel parking lot.

As per staff recommendations the plan now has two tent and two RV handicap sites, and two car/van handicap parking spaces. We have added an additional trash enclosure area both with gated six foot high walls.

The Park will have an on-site manager on duty 24/7.

The maximum stay will be enforced at 28 days, with no long term stay beyond that allowed.

No RV will be allowed to stay at the park that is older than 12 years, unless in the opinion of the park manager RV's older than that are in a well kept condition.

Quiet hours will be between ten pm and eight am.

The parks landscaping will be maintained on a weekly basis.

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HARBOR VILLAGE RV PARK

VICINITY MAP

GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH THE 2016 CALIFORNIA BUILDING CODE, 2016 CAL GREEN BLDG. CODE, 2016 CALIFORNIA PLUMBING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA ELECTRICAL CODE CALIFORNIA ENERGY CODE, MUNICIPAL CODES AND ALL OTHER APPLICABLE LOCAL ORDINANCES.

2. DO NOT SCALE DRAWINGS. DIMENSIONS AS NOTED PREVAIL. DISCREPANCIES SHALL BE BROUGHT FORTH FOR CLARIFICATION TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK IN QUESTION.

SCOPE OF WORK

50 SPACES RV PARKING, 7 TENT SPACES AND SUPPORTING SINGLE STORY 845 SQFT LAUNDRY AND RESTROOM FACILITY AND SITE WORK.

DRAWING INDEX

T1	TITLE SHEET
SU-1	BOUNDARY & TOPOGRAPHIC SURVEY
C-1	GRADING & DRAINAGE PLAN
C-2	DETAILS & SECTION
C-3	EROSION & SEDIMENT CONTROL PLAN BEST MANAGEMENT PRACTICES
C-4	SEWER PLAN
L1.1	LANDSCAPE PLAN
L2.1	LANDSCAPE DETAILS
L3.1	HYDROZONE MWELO PLAN
L4.1	LANDSCAPE SITE RENDERINGS
L5.1	VISUAL ANALYSIS SITE SECTION
L6.1	IRRIGATION PLAN
L6.2	IRRIGATION DETAILS
A1	SITE PLAN
A2	GROUND FLOOR & ROOF PLAN
A3	EXTERIOR ELEVATIONS
E1	PHOTOMETRIC PLAN
1	HARBOR VILLAGE RV PARK - SIGNAGE
2	HARBOR VILLAGE RV PARK - SIGNAGE
1	ORIGINAL BASE PHOTO ONE
2	ORIGINAL BASE PHOTO TWO
3	ORIGINAL BASE PHOTO THREE

PROJECT DATA

OWNER: POINT PILLAR PROJECT DEVELOPERS LLC.

ADDRESS - 100 CAPISTRANO ROAD HALF MOON BAY, CA

PARCEL #: 047-081-450

LOT SIZE: 141,960 SF

ZONING: C-G

CONSTRUCTION TYPE: TYPE V-B

OCCUPANCY GROUP: B / U

PROPOSED BUILDING HEIGHT = 16'-7"

FLOOR AREA = 845 sqft

Jacobsen & Associates
ARCHITECTS
63 Monte Carlo Way, American Canyon, California 94503
Telephone: 650 / 726 - 5131 e-mail: ehjarchit@pocket.net

PLN2017-00320

STAMP
LICENSED ARCHITECT
ERIC H. JACOBSEN
NO. [illegible]
REN. 2/28/19
STATE OF CALIFORNIA

HARBOR VILLAGE RV PARK
100 CAPISTRANO RD.
HALF MOON BAY, CA

POINT PILLAR PROJECT DEVELOPERS, LLC
HALF MOON BAY, CA

SHEET TITLE
TITLE SHEET

NO.	REVISIONS	DATE:
1	PLANNING REVISIONS	3/4/18
2	PLANNING REVISIONS	12/17/18

PROJECT NO. 17489
DRAWN EHJ
FILE NAME:
CHECKED:
DATE: 11-14-17

SCALE:

SHEET NO.
T1
PLANNING

BASIS OF BEARINGS

BEARINGS SHOWN HEREON TAKEN FROM THE PARCEL MAP BY MICHAEL D. ASHLEY, WHICH WAS FILED FOR RECORD IN VOLUME 68 PM 7-8, SAN MATEO COUNTY RECORDS.

BENCHMARK

ELEVATIONS SHOWN HEREON ARE BASED UPON NGVD 29 ("MEAN SEA LEVEL") DATUM BASED UPON A GPS SURVEY, AND TYING TO THE NGS BENCHMARK, "TIDAL 5" - DISK IN HANDHOLE AT PRINCETON HARBOR - NGS PID "HT0455", ELEVATION: 11.45 FEET.

NOTES

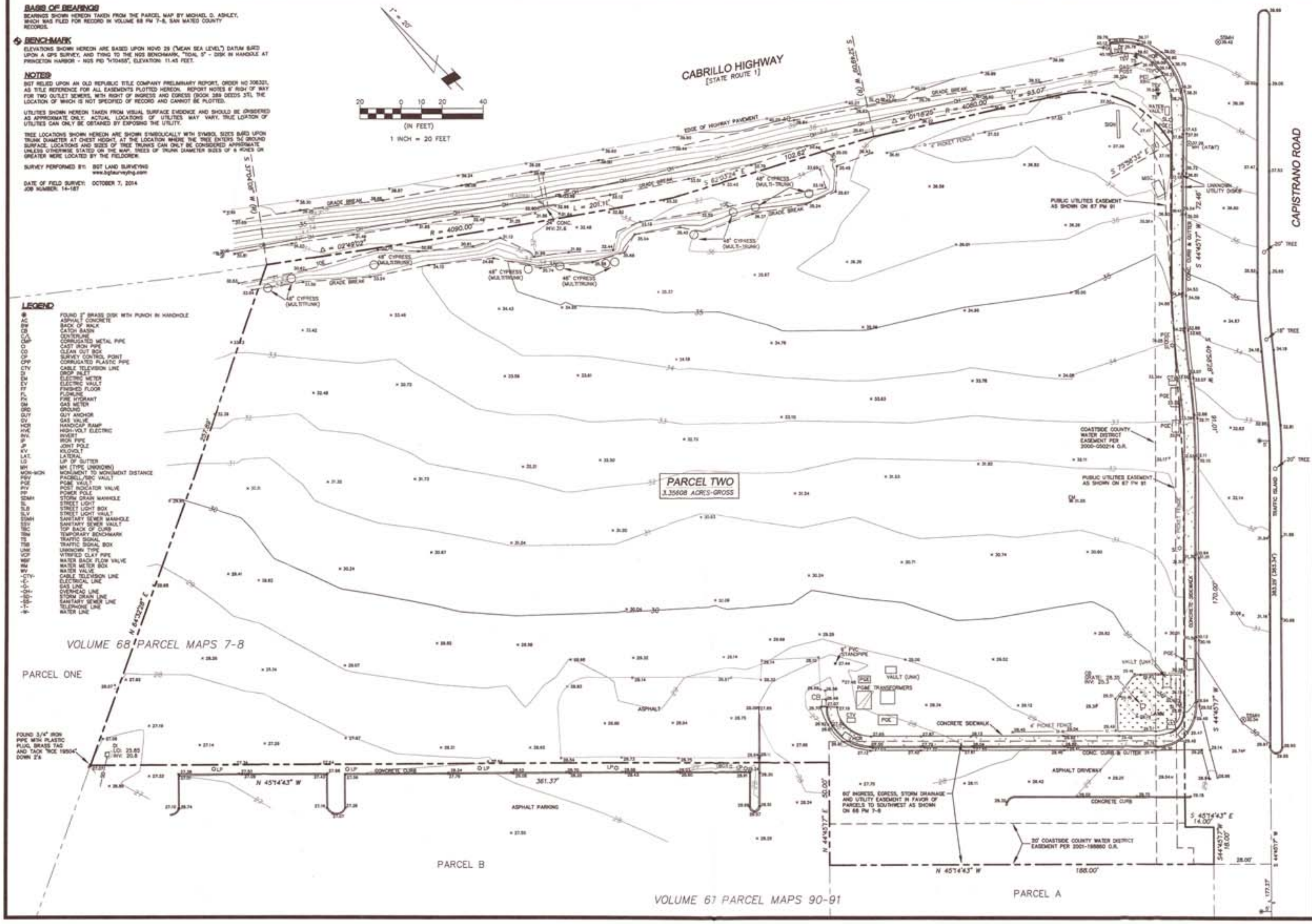
BGT RELIED UPON AN OLD REPUBLIC TITLE COMPANY PRELIMINARY REPORT, ORDER NO 306321, AS TITLE REFERENCE FOR ALL EASEMENTS PLOTTED HEREON. REPORT NOTES 6' RIGHT OF WAY FOR TWO OUTLET SEWERS, WITH RIGHT OF INGRESS AND EGRESS (BOOK 389 DEEDS 37), THE LOCATION OF WHICH IS NOT SPECIFIED OF RECORD AND CANNOT BE PLOTTED.

UTILITIES SHOWN HEREON TAKEN FROM VISUAL SURFACE EVIDENCE AND SHOULD BE CONSIDERED AS APPROXIMATE ONLY. ACTUAL LOCATIONS OF UTILITIES MAY VARY. TRUE LOCATION OF UTILITIES CAN ONLY BE OBTAINED BY EXPOSING THE UTILITY.

TREE LOCATIONS SHOWN HEREON ARE SHOWN SYMBOLICALLY WITH SYMBOL SIZES BASED UPON TRUNK DIAMETER AT CHEST HEIGHT, AT THE LOCATION WHERE THE TREE ENTERS THE GROUND SURFACE. LOCATIONS AND SIZES OF TREE TRUNKS CAN ONLY BE CONSIDERED APPROXIMATE UNLESS OTHERWISE STATED ON THE MAP. TREES OF TRUNK DIAMETER SIZES OF 6 INCHES OR GREATER WERE LOCATED BY THE FIELDCREW.

SURVEY PERFORMED BY: BGT LAND SURVEYING
www.bgtsurveying.com

DATE OF FIELD SURVEY: OCTOBER 7, 2014
JOB NUMBER: 14-187



LEGEND

●	FOUND 2" BRASS DISK WITH PUNCH IN HANDHOLE
AC	ASPHALT CONCRETE
BW	BACK OF WALK
CB	CATCH BASIN
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CI	CAST IRON PIPE
CO	CLEAN OUT BOX
CP	SURVEY CONTROL POINT
CPP	CORRUGATED PLASTIC PIPE
CTV	CABLE TELEVISION LINE
DI	DROP INLET
EM	ELECTRIC METER
EV	ELECTRIC VAULT
FF	FINISHED FLOOR
FL	FLOWLINE
FH	FIRE HYDRANT
GM	GAS METER
GRD	GROUND
GUY	GUY ANCHOR
GV	GAS VALVE
HCR	HANDICAP RAMP
HVE	HIGH-VOLT ELECTRIC
INV.	INVERT
IP	IRON PIPE
JP	JOINT POLE
KV	KILOVOLT
LAT.	LATERAL
LG	LIP OF GUTTER
MH	MH (TYPE UNKNOWN)
MON-MON	MONUMENT TO MONUMENT DISTANCE
PBV	PACBELL/SBC VAULT
PGE	PG&E VAULT
PIV	POST INDICATOR VALVE
PP	POWER POLE
SDMH	STORM DRAIN MANHOLE
SL	STREET LIGHT
SLB	STREET LIGHT BOX
SLV	STREET LIGHT VAULT
SSMH	SANITARY SEWER MANHOLE
SSV	SANITARY SEWER VAULT
TBC	TOP BACK OF CURB
TBM	TEMPORARY BENCHMARK
TS	TRAFFIC SIGNAL
TSB	TRAFFIC SIGNAL BOX
UNK	UNKNOWN TYPE
VCP	VITRIFIED CLAY PIPE
WBF	WATER BACK FLOW VALVE
WM	WATER METER BOX
WV	WATER VALVE
-CTV-	CABLE TELEVISION LINE
-E-	ELECTRICAL LINE
-G-	GAS LINE
-OH-	OVERHEAD LINE
-SD-	STORM DRAIN LINE
-SS-	SANITARY SEWER LINE
-T-	TELEPHONE LINE
-W-	WATER LINE

www.bgtsurveying.com

BGT LAND SURVEYING

NO. 7551

Assessor Parcel Number:
047-081-430

Prepared For:
KH PROPERTIES
PO BOX 138
HALF MOON BAY, CA 94019

BOUNDARY AND TOPOGRAPHIC SURVEY

PARCEL TWO - VOLUME 68 PARCEL MAPS 7-8

280 CAPISTRANO ROAD

HALF MOON BAY, COUNTY OF SAN MATEO, CALIFORNIA

Date: OCT. 2014
Scale: 1" = 20'
Contour Interval: 1'
Drawn: LHL

Drawing Number:
SU-1
SHEET 1 OF 1

Job No. 14-187

Correct

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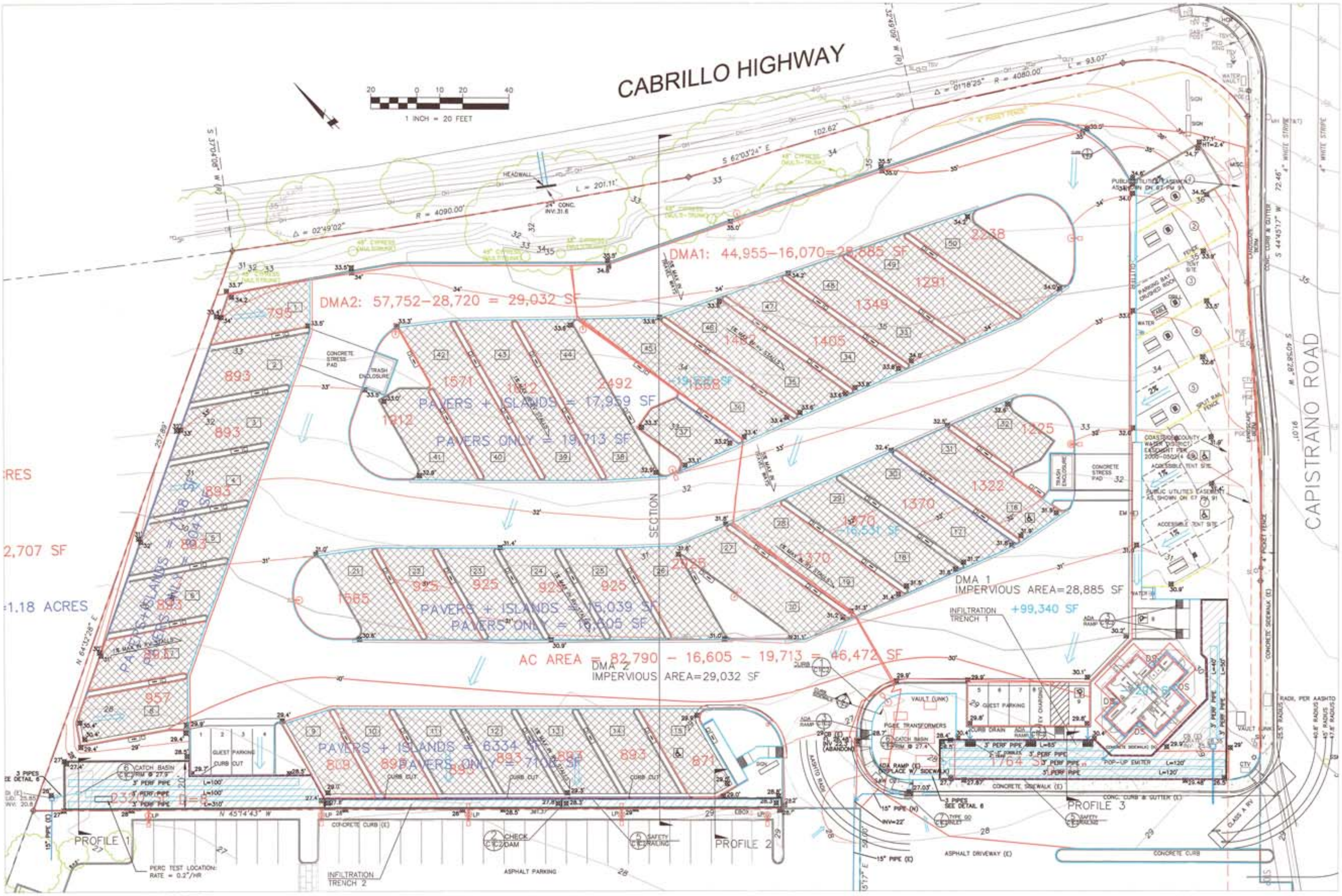
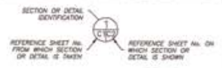
San Mateo County
Planning Division

PLN 2017-00320



SECTION AND DETAIL CONVENTION



No. 62264
9-30-19
CHARLES M. KISSICK

GENERAL NOTES

1. PLANS PREPARED AT THE REQUEST OF:
   RON STEFANICK, MANAGER TO PILLAR POINT PROJECT DEVELOPERS, LLC.
2. TOPOGRAPHY BY BGT SURVEYING, OCTOBER 7, 2014.
3. ELEVATION DATUM: NGVD 29.
3. THIS IS NOT A BOUNDARY SURVEY.

PROJECT DESIGN DATA

LOT AREA:	146,202 SF (3.36 ACRES)
EXISTING IMPERVIOUS AREA:	16,270 SF (0.37 ACRES)
PROPOSED IMPERVIOUS AREA:	51,237 SF (1.17 ACRES)
NET CHANGE:	34,967 SF ADDED (0.80 ACRES)
TOTAL % OF IMPERVIOUS COVERAGE:	35%

LEGEND

╱╲	EXISTING CONTOUR
╱╲	PROPOSED CONTOUR
31.9' ▪	SPOT ELEVATION (N)
DS ○	DOWNSPOUT
⇒	DIRECTION OF SURFACE DRAINAGE FLOW
╱	SDR 35 PVC DRAIN PIPE, DIAMETERS PER DETAIL 6
▨	INFILTRATION TRENCH
▦	PERVIOUS CONCRETE (ALL OTHER PAVED AREAS TO BE IMPERVIOUS ASPHALT)

(E) EXISTING
(N) NEW, OR PROPOSED

DRAINAGE NOTES

1. DRAINAGE INTENT: IT IS THE INTENT OF THESE DRAWINGS TO PROVIDE POSITIVE DRAINAGE IN ALL PAVED AND LANDSCAPED AREAS. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FOR ALL AREAS.

2. DRAINAGE FROM PARKING LOT TO OCCUR AS SHEET FLOW, DIRECTED TO INFILTRATION TRENCHES, AS SHOWN.

3. RAINWATER RUNOFF FROM PROPOSED ROOF TO BE COLLECTED WITH GUTTERS & DOWNSPOUTS & CONNECTED TO SOLID 4" PVC PIPE DIRECTED TO THE ADJACENT INFILTRATION TRENCH, VIA A POP-UP EMITER.

4. OVERFLOW FROM INFILTRATION TRENCHESS TO BE DIRECTED TO EXISTING STORM DRAIN SYSTEM VIA 8-INCH DIAMETER PIPES, AS SHOWN.

GRADING NOTES

CUT VOLUME, DUE TO AVERAGE 6-INCH STRIPPING DEPTH: 121,600 SF OF AREA TO BE STRIPPED X 0.5 FEET = 2252 CY

ADDITIONAL CUT VOLUME, TO REACH PAVING SUBGRADE = 1500 CY

NET CUT = 3752 CY X 1.2 = 4500 CY OFF-HAUL

FILL VOLUMES:
100 CY SOIL
1150 CY OF BASEROCK UNDER ASPHALT
1900 CY OF DRAIN ROCK UNDER PAVERS
925 CY OF DRAIN ROCK IN INFILTRATION TRENCHES
500 CY SOIL IN PLANTER ISLANDS

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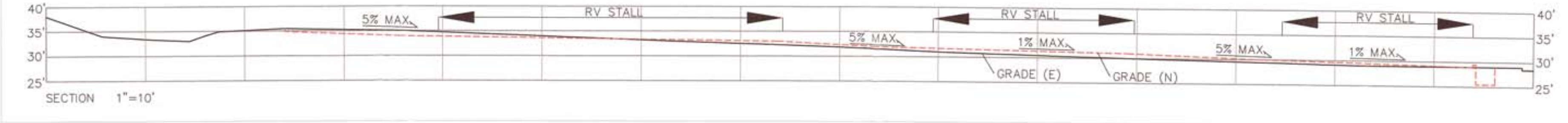
GRADING AND DRAINAGE PLAN

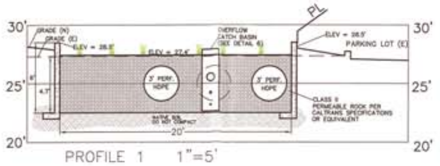
100 CAPISTRANO ROAD
HARBOR VILLAGE
RV PARK
APN: 047-081-430

DATE: 11-9-18	Sigma Prime Geosciences, Inc.
DRAWN BY: CMK	SIGMA PRIME GEOSCIENCES, INC. 332 PRINCETON AVENUE HALF MOON BAY, CA 94019 (650) 728-3590 SIGMAPRM@GMAIL.COM
CHECKED BY: AZG	
REV. DATE:	
REV. DATE:	
REV. DATE:	

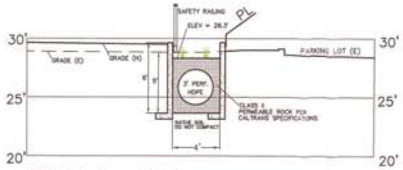
SHEET
C−1



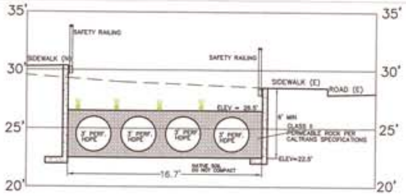
SECTION 1"=10'



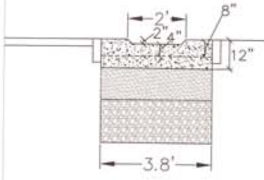
PROFILE 1 1"=5'



PROFILE 2 1"=5'



PROFILE 3 1"=5'



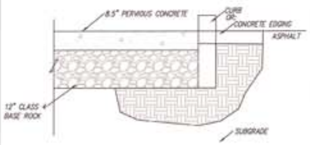
2 C1 C2 CHECK DAM
1"=2'

SIDEWALK NOTES

1. EXISTING SIDEWALK BETWEEN EXISTING CATCH BASIN AND PROPOSED CATCH BASIN SHALL BE REMOVED AND REPLACED TO MATCH EXISTING, EXCEPT WITH NEW ELEVATIONS AND FLOW DIRECTION (AT LOCATION SHOWN, AT ENTRANCE TO PROPOSED RV PARK)
2. NEW SIDEWALK TO BE CONSTRUCTED AT LOCATION SHOWN.
3. SIDEWALK SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE.
4. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED ON 10' SPACING, AT ENDS OF CURB RETURNS. MINIMUM JOINT DEPTH SHALL BE 1-1/4" WITH EDGER FINISH (R=1/8").
5. MINIMUM SIDEWALK WIDTH AT HORIZONTAL OBSTRUCTIONS SHALL BE 5'.
6. COLOR ADDITIVES OR PATTERN STAMP CONCRETE SHALL NOT BE USED WITHIN PUBLIC RIGHT-OF-WAY UNLESS APPROVED BY THE CITY ENGINEER.
7. DURING SIDEWALK RECONSTRUCTION, PEDESTRIAN TRAFFIC SHALL BE DIRECTED VIA DETOUR SIGNS TO A FENCED PATH ON THE PROPERTY, JUST INBOUND FROM THE SIDEWALK.
8. SIDEWALK RECONSTRUCTION SHALL TAKE NO MORE THAN 7 WORKING DAYS.
9. ALL SIDEWALK, CURB, AND GUTTER DAMAGED PRIOR TO OR DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR.

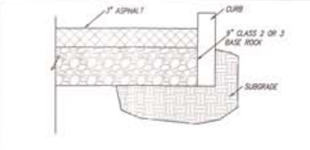
DUST CONTROL NOTES

(1) Water or cover stockpiles of debris, soil, sand or other materials that can be blown by the wind.
(2) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard.
(3) Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking and staging areas at construction sites. Also, hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
(4) Sweep daily (preferably with water sweepers) all paved access roads, parking and staging areas at construction areas.
(5) Sweep adjacent public streets daily (preferably with water sweepers) if visible soil material is carried onto them.
(6) Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)
(7) Limit traffic speeds on unpaved roads within the project parcel to 15 mph.
(8) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
(9) The approved plan shall be implemented for the duration of any grading and construction activities that generate dust and other airborne particles.

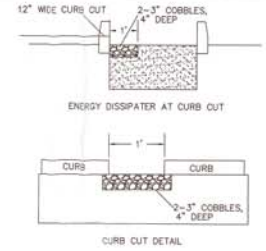


NOTE: PAVEMENT SECTION BASED ON CALTRANS PERVIOUS PAVEMENT DESIGN GUIDANCE MANUAL

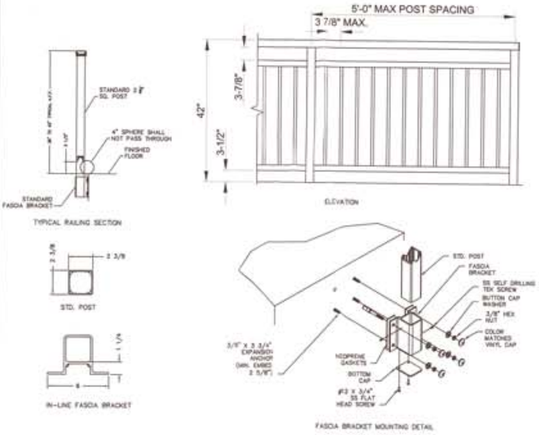
TYP. PERVIOUS PARKING LOT SECTION
NOT TO SCALE



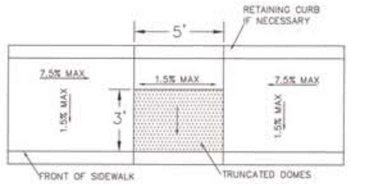
TYP. IMPERVIOUS PARKING LOT SECTION
NOT TO SCALE



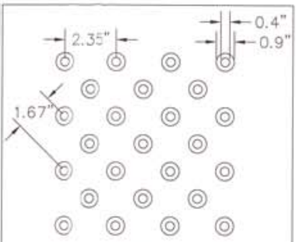
4 C1 C2 CURB CUT
NOT TO SCALE



5 C1 C2 SAFETY RAILING
NOT TO SCALE

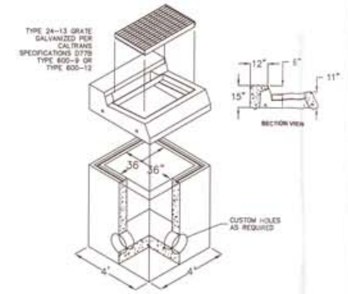


3 C1 C2 ADA RAMP-CALTRANS CASE C
NOT TO SCALE



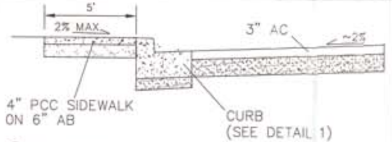
EACH DOME SHALL BE 0.2" HIGH.

TRUNCATED DOME DETAIL

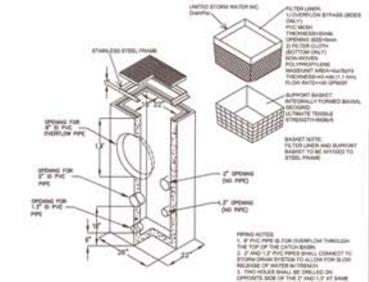


NOTES:
- MANHOLE STEPS ARE REQUIRED FOR BOXES OF 30" DEPTH OR GREATER.
- 8" BASE THICKNESS; 8" WALL THICKNESS
- DESIGN LOAD: H-20 TRAFFIC

7 C1 C2 CALTRANS TYPE GO INLET
NOT TO SCALE



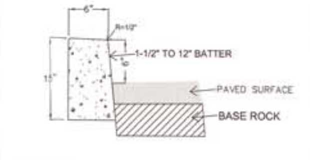
2 C1 C2 CURB, SIDEWALK
NOT TO SCALE



BASKET NOTE:
FILTER LINER AND SUPPORT BASKET TO BE AFFIXED TO STEEL FRAME

PIPING NOTES:
1. 8" PVC PIPE IS FOR OVERFLOW THROUGH THE TOP OF THE CATCH BASIN.
2. 2" AND 1.3" PVC PIPES SHALL CONNECT TO STORM DRAIN SYSTEM TO ALLOW FOR SLOW RELEASE OF WATER IN TRENCH.
3. TWO HOLES SHALL BE DRILLED ON OPPOSITE SIDE OF THE 2" AND 1.3" AT SAME LEVEL TO ALLOW FLOW OF WATER INTO CATCH BASIN AND THEN TO OUTLET PIPES.
4. LOWERMOST PIPES (1.3"-DIAMETER) CAN FLOW TO STORM DRAIN SYSTEM VIA GRAVITY.

6 C1 C2 CATCH BASIN
NOT TO SCALE



1 C1 C2 CURB
NOT TO SCALE

RAMP NOTES

1. THE SURFACE OF RAMP SHALL HAVE TRUNCATED DOMES, AS SHOWN. (SEE TRUNCATED DOME DETAIL)
2. TRANSITIONS FROM RAMPS TO WALKS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. THE BOTTOM OF THE RAMP SHALL HAVE A 1/2" LIP AT 45°.
3. INSTALL SLIP DOWELS 18" O.C. AT EXPANSION JOINTS.
4. MINIMUM WIDTH OF RAMP, NOT INCLUDING RETAINING CURBS, SHALL BE 5 FEET.
5. BACKFILL MATERIAL IN PLANTERS TO BE PLACED FLUSH WITH TOP OF CURB.
6. SUB-BASE MATERIAL WITHIN 2.5' OF SUBGRADE SHALL BE COMPACTED TO 95%

REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
EXPIRES 6-30-19
CIVIL
STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.

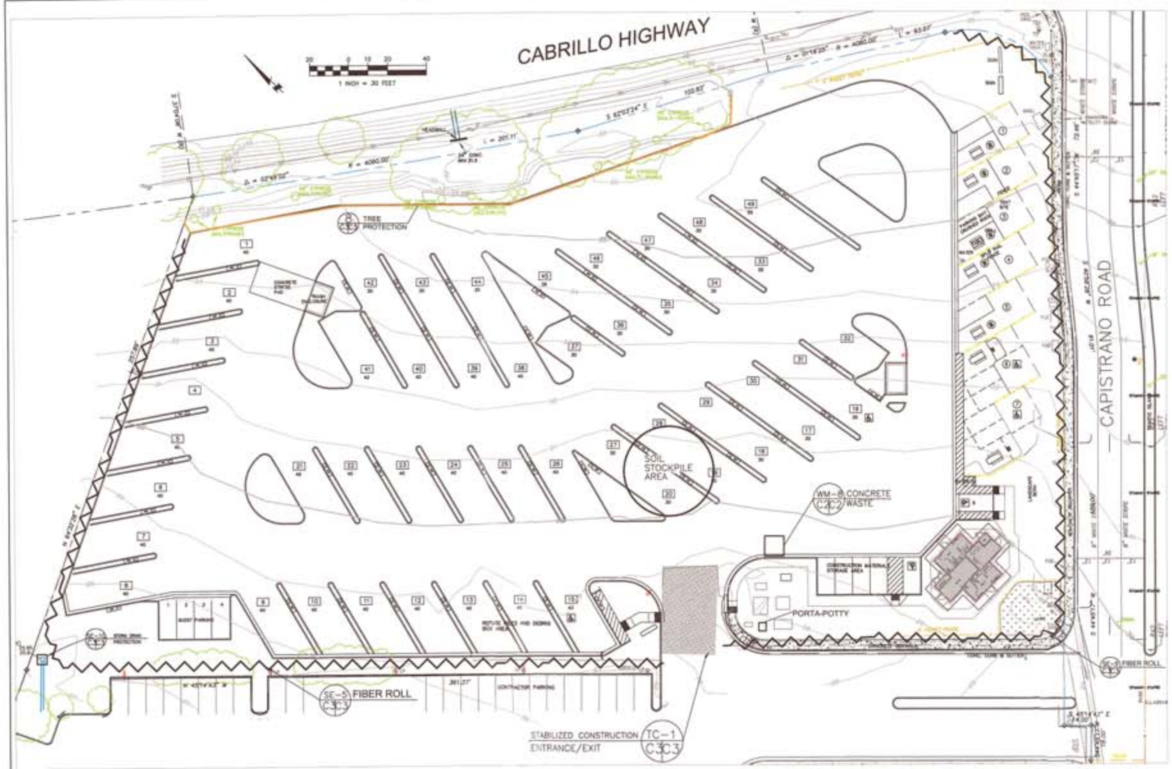
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019
(650) 728-3590
SIGMAPRIM@GMAIL.COM

DATE: 11-9-18
DRAWN BY: CMK
CHECKED BY: AZG
REV. DATE:
REV. DATE:
REV. DATE:

DETAILS,
SECTION

100 CAPISTRANO ROAD
HARBOR VILLAGE
RV PARK
APN: 047-081-430

SHEET
C-2



EROSION CONTROL NOTES

〰 FIBER ROLE
INSTALL AT LOCATIONS SHOWN.
AFIX AS SHOWN IN DETAIL SE-5

1. GRADING SHALL ONLY BE ALLOWED DURING THE GRADING MORATORIUM WITH APPROVAL FROM THE COUNTY, PROVIDED THE FOLLOWING PROVISIONS ARE FOLLOWED.
2. NO GRADING SHALL TAKE PLACE DURING RAINY WEATHER OR FOR A PERIOD OF AT LEAST 24 HOURS FOLLOWING RAIN.
3. ALL EXPOSED SOIL SHALL BE TEMPORARILY PROTECTED FROM EROSION WITH JUTE NETTING.
4. ALL STOCKPILED SOIL SHALL BE COVERED AT ALL TIMES AND REMOVED FROM SITE AS SOON AS POSSIBLE, IF SCHEDULED FOR OFF-HAUL.
5. ALL EXPOSED SURFACES SHALL BE PERMANENTLY PROTECTED FROM EROSION WITH SEEDING AND/OR LANDSCAPING. SEED MIX SHALL BE 75 LB PER ACRE ANNUAL RYGRASS OR APPROVED SUBSTITUTE. SEED SHALL BE COVERED WITH STRAW MULCH AT A RATE OF 2 TONS/ACRE.
6. ROCKED CONSTRUCTION ENTRANCE SHALL BE 40 FEET LONG BY 17 FEET WIDE AND CONFORM TO THE FOLLOWING:
   A. THE MATERIAL FOR THE PAD SHALL BE 3 TO 6 INCH STONE.
   B. PAD SHALL BE NOT LESS THAN 12" THICK.
   C. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.
   D. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA THAT DRAINS TO THE CONCRETE WASHOUT AREA.
7. CONCRETE WASHOUT AREA SHALL BE SURROUNDED BY A SINGLE LAYER OF SAND BAGS TO CONTAIN FLUIDS. CHANNEL INTO AREA SHALL BE CLEARED TO ALLOW TIRE DEBRIS (SEE NOTE 6.D. ABOVE)

EROSION CONTROL POINT OF CONTACT

THIS PERSON WILL BE RESPONSIBLE FOR EROSION CONTROL AT THE SITE AND WILL BE THE COUNTY'S MAIN POINT OF CONTACT IF CORRECTIONS ARE REQUIRED.

NAME: PILLER POINT PROJECT DEVELOPERS, LLC

TITLE/QUALIFICATION: MANAGER

PHONE: 650-430-5740

PHONE:

E-MAIL: RONSTEFANICK@ICLOUD.COM

USE OF PLASTIC SHEETING BETWEEN OCTOBER 1ST AND APRIL 30TH IS NOT ACCEPTABLE, UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH FIBER ROLLS CONTAINING THE BASE OF THE STOCKPILE.

TREE PROTECTION NOTES

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY GRADING AND REMAIN ON-SITE THROUGHOUT CONSRUCTION PROCESS.

2. TREE PROTECTION FENCES SHALL BE INSTALLED AS CLOSE TO DRIP LINES AS POSSIBLE.

3. OWNER/BUILDER SHALL MAINTAIN TREE PROTECTION ZONES FREE OF EQUIPMENT AND MATERIALS STORAGE AND SHALL NOT CLEAN ANY EQUIPMENT WITHIN THESE AREAS.

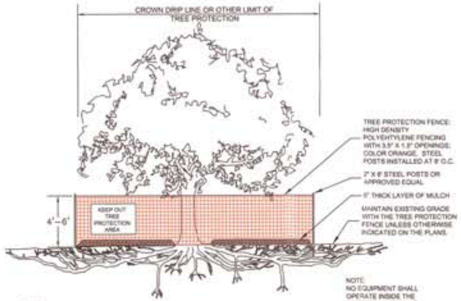
4. ANY LARGE ROOTS THAT NEED TO BE CUT SHALL BE INSPECTED BY A CERTIFIED ARBORIST OR REGISTERED FORESTER PRIOR TO CUTTING, AND MONITORED AND DOCUMENTED.

5. ROOTS TO BE CUT SHALL BE SEVERED WITH A SAW OR TOPPER.

6. PRE-CONSTRUCTION SITE INSPECTION WILL BE REQUIRED PRIOR TO ISSUANCE OF BUILDING PERMIT.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

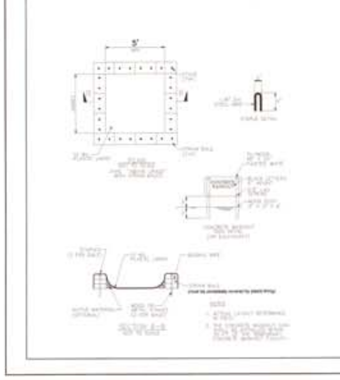
- There will be no stockpiling of soil. All excavated soil will be hauled off-site as it is excavated.
- Perform clearing and earth-moving activities only during dry weather. Measures to ensure adequate erosion and sediment control shall be installed prior to earth-moving activities and construction.
- Measures to ensure adequate erosion and sediment control are required year-round. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 30.
- Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
- Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- Use sediment controls or filtration to remove sediment when dewatering site and obtain Regional Water Quality Control Board (RWQCB) permit(s) as necessary.
- Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
- Limit construction access routes to stabilized, designated access points
- Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
- Train and provide instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.
- Placement of erosion materials is required on weekends and during rain events.
- The areas delineated on the plans for parking, grubbing, storage etc., shall not be enlarged or "run over."
- Dust control is required year-round.
- Erosion control materials shall be stored on-site



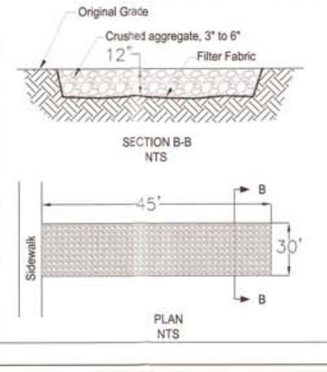
NOTE:
NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING, INCLUDING DURING FENCE INSTALLATION AND REMOVAL.

8 C3C3 TREE PROTECTION
NOT TO SCALE

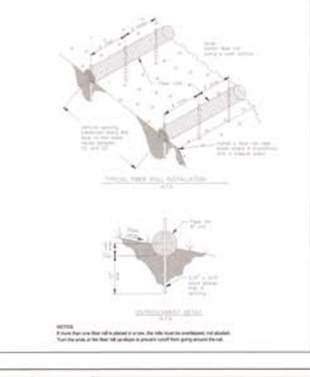
CONCRETE WASTE MANAGEMENT WM-8



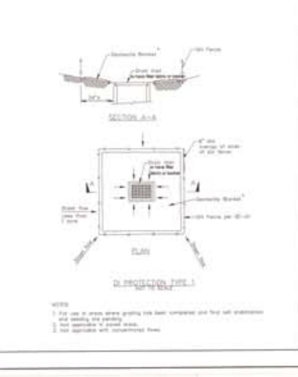
STABILIZED CONSTRUCTION ENTRANCE/EXIT TC-1



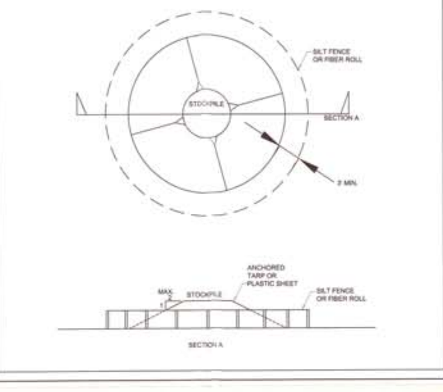
FIBER ROLLS SE-5



STORM DRAIN INLET PROTECTION SE-10



STOCKPILE MANAGEMENT



REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9-30-19
EXPIRES
CIVIL
STATE OF CALIFORNIA

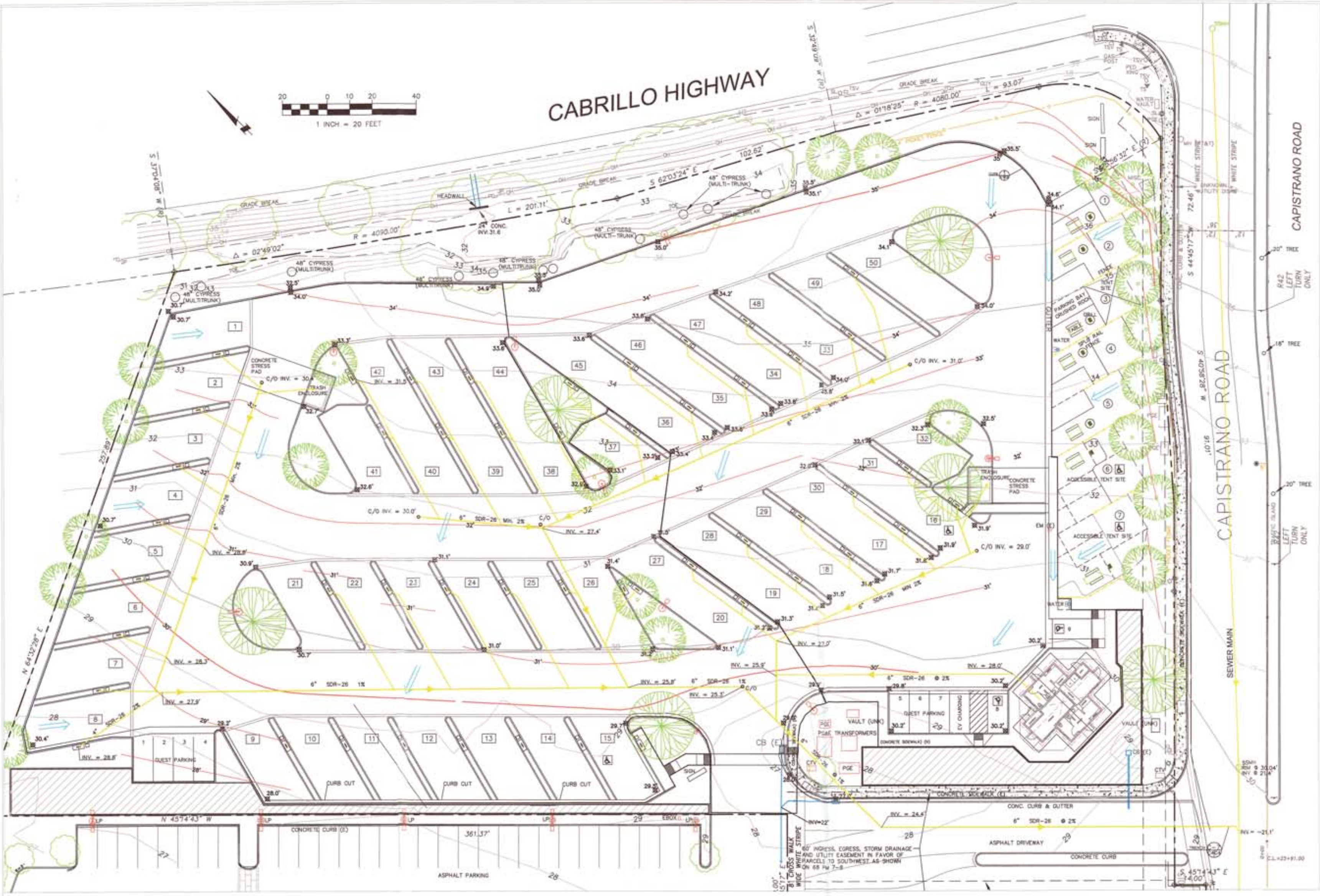
Sigma Prime Geosciences, Inc.

SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019
(650) 728-3590
SIGMAPRIM@GMAIL.COM

DATE: 11-9-18
DRAWN BY: AZG
CHECKED BY: CMK
REV. DATE:
REV. DATE:
REV. DATE:

EROSION AND SEDIMENT CONTROL PLAN AND TREE PROTECTION
100 CAPISTRANO ROAD
HARBOR VILLAGE
RV PARK
APN: 047-081-430

SHEET
C-3



GENERAL NOTES

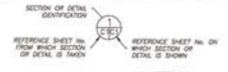
1. PLANS PREPARED AT THE REQUEST OF:
   RON STEFANICK, MANAGER TO PILLAR POINT PROJECT DEVELOPERS, LLC.
2. TOPOGRAPHY BY BGT SURVEYING.
3. THIS IS NOT A BOUNDARY SURVEY.

LEGEND

(N)	NEW, OR PROPOSED
(E)	EXISTING
⁄\⁄	EXISTING CONTOUR
⁄\⁄	PROPOSED CONTOUR
31.9' ■	SPOT ELEVATION (N)
⇒	DIRECTION OF SURFACE DRAINAGE FLOW
▨	STORM-WATER INFILTRATION TRENCH

PRELIMINARY SEWER PLAN
NOT FOR CONSTRUCTION

SECTION AND DETAIL CONVENTION



REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9-30-19
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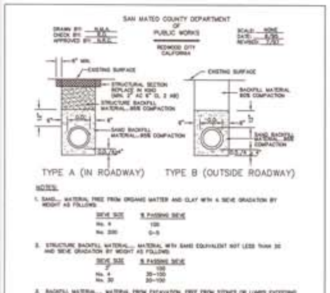
STATE OF CALIFORNIA



STANDARD TRENCH BACKFILL AND BEDDING DETAIL FOR PVC SEWER PIPE

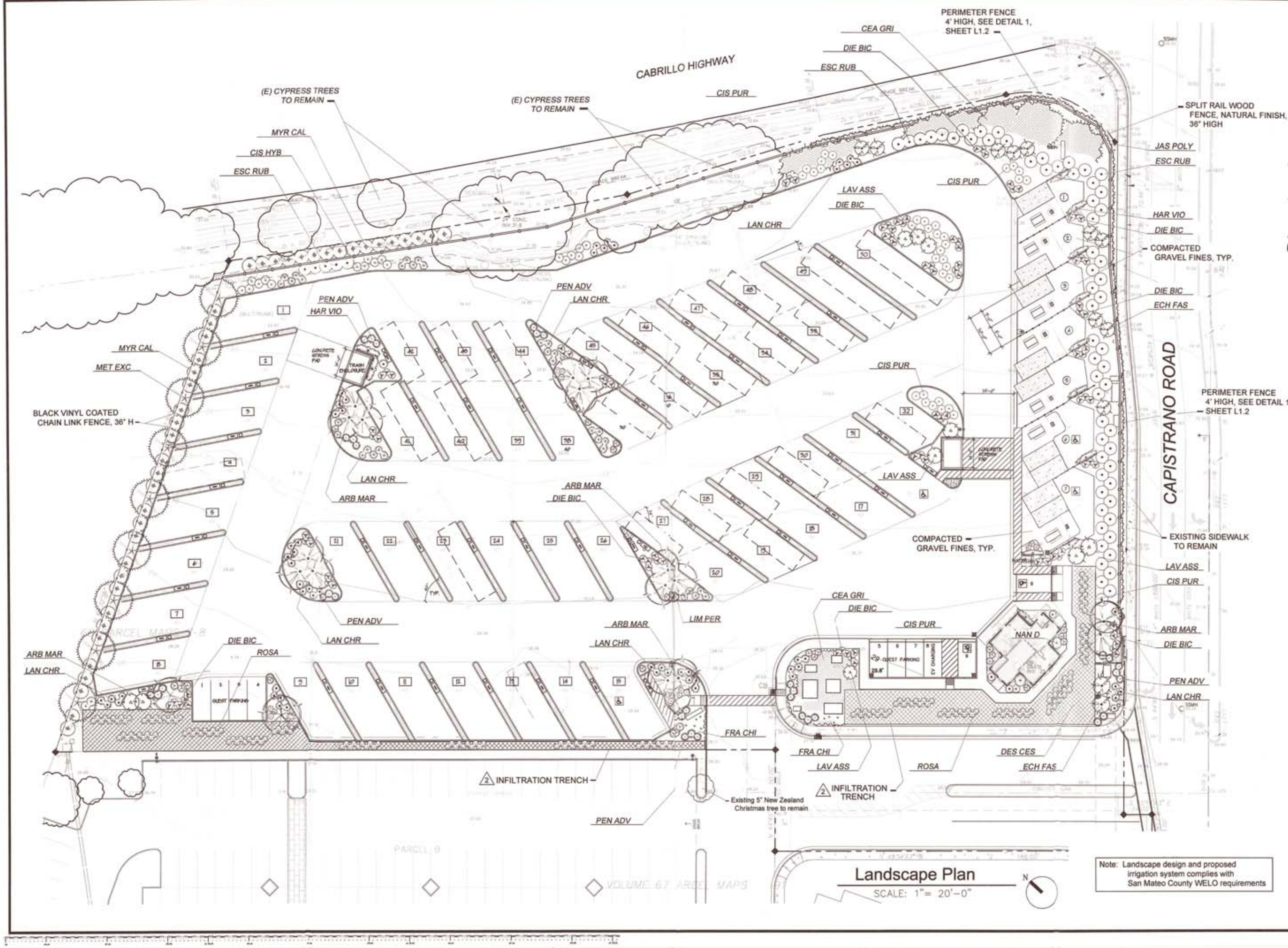
C-7

SEWER PLAN

100 CAPISTRANO ROAD
HARBOR VILLAGE
RV PARK
APN: 047-081-430

DATE: 12-17-18	Sigma Prime Geosciences, Inc.
DRAWN BY: AZG	
CHECKED BY: CMK	SIGMA PRIME GEOSCIENCES, INC. 332 PRINCETON AVENUE HALF MOON BAY, CA 94019 (650) 728-3590 SIGMAPRM@GMAIL.COM
REV. DATE:	
REV. DATE:	
REV. DATE:	

SHEET
C-4



Landscape Plan

SCALE: 1"= 20'-0"

Note: Landscape design and proposed irrigation system complies with San Mateo County WELO requirements

Land
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PLN2017-00320

HARBOR VILLAGE RV PARK

100 Capistrano Road Half Moon Bay, California

TITLE

Landscape Plan

REVISIONS

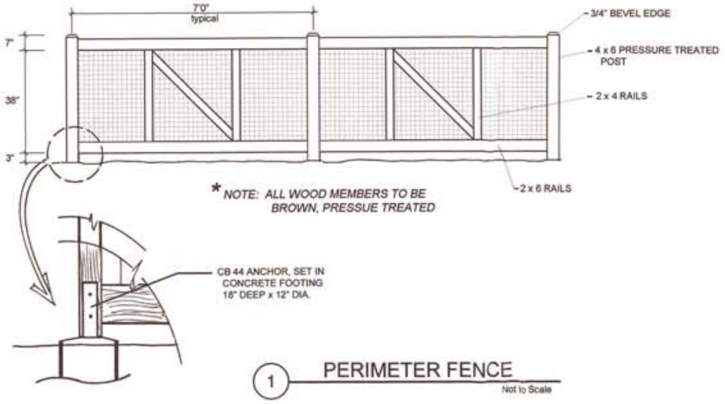
	Date	Notes
1	11-10-18	Modify Plants
2	12-27-18	Modify Planting Infiltration Trench

PROJECT

DATE 2-20-18

SHEET #

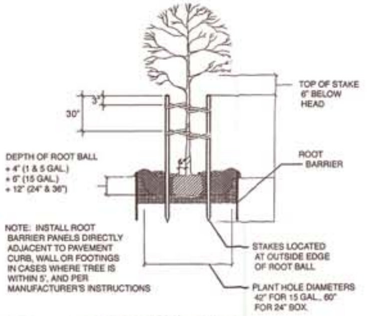
L 1.1



NOTE: ALL WOOD MEMBERS TO BE BROWN, PRESSUE TREATED

1 PERIMETER FENCE

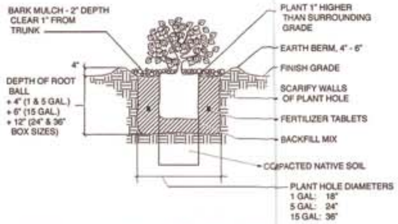
Not to Scale



NOTE: INSTALL ROOT BARRIER PANELS DIRECTLY ADJACENT TO PAVEMENT CURB, WALL OR FOOTINGS IN CASES WHERE TREE IS WITHIN 5', AND PER MANUFACTURER'S INSTRUCTIONS

2 TREE PLANTING

Not to Scale



3 SHRUB PLANTING

Not to Scale

Plant List

No.	Botanical Name	Common Name	Qty*	Size	WI	Plant Type/ Remarks
ARB MAR	Arbutus 'Marina'	Strawberry Tree	3	24" Box	L	Evgn Tree
			18	15 Gal	L	Evgn/ plant in group
MET EXC	Metrosideros excelsus	New Zealand	9	24" Box	L	Evgn Tree
		Christmas Tree				
DIE BIC	Dietes bicolor	Fortnight Lily	73	1 Gal	L	Low Shrub
CIS HYB	Cistus hybridus	White Rockrose	26	5 Gal	L	Evgn Shrub
CIS PUR	Cistus purpureus	Pink Rockrose	43	5 Gal	L	Evgn Shrub
ESCA RUB	Escallonia rubra	Red Escallonia	54	5 Gal	L	Evgn Shrub
ECH FAS	Echium fastuosum	Pride of Madeira	10	5 Gal	L	Evgn Shrub
HAR VIO	Hardenbergia violacea	Hardenbergia	10	15 Gal.	M	Evgn Shrub/ Espalier
LAN CHR	Lantana 'Christine'	N C N	84	5 Gal	L	Evgn Shrub
LAV ASS	Lavatera assurgentifolia	Tree Mallow	14	5 Gal	L	Evgn Shrub
LIM PER	Limonium perezii	Sea Thrift	44	1 Gal	L	Perennial
MYR CAL	Myrica californica	Pacific Wax Myrtle	42	5 Gal	M	Evgn Shrub
NAN DOM	Nandian domestica	Heavenly Bamboo	2	5 Gal	L	Evgn Shrub
PEN ADV	Pennisetum advena	Red Fountain Grass	53	5 Gal	L	Grassy Plant
	'Rubrum'					
JAS POLY	Jasminum polyanthem	Pink Flowering	28	5 Gal	M	Evgn Vine
		Jasmine				
CEA GRI	Ceanothus griseus	Carmel Creeper	84	1 Gal	L	Groundcover
	'Horizontalis'					
FRA CHI	Fragaria chiloensis	Ornamental	14	Flat	L	Groundcover
		Strawberry				
						INFILTRATION
						TRENCH
No.	Botanical Name	Common Name	Qty*	Size	WI	Plant Type/ Remarks
ROSA	Rosa californica	California Wild Rose	170	1 Gal	L	Evgn Shrub
DES CES	Deschampsia cespitosa	Tufted hairgrass	224	1 Gal	L	Evgn Shrub
Note: Contractor shall verify quantities, Wucols Index based on Region 1						

PLANTING NOTES

1. **CONTRACTOR SHALL CONTACT UNDERGROUND SERVICES ADMINISTRATION** PRIOR TO EXCAVATION AND GRADING.
2. **ALL PLANTING AREAS SHALL BE CLEARED OF WEEDS AND OTHER DEBRIS.** THE CONTRACTOR SHALL VERIFY WITH THE OWNER WHICH EXISTING PLANTS ARE TO REMAIN. EXISTING PLANTS TO BE REMOVED SHALL BE VERIFIED WITH OWNER PRIOR TO REMOVAL. ALL IVY IN PROJECT AREA SHALL BE REMOVED; IVY SHALL BE SPRAYED WITH HERBICIDE TWO WEEKS PRIOR TO REMOVAL.
3. **REMOVAL OF EXISTING TREES SHALL BE CONFIRMED WITH THE LANDSCAPE ARCHITECT AND OWNER IN THE FIELD PRIOR TO REMOVAL.** EACH TREE TO BE REMOVED SHALL HAVE A RED OR ORANGE TAPE SECURED TO A BRANCH, AND THE TRUNK SHALL BE CLEARLY MARKED WITH PAINT OF THE SAME COLOR. THE CONTRACTOR SHALL SUPPLY THE MATERIALS FOR MARKING THE TREES AND COORDINATE WITH THE LANDSCAPE ARCHIECT. THE TREE STUMPS AND ROOTS SHALL ALSO BE REMOVED, AND SURROUNDING SURFACE RE-GRADED AND RESTORED.
4. **SOIL TESTING SHALL BE UNDERTAKEN BY THE CONTRACTOR,** AND PERFORMED BY A CERTIFIED LABORATORY. A COPY OF THE REPORT SHALL BE PROVIDED TO THE OWNER AND LANDSCAPE ARCHITECT. RECOMMENDATIONS FOR AMENDMENTS AND FERTILIZATION SHALL REFLECT THE NUTRIENT REQUIREMENTS OF SPECIFIED PLANT SPECIES
5. **SOIL AMENDMENTS SHALL BE FREE OF DEBRIS** SUCH AS LITTER, BROKEN CLAY POTS, AND OTHER FOREIGN MATERIAL. ROCKS LARGER THAN ONE INCH DIAMETER WILL NOT BE PERMITTED. SOIL AMENDMENTS SHALL HAVE THE FOLLOWING CONTENT:
   REDWOOD NITRIFIED COMPOST 40%, COARSE SAND 30%, BLACK TOPSOIL 30%.
6. **PLANT HOLES SHALL BE DOUBLE THE SIZE OF THE CONTAINER** (generally). THE WALLS AND BASES OF PLANT HOLES SHALL BE SCARIFIED. HOLES SHALL BE BACKFILLED WITH THE FOLLOWING MIXTURE: 80% TO 20% IMPORTED SOIL TO EXISTING SOIL.
7. **SOIL BERMS SHALL BE FORMED AROUND ALL PLANTS** 1 GALLON SIZE AND LARGER. BASINS SHALL BE MULCHED WITH A 2" LAYER OF BARK CHIPS, MINIMUM OF 1" IN SIZE.
8. **ALL PLANTS SHALL BE FERTILIZED.** FERTILIZER SHALL BE COMMERCIALLY AVAILABLE TYPE, AGRIFORM OR EQUIVALENT. APPLICATION SHALL BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS. **RESIDUAL WEED PRE-EMERGENT SHALL BE APPLIED** BY THE CONTRACTOR. APPLICATION SHALL BE ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
9. **TREES SHALL BE STAKED WITH TWO PRESSURE TREATED 2" DIAMETER POLES.** TREE TRUNK SHALL BE SECURED WITH TWO RUBBER TIES OR STRAPS FORMING A FIGURE-EIGHT BETWEEN TRUNK AND STAKE.
11. **ROOT BARRIERS FOR ALL TREES WITHIN EIGHT FEET OF PAVEMENT** SHALL BE INSTALLED. BARRIERS SHALL BE PLASTIC AND EXTEND COMPLETELY AROUND THE ROOT BALL. THE DIAMETER OF THE BARRIER SHALL BE 42". THE BARRIER SHALL EXTEND TO A DEPTH OF 24".
12. **ESPALIER PLANTS SHALL BE FURNISHED WITH A PREMANUFACTURED WOOD** TRELLIS. THE TRELLIS SHALL BE SECURELY FASTENED TO TWO PRESSURE TREATED 2" DIAMETER POLES.
13. **PLANTING AREAS SHALL BE COVERED** WITH A THREE INCH LAYER OF BARK CHIPS.

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HARBOR VILLAGE RV PARK
100 Capistrano Road Half Moon Bay, California

TITLE
Landscape Details

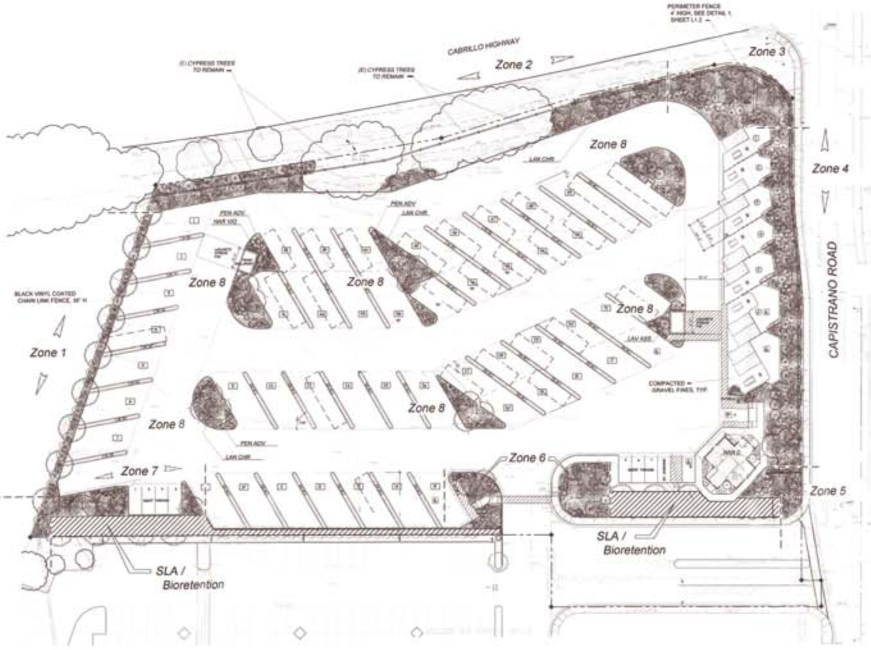
REVISIONS

	Date	Notes
△1	11-10-18	Modify Plant List
△2	12-27-18	Modify Planting Infiltration Trench

PROJECT

DATE 2-20-18

SHEET #
L 2.1



① HYDROZONE PLAN

1" = 40'

PROJECT DESIGN DATA

LOT AREA:	146,202 SF
EXISTING IMPERVIOUS AREA:	16,270 SF
PROPOSED IMPERVIOUS AREA:	100,247 SF
TOTAL POST-PROJECT IMPERVIOUS AREAS:	116,517 SF
NET CHANGE:	83,977 SF ADDED
TOTAL % OF PARCEL COVERAGE	79.7%

Maximum Applied Water Allowance (MAWA) & Estimated Total Water Use (ETWU)

Hydrozone		Hydrozone Area (HA) (ft²)	Plant Factor³ (PF)	Plant Water Use Type	PF x HA (ft²)
North Side	Zone 1	1,285	0.30	Low	386
East Side/ highway	Zone 2	4,440	0.30	Low	1,332
Corner w/ Sign	Zone 3	2,960	0.30	Low	888
Capistrano Road	Zone 4	3,960	0.30	Low	1,188
Corner Access Road	Zone 5	748	0.30	Low	224
Entry RV park	Zone 6	1,069	0.30	Low	321
Corner NW	Zone 7	1,500	0.30	Low	450
Interior Planters	Zone 8	4,760	0.30	Low	1,428
	Zone 9				-
	Zone 10				-
	Zone 11				-
	Zone 12				-
	Zone 13				-
	Zone 14				-
	Zone 15				-
	Zone 16				-
	Zone 17				-
	Zone 18				-
	Zone 19				-
	Zone 20				-
	Zone 21				-
Hydrozone Area (HA) (& PF x HA)		20,722			6,217
Special Landscape Area (SLA)		4,265	1.00	High	4,265
Total Landscape Area (TLA)		24,987			10,482
Irrigation Efficiency (IE)_Drip		0.81			
			MAWA¹ =	432,960.87	gal.
				57,878.64	cu. ft.
				578.79	HCF
				1.33	acre-ft.
				0.43	millions of gal.
			ETWU² =	327,494.79	gal.
				43,779.83	cu. ft.
ETWU complies with MAWA				437.80	HCF
				1.01	acre-ft.
				0.33	millions of gal.

³Plant Water Use Types	Plant Factor
Very Low	0 - 0.1
Low	0.1 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0

¹(ETo) x (0.62) x [(0.55 x HA)+(0.45 x SLA)], where ETo = 44.24

²(ETo) x (0.62) x [(PF x HA/IE) + SLA]

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HARBOR VILLAGE RV PARK
100 Capistrano Road Half Moon Bay, California

TITLE

Hydrozone MWELO Plan

REVISIONS

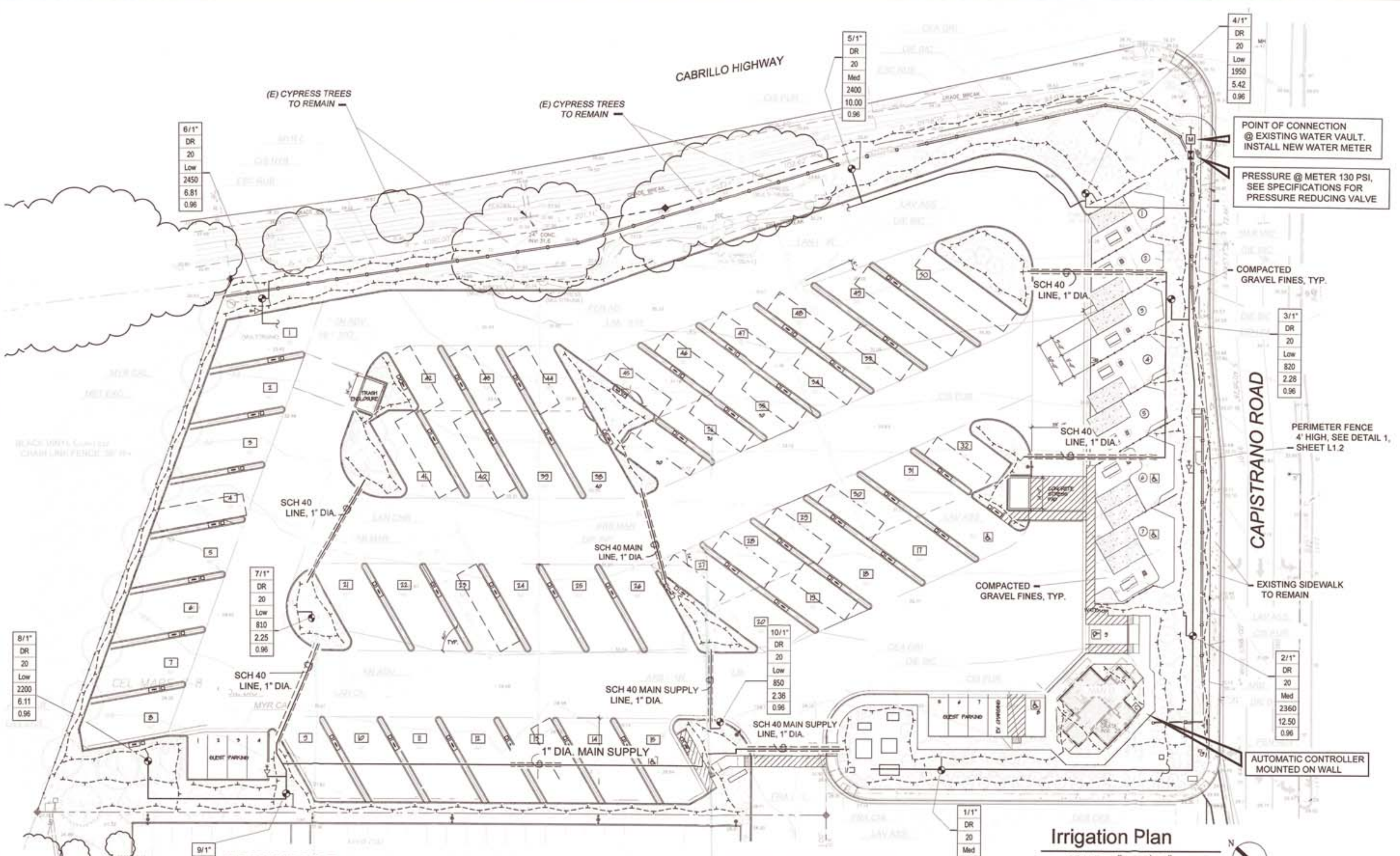
Date	Notes

PROJECT

DATE 2-20-18

SHEET #

L 3.1



Irrigation Plan

SCALE: 1"= 20'-0"

HYDROZONE TABLE

No.	Hydrozone		Area (SF)	Water Use	Type
1	Entry RV Park	Zone 1	3880	Med	Drip
2	Capistrano Road	Zone 2	2360	Med	Drip
3	Interior Planters Area C	Zone 3	820	Low	Drip
4	Highway Corner w/ Sign	Zone 4	1950	Med	Drip
5	Loop Road Corner	Zone 5	2400	Low	Drip
6	East Loop Road Planter	Zone 6	2450	Low	Drip
7	Interior Planters Area A	Zone 7	810	Low	Drip
8	North Side Planter	Zone 8	2200	Low	Drip
9	West Parking Lot Planter	Zone 9	2750	Med	Drip
10	Interior Planters Area B	Zone 10	850	Low	Drip

Key	Description
2/x"	Valve No./ Water Zone / Size
SP/DR	Spray Zone / Drip Zone
20	PSI
Low	Water Use Zone
600	Zone square feet
4.8	GPM Discharge Gallons per Minute
0.96	Application Rate/ Inches per Hour

IRRIGATION SYSTEM – GENERAL NOTES

1. CONTRACTOR SHALL LOCATE UNDERGROUND SERVICES PRIOR TO EXCAVATING.
2. CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE CLOCK WATERING CYCLE AND DURATION TO PREVENT RUN-OFF. HEADS SHALL BE ADJUSTED SO THAT SPRAY DOES NOT HIT EXISTING TREE TRUNKS.
3. PLAN IS DIAGRAMATIC. CONTRACTOR SHALL MAKE ADJUSTMENTS AS NECESSARY TO FACILITATE INSTALLATION.
4. CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING THAT ACCURATELY SHOWS FINAL SYSTEM AND PIPING LAYOUT.

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BRUCE ALLEN CHAN
No. 2324
EXP 3-31-20

HARBOR VILLAGE RV PARK

100 Capistrano Road Half Moon Bay, California

TITLE

IRRIGATION PLAN

REVISIONS

	Date	Notes
⚠1	9-23-18	Modify layout & specs per PC comments 8-15-18
⚠2	12-27-18	Modify Valve Circuits 1 & 2 Controller Location BPD Symbol

PROJECT

DATE July 9, 2018

SHEET #

L 6.1

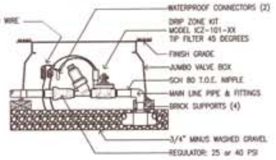
Estimated Total Water Use ETWU

Reference Evapotranspiration (ETo)		33.70	half moon bay				
	ETWU requirement	ETWU requirement	ETWU requirement	ETWU requirement	MAWA requirement	ETWU requirement	
Hydrozone#/Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	**ETAF** (PF/IE)	Landscape Area (**LA**) (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU)
Regular Landscape Areas							
1) Entry RV Park	0.5	Drip	0.81	0.617	3,880	2,395.06	50,042
2) Capistrano Road	0.5	Drip	0.81	0.617	2,360	1,456.79	30,438
3) Interior Planters Area C	0.3	Drip	0.81	0.370	820	303.70	6,346
4) Highway Corner w/ Sign	0.5	Drip	0.81	0.617	1,950	1,203.70	25,150
5) Loop Road Corner	0.2	Drip	0.81	0.247	2,400	592.59	12,382
6) East Loop Road Planter	0.3	Drip	0.81	0.370	2,450	907.41	18,959
7) Interior Planters Area A	0.3	Drip	0.81	0.370	810	300.00	6,268
8) North Side Planter	0.3	Drip	0.81	0.370	2,200	814.81	17,025
9) West Parking Lot Planter	0.5	Drip	0.81	0.617	2,750	1,697.53	35,468
10) Interior Planters Area B	0.3	Drip	0.81	0.370	850	314.81	6,578
			Totals		20,470	9,986.42	0
Special Landscape Areas (SLA): Recycled Water							
1) low water use plants				1	0	0	0
2) medium water use plants				1	0	0	0
3) medium water use plants				1	0	0	0
				Totals	0	0	0
			Estimated Total Water Use (ETWU)				**208,656**
			Maximum Allowed Water Allowance (MAWA)				299,390.13

Complies

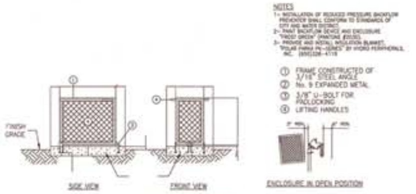
Maximum Applied Water Allowance MAWA

(Et) (0.62) [0.7 x LA) + (O.3 x SLA)] = 299,390.13



③ REMOTE CONTROL VALVE

NTS

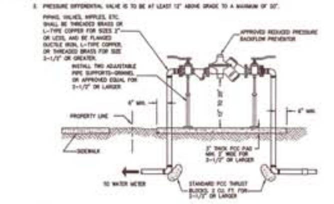


ENCLOSURE

nts

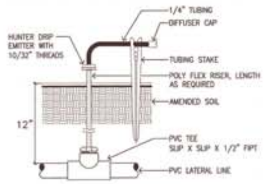
NOTES: 1. ALL DEVICES 3/4" TO 2" WILL HAVE FULL PORT DOMESTIC BALL VALVES, WITH THREADED ENDS. 3" AND LARGER DEVICES WILL HAVE RESILIENT SEATED GATE VALVES, WITH FLANGED ENDS.

2. PRESSURE DIFFERENTIAL VALVE IS TO BE AT LEAST 12" ABOVE GRADE TO A MAXIMUM OF 30".



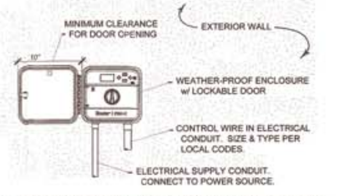
② BACKFLOW PREVENTER

Not to Scale



④ DRIP EMITTER

NTS



NOTE: 8 STATION MODEL CONTROLLER. MOUNT CONTROLLER WITH LCD SCREEN 60" ABOVE FINISH GRADE. CONTROLLER TO BE HARD-WIRED TO GROUNDED 110 VAC SOURCE.

① AUTOMATIC CONTROLLER

Not to Scale

Irrigation Legend

SYMBOL	MODEL	DESCRIPTION
◕	700-OMR-100 SERIES/ LT-T SERIES	IRRITROL REMOTE CONTROL VALVE w/ PRESSURE REGULATION/ KBI PVC BALL VALVE
⋈	975XL2-1"	WILKINS LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER
C	MC-24E PROMAX-UA	IRRITROL 24 STATION MC-E CONTROLLER - WALL MOUNT PRO MAX UNIVERSAL MAINTENANCE REMOTE KIT
┬ - - ┴ - - ┬		DRIP TUBING TORO T-EHD1645 FLUE STRIPE HOSE WITH TORO LOC-EZE FITTINGS. 4" COVER. DISTRIBUTION TUBING. TORO EHW0437-010 1/4" HOSE.
◁		HOSE BIBB, 3/4" BRASS ON 18" H GALV RISER

IRRIGATION INSTALLATION NOTES

IRR PERF 503

1. **CONTRACTOR SHALL LOCATE UNDERGROUND SERVICES** PRIOR TO PERFORMING ANY EXCAVATION.
2. **AN APPROVED BACKFLOW PREVENTER SHALL BE INSTALLED PER LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS.** THE BACKFLOW DEVICE SHALL BE A REDUCED PRESSURE DOUBLE CHECK TYPE INSTALLED IN A LOCKABLE ENCLOSURE. THE BACKFLOW DEVICE SHALL BE LOCATED IN THE VICINITY OF THE WATER METER, IF POSSIBLE.
3. **A MANUAL SHUT OFF VALVE SHALL BE REQUIRED, AS CLOSE AS POSSIBLE TO THE POINT OF THE WATER SUPPLY.** TO MINIMIZE WATER LOSS IN CASE OF AN EMERGENCY OR ROUTINE REPAIR.
4. **PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE** IS BELOW OR IN EXCESS OF RECOMMENDED OPERATING PRESSURE OF SPECIFIED IRRIGATION DEVICES.
5. **MAIN SUPPLY LINES SHALL BE PVC SCHEDULE 40,** SIZE AS NOTED, BURIED 18" DEEP. **LATERAL SUPPLY LINES** SHALL BE BURIED 12" DEEP. FLEXIBLE PIPE TUBING SHALL BE BURIED 4" DEEP.
6. **REMOTE CONTROL VALVES SHALL BE 1" WHEN CONNECTED TO MAIN SUPPLY LINES OF SAME SIZE,** AND SUPPLY A TOTAL NUMBER OF HEADS OR EMITTERS NOT TO EXCEED 14 GALLONS PER MINUTE DISCHARGE FOR EACH CIRCUIT. FOR MAIN SUPPLY LINES OF 1-1/2" DIAMETER, THE CONTRACTOR MAY CHOOSE AS AN OPTION INSTALLING A 1-1/2" RCV, WHICH WILL A HAVE CIRCUIT FLOW RATE NOT TO EXCEED 30 GPM. VALVES SHALL BE MANUFACTURED BY TORO OR HUNTER AND INSTALLED UNDERGROUND IN WEATHER-PROOF VALVE BOXES.
7. **DRIP IRRIGATION CIRCUITS SHALL BE FURNISHED WITH A PRESSURE REGULATING** DEVICE IF THE WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES. AN IN-LINE FILTER SHALL BE INSTALLED ADJACENT TO THE CONTROL VALVE. THE END OF EACH SUPPLY CIRCUIT SHALL BE FURNISHED WITH A BALL VALVE.
8. **AN INTEGRATED CHECK VALVE SHALL BE INSTALLED INTO THE LOWEST** SPRINKLER HEAD ON EACH CIRCUIT. CHECK VALVES OR ANTI-DRAIN VALAVE ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.
9. **CONTRACTOR SHALL FLUSH ALL PIPES** PRIOR TO INSTALLING SPRINKLER HEADS **AND PRESSURE TEST THE MAIN SUPPLY LINE.** A THOROUGH CHECK FOR ANY LEAKS SHALL BE PERFORMED. THE ENTIRE SYSTEM SHALL BE CHECKED FOR LEAKS PRIOR TO BACKFILLING OF TRENCHES.
10. **CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE CLOCK** WATERING CYCLE AND DURATION TO PREVENT RUN-OFF. HEADS SHALL BE ADJUSTED SO THAT SPRAY DOES NOT HIT EXISTING TREE TRUNKS.
11. **THIS PLAN IS DIAGRAMATIC. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS** AS NECESSARY TO ENSURE PROPER COVERAGE AND WATERING TO EACH PLANT. A SUFFICIENT NUMBER OF SPRINKLER HEADS AND EMITTERS SHALL BE FURNISHED AT THE CONTRACTOR'S EXPENSE TO ACHIEVE THIS.

COMPLIANCE NOTES

IRR PERF 503

1. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES. T
2. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICNENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
3. AN IRRIGATION AUDIT REPORT BY A CERTIFIED IRRIGATION AUDITOR SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION AND SUBMITTED WITH THE CERTIFICATE OF COMPLETION.
4. AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.

COUNTY OF SAN MATEO
LANDSCAPE WATER USE STATEMENT

PROJECT NAME:	**HARBOR VILLAGE RV PARK**
PROJECT ADDRESS:	100 CAPISTRANO ROAD PRINCETON CA
PREPARED BY:	BRUCE A. CHAN CA RLA #2324 923 ARGUELLO STREET, SUITE 200 REDWOOD CITY CA 94063 650-346-7645 650-367-8139 (FAX) bacla@sbcglobal.net

"I have complied with the criteria of the ordinance and applied them accordingly for efficient use of water the irrigation design plan."

Signed Bruce A. Chan

Land
Planning
Concepts

CA Lic. # 002324
Landscape Architecture
Environmental Design
Site Planning

923 Arguello Street, Suite 200
Redwood City, California 94063

Tel (650) 346-7645
Fax (650) 367-8139
Email: bacla@sbcglobal.net

No. 2324
EXP 3-31-20

HARBOR VILLAGE RV PARK
100 Capistrano Road Half Moon Bay, California

TITLE

IRRIGATION DETAILS

REVISIONS

	Date	Notes
1	11-10-18	Revise WELO Compliance Info
2	12-27-18	Add Hose Bibs to Legend Modify ETWU Calculations

PROJECT

DATE July 9, 2018

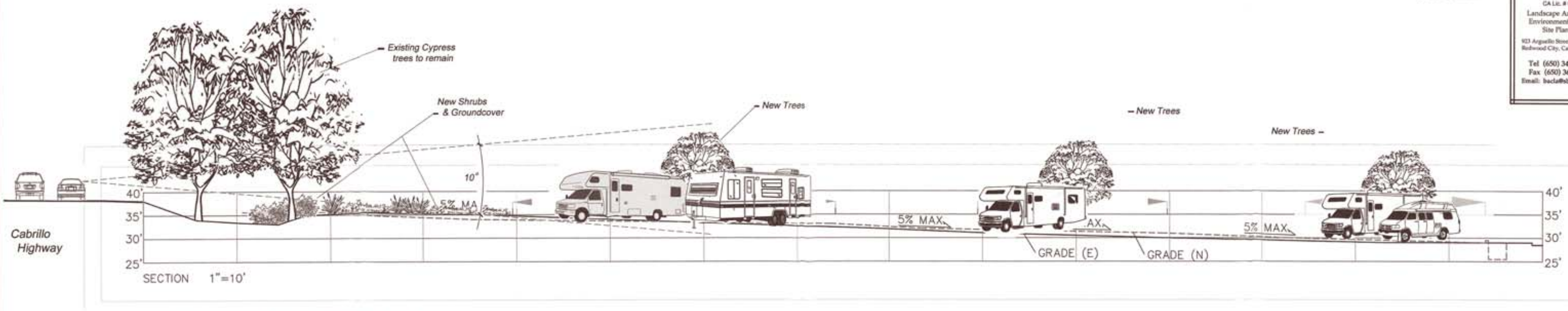
SHEET #

L 6.2

RECEIVED
DEC 0 7 2018
San Mateo County
Planning Division

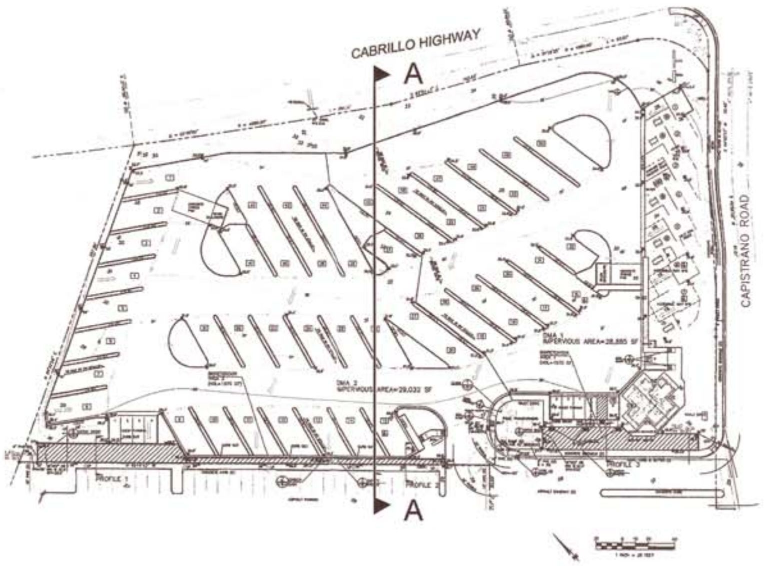
Land
Planning
Concepts
CA Lic. # 002324
Landscape Architecture
Environmental Design
Site Planning
923 Arguello Street, Suite 200
Redwood City, California 94063
Tel (650) 346-7645
Fax (650) 367-8139
Email: bacla@sbcglobal.net

PLN2017-00320



① Site Section A - A

1" = 10'0"

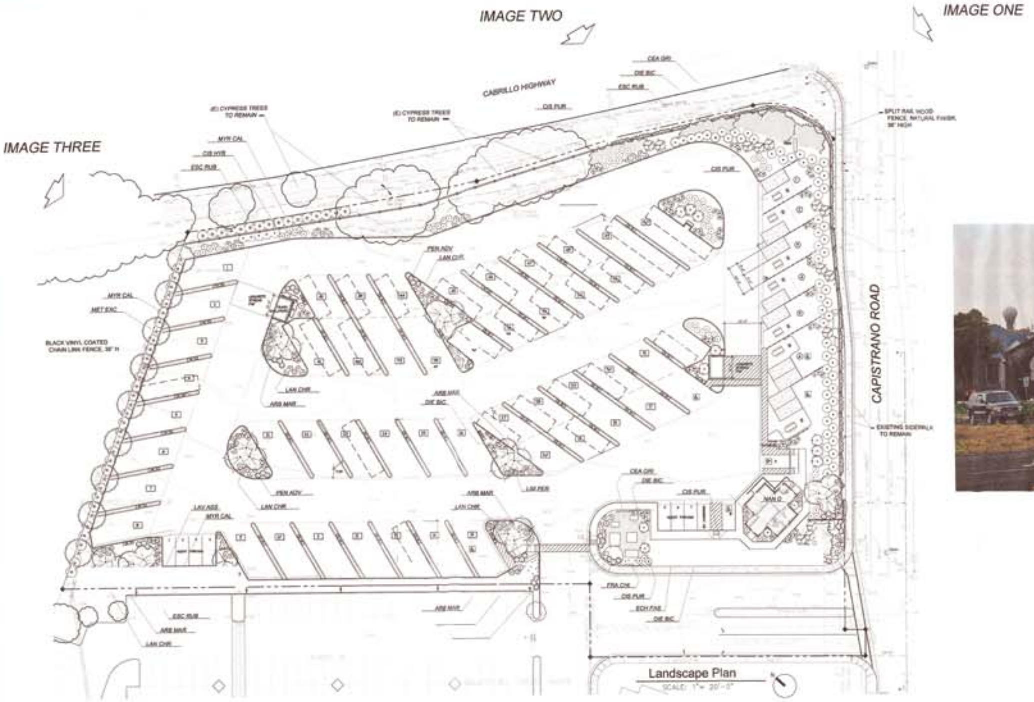


② Site Plan

reference only NTS

HARBOR VILLAGE RV PARK
100 Capistrano Road Half Moon Bay, California

TITLE	REVISIONS		DATE 05-4-18
Visual Analysis Site Section	Date	Notes	SHEET # L 5.1



Landscape Plan
SCALE: 1"= 20'-0"

Image One

Position of RVs, without landscape screening.
Tent sites located along Capistrano Road.

Image Two

Image Three

View from Highway One, southbound, w/ landscape screening

Land Planning Concepts

CA Lic. # 002324
Landscape Architecture
Environmental Design
Site Planning

923 Arguello Street, Suite 200
Redwood City, California 94063

Tel (650) 346-7645
Fax (650) 367-8139
Email: bacla@sbcglobal.net

HARBOR VILLAGE RV PARK

100 Capistrano Road Half Moon Bay, California

TITLE

Landscape Site Renderings

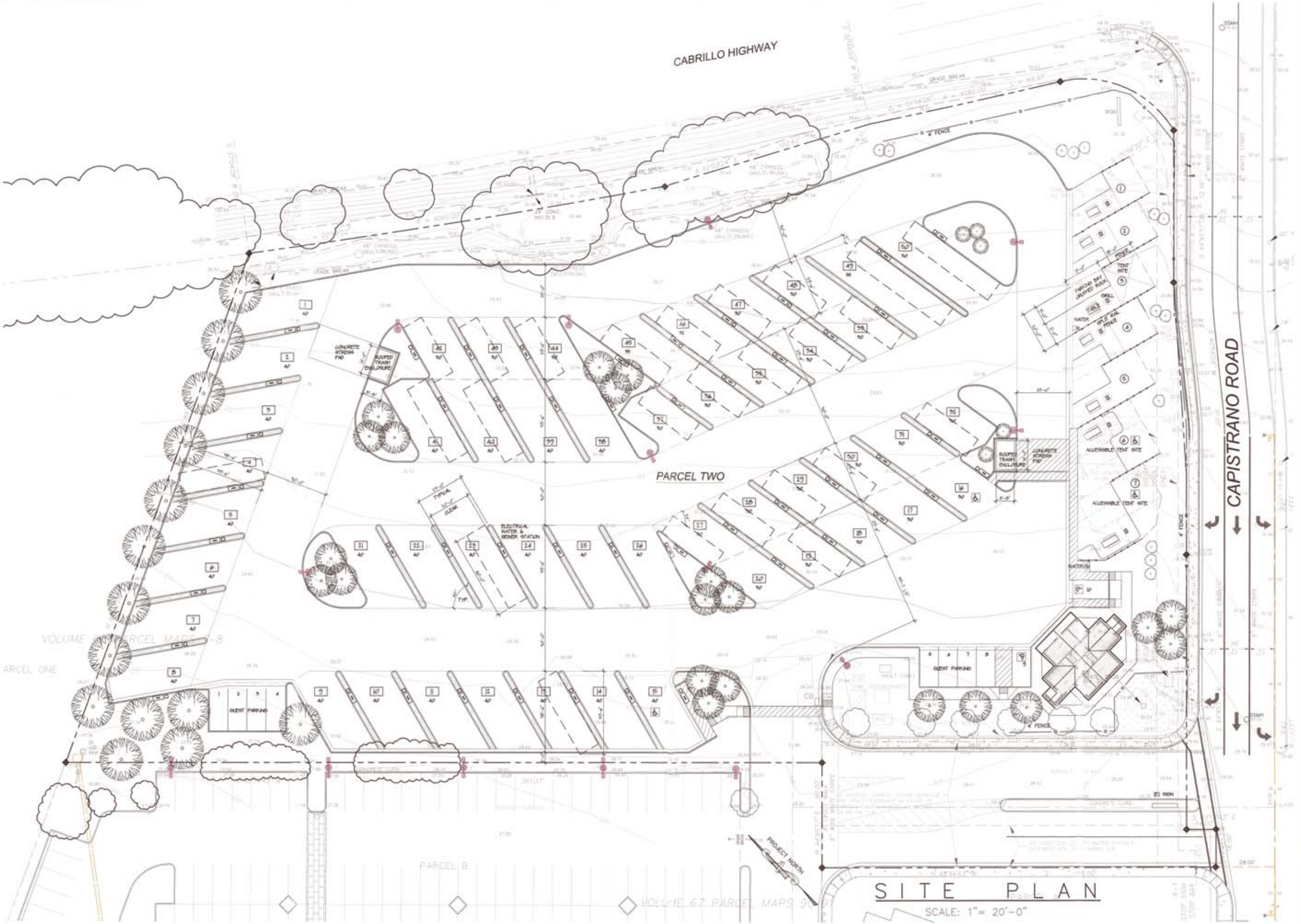
REVISIONS

Date	Notes

PROJECT

DATE Jan 3, 2018

SHEET #
L 4.1



SITE PLAN

SCALE: 1"= 20'-0"

Jacobsen & Associates
ARCHITECTS
63 Monte Carlo Way, American Canyon, California 94503
Telephone 650 / 726 - 5131 e-mail: ehjarch1@pacbell.net

STAMP

LICENSED ARCHITECT
ERIC H. JACOBSEN
NO. C12660
REN. 2/28/19
STATE OF CALIFORNIA

HARBOR VILLAGE RV PARK
100 CAPISTRANO RD.
HALF MOON BAY, CA

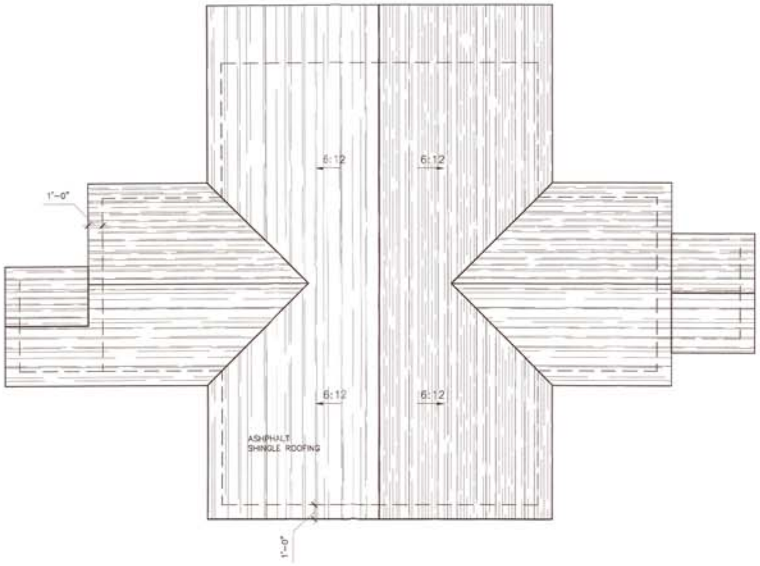
POINT PILLAR PROJECT DEVELOPERS, LLC
HALF MOON BAY, CA

SHEET TITLE
SITE PLAN

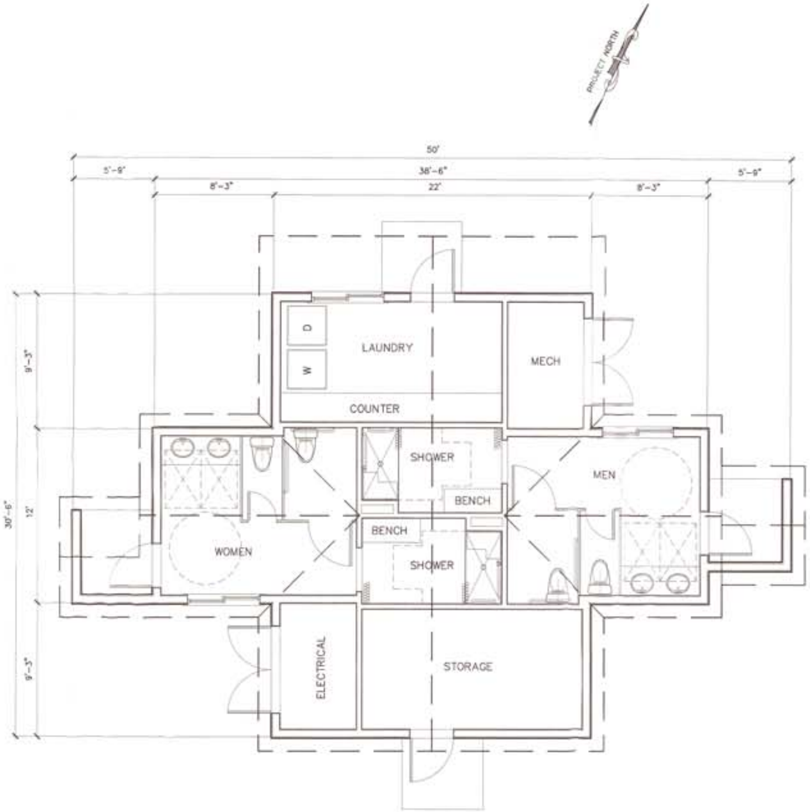
PROJECT NO. 17489	NO.	REVISIONS	DATE
DRAWN EHJ	1	PLANNING REVISIONS	3/4/18
FILE NAME:	2		
CHECKED:			
DATE: 11-14-17			

SCALE
1"=20'-0"

SHEET NO.
A1
PLANNING



ROOF PLAN



GROUND FLOOR PLAN

Jacobsen & Associates
ARCHITECTS
63 Monte Carlo Way, American Canyon, California 94503
Telephone: 650 / 726 - 5131 e-mail: ehjarch@pacbell.net

STAMP

ERIC H. JACOBSEN
REN. 2/28/19

HARBOR VILLAGE RV PARK
100 CAPISTRANO RD.
HALF MOON BAY, CA

POINT PILLAR PROJECT DEVELOPERS, LLC
HALF MOON BAY, CA

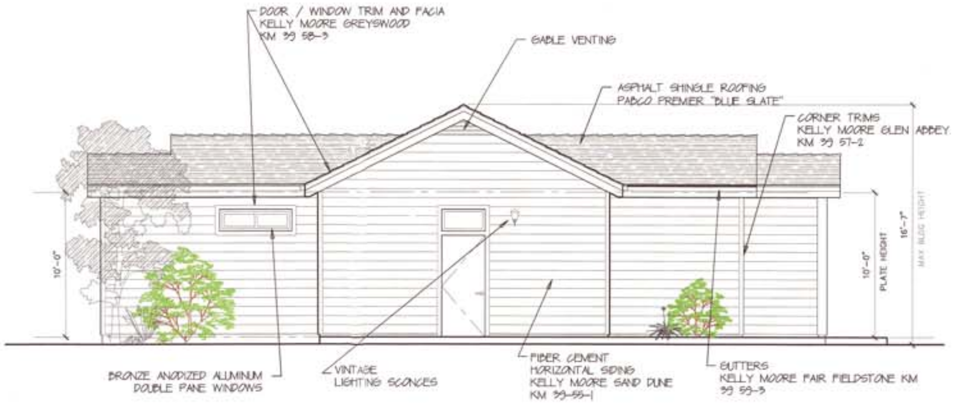
SHEET TITLE GROUND FLOOR & ROOF PLAN

NO.	REVISIONS	DATE
△		
△		

PROJECT NO. 17489
DRAWN EHJ
FILE NAME:
CHECKED:
DATE: 11-14-17
SCALE 1/4" = 1'-0"
SHEET NO.

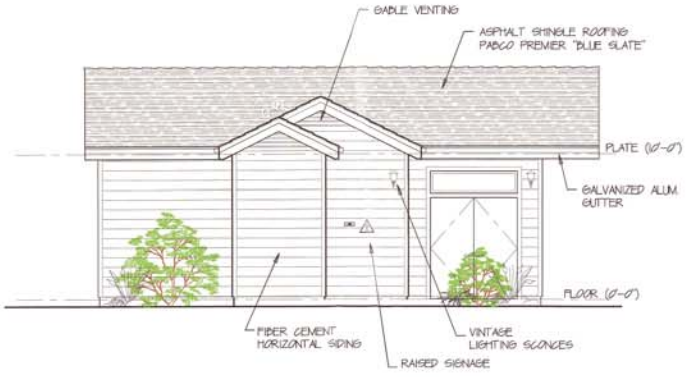
A2

PLANNING



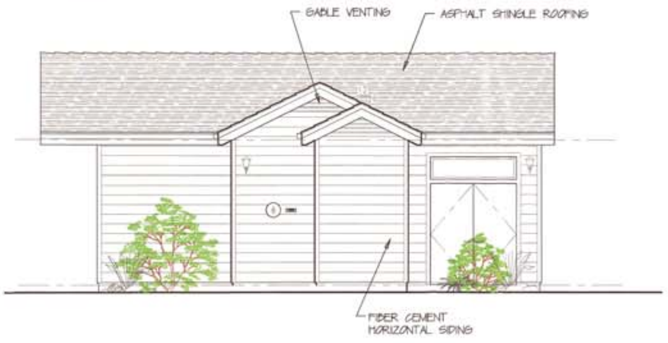
SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



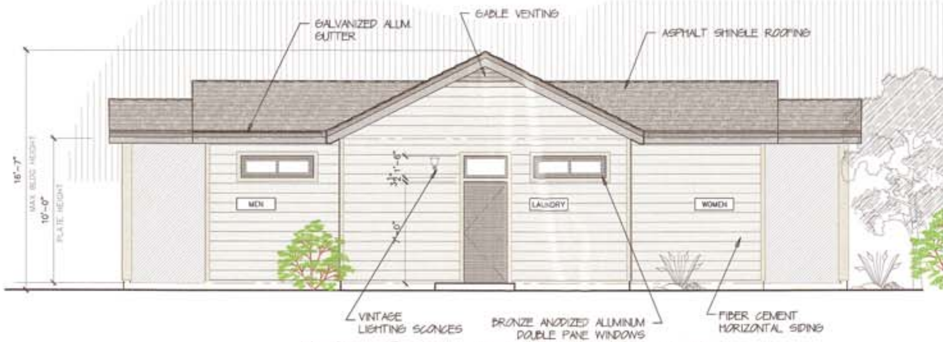
EAST ELEVATION

SCALE: 1/4" = 1'-0"



WEST ELEVATION

SCALE: 1/4" = 1'-0"



NORTH ELEVATION

SCALE: 1/4" = 1'-0"

Jacobsen & Associates
ARCHITECTS
53 Monte Carlo Way, American Canyon, California 94503
Telephone: 650 / 726 - 5131 e-mail: ehjarch@pacbell.net

STAMP

REN. 2/28/19

HARBOR VILLAGE RV PARK
100 CAPISTRANO RD.
HALF MOON BAY, CA

POINT PILLAR PROJECT DEVELOPERS, LLC
HALF MOON BAY, CA

SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NO. 17489	NO.	REVISIONS	DATE
DRAWN EHJ	△		
FILE NAME:	△		
CHECKED:			
DATE: 11-14-17			

SCALE
1/4" = 1'-0"

SHEET NO.
A3
PLANNING

Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts
🟥—🟥	5	S2	BACK-BACK	0.950	VUE-1-T3-48L-53-40K-TWIN @ 20' MTG.HT.	76
🟨	8	S1A	SINGLE	0.950	VUE-1-T5-48L-530-40K-SINGLE @ 16' MTG.HT.	76
🟪	2	S1	SINGLE	0.950	VUE-1-T3-48L-53-40K-SINGLE @ 16' MTG.HT.	76

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Illuminance	Fc	1.03	6.8	0.0	N.A.	N.A.

NEW RV
NLS LIGHTING
REV 4 7/31/17

Jacobsen & Associates
ARCHITECTS
63 Monte Corte Way, American Canyon, California 94503
Telephone: 650 / 726 - 5131 e-mail: ehjarch@pacbell.net

STAMP
LICENSED ARCHITECT
ERIC H. JACOBSEN
NO. C15562
REN. 2/28/18
STATE OF CALIFORNIA

HARBOR VILLAGE RV PARK
100 CAPISTRANO RD.
HALF MOON BAY, CA

POINT PILLAR PROJECT DEVELOPERS, LLC
HALF MOON BAY, CA

SHEET TITLE: PHOTOMETRIC PLAN

PROJECT NO. 17489	NO.	REVISIONS	DATE
DRAWN: EHJ	△		
FILE NAME:	△		
CHECKED:			
DATE: 11-14-17			

SCALE

SHEET NO.
E1
PLANNING

NOT FOR PRODUCTION

11.08.17 BJL / RI / ADDRESS CHANGE, NEW DESIGN NUMBER, NAME CHANGE TO HARBOR VILLAGE FROM PRINCETON

SIGN DESIGNS INCORPORATED

P.O. Box 4590 / 204 Campus Way, Modesto, CA 95350 / Office 209.524.4484 / Fax 209.521.0272 / Lic#268001

MEMBER CSA WSA ISA

NOTICE TO THE CUSTOMER

Note: The colors depicted on this rendering may not match actual colors used on the finished display. Please refer to the detail drawing for the approved color specifications. Note: The cost of providing electrical wiring to the sign area, all required permits and all special inspections are not included in this sign proposal. Note: The proportion of signs shown on building & landscape area photos is an approximate representation.

CUSTOMER APPROVAL

☐ ACCEPTED W/ NO CHANGES ☐ ACCEPTED W/ CHANGES AS NOTED
☐ REVISE AS NOTED AND RESUBMIT

BY CUSTOMER BY LANDLORD
DATE DATE

DATE	BY	DATE	BY
06.21.17	BJL	.17	BJL
11.08.17	BJL		

COMPANY OR JOB NAME / JOB DESCRIPTION **170228/42365 RI**

PRINCETON HARBOR RV PARK
REFACES FOR TWO EXISTING DF ILLUMINATED SIGN CABINETS PROJECT

ADDRESS: **100 CAPISTRANO ROAD HALF MOON BAY CALIFORNIA 94019**

SALESPERSON: **DOUG SMITH** CUSTOMER CONTACT: **XXXXX**

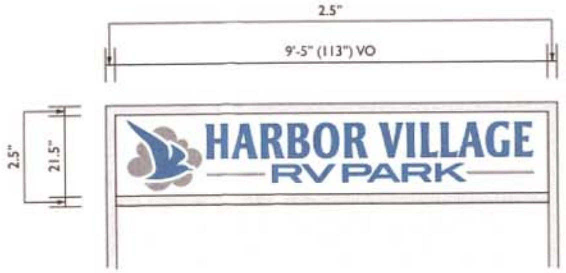
By signing this drawing document, I understand that I am not obligated to purchase this project, notwithstanding, the above artwork cannot be submitted for pricing, duplication and/or manufacturing to another sign company, architectural company or other business entity for the purpose or intent of manufacturing or for use as intellectual property, such as, but not limited to, a company logo, unless the represented logo was provided to Sign Designs by the customer and input into this drawing document by a Sign Designs employee. NAME / DATE

1 OF 2

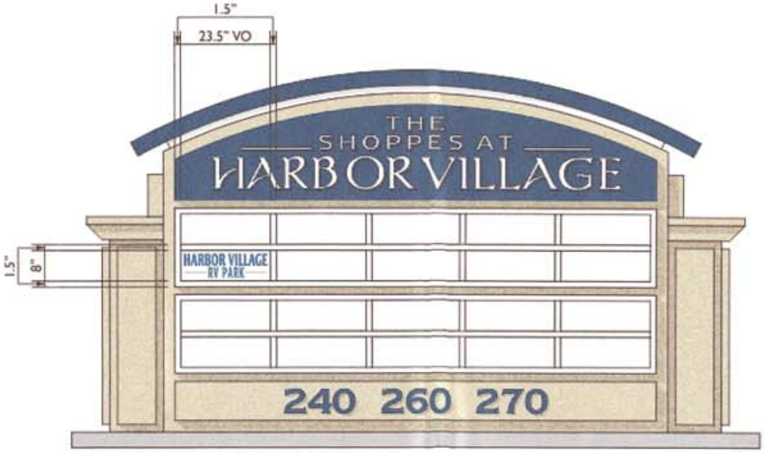
THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

ALL MEASUREMENTS SHOWN IN THIS DRAWING ARE NOMINAL UNTIL THE "NOT FOR PRODUCTION" STAMP HAS BEEN REMOVED

SIGN A / EXISTING DF ILLUM CABINET / REFACES **QTY (2 TOTAL)**
0.375"= 1'-0"



SIGN A / EXISTING DF ILLUM CABINET / REFACES **QTY (2 TOTAL)**
0.375"= 1'-0"



SIGN B / EXISTING DF ILLUM CABINET / REFACES **QTY (2 TOTAL)**
0.375"= 1'-0"

SIGN B / EXISTING DF ILLUM CABINET / REFACES **QTY (2 TOTAL)**
0.375"= 1'-0"

SIGNS A & B:
TENANT COPY FACES
FACES: REMOVE EXISTING VINYL & REUSE EXISTING 3/16" WHITE POLYCARBONATE FACES W/ NEW FIRST SURFACE VINYL DECORATIONS (OPTIONAL NEW FACES) **VINYL:** 3630-157 SULTAN BLUE, 3630-51 SILVER GREY
RETAINERS: (SIGN A) EXISTING 1.5" (FACE), 2.5" DEEP (SIDES) FLAT STYLE ALUMINUM, (SIGN B) EXISTING 1.5" FLAT STYLE ALUMINUM **MECHANICAL DIVIDERS:** (SIGN A) EXISTING 2.5", (SIGN B) EXISTING 1.5" EXTRUDED ALUMINUM
NOTE: (SIGN B) THE VERTICAL DIVIDERS ARE 1.5" WIDE FLAT ALUMINUM BAR ONLY **REMOVALS:** ____________ **NOTE:** THERE HAS NOT BEEN AN OFFICIAL SURVEY COMPLETED AS OF 06.22.17
NOTE: AS OF 06.22.17 THERE HAS NOT BEEN A REQUEST TO REPAINT, REPAIR, REWIRE, RELAMP OR REPLACE ANY MISSING OR DAMAGED COMPONENTS OF THE EXISTING SIGN STRUCTURE(S)

SCOPE OF WORK: FABRICATE & INSTALL (2) TWO NEW FACES FOR EACH SIGN (4 TOTAL FACES)

THE RECTANGLES SHOWN HERE REPRESENT THE VISUAL OPENING MEASUREMENT, NOT THE FACE CUT SIZES OR THE RETAINERS

11.08.17 BJL / RI / ADDRESS CHANGE, NEW DESIGN NUMBER, NAME CHANGE TO HARBOR VILLAGE FROM PRINCETON

SIGN DESIGNS INCORPORATED
P.O. BOX 4590 / 204 CAMPUS WAY, MODESTO, CA 95350 / OFFICE 209.524.4484 / FAX 209.521.0272 / LIC#268001

MEMBER

NOTICE TO THE CUSTOMER
Note: The colors depicted on this rendering may not match actual colors used on the finished display. Please refer to the detail drawing for the approved color specifications. Note: The cost of providing electrical wiring to the sign area, all required permits and all special inspections are not included in this sign proposal. Note: The proportion of signs shown on building & landscape area photos is an approximate representation.

CUSTOMER APPROVAL
☐ ACCEPTED W/ NO CHANGES ☐ ACCEPTED W/ CHANGES AS NOTED
☐ REVISE AS NOTED AND RESUBMIT
BY ____CUSTOMER____ BY ____LANDLORD____
DATE ____________ DATE ____________

DATE	BY	DATE	BY
06.21.17	BJL	.17	BJL
11.08.17	BJL		

COMPANY OR JOB NAME / JOB DESCRIPTION **170228/42365 RI**
PRINCETON HARBOR RV PARK
REFACES FOR TWO EXISTING DF ILLUMINATED SIGN CABINETS PROJECT
ADDRESS: **100 CAPISTRANO ROAD HALF MOON BAY CALIFORNIA 94019**
SALESPERSON: **DOUG SMITH** CUSTOMER CONTACT: **XXXXX**

By signing this drawing document, I understand that I am not obligated to purchase this project, notwithstanding, the above artwork cannot be submitted for pricing, duplication and/or manufacturing to another sign company, architectural company or other business entity for the purpose or intent of manufacturing or for use as intellectual property, such as, but not limited to, a company logo, unless the represented logo was provided to Sign Designs by the customer and input into this drawing document by a Sign Designs employee. NAME / DATE ____________

2 OF 2

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

ALL MEASUREMENTS SHOWN IN THIS DRAWING ARE NOMINAL UNTIL THE "NOT FOR PRODUCTION" STAMP HAS BEEN REMOVED

Image One
Original Photo, August 2017

A

B

C

Image Two

Original Photo, August 2017

Image Three
Original Photo, August 2017

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

BIOLOGICAL RESOURCE EVALUATION FOR THE PRINCETON RECREATIONAL VEHICLE PARK PROJECT

November 2017

SUBMITTED TO

Mr. Ronald Stefanick
Point Pillar Project Developers LLC
ronstefanick@icloud.com

SUBMITTED BY

SWCA Environmental Consultants
60 Stone Pine Road, Suite 100
Half Moon Bay, CA 94019

Biological Resource Evaluation for the Princeton Recreational Vehicle Park Project San Mateo County, California

Prepared for

Mr. Ronald Stefanick
Point Pillar Project Developers LLC
ronstefanick@icloud.com

Prepared by

Jessica Henderson-McBean, Biologist

SWCA Environmental Consultants
60 Stone Pine Road, Suite 100
Half Moon Bay, California 94019
(650) 440-4160
www.swca.com

SWCA Project No. 45857

November 7, 2017

EXECUTIVE SUMMARY

SWCA Environmental Consultants (SWCA) has prepared this Biological Resource Evaluation (BRE) report for the Princeton Recreational Vehicle Park Project, San Mateo County, California (Project Area). The Project Area is located at the corner of Cabrillo Highway (California State Highway 1) and Capistrano Road. This report was prepared in accordance with Section 7.5 of the County of San Mateo (County) Local Coastal Program (LCP) Policies (County of San Mateo 2013), as well as the County's Biological Impact Form, to support the County's development review process for proposed development of the Project Area (Project). The purpose of this report is to document the existing environmental setting and potential biological resources within the Project Area as well as an additional Biological Study Area (BSA) comprising a 200-foot buffer area encircling the Project Area. This report includes identification and analysis of the Project's potential to affect sensitive biological resources, a description of recommended Avoidance and Minimization Measures, and review of the Project's consistency with applicable federal, state, and local environmental regulations and policies. For the purposes of this report, the Project includes the development of a recreational vehicle (RV) park including 50 RV spaces, seven tent camping spaces, and a single-story laundry/restroom building. The Project location is currently an unpaved vacant parcel. Project development includes paving portions of the parcel as well as landscaping and drainage improvements.

SWCA biologists conducted a literature review and preliminary analysis of biological resources on and in the vicinity of the Project Area. This analysis included the review of available biological resources reports and searches of special-status species databases to identify habitat types and plant and wildlife species that have potential to occur in the BSA. Biologists also examined the potential for *Sensitive Habitats*, as defined by San Mateo County LCP Policies Sections 7.1–7.14, to occur within or in the vicinity of the Project Area (County of San Mateo 2013). Databases utilized for the analysis include the California Natural Diversity Database (CNDDB), the California Native Plant Society (CNPS) Rare Plant Inventory, and the U.S. Fish and Wildlife Service (USFWS) endangered and threatened species database. Additional database and mapping resources employed include the National Wetland Inventory (NWI) database, U.S. Geological Survey (USGS) topographic quadrangle maps, and Natural Resource Conservation Service (NRCS) Web Soil Survey.

Following completion of the preliminary analysis, SWCA biologist Jessica Henderson-McBean conducted a reconnaissance-level field survey of the BSA on October 17, 2017, to document the existing biological conditions and determine the potential for special-status species to occur in the BSA. One northern harrier (*Circus cyaneus*), a California Department of Fish and Wildlife (CDFW) species of special concern was observed foraging within the BSA. No other special-status species were observed within the BSA during the biological field survey. A drainage swale was observed along the northeastern edge of the Project Area, which is unlikely to be considered jurisdictional by CDFW, US Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Coastal Commission (CCC). No other jurisdictional wetlands, water features, or riparian corridors were observed within the Project Area.

The Project Area consists of a disturbed vacant lot dominated by ruderal, nonnative plant species. The predominant habitat type within the Project Area is disturbed/ruderal. The Project Area is bordered by a commercial development to the northwest and southwest, by actively cultivated agricultural land to the north, and by Cabrillo Highway to the northeast. Developed, agricultural, and disturbed/ruderal habitats do not typically provide suitable habitat for sensitive wildlife species. In addition, infrastructure and other man-made facilities surrounding the Project Area (e.g., roads and dense development) present potential barriers to dispersal of wildlife into and across the Project Area.

The drainage swale along the northeast edge of the project area, which conveys surface flows into a culvert pipe with a presumed terminus in the Pacific Ocean, may provide marginal, suitable aquatic habitat for sensitive wildlife species such as California red-legged frog (*Rana draytonii*), a federally listed threatened species and California species of special concern, and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), a federally and state listed endangered species and CDFW fully protected species. Although the Project Area lacks suitable natural habitat conditions for these species, the Project Area could be used by these species for dispersal. Due to the potential for these species to occur within the Project Area, it is recommended that Best Management Practices and Avoidance and Minimization Measures be implemented to avoid potential impacts to California red-legged frog and San Francisco garter snake (see Section 5).

Additionally, the Project Area contains habitat for nesting migratory birds, including northern harrier (*Circus cyaneus*), a CDFW species of special concern that is protected under the Migratory Bird Treaty Act and/or the California Fish and Game Code. Due to the potential for nesting birds to occur within the Project Area and surrounding area during the breeding season (February 1 through August 31), it is recommended that best management practices and Avoidance and Minimization Measures (see Section 5) be implemented during project activities to reduce and/or eliminate potential impacts to nesting birds.

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared this Biological Resource Evaluation (BRE) report for the Princeton Recreational Vehicle Park Project, San Mateo County, California (Project Area). This report was prepared in accordance with Section 7.5 of the County of San Mateo (County) Local Coastal Program (LCP) Policies (County of San Mateo 2013) as well as the County's Biological Impact Form. This report documents the existing environmental setting and potential biological resources within the Project Area as well as an additional Biological Study Area (BSA) comprising a 200-foot buffer area around the Project Area. The report also identifies and analyzes the Project's potential to affect sensitive biological resources, describes recommended Avoidance and Minimization Measures, and reviews the Project's consistency with applicable federal, state, and local environmental regulations and policies.

1.1 Project Location and Description

The Project Area consists of an approximately 3.35 acre vacant parcel in unincorporated San Mateo County, California (Figures 1 and 2). The Project Area is located at the corner of Cabrillo Highway (California State Highway 1) and Capistrano Road (APN 047-081-430). The Project Area is surrounded by commercial development to the southwest and southeast, by actively cultivated agricultural fields to the northwest, and by Cabrillo Highway to the northeast. A roadside drainage swale runs along the northeastern boundary of the Project Area, along the southern road shoulder of Cabrillo Highway. Land use in the area is a mixture of commercial development to the south, residential development to the north, and agricultural cultivation to the northwest.

For the purposes of this report, the Project includes the development of a recreational vehicle (RV) park including 50 RV spaces, seven tent camping spaces, and a single-story laundry/restroom building. The Project location is currently an unpaved vacant parcel. Project development includes paving portions of the parcel as well as landscaping and drainage improvements.

Figure 1. Site Location Map

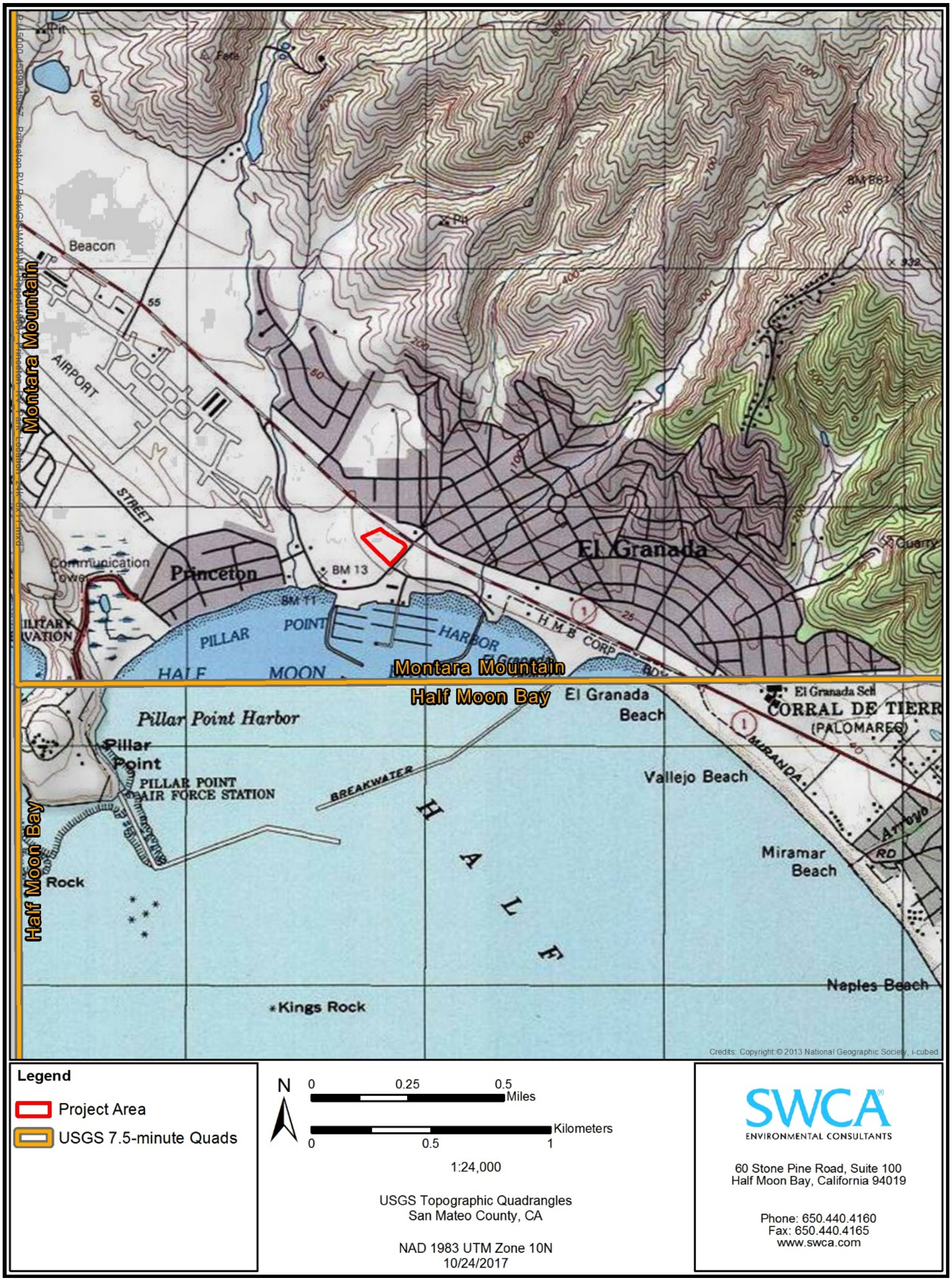
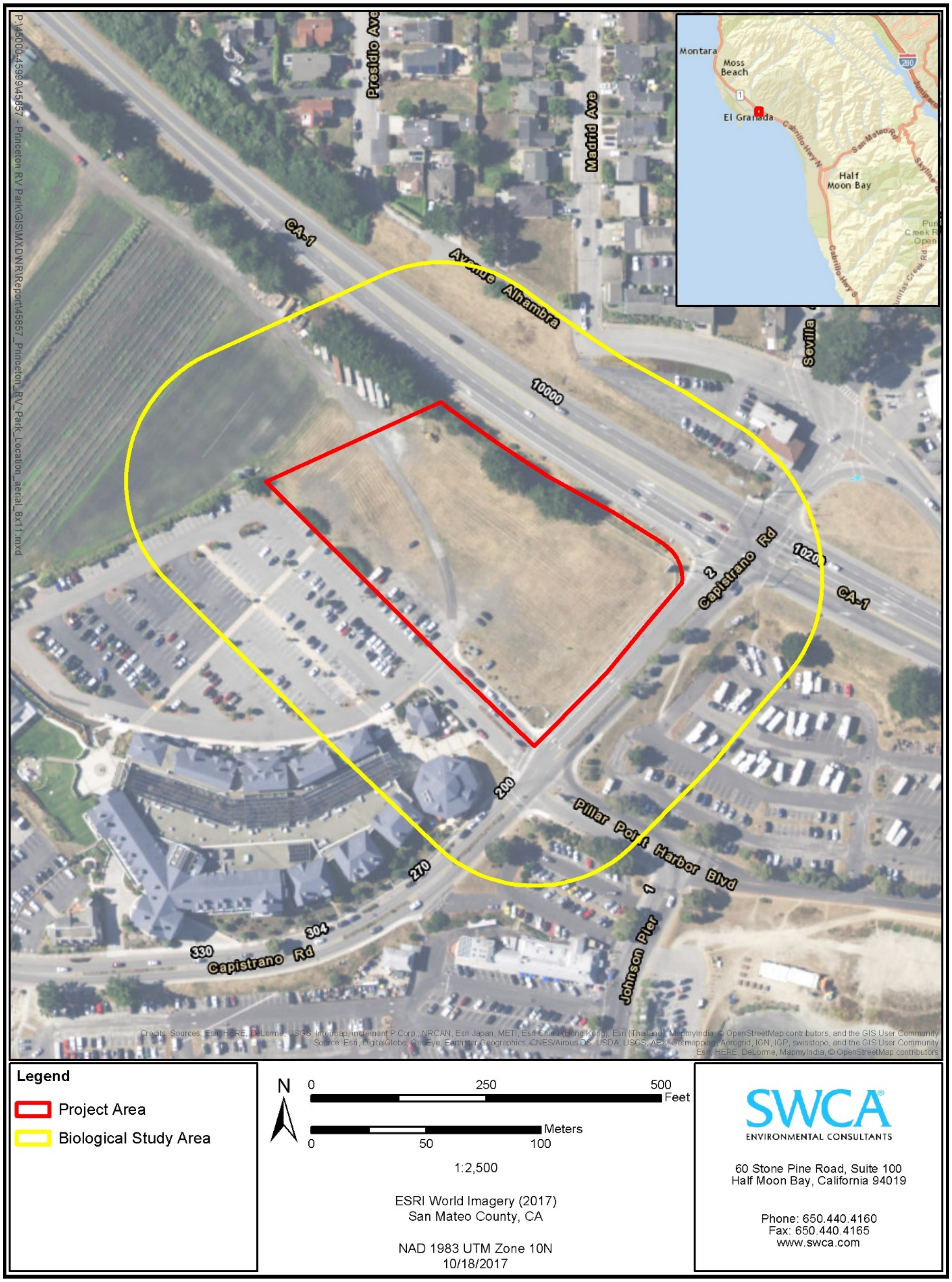


Figure 2. Project Area Map



2 REGULATORY FRAMEWORK

The federal, state, and local regulatory context for this report is described below.

2.1 Federal Policies and Regulations

2.1.1 Section 404 of the Clean Water Act of 1977

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The term "waters of the United States" as defined in the Code of Federal Regulations (CFR; 33 CFR 328.3[a]; 40 CFR 230.3[s]) includes:

1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2) All interstate waters including interstate wetlands (Wetlands are defined by the federal government [CFR Section 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.).;

3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;

4) All impoundments of waters otherwise defined as waters of the United States under the definition;

5) Tributaries of waters identified in paragraphs (1) through (4);

6) Territorial seas; and,

7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).

8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the Environmental Protection Agency (EPA; 33 CFR 328.3[a][8] added 58 CFR 45035, August 25, 1993).

The EPA also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the applicable Regional Water Quality Control Board (RWQCB).

2.1.2 Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA) protects plants and wildlife that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). Section 9 of the FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [U.S.C.] 1538). Under Section 7 of the FESA, federal agencies are required to consult with USFWS if their actions, including permit approvals or funding, may adversely affect a federally listed species or its designated critical habitat. Through consultation and the issuance of a biological opinion, USFWS may issue an incidental take statement allowing take of the species that is incidental to otherwise authorized activity provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties in association with development of a Habitat Conservation Plan.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, USFWS may issue permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13, General Permit Procedures, and 50 CFR Part 21, Migratory Bird Permits.

2.2 State Policies and Regulations

2.2.1 California Endangered Species Act

The California Endangered Species Act of 1984 (CESA) and the Native Plant Protection Act of 1977 (NPPA) ensure legal protection for plants listed as rare or endangered, and wildlife listed as threatened or endangered. The California Department of Fish and Wildlife (CDFW) regulates activities that may result in the "take" of such species. Take of state-listed species would require a Section 2081 incidental take permit from CDFW. This process requires submittal of a sensitive species study and permit application package to CDFW. If CDFW concurs that impacts to a state listed species would likely occur as a result of a proposed project, alternatives and measures to avoid or reduce the impacts must be identified in a Section 2081 permit to allow for incidental take authorization. CDFW may also include compensatory mitigation (mitigation/conservation bank) requirements for impacts to habitat for listed plants and wildlife.

CDFW also maintains informal lists of "species of special concern." These species are broadly defined as plants and wildlife that are of concern to CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. Development-related impacts to species on the state endangered or threatened lists and lists of species of special concern are considered "significant" under the *California Environmental Quality Act* (CEQA) *Guidelines*.

2.2.2 California Environmental Quality Act Guidelines

Although threatened and endangered species are protected by specific federal and state statutes, *State CEQA Guidelines* Section 15380 provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the California Fish and Game Code dealing with rare or endangered species. Section 15380 was included in the *State CEQA Guidelines* primarily to address situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either USFWS or CDFW. Therefore, CEQA provides a lead agency with the ability to protect a species from a project's potential impacts until the respective governmental agencies have an opportunity to formally protect the species.

2.2.3 California Coastal Act

The California Coastal Act of 1976 (CCA) governs the decisions made by the California Coastal Commission (CCC) regarding issues such as shoreline public access and recreation, terrestrial and marine habitat protection, water quality, commercial fisheries, and development within the California coastal zone. Development within the coastal zone requires either a Coastal Development Permit (CDP) or CDP Exemption from CCC or from a local government with a CCC-certified LCP. Pursuant to Public Resources Code (PRC) Section 30106, development in this context means:

> *"…on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511)."*

Whereas, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

CCC also regulates activities in wetlands. Unlike the federal government, CDFW and CCC have adopted the Cowardin et al. (1979) definition of wetlands:

> *Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of the land or is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.*

The Project is located within the coastal zone in San Mateo County. The San Mateo County LCP was approved by the County Board of Supervisors and CCC in 1980. In April 1981, the County assumed responsibility for implementing the State Coastal Act in the unincorporated areas of San Mateo County, including issuance of CDPs. For a permit to be issued the development must comply with the policies of the LCP and those ordinances adopted to implement the LCP. The LCP defines wetlands as:

> *"…an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme*

> *high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric.*
>
> *In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat."*

The County provides the following definition for *Sensitive Habitats*:

> *"…any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.*
>
> *Sensitive habitat areas include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, and habitats supporting rare, endangered, and unique species."*

Policies of the San Mateo County LCP take precedence over San Mateo County General Plan policies for property located in the Coastal Zone. Actions taken by counties or municipalities within the Coastal Zone may be appealed to CCC only under defined circumstances, as specified in PRC Section 30603. CCC also retains permit authority in certain limited areas, such as tidelands and submerged lands (Coastal Act Section 30519[b]). Development must also comply with other provisions of the County Ordinance Code, such as zoning, building, and health regulations.

2.2.4 California Fish and Game Code Section 1602

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW and the notification deemed complete by CDFW for any activity that may, "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake." CDFW reviews the proposed actions and, if the activity would result in a substantial adverse effect to fish and wildlife resources, submits to the applicant a draft agreement with measures to protect the affected fish and wildlife resources. The final proposal that is mutually agreed upon by the department and the applicant is the Lake or Streambed Alteration Agreement.

2.2.5 California Protection for Birds (California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800)

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by in the California Fish and Game Code or any regulation made pursuant thereto. Section 3503.5 provides protection for all birds of prey, including their eggs and nests. In addition, Section 3513 states that it is unlawful to take or possess any migratory bird as designated in the MBTA or any part of such migratory birds except as provided by rules and regulations under provisions of the MBTA. Section 3800 states that it is unlawful to take non-game birds and defines non-game birds as, “all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds.”

3 METHODOLOGY

The following section details the methods employed when reviewing biological resources in proximity to the Project.

3.1 Biological Study Area

This report contains a review of the BSA that includes the maximum anticipated extent of Project-related impacts within the Project Area and an additional survey buffer of 200 feet beyond the Project Area (Figure 2). SWCA conducted a literature review of existing sources of information regarding occurrences of special-status species and sensitive resources within and near the BSA. Field surveys were conducted within the BSA to document biological resources, including sensitive habitats.

3.2 Literature Review and Preliminary Analysis

SWCA conducted a literature review to gain familiarity with the Project Area and to identify sensitive biological features including *Sensitive Habitats* and target special-status species that have the potential to occur within the BSA. The following inventories and databases were searched:

- *California Natural Diversity Database (CNDDB).* The CNDDB database search covered special-status species occurrences within a 5-mile radius of the Project Area.

- *California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants.* The CNPS database search covered occurrences of native plant species within the Montara Mountain U.S. Geological Survey (USGS) 7.5-minute quadrangle, in which the Project Area is located.

- *Sacramento U.S. Fish and Wildlife Service Office Federal Endangered and Threatened Species Database.* The Sacramento USFWS Office database search covered occurrences of endangered and threatened wildlife species within the Montara Mountain USGS 7.5-minute quadrangle.

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2017) and USFWS National Wetlands Inventory (NWI) Database (USFWS 2017) were also reviewed to provide additional information regarding soils and wetlands known to occur in the area. The USFWS Wetlands Mapper and USGS National Hydrography Data were used to identify potential hydrological features in the BSA, the presence/absence of which were confirmed during the field survey (see Section 3.3). Literature pertaining to pertinent zoning and land use documents was reviewed to determine the local compliance requirements for the Project (County of San Mateo 2012, 2013).

All special-status species and sensitive habitats identified in the records search and literature review that have potential to occur within the BSA were compiled into a table for use during the field survey as described in Section 3.3 below. Appendix A provides a description of the 57 special-status plant and wildlife species and two natural communities reviewed, and rationale for expecting presence or absence within the Project Area. For the purpose of this report, special-status species are defined as follows:

- Plants and wildlife listed, proposed, or candidates for listing as threatened or endangered under the FESA.

- Plants and animals listed or proposed for listing by the State of California as threatened or endangered under the CESA.
- Plants listed as rare under the NPPA.
- Plants included in California Rare Plant Ranks 1 and 2.
- California designated status:
    - Animal species that are classified as Fully Protected by the State; or
    - Species of special concern (SSC) by CDFW.

3.3 Field Survey

Following the literature review, on October 17, 2017, SWCA biologist Jessica Henderson-McBean conducted a reconnaissance-level field survey of biological resources in the Project Area and surrounding BSA. The purpose of the field survey was to identify vegetative communities present and evaluate the presence or absence of suitable habitat for special-status species determined to have the potential to occur in the area, sensitive habitats with potential to occur, wetland features, wildlife movement corridors, and indications of wildlife breeding activities. In addition, the biologist identified and mapped vegetation communities using *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et. al. 2009). A complete list of plant and wildlife species observed during the field survey is included in Appendix B. When necessary, the biologist referred to the *Jepson Manual* (Baldwin et al. 2012) to identify plant species. Representative photographs depicting existing conditions are included in Appendix C.

The field surveys also identified the presence/absence of features that may be subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code, USACE/RWQCB jurisdiction pursuant to CWA Section 404/401, or CCC jurisdiction pursuant to the CCA. This included observations for the presence of a defined streambed, bank, or other channel features such as an Ordinary High Water Mark (OHWM) or riparian vegetation.

4 RESULTS

4.1 Topography and Soils

The topography within the BSA slopes from the northeast toward the southwest at an approximately 5–10% grade (field estimate). The elevation is approximately 30–40 feet above mean sea level. The NRCS Web Soil Survey identified the Project Area as occurring on a mixture of Denison clay loam, nearly level soils; Denison coarse sandy loam, nearly level soils; Denison loam, nearly level soils; and coastal beaches. Denison soils are characterized as being moderately well-drained soils comprised primarily of alluvium derived from weathered sedimentary rock (NRCS 2017). Coastal beach soils are poorly drained, sandy, soils which are primarily comprised of alluvium.

4.2 Jurisdictional Wetlands and Waters

A formal wetland delineation was not conducted as part of this study; however, several drainage features were identified within the BSA.

One roadside drainage swale was identified along the northeastern boundary of the Project Area, generally flowing from north to south (Figure 3). This ephemeral swale appears to convey surface flows to a culvert that drains west toward the Pacific Ocean. Monterey cypress trees (*Cupressus macrocarpa*) line the edge of the swale, and vegetation within the swale primarily consists of ruderal vegetation including pampas grass (*Cortaderia selloana*), English ivy (*Hedera helix*), California blackberry (*Rubus ursinus*), Italian thistle (*Carduus pynocephalus*), and bristly ox-tongue (*Helminthotheca echioides*). In addition, one small patch (less than 2 square feet) of horsetail (*Equisetum sp.*), a wetland indicator species, was observed within the channel. No water was present in the drainage swale at the time of the site visit, and there was no evidence of wetland hydrology. Based on the lack of defined bed and banks, OHWM, a dominance of hydrophytic vegetation, and/or wetland hydrology, it is unlikely that this feature would be considered jurisdictional by USACE, RWQCB, CDFW, or CCC.

A roadside drainage swale was also observed on the northeast side of Cabrillo Highway. The drainage swale feature conveys overland surface flow towards culverts, crosses beneath Cabrillo Highway, and enters the drainage swale that parallels the west side of the highway. This drainage swale also lacks a defined bed and banks, OHWM, hydrophytic vegetation, and wetland hydrology, and therefore is unlikely be considered jurisdictional by USACE, RWQCB, CDFW, and CCC.

4.3 Vegetation Communities

Vegetation communities observed within the BSA included Disturbed/Ruderal, Developed, and Agricultural, as described below. Photographs (Appendix C) and mapping (Figure 3) depict the locations of habitat types in the BSA.

4.3.1 Disturbed/Ruderal

This cover type describes areas with highly modified soils and vegetation structure. These areas are often dominated by nonnative and weedy annual species that may or may not have been intentionally planted. Disturbed/Ruderal lands are the dominant cover type within the BSA. This cover type does not meet the definitions for any vegetation community in the MCV. This cover type is predominantly composed of nonnative ruderal species, and is generally found adjacent to the access roads and other human disturbances. Few native species are generally present within these areas.

Within the BSA, common species in this cover type include cut leaf plantain (*Plantago coronopus*), Bermuda grass (*Cynodon dactylon*), wild radish (*Raphanus sativus*), Italian rye grass (*Festuca perennis*), bristly ox-tongue (*Helminthotheca echioides*), Italian thistle (*Carduus pynocephalus*), and pampas grass (*Cortaderia jubata*).

Disturbed/Ruderal areas within the BSA are not likely to support special-status species due to the high level of disturbance and human activity; however, the cover type may provide habitat for nesting birds covered under the MBTA.

4.3.2 Developed

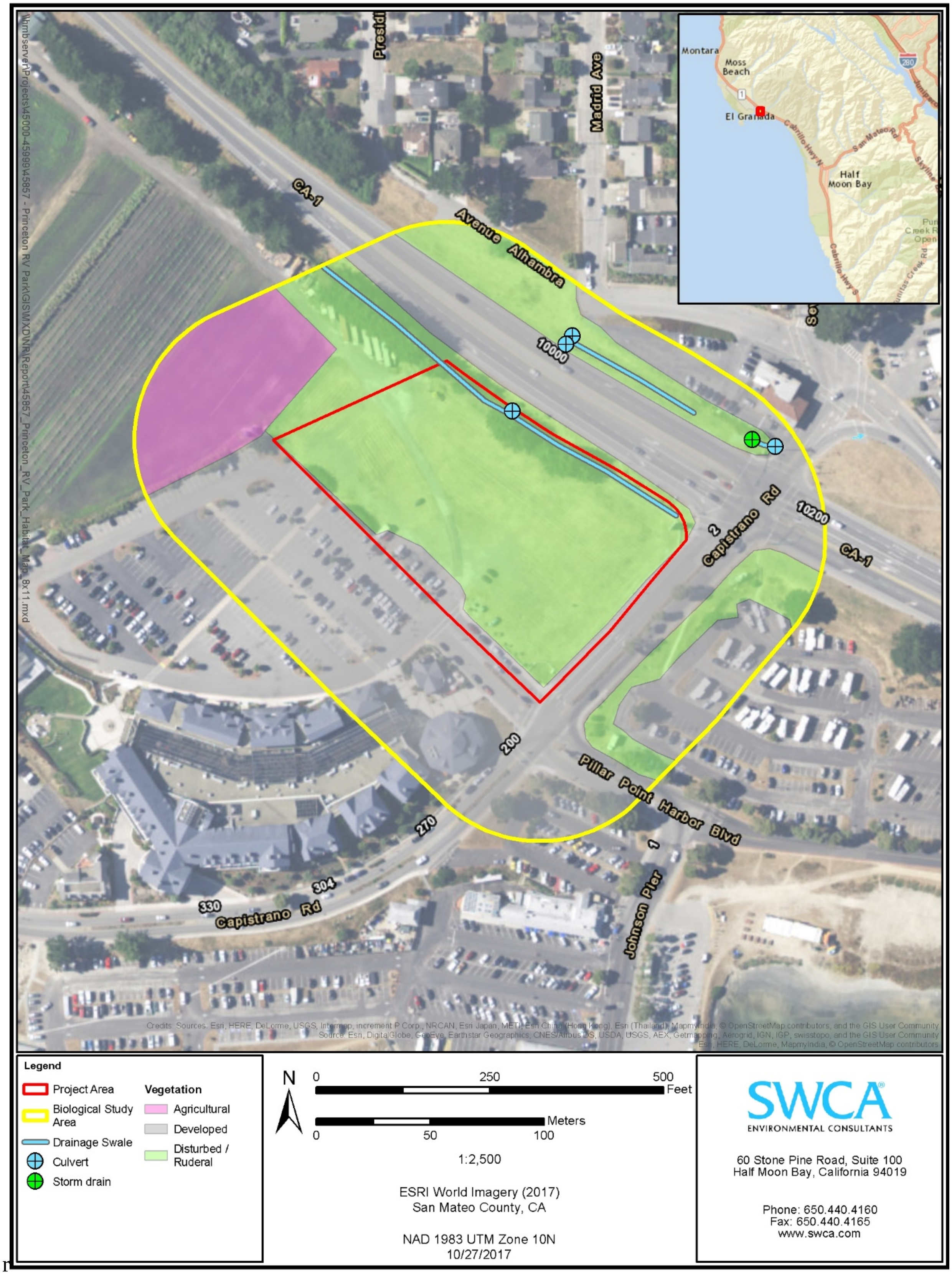
This cover type is used to describe areas dominated by man-made structures. These areas typically lack vegetation, and are best represented as either concrete, gravel, or bare soil. Typical structures include roads, houses, horse paddocks, etc. This cover type does not meet definitions for any vegetation community in the MCV.

In the BSA, developed areas are present in the form of numerous parking lots, commercial buildings, and paved roadways. These areas are not likely to support special-status species due to the high level of disturbance and human activity. However, ornamental trees and shrubs within developed areas may provide habitat for nesting bird species covered under the MBTA.

4.3.3 Agricultural

MCV does not characterize agricultural cover types. However, for the purposes of this report, agricultural cover type is primarily characterized as land that is under active cultivation. An agricultural field (cultivated artichokes) is present within the BSA northwest of the Project Area. The agricultural area within the BSA is not likely to support special-status species due to the high level of disturbance and human activity; however, this may provide marginal habitat for nesting birds covered under the MBTA.

Figure 3. Vegetation Communities Map



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4.4 Sensitive Resources

4.4.1 Desktop Review and Literature Search

Results of desktop research included records for 14 federally or state-listed plant species and 29 additional plants with CNPS California Rare Plant Rank 1B or 2 in the vicinity of the BSA. Records were returned for 21 wildlife species with state listing status, federal listing status, and/or CDFW designated status. Tables A-1 and A-2 in Appendix A describe each species' habitat requirements, listing status, and potential to occur in the BSA. No USFWS designated critical habitat is located within the BSA.

4.4.2 Special-status Plants

Based on the existing biological conditions in and adjacent to the BSA, the predominance of disturbed/ruderal and developed areas within the BSA, review of relevant literature, the known occurrences of special-status species in the region (Appendix A), and SWCA biologists' local knowledge of the region, no special-status plant species were determined to have potential to occur in the BSA. No known population of rare plant occurrences have been identified within the BSA (CNDDB 2017). None of the 36 special-status plant species identified during desktop review were observed during field surveys. Field surveys were conducted by SWCA within the appropriate blooming period for nine of the identified species (surveys conducted in October 2017). The remaining 34 plant species, with blooming periods outside of when the field survey was conducted, were determined to not have the potential to occur within the BSA due to lack of suitable habitat, soils, or elevation requirements.

4.4.3 Special-status Wildlife

One northern harrier (*Circus cyaneus*, CDFW species of special concern) was observed foraging within the Project Area during the field surveys. No other special-status species were observed in the BSA during the field surveys. Based on desktop review (CNDDB 2017; USFWS 2017), 22 special-status wildlife species that have been recorded within the Project vicinity. A description of these species and their potential to occur is included in Appendix A. Northern harrier, despite no previous records in the CNDDB, was included in the review based on observed presence. Of the 23 listed species that were assessed, three special-status wildlife species were determined to have potential to occur in the Project Area. These species are discussed in the sections below:

- California red-legged frog (*Rana draytonii*): federally threatened, CDFW species of special concern.

- San Francisco garter snake (*Thamnophis sirtalis tetrataenia*): federally and state endangered, CDFW fully protected species.

- Northern harrier *(Circus cyaneus)*: CDFW species of special concern.

4.4.3.1 CALIFORNIA RED-LEGGED FROG

The nearest record for California red-legged frog, dated 2006, is located approximately 1.2 miles to the northeast of the Project Area (CNDDB 2017). California red-legged frog occurs in various habitats during its life cycle. Breeding areas include aquatic habitats such as lagoons, streams, natural and human-made ponds, and slow-flowing stream reaches or deep pools within a stream with vegetation or other material to which egg masses may be attached (USFWS 2010). This species prefers aquatic habitats with little or no flow, the presence of surface water until at least early June, surface water depths to at least 2.3 feet, and the presence of emergent vegetation (e.g., cattails and bulrush). The largest densities of California red-legged frog are typically associated with dense stands of overhanging willows and an intermixed fringe of sturdy emergent vegetation. During periods of wet weather, some individuals may make overland dispersals through adjacent upland habitats of distances up to 2 miles (USFWS 2010). Upland habitats including small mammal burrows and woody debris can also be used as refuge during the summer if water is scarce or unavailable (Jennings and Hayes 1994). California red-legged frogs typically travel between sites and are unaffected by topography and vegetation types during migration. Dispersal habitat makes it possible for California red-legged frogs to locate new breeding and non-breeding sites, and is crucial for conservation of the species.

Although it is well-documented that California red-legged frogs are known to migrate and use upland areas for refuge, research has shown that these migrations are temporary, often initiated by winter rains and limited to the winter wet-season, spatially restricted, and most often occur between aquatic habitats that are required for survival (Bulger et al. 2002; Tatarian 2008). Bulger et al. (2002) found that only 11–22% of the adult population studied migrated to and from breeding sites annually, the remaining percentage staying in close proximity to breeding areas (median travel of less than 82 feet [25 meters]). Tatarian (2008) found similar results with only 42.8% of frogs tracked moving from source pools. Average migratory distances observed for aquatic and terrestrial movements were 352 feet (107.2 meters) and 80 feet (24.4 meters), respectively. Radio tracking of 123 individuals by Fellers and Kleeman (2007) found the majority of frog movements observed in this study to be less than 98 feet (30 meters). Of the individuals that moved greater than 98 feet (30 meters) (32), the median distance traveled was 492 feet (150 meters). This distance was found to roughly coincide with the distance to the nearest suitable nonbreeding area. Larger movements, including one presumed to be upwards of 1.74 miles (2.8 kilometers), were observed but generally found to occur along riparian corridors coinciding with winter rains or upon seasonal habitat drying. Similar to Bulger et al. (2002) and Tatarian (2008) most movements recorded during the study were typically between aquatic habitats. High-density urban or industrial developments also form barriers to California red-legged frog dispersal (USFWS 2010).

The Project Area is primarily comprised of a disturbed/ruderal field, which provides marginal upland dispersal habitat for this species. Scattered pocket gopher burrows were observed throughout the Project Area, which may provide upland refugia refuges to California red-legged frogs. In addition, the roadside drainage swale observed on the northeast side of the Project Area may provide seasonal aquatic non-breeding habitat for this species. Two creeks occur in the vicinity of the Project Area which provide suitable aquatic non-breeding habitat for this species: Denniston Creek (0.25 miles northwest of the Project Area) and Deer Creek (0.25 miles southwest). However, the Project Area is surrounded by developed land and actively cultivated agricultural fields. The developed and highly disturbed nature of areas surrounding the Project Area may provide obstacles to upland dispersal to the Project Area from any nearby aquatic features.

Due to the location of the Project Area in relation to suitable aquatic habitat, there is low potential for California red-legged frog to travel through the Project Area to access other nearby aquatic sources, such as the roadside drainage swale on the north side of the Project Area. With the implementation of Avoidance and Minimization Measures outlined in Section 5, such as work restriction following rain, no impacts are anticipated to this species as a result of project activities.

4.4.3.2 SAN FRANCISCO GARTER SNAKE

San Francisco garter snake inhabits various aquatic habitats, including reservoirs, freshwater marshes, creeks, drainage ditches, ponds, and lakes. Less ideal habitats can also be used by San Francisco garter snake, such as ditches and other waterways, or floating algal or rush mats. Suitable breeding habitat includes shallow marshlands with an abundance of emergent vegetation. Grasslands are also an important upland habitat for this species, as they provide areas for thermoregulation and cover. Prey items for this species include California red-legged frog, Pacific chorus frogs (*Pseudacris regilla*), and earthworms. Small mammal burrows are used by San Francisco garter snake during hibernation. During the warm days of summer, most activity occurs during the morning and afternoon. Preferred nocturnal retreats are thought to be holes, especially mammal burrows, crevices, and surface objects (USFWS 2007).

There are 18 records of San Francisco garter snake within the Montara Mountain USGS 7.5-minute quadrangle; however, more specific locational data for this species is suppressed by CDFW in the CNDDB database.

The roadside drainage swale observed on the northeast side of the Project Area may provide seasonal marginal aquatic habitat for this species. The drainage swale lacks cover for this species because no emergent vegetation is present. The Project Area is comprised primarily of a disturbed/ruderal field, which provides marginal upland dispersal habitat for this species. Scattered pocket gopher burrows were observed throughout the Project Area as well as farm equipment and wood piles which could provide upland refugia for this species. Two creeks occur in the vicinity of the Project Area which provide suitable aquatic habitat for this species: Denniston Creek (0.25 miles northwest of the Project Area) and Deer Creek (0.25 miles southwest). However, the Project Area is surrounded by developed land and actively cultivated agricultural fields. The developed and highly disturbed nature of habitat surrounding the Project Area may provide obstacles to upland dispersal to the Project Area from nearby aquatic features with more suitable habitat.

Due to the location of the Project Area in relation to marginal aquatic habitat, there is low potential for San Francisco garter snake to occur within the Project Area. With the implementation of Avoidance and Minimization Measures outlined in Section 5, no impacts are anticipated to this species as a result of project activities.

4.4.3.3 NORTHERN HARRIER

Northern harriers occur in many kinds of open terrain including: marshes, fields, and prairies. This species flies low over fields hunting for small mammals, large insects, snakes, lizards, toads, and other small birds. Northern harriers nest on the ground in dense fields or marshes, where they build a shallow nest depression lined with grass or a platform of sticks, grass, and weeds (Audubon 2017).

One female northern harrier was observed foraging within the BSA during the site visit. However, no suitable nesting habitat for this species was observed within the BSA. With the implementation of Avoidance and Minimization Measures outlined in Section 5, no impacts are anticipated to this species as a result of project activities.

4.4.4 Migratory Birds

Most nesting bird species are protected under the MBTA as well as the California Fish and Game Code. Additional protections are provided to state listed species and fully protected species under the CESA and California Fish and Game Code Section 3511, respectively. The migratory bird nesting season is generally identified as February 1 through August 31, but varies by species. These regulations prohibit the removal of active nests and provide nests with protection from “take” typically in the form of activity-free buffers around active nests or other performance controls. There are further provisions that prohibit the removal of inactive nests used by raptors and listed species.

Ruderal and fallow agricultural fields within the BSA provide suitable foraging habitat for many raptor species in the area, including northern harrier. One northern harrier was observed foraging within the BSA during the survey. In addition, Monterey cypress trees within the BSA provide suitable nesting habitat for other raptor species.

Monterey cypress trees, ruderal and ornamental vegetation, and commercial structures within the BSA provide suitable foraging and nesting habitat for migratory bird species. Avian species protected by the MBTA and observed within the BSA during the field survey included black phoebe (*Sayornis nigricans*), Brewer’s blackbird (*Euphagus cyanocephalus*), white-crowned sparrow (*Zonotrichia leucophrys*), American crow (*Corvus brachyrhynchos*), northern harrier (*Circus cyaneus*), and red-shouldered hawk (*Buteo lineatus*). If project activities occur during the nesting season (February 1 through August 31), it is recommended that Avoidance and Minimization Measures, described below in Section 5, be implemented to avoid impacts to nesting birds.

4.4.5 Wildlife Movement Corridors

The Project Area is located within an area of commercial and agricultural development and therefore it is unlikely that the Project Area serves as a wildlife movement corridor. Due to the presence of marginal aquatic habitat for California red-legged frog and San Francisco garter snake, it is possible that the Project Area may be used as seasonal dispersal habitat for these species. However, due to the lack of emergent vegetation cover and development surrounding the Project Area, the potential for these species to occur within the Project Area is low. With the implementation of recommended Avoidance and Minimization Measures described in Section 5 below, impacts to wildlife corridors would be avoided.

4.4.6 Sensitive Habitats

No sensitive habitats, as defined by San Mateo County LCP Policies 7.1–7.14, were observed within the Project Area. The drainage swale observed within the Project Area does not contain 50% cover of the plant species that are used to define riparian corridors under Policy 7.7 of the San Mateo County LCP. No coastal wetlands as defined by the County (see Sections 2.2.3 and 4.2) were observed within the Project Area.

4.5 Land Use and Zoning

The Project Area is located within the California Coastal Zone and is zoned as a Coastside Commercial Recreation/Design Review/Coastal Development District (San Mateo County Property Maps Portal). The San Mateo County LCP Land Use Plan designates the Project Area as Coastside Commercial Recreation area. Based on review of the San Mateo County Zoning Regulations, December 2012 (Zoning Code), the proposed Project falls within the Coastal Development District and as such would likely require a CDP.

5 CONCLUSION AND RECOMMENDATIONS

The goal of this BRE is to identify the potential for sensitive biological resources to occur within the Project Area and analyze any potential Project impacts to biological resources. One northern harrier, a CDFW species of special concern, was observed within the BSA during the biological field surveys. No other special-status species were observed. Based on the results of the literature review and field survey, the Project Area is not expected to contain or support special-status species. However, the drainage swale on the northeast side of the Project Area may provide marginally suitable, seasonally available, aquatic habitat for California red-legged frog and San Francisco garter snake. Additionally, the Project Area and BSA contain suitable nesting habitat for migratory birds covered under the MBTA. It is recommended that Avoidance and Minimization Measures, listed below, be implemented to reduce or eliminate potential impacts to sensitive wildlife species.

Although the drainage swale along the northeast side of the Project Area is unlikely to be considered jurisdictional by USACE, RWQCB, CDFW, and CCC, it is suggested that project impacts avoid the swale because the swale has connectivity to navigable waterways. It is suggested that erosion and sediment control Best Management Practices (BMPs) provided in Section 5 are implemented in order to avoid impacts to downstream water quality.

The Project is not anticipated to be subject to permitting pursuant to the CWA, FESA, CESA, or Section 1602 of the California Fish and Game Code. Due to the location of the project within the Coastal Zone, the project will likely require a CDP from the County.

5.1 Site-Specific Avoidance and Minimization Measures

1. **Pre-Construction Nesting Bird Surveys.** Prior to any Project construction activities, the Project proponent will take the following steps to avoid direct losses of active nests, eggs, and nestlings and indirect impacts to avian breeding success:

    - If construction activities occur only during the non-breeding season, between August 31 and February 1, no nest surveys will be required.

    - During the breeding bird season (February 1 through August 31), a qualified biologist will survey construction areas in the vicinity of the Project Area for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys will include all potential habitats within 250 feet of activities for raptors, and 50 feet of activities for all other species of activities. If results are positive for nesting birds, avoidance procedures will be adopted, if necessary, on a case-by-case basis. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and minimum 250-foot buffer for most raptors) or seasonal avoidance. Buffer areas around active nests may be reduced on a case-by-case basis based on guidance from a qualified biologist. The biologist will consider factors such as topography, land use, Project activities, visual screening or line-of-site to active nest, and background noise levels when establishing a reduced nest buffer. The biologist will determine if full-time biological monitoring may be required during all activities that occur within reduced nest buffers in order to monitor the active nest(s) for signs of disturbance or “take.”

2. **Environmental Training.** Before the start of project activities, all crewmembers shall attend an Environmental Awareness Training presented by a qualified biologist. The training shall include a description of the life history special-status species that may occur in the region, the project Avoidance and Minimization Measures, the limits of the project work areas, applicable laws and regulations, and penalties for non-compliance. Upon completion of training, crewmembers shall sign a training form indicating they attended the program and understood the measures.

3. **Ground Disturbing Construction Activities.** It is suggested that ground disturbing construction activities (i.e., grubbing, grading, or paving) should occur during the dry season (June 1 to October 15) to facilitate avoidance of California red-legged frog. Regardless of the season, no construction shall occur within 24 hours following a significant rain event (>1/4 inches in a 24-hour period). Following a significant rain event and the 24-hour drying-out period, a qualified biologist shall conduct a pre-construction survey for California red-legged frog prior to the restart of any Project activities.

4. **Wildlife Encounters.** If any wildlife is encountered during Project activities, said wildlife should be allowed to leave the work area unharmed. Animals will be allowed to leave the work area of their own accord and without harassment. Animals shall not be picked up or moved in any way.

5. **Vegetation Disturbance.** Disturbance to vegetation should be kept to the minimum necessary to complete the Project activities, provided there is no feasible alternative. To minimize impacts to vegetation, a qualified biologist shall work with the contractor to designate the work area and any staging areas.

6. **Vehicle Fueling and Maintenance.** All fueling and maintenance of vehicles and other equipment and staging areas should occur at least 50 feet from the drainage swale on the northeastern edge of the project area. Equipment operators and fueling crews shall ensure that contamination of the swale does not occur during such operations. Prior to the onset of work, a plan to allow for prompt and effective response to any accidental spills shall be established. All workers should be informed of the importance of preventing spills, and of the appropriate measures to take should a spill occur.

7. **Erosion and Sediment Control BMPs.** Erosion and sediment control BMPs shall be installed to prevent runoff to the drainage swale on the northeastern edge of the project area. This shall include the installation of silt fences or straw wattles between work areas and any water sources such as the drainage swale, and around any spoil piles (e.g., loose asphalt, dirt, debris, construction-related materials) that could potentially discharge sediment into habitat areas. If straw wattles are used, they shall be made of biodegradable fabric (e.g., burlap) and free of monofilament netting.

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Appendix A.
Special-Status Species Considered for Potential Occurrence in the Project Area

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Notes for Tables A-1 and A-2

Sources: Sawyer et. al. (2009), CNPS (2017) CNDDB (2017), USFWS (2017).

Status Codes:

-- = No status

Federal:

FE = Federal Endangered
FT = Federal Threatened
MBTA = Protected by Migratory Bird Treaty Act

State:

SE = State Endangered
ST = State Threatened
SR = State Rare
CSC = California Special Concern Species
FP = Fully Protected
SC=State Candidate

General Habitat Descriptions:

Months in parentheses are uncommon.

California Native Plant Society (CNPS):

List 1B = Rare, threatened, or endangered in California and elsewhere
List 2 = Rare, threatened, or endangered in California, but more common elsewhere
List 3 = Plants about which more information is needed
List 4 = Watch list of plants of limited distribution

CNPS Threat Code:

.1 = Seriously endangered in California (more than 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Fairly endangered in California (20–80% occurrences threatened)
.3 = Not very endangered I California (<20% of occurrences threatened or no current threats known)

Potential for Occurrence Ratings:

None = No potential for the species or habitat to occur due to lack of suitable habitat in the BSA.
Low = Species has been mapped within 5 miles of the BSA, but record is old/unreliable, the appropriate habitat is not present, or the record is far from the Project area.
Moderate = Records have been mapped near the Project area and/or suitable habitat is present, but records are old or far from the Project area.
High = Species has high likelihood of presence in the BSA, has been mapped in close proximity to the Project area, and suitable habitat is present.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
Plant Species of Concern			
arcuate bush-mallow *(Malacothamnus arcuatus)*	A perennial evergreen shrub associated with chaparral and cismontane woodland habitat. Blooming period: April-September. Elevation: 12-355 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
bent-flowered fiddleneck (*Amsinckia lunaris*)	An annual herb that occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland habitat. Blooming period: March-June. Elevation: 3-500 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA including lack of serpentine soils and gravelly slopes. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Blasdale's bent grass (*Agrostis blasdalei*)	A perennial rhizomatous herb that occurs in coastal bluff scrub, coastal dunes, and coastal prairie habitats. Blooming period: May-June Elevation: 5-150 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
California seablite (*Suaeda californica*)	A perennial evergreen shrub found in marshes and swamps. Blooming period: July-October Elevation: 0-15 meters	FE/--/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Choris' popcorn-flower *(Plagiobothrys chorisianus* var. *chorisianus)*	An annual herb occurring in mesic chaparral, coastal prairie, and coastal scrub habitats. Blooming period: March–June. Elevation: 3-160 meters	--/--/1B.2	**None:** Suitable habitat for the species not present in the BSA. Species known to be limited to coastal areas with mesic conditions. Species not observed during field survey.
coast yellow leptosiphon *(Leptosiphon croceus)*	An annual herb that occurs in coastal bluff scrub and coastal prairie habitats. Blooming period: April–May. Elevation: 10-150 meters	--/SC/1B.1	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey. This species is thought to be extirpated from San Mateo County
coastal marsh milk-vetch *(Astragalus pycnostachyus* var. *pycnostachyus)*	Perennial herb that occurs in mesic coastal dunes, coastal scrub, marshes, and swamps (coastal salt marshes and streamsides). Blooming period: April–October. Elevation: 0-30 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Site elevation above typical range for this species. Species not observed during field survey.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
coastal triquetrella (*Triquetrella californica*)	A moss that forms loose mats on exposed shaded soil within coastal bluff scrub and coastal scrub habitats. Elevation: 10-100 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Crystal Springs lessingia (*Lessingia micradenia* var. *arachnoidea*)	An annual herb that occurs in serpentine soil often on roadsides, in cismontane woodland, coastal scrub and grassland habitats. Blooming period: July-October. Elevation: 60-200 meters	--/--/1B.2	**None:** Serpentine soils do not occur in the BSA. Species not observed during field survey. Impacts to this species are not expected to occur. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Davidson's bush-mallow *(Malacothamnus davidsonii)*	A perennial deciduous shrub that occurs in chaparral, cismontane woodland, coastal scrub, and riparian woodlands. Blooming period: June–January. Elevation: 185-855 meters.	--/--/1B.2	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
fragrant fritillary *(Fritillaria liliacea)*	A perennial bulb found in cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland habitats. This species is often found on serpentinite soils. Blooming period: February–April. Elevation: 3-410 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
Franciscan manzanita (*Arctostaphylos franciscana*)	A perennial evergreen shrub found in coastal scrub habitats on serpentinite soils. Blooming period: February-April, Elevation: 60-300 meters	FE/--/1B.1	**None:** Serpentine soils do not occur in the BSA. Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Franciscan onion *(Allium peninsulare* ssp. *franciscanum)*	Perennial bulb found on clay, volcanic and often serpentinite soils within cismontane woodlands and grasslands. Blooming period: April–June. Elevation: 52-300 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
Franciscan thistle *(Cirsium andrewsii)*	Perennial herb found in mesic areas and occasionally on serpentine soils in broadleafed upland forest, coastal bluff scrub, coastal prairie, and coastal scrub habitats. Blooming period March-July. Elevation: 0-150 meters.	--/--/1B.2	**None:** Serpentine soils do not occur in the BSA. Suitable habitat for the species is not present in the BSA. Species not observed during field survey.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
fountain thistle *(Cirsium fontinale var. fontinale)*	A perennial herb that occurs in serpentine seeps. Known only from the vicinity of Crystal Springs Reservoir. Occurs in chaparral, cismontane woodlands, grassland, meadows, and seeps. Blooming period: April-October. Elevation: 45-175 meters.	FE/SE/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Hall's bush-mallow *(Malacothamnus hallii)*	A stout perennial evergreen shrub associated with open chaparral and coastal scrub habitat. Blooming period: May-October. Elevation: 10-760 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Hickman's cinquefoil (*Potentilla hickmanii)*	Occurs in vernally wet meadows, coastal bluff scrub, closed-cone coniferous forest, vernally mesic meadows and seeps, and freshwater marshes and swamps. Found along the central California coast. Blooming period: April-August. Elevation: 10-149 meters.	FE/SE/1B.1	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey.
Hillsborough chocolate lily (*Fritillaria biflora* var. *ineziana*)	A perennial bulb associated with serpentine soils in the San Francisco Bay Area. Found in cismontane woodland, and valley and foothill grasslands. Known only from the Hillsborough area. Blooming period: March-April.	–/–/1B.1	**None:** Serpentine soils do not occur in the BSA. Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Kellogg's horkelia (*Horkelia cuneata var. sericea*)	A perennial herb found in sandy or gravelly openings in closed-cone coniferous forests, maritime chaparral, coastal dune and coastal scrub habitats. Blooming period: April-September, Elevation: 10-200 meters	–/–/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
Kings Mountain manzanita *(Arctostaphylos regismontana)*	A perennial evergreen shrub that occurs in broad-leafed upland forest, chaparral, and north coast coniferous forest with granitic or sandstone based soil. Blooming period: December–April.	--/--/1B.2	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey.
Marin checker lily (*Fritillaria lanceolata* var. *tristulis*)	A perennial bulb that occurs in coastal bluff scrub, coastal prairie, and coastal scrub. Blooming period: February–May. Elevation 15-150 meters.	--/--/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
Marin dwarf-flax (*Hesperolinon congestum*)	An annual herb that occurs on serpentinite soils in chaparral and grassland habitats. Blooming period: April-July. Elevation: 5-370 meters.	FT/CT/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Montara manzanita *(Arctostaphylos montaraensis)*	A perennial evergreen shrub that occurs on granite and sandstone outcrops in maritime chaparral and coastal scrub habitats. Blooming period: January–March. Elevation: 80-500 meters	--/--/1B.2	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey.
Oregon polemonium *(Polemonium carneum)*	A perennial herb found in moist to dry, open areas. This species occurs in coastal prairie, coastal scrub, and lower montane coniferous forest habitats. Blooming period: April-September. Elevation: 0 to 1830 m.	--/--/2B.2	**None:** Suitable habitat not present in the BSA. Most recent occurrence within 5 miles is dated from 1916 (CNDDB 2016). Species not observed during field survey.
Ornduff's meadowfoam *(Limnanthes douglasii* ssp. *ornduffii)*	An annual herb found in agricultural fields, meadows, and seeps. Restricted to a single agricultural field in San Mateo County. Blooming period: November-May. Elevation: 10-20 meters.	--/--/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
pappose tarplant (*Centromadia parryi* ssp. *parryi*)	Annual herb that occurs on alkaline soils in chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), and valley and foothill grassland (vernally mesic). Blooming period: May-November. Elevation: 0-420 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
perennial goldfields (*Lasthenia californica ssp. macrantha*)	Perennial herb that occurs in coastal bluff scrub, coastal dune and coastal scrub habitats. Blooming period: January-November Elevation: 5-520 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Point Reyes horkelia (*Horkelia marinensis*)	Occurs on sandy soils in coastal dunes, prairie, and scrubland. Blooming period: May–September. Elevation: 5-755 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
Presidio manzanita (*Arctostaphylos montana*)	A perennial evergreen shrub found in serpentinite outcrops in chaparral, coastal prairie and coastal scrub habitats. Known from only one extant population at the Presidio in San Francisco. Blooming period: February-March Elevation: 45-215 meters	FE/CE/1B.1	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. This species is only known to occur at the Presidio in San Francisco. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
robust spineflower (*Chorizanthe robusta var. robusta*)	Annual herb that is known to occur in sandy or gravelly soils in maritime chaparral, cismontane woodland openings, coastal dunes, and coastal scrub habitats. Blooming period: April-September Elevation: 3-300 meters	FE/--/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
rose leptosiphon *(Leptosiphon rosaceus)*	An annual herb found in coastal bluff scrub habitat on the central California coast. Blooming period: April-July. Elevation: 0-100 meters	--/--/1B.1	**None:** Suitable habitat not present in the BSA and located outside of the known elevation range for this species. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
San Francisco Bay spineflower (*Chorizanthe cuspidata* var. *cuspidata*)	An annual herb that grows in sand along the central California coast. This species occurs in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub habitats. Blooming period: April-August. Elevation: 3-215 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
San Francisco campion *(Silene verecunda ssp. verecunda)*	A perennial herb occurring in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grasslands habitats. Blooming period: February-August. Elevation: 30-645 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
San Francisco collinsia *(Collinsia multicolor)*	An annual herb that occurs in closed-cone coniferous forest and coastal scrub. Occasionally found in serpentine soils. Blooming period: February-May. Elevation: 30-250 meters	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
San Francisco lessingia (*Lessingia germanorum* = L.g. var. germanorum)	An annual herb that occurs in coastal scrub habitats on remnant dunes. Blooming period: (June)July-November, Elevation: 25-110 meters	FE/CE/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
San Francisco owl's clover (*Triphysaria floribunda*)	An annual herb found in coastal prairie, coastal scrub, and coastal grasslands on serpentine soils. Blooming period: April-June. Elevation: 10-160 meters.	--/--/1B.2	**None:** Serpentine soils do not occur in the BSA. Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
San Mateo thornmint *Acanthomintha obovate ssp. duttonii*	An annual herb that occurs in chaparral and grassland habitats. Often occurs on serpentine soils. Blooming period: April-June Elevation: 50-300 meters.	FE/SE/1B.1	**None:** Serpentine soils do not occur in the BSA. Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
San Mateo woolly sunflower *(Eriophyllum latilobum)*	A perennial herb found in cismontane woodlands in the San Francisco Bay Area. Often found on road cuts and on serpentinite soils. Blooming period: May-June Elevation: 45-150 meters.	FE/SE/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Showy indian clover (*Trifolium amoenum*)	An annual herb that occurs on coastal bluff scrub, valley and foothill grasslands and sometimes serpentinite soils. Blooming period: April-June Elevation: 5-415 meters	FE/--/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Sonoma sunshine (Blennosperma bakeri)	An annual herb that occurs in valley and foothill grasslands (mesic) and vernal pools. Blooming period: March-May Elevation: 10-110 meters	FE/SE/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
western leatherwood *(Dirca occidentalis)*	A perennial deciduous shrub that occurs in broad-leafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland habitats. Blooming period: January–April. Elevation: 25-425 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
white-rayed pentachaeta (*Pentachaeta bellidiflora*)	Occurs in grassy or rocky areas on the central California coast and in the San Francisco Bay Area. Primarily in cismontane woodland, valley and foothill grasslands on serpentine soils. Blooming period: March-May. Elevation: 35-620 meters	FE/SE/1B.1	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.

Table A-1. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Plants and Natural Communities)

Species Name	General Habitat Description	Legal Status Federal/ State/CNPS	Potential for Occurrence
woodland woollythreads *(Monolopia gracilens)*	An annual herb associated with serpentine soils in broad-leafed upland forest openings, chaparral openings, cismontane woodlands, North Coast coniferous forest openings, and grassland habitats. Blooming period: February–July. Elevation: 100-1200 meters.	--/--/1B.2	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
Natural Communities of Concern			
northern coastal salt marsh	Marsh habitat supporting herbaceous, suffrutescent, salt-tolerant hydrophytes often active in summer and dormant in winter. Characteristic species include *Jaumea carnosa, Limonium californicum,* and *Frankenia salina*. Developed around Humboldt Bay, Tomales Bay, San Francisco Bay, Elkhorn Slough, and Morro Bay.		**None:** Project Area does not support northern coastal salt marsh.
northern maritime chaparral	Dense shrub habitat composed of several species of manzanita, wild lilac, and chamise. Associated with sandy substrates in the coastal fog zone, usually on rolling to hilly terrain. Occurs from Santa Cruz to Sonoma Counties.		**None:** Project Area does not support northern maritime chaparral.

Table A-2. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Wildlife)

Species Name	General Habitat Description	Legal Status Federal/ State	Potential for Occurrence
Wildlife Species of Concern			
Invertebrates			
Bay checkerspot butterfly (*Euphydryas editha bayensis*)	A medium sized butterfly which occurs in shallow serpentinite soil communities. The primary host plant for this species is dwarf plantain (*Plantago erecta)* when they eggs hatch they feed on the host plant or if the host plant has dried up they will move to native owls clover species *(Castilleja densiflorus or Castilleja exserta).* The range of this species primarily occurs within the San Francisco Bay Area from Twin Peaks to Santa Clara County with some populations in Contra Costa and Alameda Counties.	FT/--	**None:** Suitable habitat and larval host plants were not observed in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Callippe silverspot butterfly (*Speyeria callippe callippe*)	A medium-sized butterfly that occurs in only 14 populations along hilltops and ridges in grassland habitats located in the San Francisco Bay Area of California. Their primary host plants are Johnny jump-ups (*Viola pedunculata*).	FE/--	**None:** Suitable habitat and larval host plants were not observed in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
mission blue butterfly (*Icaricia icarioides missionensis*)	A small bluish-lavender or brown butterfly that occurs in coastal grassland and coastal chaparral dominated habitats. The primary larval food plant is lupine (*Lupinus albifrons, L. formosus, L. variicolor*).	FE/--	**None:** Suitable habitat and larval host plants were not observed in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Myrtle's silverspot butterfly (*Speyeria zerene myrtleae*)	A medium-sized butterfly found in coastal dune or prairie habitat. The primary larval food plant is violets (typically *Viola adunca*). Populations range from the Golden Gate in San Francisco north to the mouth of the Russian River in Sonoma County.	FE/--	**None:** Suitable habitat and the larval host plant were not observed in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
San Bruno elfin butterfly *(Callophrys mossii bayensis)*	A small brownish butterfly that occurs in coastal mountains near San Francisco Bay, in the fog-belt of steep north-facing slopes that receive little direct sunlight. The primary larval host plant is stonecrop (*Sedum spathulifolium*).	FE/--	**None:** Suitable habitat and the larval host plant were not observed in the BSA. Species not observed during field survey.

Table A-2. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Wildlife)

Species Name	General Habitat Description	Legal Status Federal/ State	Potential for Occurrence
Amphibians			
California giant salamander *(Dicamptodon ensatus)*	A large reddish brown terrestrial salamander found in wet coastal forests or near clear, cold permanent and semi-permanent streams. Typically occurs from sea level to near 3,000 feet in elevation.	--/SSC	**None**. Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
California red-legged frog *(Rana draytonii)*	Aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Upland habitats include small mammal burrows and woody debris.	FT /SSC	**Low:** Suitable habitat for the species is not present in the Project Area; however the roadside drainage swale on the north side of the Project Area may provide marginal aquatic non-breeding habitat for this species. Low potential for this species to occur in the Project Area if using area for dispersal.
Fish			
Delta smelt (*Hypomesus transpacificus*)	Delta smelt are endemic to the upper San Francisco Estuary and can be found throughout the delta region. Delta smelt are a euryhaline species that can tolerate a wide range of salinities, but are typically found in a salinity range of 2–7 ppt. They are typically found in the shallow (<3 meters) open waters of the delta, where they feed on plankton.	FT/SE	**None:** Suitable habitat for the species is not present in the Project Area. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project area.
Steelhead-central California coast DPS (*Oncorhynchus mykiss irideus*)	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT/--	**None:** Suitable habitat for the species is not present in the Project Area. Species not observed during field survey. Although CNDDB occurrences have been documented within 5 miles of the Project Area.
Tidewater goby (*Eucyclobius newberryi*)	Inhabits coastal lagoons and brackish bays at mouth of freshwater streams.	FE/SSC	**None:** Suitable habitat for the species is not present in the Project Area. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project area.
Reptiles			
Green sea turtle (*Chelonia mydas*)	A large marine turtle with low, smooth, heart-shaped carapace. This species rarely comes on to land, and are often found far out to sea. Eggs are laid on sandy beaches.	FE/--/--	**None:** Suitable habitat for the species is not present in the BSA. This species is primarily marine. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.

Table A-2. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Wildlife)

Species Name	General Habitat Description	Legal Status Federal/ State	Potential for Occurrence
San Francisco garter snake (*Thamnophis sirtalis tetrataenia*)	Occurs in ponds and other wetlands where their preferred prey (California red-legged frog) reside. Grasslands and vegetated bank side areas are often used for basking.	FE/SE/FP	**Low:** Suitable habitat for this species is not present in the Project Area; however, the roadside drainage swale on the north side of the project area could provide marginal aquatic habitat for this species. Species not observed during field survey.
Birds			
California clapper rail (*Rallus longirostris obsoletus*)	Found in tidal salt marshes, sloughs, and wetlands with concentrations of pickleweed and cordgrass. This species occasionally nests in brackish marshes.	FE/SE/FP	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
California least tern (*Sternula antillarum browni*)	Primarily found along marine or estuarine shores in areas free of human disturbance and predators. This species primarily feeds on fish.	FE/SE/FP	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
Marbled murrelet (*Brachyramphus marmoratus*)	Spends the majority of its life on the ocean, but come inland to nest. Nesting occurs in old-growth coniferous forests near coasts, nesting on large horizontal branches high up in trees.	FT/SE	**None:** Suitable nesting and/or foraging habitat for the species is not present in the BSA. Species not observed during field survey.
Northern harrier (*Circus cyaneus*)	This species has a flat, owl-like face. Flies close to the ground when hunting for small mammals. Often found in undisturbed tracts of wetlands and grasslands with thick vegetation. This species nests on the ground in thick stands of cattails, alders or willows.	--/SSC	**High:** One individual was observed foraging in the Project Area during the field surveys. Suitable foraging habitat is present within the BSA, however no suitable nesting habitat is present.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	Frequents low, dense vegetation near water. Nest usually placed on or within 8 centimeters (3 inches) of ground. May be over water, in emergent aquatic vegetation, dense shrubs, or other dense growth.	MBTA/SSC	**None:** Suitable nesting and/or foraging habitat for the species is not present in the BSA. Species not observed during field survey.

Table A-2. Special-Status Species and Habitats Considered for Potential Occurrence in the Project Area (Wildlife)

Species Name	General Habitat Description	Legal Status Federal/ State	Potential for Occurrence
Short-tailed albatross *Phoebastria [=Diomedea] albatrus*	The largest seabird in the North Pacific, and can be identified from other albatross species by its pink bill. This species spends most of its life at sea, but nests in colonies on islands off the coast of Japan. Following nesting season (which typically ends in June), this species migrates to their foraging habitat which ranges across the temperate and subarctic North Pacific. This species primarily feeds on squid, but other marine organisms such as fish and offal thrown overboard by fisherman are also consumed.	FE/SSC	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
western snowy plover (*Charadrius alexandrinus nivosus*)	This species breeds and nests in March through September, usually along coastal beaches and river mouths, and occasionally dry salt ponds and river bars. Nests typically occur in sparsely vegetated, flat, open areas with sandy or saline substrate.	FT/SSC	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey.
Mammals			
Southern sea otter (*Enhydra lutris nereis*)	This exclusively marine species of otter occurs in kelp forests found along the coast of California from San Mateo County to the city of Santa Barbara. Diet primarily includes crabs, snails, urchins, clams, mussels, and other marine invertebrate species.	FT/FP	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project Area.
American badger *(Taxidea taxus)*	Occurs in open stages of shrub, forest, and herbaceous habitats; needs uncultivated ground with friable soils.	--/SSC	**None:** No suitable badger burrows or sign identified in the BSA during the survey.
salt marsh harvest mouse (*Reithrodontomys raviventris*)	The salt marsh harvest mouse inhabits tidal saline or brackish marsh habitats around the San Francisco Bay Estuary characterized by dense stands of pickleweed. Pickleweed stands must remain unsubmerged during periods of tidal flooding within the marshes.	FE/SE/FP	**None:** Suitable habitat for the species is not present in the BSA. Species not observed during field survey. No CNDDB occurrences have been recorded within 5 miles of the Project area.

Appendix B.
Species Observed During the Field Survey

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Table B-1. Species Observed During the Field Survey

Scientific Name	Common Name	Native
Gymnosperms		
Pinaceae	**Pine Family**	
Pinus radiata	Monterey pine	Yes
Angiosperms (Eudicots)		
Anacardiaceae	**Sumac Family**	
Toxicodendron diversilobum	Poison oak	Yes
Araliaceae	**Ginseng Family**	
Hedera helix	English ivy	No
Asteraceae	**Sunflower Family**	
Baccharis pilularis	coyotebrush	Yes
Helminthotheca (Picris) echioides	bristly ox-tongue	No
Brassicaceae	**Mustard Family**	
Brassica nigra	black mustard	No
Raphanus sativus	wild radish	No
Malvaceae	**Mallow Family**	
Malva parviflora	cheeseweed	No
Papaveraceae	**Poppy Family**	
Eschscholzia californica	California poppy	Yes
Plantaginaceae	**Plantain Family**	
Plantago coronopus	cut leaf plantain	No
Plantago lanceolata	English plantain	No
Polygonaceae	**Buckwheat Family**	
Rumex crispus	curly dock	No
Rosaceae	**Rose Family**	
Rubus ursinus	California blackberry	Yes
Salicaceae	**Willow Family**	
Salix lasiolepis	arroyo willow	Yes
Angiosperms (Monocots)		
Poaceae	**Grass Family**	
Avena barbata	slender wild oats	No
Bromus diandrus	ripgut brome	No
Cortaderia jubata	pampas grass	No
Cynodon dactylon	Bermuda grass	No
Festuca perennis	Italian rye grass	No

Table B-1. Species Observed During the Field Survey

Scientific Name	Common Name	Native
Phalaris aquatica	Harding grass	No
Equisetales		
Equisetaceae	**Horsetail family**	
Equisetum sp.	unknown horsetail species	Yes
Wildlife		
Buteo lineatus	red-shouldered hawk	Yes
Circus cyaneus	northern harrier	Yes
Corvus brachyrhynchos	american crow	Yes
Euphagus cyanocephalus	Brewer’s blackbird	Yes
Sayornis nigricans	black phoebe	Yes
Zonotrichia leucophrys	white-crowned sparrow	Yes

Appendix C.
Photo Documentation

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Photo 1: View looking east at the Project Area from the northwestern corner of the Project Area.

Photo 2: View looking northwest at the Project Area from the northeastern corner of the Project Area.

Photo 3: View looking northwest along the ephemeral drainage swale on the northeastern boundary of the Project Area. Photo is taken standing at the northeastern corner of the Project Area.

Photo 4: View looking northwest along the ephemeral drainage swale along the northeastern boundary of the Project Area. Photo shows the location of the culvert outlet which conveys water from the north side of Cabrillo Highway to the drainage swale.

Photo 5: View looking south from the northern end of the drainage swale location on the north side of Cabrillo Highway. Photo shows the culvert inlet which conveys water beneath the highway to the drainage swale on the northeastern edge of the Project Area.

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Appendix D.
CNDDB Records Map

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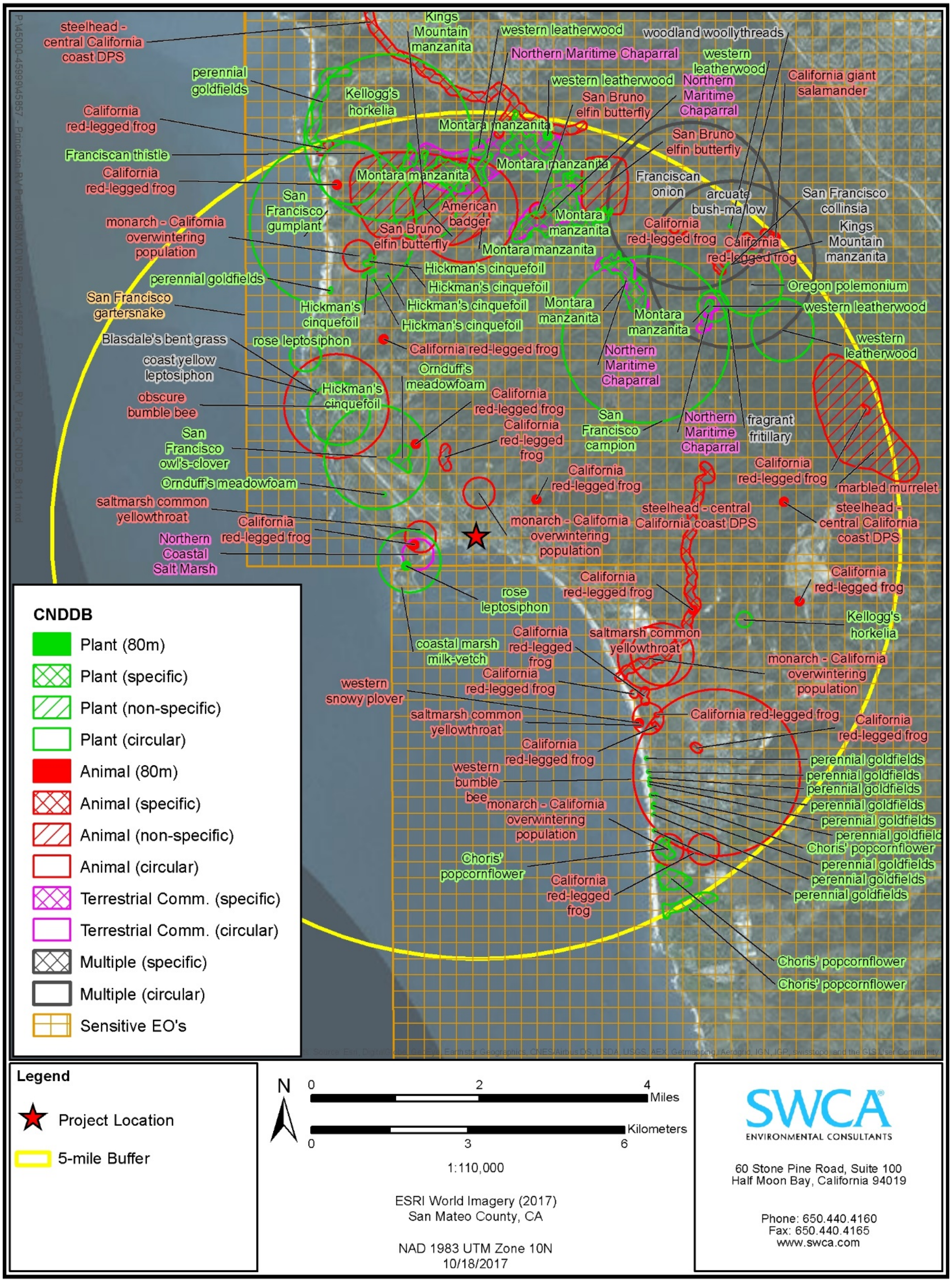
Figure D-1. CNDDB records map.



ESRI World Imagery (2017)
San Mateo County, CA

NAD 1983 UTM Zone 10N
10/18/2017

60 Stone Pine Road, Suite 100
Half Moon Bay, California 94019

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE

HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO

SAN FRANCISCO
SAN MATEO
SANTA CLATA
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
nwic@sonoma.edu
http://www.sonoma.edu/nwic

April 10, 2019 File No.: 18-1904

Ruemel Panglao, Project Planner
San Mateo County Planning and Building Division
455 County Center
Redwood City, CA 94063

re: PLN2017-00320 / 100 Capistrano Road, APN 047-081-430 / Harbor Village RV Park

Dear Ruemel Panglao,

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Project Description: CDP, Use Permit & Grading permit to allow a RV park with 50 spaces & 7 tent camping spaces, a single-story 832 sq/ft laundry & restroom facility, & landscape & drainage improvements

Previous Studies:

XX Study #16130 (Clark 1994), covering approximately 100% of the proposed project area, identified no cultural resources *(see recommendation below).*

Archaeological and Native American Resources Recommendations:

XX The proposed project area has the possibility of containing unrecorded archaeological site(s). Native American resources in this part of San Mateo County have been recorded in the foothill to valley floor interface, at the mouths of drainage canyons, in Holocene alluvial fan deposits, and in coastal terraces or adjacent to intermittent or perennial watercourses. The proposed project area is situated within Holocene alluvial fan deposits approximately 160 m from Half Moon Bay; additionally, according to a review of historic maps, the proposed project area was once adjacent to a perennial watercourse.

Due to the passage of time since the previous survey (Clark 1994) and the changes in archaeological theory and method since that time, we recommend a qualified archaeologist conduct further archival and field study for the entire project area to identify archaeological resources. Field study may include, but is not limited to, pedestrian survey, hand auger sampling, shovel test units, or geoarchaeological analyses as well as other common methods used to identify the presence of archaeological resources. Please refer to the list of consultants who meet the Secretary of Interior's Standards at http://www.chrisinfo.org.

XX We recommend the lead agency contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/373-3710.

Built Environment Recommendations:

XX Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of San Mateo County conduct a formal CEQA evaluation.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at http://www.chrisinfo.org. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 588-8455.

Sincerely,

Cameron Felt
Researcher

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

ARCHAEOLOGICAL RESOURCES RECONNAISSANCE REPORT FOR THE HARBOR VILLAGE RV PARK PROJECT, 100 CAPISTRANO ROAD, PRINCETON, SAN MATEO COUNTY, CALIFORNIA

by

Matthew R. Clark
RPA #10310

Report Prepared For

Mary Young, Project Manager
Pillar Point Project Developers, LLC
PO Box 158
Half Moon Bay, CA 94019

June 2019

HOLMAN & ASSOCIATES
ARCHAEOLOGICAL CONSULTANTS
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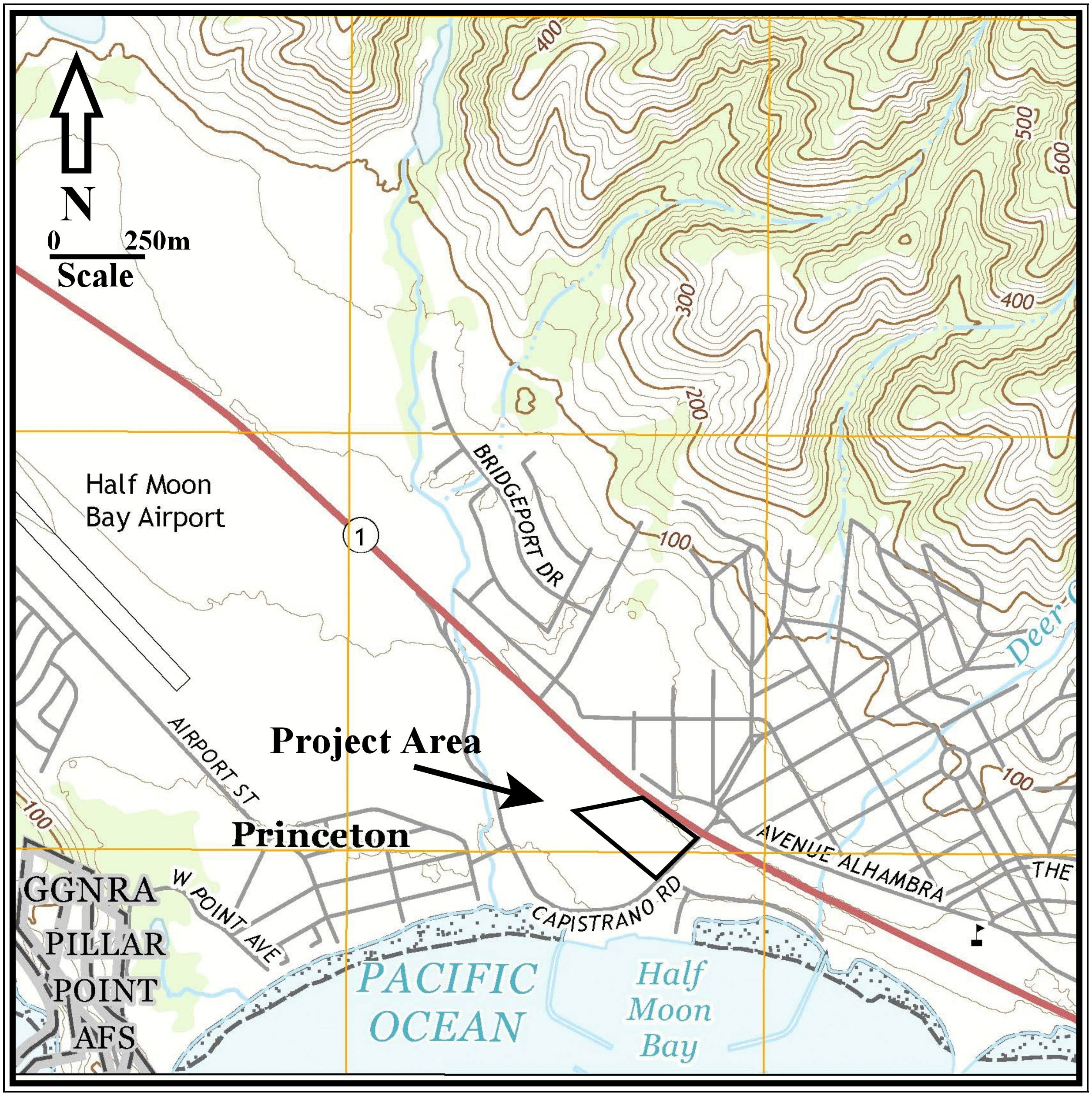
INTRODUCTION AND PROJECT SUMMARY

In June 2019, for Holman & Associates (H&A) the author conducted a historical resources records search and field survey of the "Harbor Village RV Park Project Area" (HVRV/Project), in the unincorporated town of Princeton in coastal San Mateo County. This work was requested by Mr. Ronald Stefanick and authorized by Ms. Mary Young, of Pillar Point Project Developers, LLC, of Half Moon Bay. San Mateo County required this archaeological research and report under CEQA, its own procedures as part of permitting, and after a recommendation by the California Historical Resources Information System (CHRIS) for a resurvey of the property, because the proposed project would involve earth-moving and construction impacts that could adversely affect archaeological resources.

H&A first conducted an archaeological records search for the approximately 3.36 acre Project Area at the CHRIS Northwest Information Center (NWIC). The records search found this property had been the subject of a surface reconnaissance and report in 1994 (Clark 1994), which was negative for archaeological or other historic resources. Three wide area and/or longitudinal survey reports including the records search area may have covered portions of the specific property (Dietz and Jackson 1970; Nissen and Swezey 1976; Hylkema 1989), and three others were smaller surveys in the immediate vicinity of the Project Area (Brandt 1980; Rudo 1981; Clark 1989); none of these reported resources within or adjacent to the HVRV Project. No archaeological resources are recorded within the search perimeter, but there is one historic structure on the opposite side of Highway 1. There are no recorded archaeological or historical resources within or adjacent to the Project Area. The nearest recorded archaeological sites are over a kilometer/0.68 mile from the Project Area at Princeton Marsh, not within the records search perimeter.

A pedestrian general surface reconnaissance of the Project Area was completed by the author on 02 June 2019, finding no evidence of archaeological resources anywhere on the property. There are no standing or permanent structures on the property to be evaluated for significance; the historic structure across the highway would not be physically impacted by the proposed project. No evidence of prehistoric or historical archaeological resources was found during the surface survey.

The HVRV Park Project Area at 100 Capistrano Road was surface surveyed; poor field conditions generally hampered the survey over most of the property; much of the parcel is covered or partially covered by imported fill and gravels; surface visibility ranged from good in small areas to fair in slightly larger areas to poor or nonexistent on most of the property. Conditions were adequate for a general surface survey, and the area is generally of medium archaeological sensitivity, being near the beach (~160 m away) and a small perennial stream running through Princeton (~310 m away), where prehistoric sites could be expected but none are recorded. No additional cultural resources research is recommended for this property and project, which would be of low archaeological sensitivity based on previous surveys on and around the property. The hamlet of Princeton to the west of the Project Area was developed prior to the twentieth century, but there is a low possibility historical archaeological resources could exist on the property (see discussion below). The general caveat about surprise discoveries given at the end of this report (Recommendation 2) should be incorporated into permitting conditions for construction and landscape alterations on the property.



Map 1: Harbor Village RV Park Project Area Location.
(USGS "Montara Mountain" 7.5 minute topographic quadrangle, 2015)

THE PROJECT AREA

Location and Legal Description

The Harbor Village RV Park Project Area at 100 Capistrano Road is located on the flat and nearly level coastal terrace in the community of Princeton in coastal San Mateo County. The parcel is an uneven quadrilateral but basically a rectangle running northwest from Capistrano, fronting onto that road at the southeast and on the CalTrans right-of-way for State Route 1 to the northeast. The Project Area is located on the USGS "Montara Mountain" 7.5 minute topographic quadrangle, a portion of which is reproduced here as "Map 1." Princeton and the Project Area are within the Spanish-era "Rancho Corral de Tierra (Palomares)" land grant and so are not surveyed into the township-and-range survey system. The property is designated by San Mateo County Assessor's Parcel Number (APN) 047-081-430 and contains approximately 3.36 acres. The property is only fenced along the southeast boundary, part of the northeast, and part of the adjacent parking lot at the southwest, but is bounded by undeveloped CalTrans ROW at the east and paved parking lot and curbs along the west side, so the Project Area was easily defined in the field.

Biophysical Description

Cultural resources and/or historic properties likely to exist in the Project Area are products of the interaction of human behaviors with the physical environment–i.e, adaptations to utilize resources allowing human use and occupation of the location. To find, understand the genesis and uses, and interpret the meanings of cultural resources in the Project Area, knowing the past and present environmental and cultural context is essential. Following is a basic description of the natural setting, current conditions, and cultural past of the HVRVPA vicinity.

The Project Area lies at the ocean-side edge of the generally flat to rolling and generally nearly level coastal terrace along Half Moon Bay, just above the beach and ocean to the south. This location on the terrace is between Denniston Creek to the west and Deer Creek to the east, both small but perennial streams. The parcel is basically flat and level, rising slightly from the southernmost corner at about 31 feet to about 34 feet at the northernmost. Native topsoil is a medium dark to medium light grey fine silty clay loam containing few native rocks, but imported angular gravels and other fill/displaced materials were observed wherever the surface could be seen as well as in rodent backdirt piles. Open native soil was only visible at a few spots on the property, on the southwest margin and in the northern corner, with a few smaller spots and rodent burrows spread around the parcel.

The Project Area appears to never have been more developed than it is currently; the only structures are utility boxes and vaults, concentrated at the southwest corner and along the southern boundary. An asphalt on the south then graveled at the north driveway/access road crosses the property from near the middle of the southwestern boundary, curving northwest to near the northernmost corner. Just off the property at the north several trailers and agricultural equipment are stored. A less obvious graveled former access also runs into the parcel to the northeast from the same starting point as the asphalt drive.

A large majority of the property was covered by not so recently mowed annual grasses and forbs, limiting surface visibility considerably where thicker weeds occur. Noted were annual grasses of Eurasian origins, wild radish, Bristly Oxtongue, Gloxinia, California Burclover, at least one other clover, Sow Thistle, mallow, camomile, and others. As noted, rodent burrows and backdirt were common except on the paved/graveled roadways and compacted former roads.

Aboriginally, this location would have been an open windy brushy/grassy terrace edge above the beach, probably lacking trees, with topography much like now except the beach would have been farther south. It would have been a location used by local populations for scouting the beach and reef resources, but not as attractive as right next to a stream for habitation, where detectable prehistoric sites are typically found in the region.

BACKGROUND RESEARCH AND SETTING

Historical Resources Records Search and Archival Research

Archaeological research was conducted for the Project Area with the initial basic goal of determining whether any physical remnants of prehistoric or historic cultural use of the property were present and recorded, or likely to be present. This began with a search of relevant records, maps, and archives maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University. The records search was conducted on 23 May 2019 by Charles Mikulik of Cultural Resources Practitioners, LLC, a former NWIC employee, for the Project Area and environs within 100 m. The records search also included a check of National Register of Historic Places data, the California Register, California Historical Landmarks, California Points of Historical Interest, the California Inventory of Historic Resources, local historic resource registries, and other historic maps and archives in the possession of the NWIC. The results of the records search are briefly reviewed here.

The records search found one archaeological/historical resources reconnaissance report that covered the HVRVPA property exactly (Clark 1994), and three others that were nearby, within or just outside the 100 m search perimeter (Brandt 1980; Rudo 1081; Clark 1989). As noted, the Project Area may have been inspected during three wide area surveys that generally, if new fieldwork was conducted, would have been cursory examinations (Dietz and Jackson 1970; Nissen and Swezey 1976; Hylkema 1989). No historical resources are recorded within, adjacent to, or near the Project Area, nor within the records search 100 m reach. Several prehistoric archaeological sites are recorded around the north end of Half Moon Bay, but the nearest is at least 1.1 km/0.68 miles from the Project Area: none of the characteristics of those sites were found on the HVRVPA property, though the topography is very similar to at least two sites. Another 13 wide or general surveys and reports that considered the entire region or even wider regions such as the whole Bay Area, all of California, and even all the West Coast states, but did not focus on this Project Area and did not include fieldwork on or near the property (classified as "Other" reports by the NWIC; not included in references below). None of the reports on file recorded archaeological or historical resources within the search perimeter.

The survey of this property by Clark 1994 did not find any archaeological evidence and describes the area as very like the current situation. The 1980 report by Brandt was a "Cultural Resources Investigation of Operating Projects, Half Moon Bay - Pillar Point Harbor" and the 1981 Rudo report was a "Cultural Resources Survey, Pillar Point Harbor Navigational Improvements." As nothing has been built on the Project Area, no "operating projects," and no "navigational improvements" were then present to cause this property to be examined for these focused surveys. The 1989 Clark report is for a parcel between Pillar Point Harbor property and Highway 1 more than 650 m/2150 feet south of this Project Area. None of these reports recorded archaeological or historical resources. The one historic structure recorded (but not evaluated) across the highway less than 200 feet from the HVRVPA is the 1906 former Ocean Shore Railroad "North Granada Station" building, now occupied by a Japanese restaurant; the record notes it had been "extensively remodeled" and was a real estate office in 1970 (McGregor 1970).

The NWIC File Number for the records search is 18-2273; a copy of this report will be submitted to the NWIC for inclusion in the permanent CHRIS archives.

Historic maps were also examined for the records search. The oldest USGS topographic maps, the 1896 and 1899 15 minute San Mateo quadrangles, shows Capistrano Road on the ocean side of the current Highway 1 as the County Highway, but do not show any structures at the Project Area. By the 1915 the 15 minute San Mateo quad shows the Ocean Shore Railroad running on the current highway alignment and the North Granada Station in place near the property, but no roads into or structures on the property. The 1939 15 minute San Mateo map shows Highway 1 still running through Princeton but does not spot structures; no development is shown in the vicinity of the HVRVPA property but the street pattern of El Granada on the other side of the highway is in place; the railroad was gone by then. The 1949 Montara Mountain 7.5 minute map shows the same, with no developments on or near the Project Area; the 1956 version of that map shows Highway 1 in its current alignment and no development at the intersection with Capistrano Road.

The vicinity of 100 Capistrano Road was occupied by Native Americans, now known most commonly as the Ohlones, for thousands of years prior to the Spanish invasion of California, creating numerous archaeological sites generally located along the creeks and other perennial and seasonal streams but also numerous along the ocean coast. When the Spanish arrived, the best evidence indicates the Point Montara to Half Moon Bay area was held by the *Chiguan* tribelet, who had several villages in the area but none known near the Project Area (Milliken 1995:228, 239). The Portolá Expedition passed by, crossing Denniston Creek north toward Point Montara in October 1769, and did the same on their return trip in November, but did not comment on encountering natives between Half Moon Bay and Pacifica (Costansó 1992[1770]). Later expeditions to the San Francisco Bay Area established missions in the area in the 1770s, including Mission San Francisco in 1776, where some *Chiguan* were baptized. The Native Americans were quickly swept aside and brought under the control of the Spanish. By the 1840s Europeans were settled in parts of Pacifica and along the banks of Pilarcitos Creek in what became Half Moon Bay, and by 1839 the Rancho Miramontes "Rancho Corral de Tierra (Palomares)" land grant had encompassed the Project Area (Dietz and Jackson 1970).

Field Surface Reconnaissance

Pedestrian field survey was conducted by the author on 02 June 2019. An "intensive surface reconnaissance" was planned, but conditions reduced the survey coverage to "general" (King, Moratto, and Leonard 1973) as attempting to find locations where surface soil or subsoil could be examined became most important. The Project area was covered in NW/SE transects spaced at 10 m, with open soil and rodent burrows examined wherever they occurred. Surface visibility was generally poor, ranging from goof to fair to nonexistent. Visibility was particularly poor in the entire central part of the property, as the majority was covered by thick grass and weeds. As noted, native topsoil could only be seen rarely, often poorly, but those areas observed had soil amendments (gravels mostly) and were only partially native. Numerous gopher burrows had brought up native soil in the grass and around the edges, which were examined. Archaeological sites right along the terrace edge away from fresh water tend to not have subsurface components and to be sparsely indicated because those locations were not suitable for habitation or other activities that leave more substantial indications, so the surface survey in this instance is judged adequate.

Figure 1: Harbor Village RV Park Project Area, looking northwest from south-central property fence, Highway 1 to right, buried utility box in foreground (02 June 2019).

CONCLUSION AND RECOMMENDATIONS

No evidence of prehistoric archaeological resources was found on the Harbor Village RV Park Project Area by archival search or field survey. No areas very likely to contain perhaps obscured resources were identified. The Project Area had been surveyed previously; that and the nearest other surveys have found no resources with the exception of prehistoric sites well to the north around the Pillar Point marsh and bluff, and near a perennial stream meeting the ocean about 2.25 km to the south. This Project Area would have been suitable for prehistoric cultural use but in this region virtually all identified prehistoric sites are found quite near sources of fresh water. There was no evidence found that previous work on the property could have disturbed historical resources, but the large majority of the property displays evidence of at least surface and near-surface disturbances for many years, including plowing many times, and that with other shallow earth moving has introduced and spread imported construction gravels across the property.

Historic topographic maps show no prior development around and within the Project Area, so it is quite unlikely historic archaeological deposits or features could exist in or around the currently developed property.

The proposed development work at the Harbor Village RV Park Project Area can proceed without affecting known prehistoric or historic archaeological resources as defined under CEQA or historic properties as defined by federal regulations. However, due to the inability to adequately inspect much of the property surface, the normal conditions requiring appropriate investigations if potential archaeological resources are encountered should be in place for this development.

Recommendations

1) No additional prehistoric archaeological or historic preservation research for resources is recommended for the Harbor Village RV Park Project Area at this time, not being needed for onsite work to proceed.

2) Although no archaeological resources were found on the 100 Capistrano Road Project Area property, it is possible that subsurface deposits may yet exist or that evidence of such resources has been obscured by more recent natural or cultural factors. Archaeological and historic resources and human remains are protected from unauthorized disturbance by State law, so supervisory and construction personnel therefore must notify the County and proper authorities if any archaeological or historic resources or human remains are encountered during construction activities and halt construction to allow qualified archaeologists to identify, record, and evaluate such resources and recommend an appropriate course of action.

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

Sigma Prime Geosciences, Inc.
Effective Solutions

GEOTECHNICAL STUDY

HARBOR VILLAGE RV PARK
100 CAPISTRANO ROAD
PRINCETON, CALIFORNIA
APN 047-081-430

PREPARED FOR:
PILLAR POINT PROJECT DEVELOPERS LLC
P.O. BOX 158
HALF MOON BAY, CA 94019

PREPARED BY:
SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CALIFORNIA 94019

MAY 17, 2018

Sigma Prime Geosciences, Inc.
Effective Solutions

May 17, 2018

Pillar Point Project Developers LLC
P.O. Box 158
Half Moon Bay, CA 94019

Re: Geotechnical Report for Proposed RV Park: 100 Capistrano Road,
Princeton, California. APN 047-081-430
Sigma Prime Geosciences Job No. 14-158

Dear Sirs:

As per our proposal dated November 20, 2014 we have performed a geotechnical study for your proposed RV Park located at 100 Capistrano Road in Princeton, California. The accompanying report summarizes the results of our field study, laboratory testing, and engineering analyses, and presents geotechnical recommendations for the planned project.

Thank you for the opportunity to work with you on this project. If you have any questions concerning our study, please call.

Yours,

Sigma Prime Geosciences, Inc.

Charles M. Kissick, P.E.

REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KISSICK
No. 62264
9/30/19
EXPIRES
CIVIL
STATE OF CALIFORNIA

GEOTECHNICAL STUDY
100 CAPISTRANO ROAD
PRINCETON, CALIFORNIA
APN 047-081-430

PREPARED FOR:

PILLAR POINT PROJECT DEVELOPERS LLC
P.O. BOX 158
HALF MOON BAY, CA 94019

PREPARED BY:

SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CALIFORNIA 94019

May 17, 2018

TABLE OF CONTENTS

1. INTRODUCTION

We are pleased to present this geotechnical study report for the proposed RV Park located at 100 Capistrano Road in Princeton, California, at the location shown in Figure 1. The purpose of this study was to evaluate the subsurface conditions at the site, and to provide geotechnical design recommendations for the proposed project.

1.1 PROJECT DESCRIPTION

We understand that you plan to grade the site to create 50 RV parking stalls. Most cuts and fills be 1 foot or less in thickness. A 770 square foot restroom and laundry is the only planned structure. Structural loads are expected to be relatively light as is typical for this type of construction.

1.2 SCOPE OF WORK

The scope of work for this study was presented in our proposal dated November 20, 2014. In order to complete this project we have performed the following tasks:

- Reviewed published information on the geologic and seismic conditions in the site vicinity;

- Subsurface study, including 1 soil boring at the site;

- Laboratory testing of selected soil samples, to establish their engineering properties, and for soil classification purposes;

- Engineering analysis and evaluation of the subsurface data to develop geotechnical design criteria; and

- Preparation of this report presenting our recommendations for the proposed project.

2. FINDINGS

2.1 GENERAL

The site reconnaissance and subsurface study were performed on April 26, 2018. The subsurface study consisted of drilling 1 soil boring, 53.5 feet deep. The approximate location of the boring is shown in Figure 2. The boring log and the results of laboratory tests on soil samples are attached in Appendix A.

2.2 SITE CONDITIONS

At the time of our study, the site was an undeveloped 3.36-acre property. The property slopes to the northwest at a gradient of about 4 percent The project site is vegetated with grasses and weeds throughout the property.

2.3 REGIONAL AND LOCAL GEOLOGY

Based on Brabb and Pampeyan (1983), the site vicinity is primarily underlain by Holocene-age inner and outer alluvial fan deposits. The alluvial fan deposits are described as silt, sand, and clayey silt.

2.4 SITE SUBSURFACE CONDITIONS

Based on the soil boring, the subsurface conditions at the restroom site consist of 13.5 feet of stiff clay over a 4.5 foot thick layer of loose silty sand. Below a depth of 18 feet, the soil consists of stiff the very stiff clays and dense to very dense sands. The upper clay has a high expansive potential, with a plasticity index of 31.

2.5 GROUNDWATER

Groundwater was not detected at the time of soil sampling, due to the drilling method (mud-rotary drilling). It is likely that groundwater is in the silty sand lens at a depth of 13.5 feet. Groundwater is not expected to have an impact on the project.

2.6 FAULTS AND SEISMICITY

The site is in an area of high seismicity, with active faults associated with the San Andreas fault system. The closest active fault to the site is the San Gregorio-Seal Cove fault, located offshore, about 1 km to the west. The San Andreas fault is located about 12 km to the northeast. Other faults most likely to produce significant seismic ground motions include the Hayward, Rodgers Creek, and Calaveras faults. Selected historical earthquakes in the area with an estimated magnitude greater than 6-1/4, are presented in Table 1 below.

TABLE 1
HISTORICAL EARTHQUAKES

Date	Magnitude	Fault	Locale
June 10, 1836	6.5[1]	San Andreas	San Juan Bautista
June 1838	7.0[2]	San Andreas	Peninsula
October 8, 1865	6.3[2]	San Andreas	Santa Cruz Mountains
October 21, 1868	7.0[2]	Hayward	Berkeley Hills, San Leandro
April 18, 1906	7.9[3]	San Andreas	Golden Gate
July 1, 1911	6.6[4]	Calaveras	Diablo Range, East of San Jose
October 17, 1989	7.1[5]	San Andreas	Loma Prieta, Santa Cruz Mountains

(1) Borchardt & Toppozada (1996)
(2) Toppozada et al (1981)
(3) Petersen (1996)
(4) Toppozada (1984)
(5) USGS (1989)

2.7 2016 CBC EARTHQUAKE DESIGN PARAMETERS

Based on the 2016 California Building Code (CBC) and our site evaluation, we recommend using Site Class Definition D (stiff soil) for the site. The other pertinent CBC seismic parameters are given in Table 2 below.

Table 2
CBC SEISMIC DESIGN PARAMETERS

S_S	S_1	S_{MS}	S_{M1}	S_{DS}	S_{D1}
2.21	0.859	2.21	null	1.474	null

Because the S_1 value is greater than 0.75, Seismic Design Category E is recommended, per CBC Section 1613.5.6. The values in the table above were obtained from a USGS software program which provides the values based on the latitude and longitude of the site, and the Site Class Definition. The latitude and longitude were 37.5045 and –122.4823, respectively, and were accurately obtained from Google Earth^{TM}. These same values can be obtained directly from maps in the CBC, however the scale of the map makes it impractical to achieve satisfactory accuracy. The map in the CBC was derived from the same work that led to the USGS software. The remaining parameters were also obtained by the same USGS program.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 GENERAL

It is our opinion that, from a geotechnical viewpoint, the site is suitable for the proposed construction, provided the recommendations presented in this report are followed during design and construction. Detailed recommendations are presented in the following sections of this report.

Because subsurface conditions may vary from those encountered at the location of our borings, and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) Review the project plans and structural calculations for conformance with our report recommendations and 2) Observe and test the earthwork and foundation installation phases of construction.

3.2 EXPANSIVE SOILS

Subsurface clayey soils at the site have a high potential for expansion. Expansive soils tend to swell with increases in moisture content and shrink with decreases in moisture content. These moisture fluctuations typically occur during seasonal variations in precipitation, but can also occur from irrigation, changes in site drainage, or the presence of tree roots. As the soil shrinks and swells, improvements supported on the expansive soils may fall and rise. These movements may cause cracking and vertical deformations of improvements.

We will recommend a foundation type for the restroom that takes into account the highly expansive soils in Section 3.5 below.

3.3 GEOLOGIC HAZARDS

We reviewed the potential for geologic hazards to impact the site, considering the geologic setting, and the soils encountered during our investigation. The results of our review are presented below:

- Fault Rupture - The site is not located in an Alquist-Priolo Earthquake Fault Zone where fault rupture is considered likely (California Division of Mines and Geology, 1976). Therefore, active faults are not believed to exist beneath the site, and the potential for fault rupture to occur at the site is considered low, in our opinion.

- Ground Shaking - The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the design life of the project, as is typical for sites throughout the Bay Area. The improvements should be designed and constructed in accordance with current earthquake resistance standards.

- Differential Compaction - Differential compaction occurs during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. In our opinion, due to the stiff nature of the upper 13.5 feet of clay and the small proportion of loose sands, the likelihood of significant damage to the project from differential compaction is low.

- Liquefaction - Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Soils most susceptible to liquefaction are saturated, loose, silty sands, and uniformly graded sands. The 4.5-foot thick layer of loose silty sand at a depth of 13.5 feet is likely to liquefy during a design earthquake. Using the methods of Idriss and Boulanger (2008), we estimated up to 1.8 inches of settlement. The thick clay cap should reduce this amount at the ground surface. We estimate about 1 inch of total settlement and 0.5 inches of differential settlement.

3.4 EARTHWORK

3.4.1 Clearing & Subgrade Preparation

All deleterious materials, including trees, topsoil, roots, vegetation, designated utility lines, etc., should be cleared from building and paving areas. The actual stripping depth required will depend on site usage prior to construction, and should be established by the Contractor during construction. Topsoil may be stockpiled separately for later use in landscaping areas.

After the site has been properly cleared, stripped, and excavated to the required grades, the exposed surface soil in areas to receive a slab-on-grade or paving should be scarified to the depth recommended in Section 3.5.2, moisture conditioned to at least 3-5 percent over optimum moisture content, and compacted to the specifications listed below under the section captioned "compaction."

3.4.2 Compaction

The scarified surface soils should be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 90 percent of the maximum dry density, as determined by ASTM D1557-78. All trench backfill should also be moisture conditioned to 3-5 percent above the optimum moisture content and compacted to at least 90 percent of the maximum dry density. The upper 3 feet of trench backfill below foundations or paved areas should be compacted to 95 percent of the maximum dry density. Fills should be placed in maximum loose lifts of 6 to 8 inches.

3.4.3 Surface Drainage

The finish grades should be designed to drain surface water away from foundations and slab areas, to suitable discharge points. On pervious surfaces, such as soil, slopes of at least 5 percent within 10 feet of the structures is required by the building code. The slope can be reduced to 2 percent for impervious surfaces. Ponding of water should not be allowed adjacent to the structure.

3.5 FOUNDATIONS

Due to the nature of the highly expansive soils found on this site and the potential for liquefaction-induced ground settlement, a reinforced slab/mat foundation is recommended for the restroom. A reinforced slab or mat foundation may be designed for allowable bearing pressures of 2,500 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces.

We recommend that the slabs be underlain by at least 12 inches of non-expansive granular fill, including a 2-foot-wide zone around the mat foundation. Where floor wetness would be detrimental, a vapor barrier, such Stego wrap or equivalent may be used.

All slabs should be reinforced to provide structural continuity and to permit spanning of local irregularities. The slabs should be capable of spanning 10 feet, point to point, and should cantilever a minimum of 4 feet.

3.5.1 Lateral Loads

A passive pressure equivalent to that provided by a fluid weighing 300 pcf and a friction factor of 0.3 may be used to resist lateral forces and sliding against mat or spread footing foundations. These values include a safety factor of 1.5 and may be used in combination without reduction. Passive pressures should be disregarded for the uppermost 12 inches of foundation depth, measured below the lowest adjacent finished grade, unless confined by concrete slabs or pavements. However, the pressure distribution may be computed from the ground surface.

3.5.2 Slabs-on-Grade

Slabs-on-grade should be constructed as free-standing slabs, structurally isolated from surrounding grade beams. We recommend that the slab-on-grade be underlain by at least 24 inches of non-expansive fill. The upper 4 inches of this fill should consist of ½- to ¾-inch clean crushed rock. Where floor wetness would be detrimental, a vapor barrier, such as Stego wrap or equivalent may be used.

3.6 PAVING

The RV park will have large areas of standard asphalt paving, as well as pervious concrete. The upper soils are comprised of stiff clay. The standard pavement section of 3 inches of asphalt over 9 inches of compacted class 2 base rock is recommended. The pervious concrete should consist of 8.5 inches of permeable concrete over 12 inches of class 4 base rock. This recommended section is based on the Caltrans pervious pavement design guidance manual.

3.7 CONSTRUCTION OBSERVATIONS AND TESTING

The earthwork and foundation phases of construction should be observed and tested by us to 1) Establish that subsurface conditions are compatible with those used in the analysis and design; 2) Observe compliance with the design concepts, specifications and recommendations; and 3) Allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited number of borings. The nature and extent of variation across the site may not become evident until construction. If variations are then exposed, it will be necessary to reevaluate our recommendations.

4. LIMITATIONS

This report has been prepared for the exclusive use of the owner for specific application in developing geotechnical design criteria for the currently planned project at 100 Capistrano Road in Princeton, California (APN 047-081-430). We make no warranty, expressed or implied, except that our services were performed in accordance with geotechnical engineering principles generally accepted at this time and location. The report was prepared to provide engineering opinions and recommendations only. In the event that there are any changes in the nature, design or location of the project, or if any future improvements are planned, the conclusions and recommendations contained in this report should not be considered valid unless 1) The project changes are reviewed by us, and 2) The conclusions and recommendations presented in this report are modified or verified in writing.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our study; the currently planned improvements; review of previous reports relevant to the site conditions; and laboratory results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during a study of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.

5. REFERENCES

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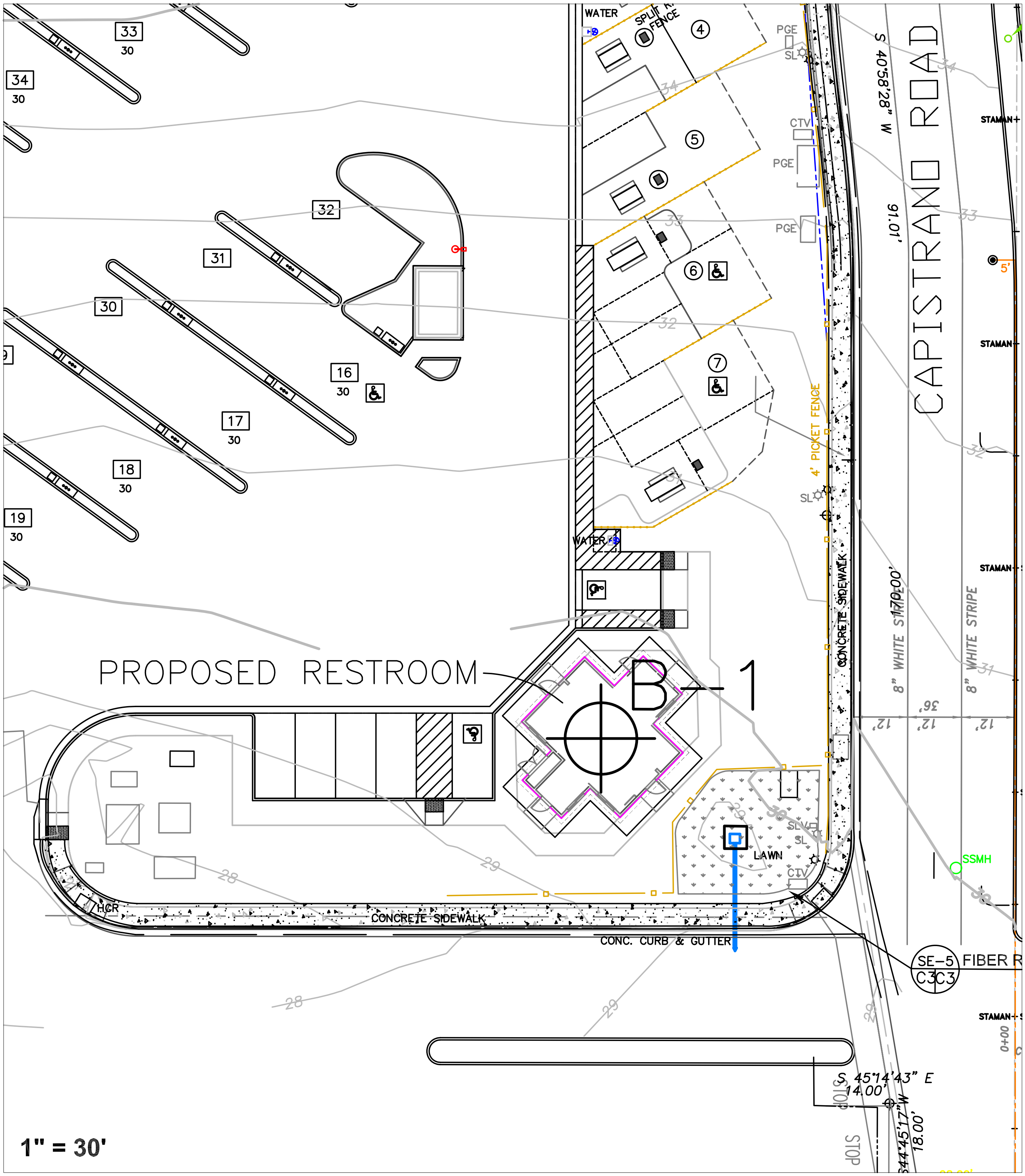
Sigma Prime Geosciences, Inc.

Figure	1
Date:	5/17/18
Job No.:	14-158

Location Map

Capistrano Road RV Park, Princeton



Explanation

⌖ B–1 Soil Boring Drilled 4-26-18

Sigma Prime Geosciences, Inc.

Figure	2
Date:	5/17/18
Job No.:	14-158

Site Map

Capistrano Road RV Park, Princeton

APPENDIX A

SUBSURFACE STUDY

The soils encountered during drilling were logged by our representative, and samples were obtained at depths appropriate to the study. The samples were taken to the laboratory where they were carefully observed and classified in accordance with the Unified Soil Classification System. The logs of our borings, as well as a summary of the soil classification system, are attached.

Several tests were performed in the field during drilling. The standard penetration resistance was determined by dropping a 140-pound hammer through a 30-inch free fall, and recording the blows required to drive the 2-inch (outside diameter) sampler 24 inches. The standard penetration resistance is the number of blows required to drive a standard split spoon sampler the last 12 inches. The blow counts are recorded on the boring logs at the appropriate depth. Use of the standard split spoon sampler defines a Standard Penetration Test (SPT), and yields an SPT-equivalent blow count. A modified California (Mod-Cal) sampler was also used, which results in blow counts that are higher than an SPT-equivalent blow count, due to the Mod-Cal sampler's larger diameter. For analyses, it is normal practice to reduce the Mod-Cal blow counts to correspond to an SPT-equivalent blow count. The blow counts from the Mod-Cal sampler are uncorrected on the logs. The results of these field tests are also presented on the boring logs.

The boring logs and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and groundwater levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.

Project Name Capistrano RV Park					Project Number 14-158		Sigma Prime Geosciences, Inc.
Location Restroom Location							
Drilling Method	Hole Size	Total Depth	Soil Footage	Rock Footage	Elevation	Datum	
Mud Rotary	4“	53.5’	53.5’	0’	29.5’	NAVD88	**Boring No.** **B-3**
Drilling Company Pitcher Drilling				Logged By: C. Kissick			**Page** 1 of 2
Type of Drill Rig Failing 1500	Type of Sampler(s) SPT			Hammer Weight and Fall 140 lb, 30“			**Date(s)** 4/26/18

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
	0-3’: Sandy Clay: dark brown; stiff; moist.	▨	CL	N/a	1	N/a	Grab Sample #1: LL=50, PL=19, PI=31
		▨		3 4 5	2	SPT	
	3’-13.5’: Sandy Clay: yellowish brown; stiff; moist.	▨					
5		▨		4 9 11	3	SPT	
		▨	CL				
10		▨					
	13.5’-18: Silty Sand: blue-gray; loose; moist. Fine sand.	░					
15		░	SM	3 3 2	4	SPT	
	18’-22.5’: Sandy Clay: blue-gray; stiff; moist.	▨	CL				
20							

Project Name	Boring No.		Date		Page	2	Sigma Prime Geosciences, Inc.

Depth (feet)	Description	Graphic Log	Class	Blow Count	Sample No.	Sample Type	Comments
20	18'-22.5': Sandy Clay: blue-gray; stiff; moist.		CL	3 3 7	5	SPT	
	22.5'-32': Clayey Sand: blue-gray; dense; moist.		SC				
25				6 12 20	6	SPT	
30	Very dense.			9 20 31	7	SPT	
	32'-44': Sandy Clay: blue-gray; very stiff; moist.		CL				
35				4 8 13	8	SPT	
40				5 13 20	9	SPT	
	44'-53.5': Silty Sand: blue-gray; very dense; moist. Fine sand.		SM				
45				22 36 43	10	SPT	
							52'
	Bottom of Hole 53.5' below ground surface.			13 31 44	11	SPT	53.5'
50							

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-85)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
COARSE-GRAINED SOILS > 50% RETAINED ON NO. 4 SIEVE	**GRAVELS** > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS < 5% FINES	Cu > 4 AND 1 < Cc < 3	**GW**	WELL-GRADED GRAVEL	░
			Cu < 4 AND/OR 1 > Cc > 3	**GP**	POORLY-GRADED GRAVEL	▚
		GRAVELS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	**GM**	SILTY GRAVEL	▥
			FINES CLASSIFY AS CL OR CH	**GC**	CLAYEY GRAVEL	▨
	SANDS > 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SANDS < 5% FINES	Cu > 6 AND 1 < Cc < 3	**SW**	WELL-GRADED SAND	░
			Cu < 6 AND/OR 1 > Cc > 3	**SP**	POORLY-GRADED SAND	░
		SANDS WITH FINES > 12% FINES	FINES CLASSIFY AS ML OR CL	**SM**	SILTY SAND	▥
			FINES CLASSIFY AS CL OR CH	**SC**	CLAYEY SAND	▨
FINE-GRAINED SOILS > 50% PASSING NO. 200 SIEVE	**SILTS AND CLAYS** LIQUID LIMIT < 50	INORGANIC	PI > 7 AND PLOTS > "A" LINE	**CL**	LOW-PLASTICITY CLAY	▨
			PI > 4 AND PLOTS < "A" LINE	**ML**	LOW-PLASTICITY SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	**OL**	ORGANIC CLAY OR SILT	≈
	SILTS AND CLAYS LIQUID LIMIT > 50	INORGANIC	PI PLOTS > "A" LINE	**CH**	HIGH-PLASTICITY CLAY	▨
			PI PLOTS < "A" LINE	**MH**	HIGH-PLASTICITY SILT	▥
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	**OH**	ORGANIC CLAY OR SILT	≈
HIGHLY ORGANIC SOILS	PRIMARILY ORGANIC MATTER, DARK COLOR, ORGANIC ODOR			**PT**	PEAT	░

NOTE: $Cu=D_{60}/D_{10}$

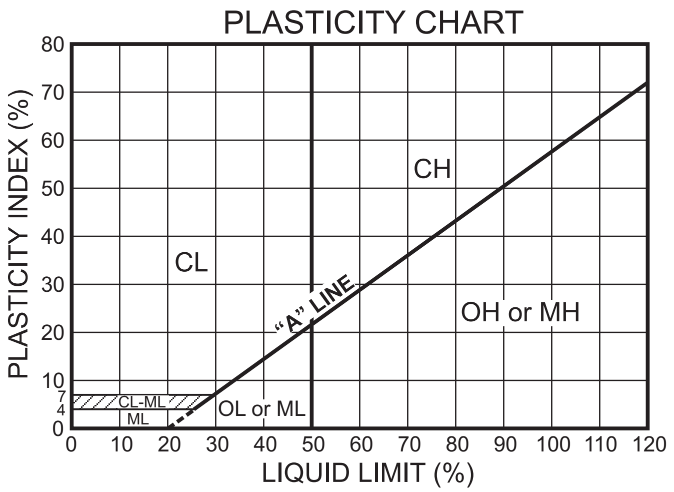
$Cc=(D_{30})^2/(D_{10}+D_{60})$

SAMPLE TYPES

B	BULK SAMPLE
ST	PUSHED SHELBY TUBE
SPT	STANDARD PENETRATION
MC	MODIFIED CALIFORNIA
P	PITCHER SAMPLE
C	ROCK CORE

BLOW COUNT

THE NUMBER OF BLOWS OF THE HAMMER REQUIRED TO DRIVE THE SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE. THE NOTATION 50/4 INDICATES 4 INCHES OF PENETRATION ACHIEVED IN 50 BLOWS.



ADDITIONAL TESTS

CA - CHEMICAL ANALYSIS
CN - CONSOLIDATION
CP - COMPACTION
DS - DIRECT SHEAR
PM - PERMEABILITY
PP - POCKET PENETROMETER
Cor. - CORROSIVITY
SA - GRAIN SIZE ANALYSIS
(20%) - (PERCENT PASSING #200 SIEVE
SW - SWELL TEST
TC - CYCLIC TRIAXIAL
TU - CONSOLIDATED UNDRAINED TRIAXIAL
TV - TORVANE SHEAR
UC - UNCONFINED COMPRESSION
WA - WASH ANALYSIS
▽ - WATER LEVEL AT TIME OF DRILLING AND DATE MEASURED
▼ - LATER WATER LEVEL AND DATE MEASURED

LEGEND TO SOIL DESCRIPTIONS

Sigma Prime Geosciences, Inc.

FIGURE A-1

APPENDIX B

LABORATORY TESTS

Samples from the subsurface study were selected for tests to establish some of the physical and engineering properties of the soils. The tests performed are briefly described below.

The plasticity of the upper clayey soil sample was determined on one soil sample in accordance with ASTM D 422. These results are presented on the boring log, at the appropriate sample depth.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT G

Sigma Prime Geosciences, Inc.
Effective Solutions

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DRAINAGE REPORT

HARBOR VILLAGE RV PARK
100 Capistrano Road
El Granada, California
APN: 047-081-430
Sigma Prime Job #: 14-158

March 2018

TABLE OF CONTENTS

APPENDICES:

i) BAHM Report
ii) Pervious and Impervious Areas
iii) C3 and C6 Development Review
iv) Culvert Sizing Calculations

1.0 INTRODUCTION

This drainage report was prepared for 100 Capistrano Road in El Granada, California. The drainage analysis for the proposed project was conducted in accordance with the San Mateo County "Guidelines for Drainage Review" (Guidelines). The Guidelines require the project to show that the post-project peak flow is less than or equal to the pre-project condition. Peak runoff flow rates were calculated using the Rational Method (Q=CIA) with a runoff coefficient of 0.30 for vegetated areas, and 0.90 for impervious areas (hardscape or roof). The San Mateo County Rainfall Runoff Data Map was used to obtain the local rainfall intensity.

1.1 Site Overview

The site is a 3.36-acre commercial lot located at the corner of Highway 1 and Capistrano Road in El Granada, California. It is on the west side of Highway 1 within the Denniston Creek watershed which covers approximately 2600 acres and discharges into Pillar Point Harbor. The site is gently sloping at approximately 4% to the southwest with no drainage channels. Any runoff that currently flows across the site occurs as dispersed sheet flow. The site is vegetated with grasses and weeds. There are no springs or shallow groundwater on the site. The gentle slope is very stable.

1.2 Existing Conditions

The site has little relief and is generally flat at approximately 40 feet (NAVD) at the eastern edge to 32 feet above sea level at the western boundary. The property is bounded on the east by Highway 1. The west side is bounded by the Oceano Hotel, shops, and large parking lot. The north side is bounded by farmer's fields and an irrigation pond. Capistrano Road is at the south side of the property with Pillar Point Parking beyond.

The subject property contains approximately 3 acres of wild grasses and weeds with 0.38 acres of asphalt at the west end of the property. Currently, surface runoff flows across the property as sheet flow to the west side of the property. There are three existing storm-water catch basins at the western side of the property.

1.3 Proposed Improvements

Proposed improvements include a 50 space RV Park, 7 tent sites, 9 visitor parking spaces and a bath house/laundry facility building. The pervious surfaces will consist of permeable concrete within the RV parking spaces, the tent spaces on gravel or drain-rock and landscape features. Pervious surfaces will account for 1.92 acres of the proposed improvements. Impervious surfaces will consist of asphalt driveway and parking areas, sidewalks, concrete berms and the roof area of the bath-house/laundry facility. Impervious surfaces will account for 1.46 acres of the site.

Due to the impervious area being larger than 1 acre, we ran the Bay Area Hydrology Model (BAHM) 2013 program to justify the use of the drainage element as described below. We established that a 2-foot diameter pipe at 1000' length would be adequate for this site. We calculated the volume of this pipe to corelate with the volume of two proposed bioretention areas. The bioretention areas would also be a good element for filtering possible stormwater contaminants prior to discharge to the existing storm-water system.

Based on the above data, we have designed a drainage system consisting of two bioretention areas. Our calculations, attached, show that the proposed volume of the bioretention systems will be large enough for a 10-year storm. The bioretention areas receive runoff from two Drainage Management Areas (DMAs), shown on the plans. The DMAs are very nearly the same size and will produce about 1570 cubic feet of runoff for retention, based on the BAHM analysis. The surface areas of the two bioretention areas (1764 square feet and 2320 square feet) yield required water depths on 8 inches and 11 inches. To provide conservatively sized bioretention areas, these water depths disregard the volume of water held in the bioretention soil and underlying drain rock. The overflow from both bioretention areas are able to flow by gravity to the existing drainage system. We performed hydrologic calculations to show that the overflow from the bioretention areas will not overwhelm the existing 15 to 18 inch drain pipes on the adjacent property.

We performed a percolation test at the north-west corner of the property. Below approximately 2 feet of rich organic top-soil we encountered colluvial deposits of sandy clay with a percolation rate of 0.2 inches/hour.

With the proposed bioretention areas, the post-development runoff will be not more than the pre-development runoff. No runoff is diverted from one drainage area to another. There will be no downstream impacts. Runoff from the RV park will be filtered through and be detained by the bioretention areas. This will result in a net decrease of the volume of runoff that ultimately reaches the Pacific Ocean through the existing storm drain system.

2.0 BEST MANAGEMENT PRACTICES (BMPs)

2.1 Construction Measures

The quality and quantity of stormwater runoff will be controlled during construction with the use of the following measures:

- A designated equipment washout area to minimize impact to the surrounding area.
- Fiber rolls will be utilized to collect sediment and reduce the erosive potential of runoff.
- All existing and proposed storm drain inlets and channels will be protected with sand/gravel bags to prevent storm drain runoff from being introduced into the storm system during construction.
- Periodic removal of debris from existing and proposed storm inlets where protected.
- Covering of all stockpiled material with Visqueen or tarpaulin until material is removed from site.
- Use of dikes, swales, inlet filters, straw bales, earth berms, etc. to protect downhill drainage courses, streams, etc.
- A water truck or alternate adequate method shall be used during construction to ensure that dust contamination is minimized.
- Protective fencing around existing trees to be installed, per arborist recommendations.
- Vegetative buffer strip and mulching.

2.2 Post-Construction Measures

On-site post construction stormwater treatment measures include:

- Landscape planting, new grass or other forms of stabilization (mulch) to reduce the surface exposure and prevent long-term erosion.

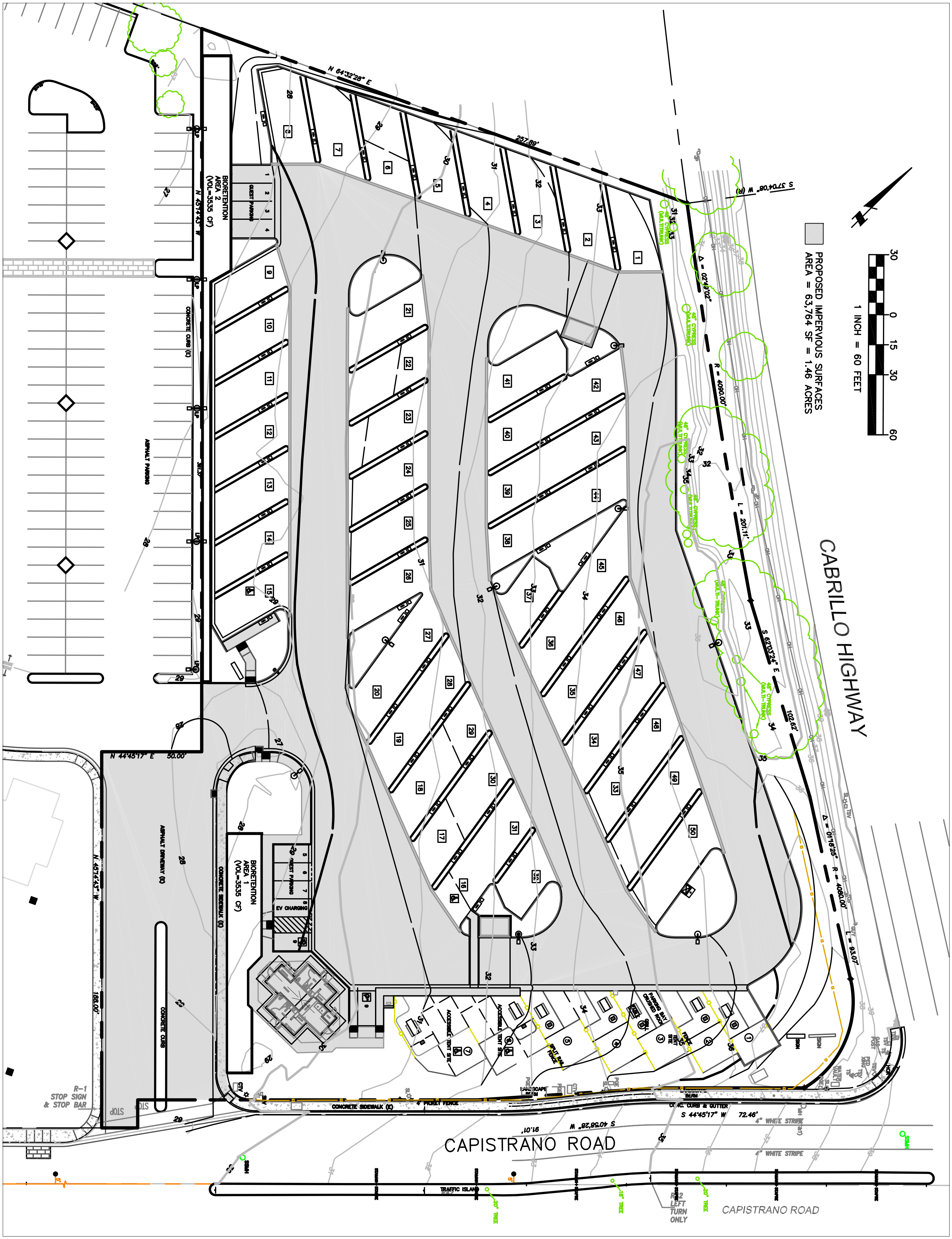
3.0 MAINTENANCE

The operation and maintenance of the source control BMPs is the responsibility of the site owner.

3.1 Additional Inspection and Maintenance

The property owner or manager should regularly maintain grading and drainage structures to ensure functionality throughout the lifetime of the facility. This maintenance should include:

- The clearing of debris and sediment build-up from the roof gutters, downspouts, area drains and drainage lines.
- Keep permeable concrete free of debris.
- Continual refinement of surface grading, including clearing/re-finishing of slopes, to: minimize ponding, provide positive drainage away from structures, and protect against erosion.

1 INCH = 60 FEET
30
0
15
30
60
PROPOSED IMPERVIOUS SURFACES
AREA = 63,764 SF = 1.46 ACRES
CABRILLO HIGHWAY
CAPISTRANO ROAD
CAPISTRANO ROAD
N 64°32'28" E
257.89'
S 37°04'08" W (R)
Δ = 02°49'02"
R = 4090.00'
L = 201.11'
S 62°03'24" E
102.62'
Δ = 01°18'25"
R = 4090.00'
L = 93.07'
S 44°45'17" W
72.46'
S 40°58'28" W
91.01'
N 44°45'17" E
50.00'
N 45°14'43" W
188.00'
BIORETENTION AREA 2 (VOL=3535 CF)
BIORETENTION AREA 1 (VOL=3535 CF)
GUEST PARKING
EV CHARGING
CONCRETE CURB (E)
ASPHALT PARKING
ASPHALT DRIVEWAY (E)
CONCRETE SIDEWALK (E)
CONCRETE CURB
CONCRETE SIDEWALK (E)
4' PICKET FENCE
CONC. CURB & GUTTER
4" WHITE STRIPE
4" WHITE STRIPE
TRAFFIC ISLAND
R-1 STOP SIGN & STOP BAR
STOP
R3-2 LEFT TURN ONLY
ACCESSIBLE TENT SITE
ACCESSIBLE TENT SITE
TENT SITE
TENT SITE
PARKING BAY CRUSHED ROCK
SPLIT RAIL FENCE
LANDSCAPE BERM
48" CYPRESS (MULTI-TRUNK)
48" CYPRESS (MULTI-TRUNK)
48" CYPRESS (MULTI-TRUNK)
48" CYPRESS (MULTI-TRUNK)
48" CYPRESS (MULTI-TRUNK)
48" CYPRESS (MULTI-TRUNK)
20" TREE
18" TREE
20" TREE
SIGN
SIGN
GAS POST
1
2
3
4
5
6
7
8
9
10
11
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Rational Method / Culvert Sizing

Job: Capistrano RV Park
No.: 14-158
Date 3/5/2018
by: CMK

NOTE: FOR TOTAL SITE, INCLUDING HOTEL AND PARKING LOT TO CHECK ON SIZING OF EXISITNG DRAIN PIPES.

Rational Method to Estimate Storm Runoff (page 20-13)

Q_p=CIA_d Reference: Civil Engineering Reference Manual

SOUTH SIDE OF SITE

Area, A_d (acres): 4.3
C (Appendix 20.A): 0.9
I (rainfall intensity): From NOAA website
Storm Frequency: 10 years
Time of Concentration, t_c t_c=L_o/vel
L_o: 270 feet, longest flow distance in watershed
elev change: 5
Slope: 1.9 percent
vel.: 3 ft/sec (from Fig 20.4, page 20-4)
t_c: 90.0 seconds
1.5 minutes
I= **3.06** in/hr
Q_p= **11.8422** **ft^3/sec** = 5301.28 **gal/min**

Culvert Size (page 19-6)

D=1.335(nQp/sqrt(S))$^{3/8}$ Eq. 19.16b, page 19-6, full flow

n: 0.009 Manning roughness coefficient, from Appendix 19.A
S: 0.04 Slope of culvert

D= **1.05** **feet**
= **12.7** **inches**

NORTH SIDE OF SITE

Area, A_d (acres): 3.8
C (Appendix 20.A): 0.9
I (rainfall intensity): From NOAA website
Storm Frequency: 10 years
Time of Concentration, t_c t_c=L_o/vel
L_o: 230 feet, longest flow distance in watershed
elev change: 6
Slope: 2.6 percent
vel.: 2.5 ft/sec (from Fig 20.4, page 20-4)
t_c: 92.0 seconds
1.5 minutes
I= **3.06** in/hr
Q_p= **10.4652** **ft^3/sec** = 4684.85 **gal/min**

Culvert Size (page 19-6)

D=1.335(nQp/sqrt(S))$^{3/8}$ Eq. 19.16b, page 19-6, full flow

n: 0.009 Manning roughness coefficient, from Appendix 19.A
S: 0.04 Slope of culvert

D= **1.01** **feet**
= **12.1** **inches**

Rational Method / Culvert Sizing

Job: Capistrano RV Park
No.: 14-158
Date 3/5/2018
by: CMK

NOTE: For sizing overflow pipes from bioretention areas

Rational Method to Estimate Storm Runoff (page 20-13)

Q_p=CIA_d Reference: Civil Engineering Reference Manual

DMA 1

Area, A_d (acres): 0.663
C (Appendix 20.A): 0.9
I (rainfall intensity): From NOAA website
Storm Frequency: 10 years
Time of Concentration, t_c t_c=L_o/vel
L_o: 270 feet, longest flow distance in watershed
elev change: 5
Slope: 1.9 percent
vel.: 3 ft/sec (from Fig 20.4, page 20-4)
t_c: 90.0 seconds
1.5 minutes
I= **3.06** in/hr
Q_p= **1.8259** **ft^3/sec** = 817.38 **gal/min**

Culvert Size (page 19-6)

D=1.335(nQp/sqrt(S))$^{3/8}$ Eq. 19.16b, page 19-6, full flow

n: 0.009 Manning roughness coefficient, from Appendix 19.A
S: 0.04 Slope of culvert

D= **0.52** **feet**
= **6.3** **inches**

DMA 2

Area, A_d (acres): 0.667
C (Appendix 20.A): 0.9
I (rainfall intensity): From NOAA website
Storm Frequency: 10 years
Time of Concentration, t_c t_c=L_o/vel
L_o: 230 feet, longest flow distance in watershed
elev change: 6
Slope: 2.6 percent
vel.: 2.5 ft/sec (from Fig 20.4, page 20-4)
t_c: 92.0 seconds
1.5 minutes
I= **3.06** in/hr
Q_p= **1.8369** **ft^3/sec** = 822.31 **gal/min**

Culvert Size (page 19-6)

D=1.335(nQp/sqrt(S))$^{3/8}$ Eq. 19.16b, page 19-6, full flow

n: 0.009 Manning roughness coefficient, from Appendix 19.A
S: 0.04 Slope of culvert

D= **0.52** **feet**
= **6.3** **inches**

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT H

HEXAGON TRANSPORTATION CONSULTANTS, INC.

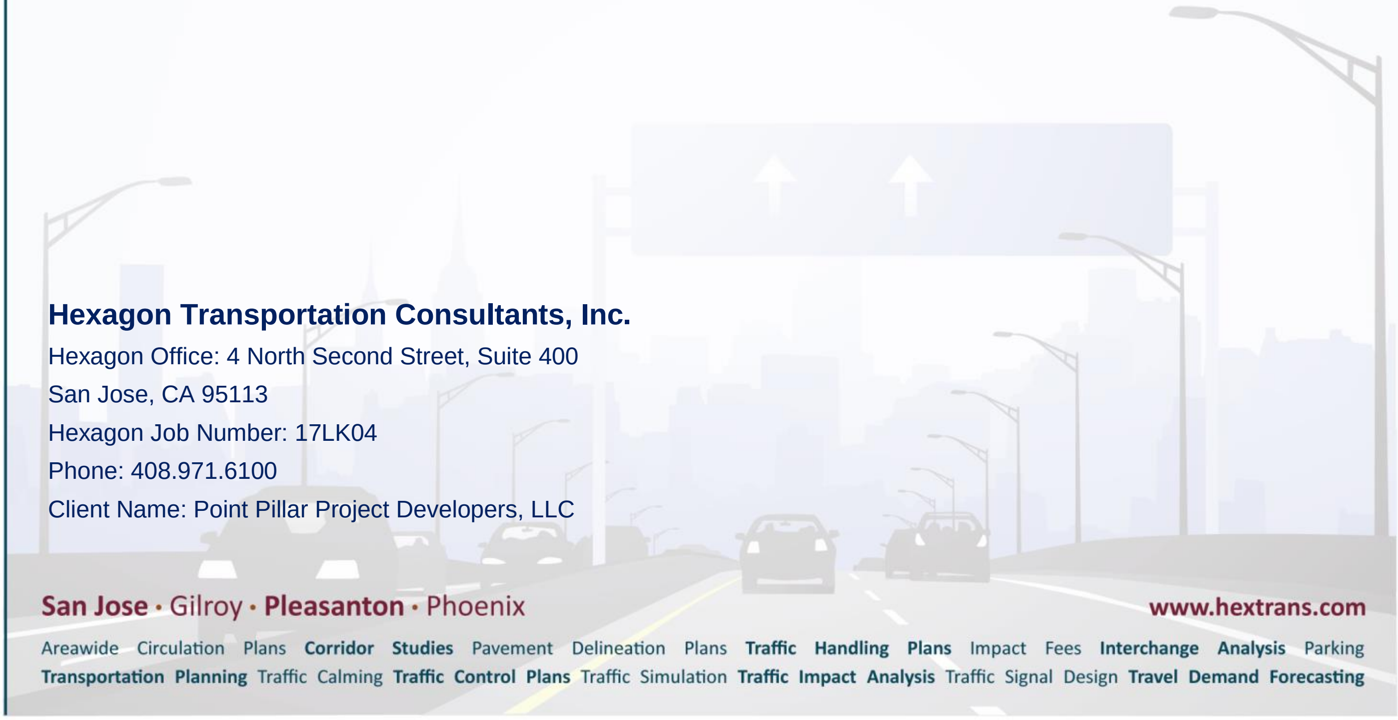
100 Capistrano Road
Harbor Village RV Park

Draft Traffic Impact Analysis

Prepared for:

Point Pillar Project Developers, LLC

January 18, 2019



Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Hexagon Job Number: 17LK04
Phone: 408.971.6100
Client Name: Point Pillar Project Developers, LLC

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Executive Summary

This report presents the results of the Traffic Impact Analysis (TIA) conducted for the proposed RV Park located at 100 Capistrano Road in Half Moon Bay, California. The project proposes to construct a 50-space RV park with 7 tent spaces and a supporting 832 square-foot laundry and restroom facility. The proposed RV park site is located on the northwest corner of the Cabrillo Highway (State Route 1) and Capistrano Road intersection, just north of Pillar Point Harbor. The project site is currently vacant. Access to the project site would be provided via a driveway operating as the north leg of the unsignalized intersection at Pillar Point Harbor Boulevard/Capistrano Road. The driveway access would be shared with the existing Shoppes at Harbor Village.

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the County of San Mateo and the City/County Association of Governments (C/CAG) of San Mateo County CMP. The study included the analysis of traffic conditions at one signalized intersection and one unsignalized intersection during the weekday AM, PM, and Saturday midday peak hours. The analysis focuses on the weekday peak commute periods between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM, and the Saturday midday peak hour is typically between 11:00 AM and 3:00 PM. It is during these hours that traffic conditions on the surrounding roadways are generally the most congested and the impact on the roadway system by traffic from the proposed RV park would be greatest.

Project Trip Generation

Trip generation for the proposed RV park was estimated by applying to the size and use of the development the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10th Edition* (2017). The trip generation rates for Campground/Recreational Vehicle Park (ITE Land Use 416) were applied to the project. In consultation with County staff, the upper-range trip rate during each peak hour was used to present a conservative estimate. Given that the ITE trip generation rates do not include Saturday peak hours, the Saturday midday peak hour was derived from trip generation surveys Hexagon Transportation Consultants, Inc. conducted in March 2017 at comparable RV parks within the Bay Area. The magnitude of traffic generated by the proposed RV park was estimated by multiplying the ITE and the observed RV parks' trip generation rates by the proposed development.

Based on a size of 57 spaces, the proposed development would generate a total of 20 trips (7 incoming and 13 outgoing) during the AM peak hour, 25 trips (16 incoming and 9 outgoing) during the PM peak hour, and 24 trips (11 incoming and 13 outgoing) during the Saturday midday peak hour.

Project Impacts

The results of the intersection level of service analysis are shown in Table ES-1. The analysis determined that under all scenarios with and without the project, the signalized study intersection, Cabrillo Highway (SR 1)/Capistrano Road, would operate at an acceptable level of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours. In addition, the analysis results show that under all scenarios with and without the project, the two-way stop-controlled study intersection would operate at LOS C or better during all peak hours. The analysis indicates that vehicles on the stop-controlled approaches (the Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.

Other Transportation Issues

Based on a review of the project site plan, there would be no issues regarding site access along Capistrano Road; and no issues are expected to arise regarding on-site circulation. The driveway design of the proposed shared-access driveway would provide adequate clearance for large vehicles to perform turn movements. Furthermore, the proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the study area. Thus, no project sponsored improvements would be necessary.

Table ES-1
Intersection Level of Service Summary

					Existing				Background				Cumulative			
					No Project		with Project		No Project		with Project		No Project		with Project	
Study Number	Intersection	Peak Hour	Count Date	Control Type	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	3/2/17	Signal	17.9	B	17.9	B	19.6	B	19.7	B	19.5	B	19.6	B
		PM	3/2/17		15.9	B	16.0	B	16.9	B	17.1	B	18.5	B	18.7	B
		Sat Midday	3/4/17		16.2	B	16.4	B	18.6	B	18.8	B	19.6	B	20.1	C
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	5/4/17	TWSC [1]	12.7	B	13.0	B	14.1	B	14.6	B	13.6	B	14.1	B
		PM	5/4/17		17.5	C	17.9	C	20.3	C	20.9	C	19.4	C	19.9	C
		Sat Midday	5/6/17		20.4	C	21.9	C	20.4	C	21.9	C	22.6	C	24.7	C

Note:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold indicates a significant project impact.

1. Introduction

This report presents the results of the Traffic Impact Analysis (TIA) conducted for the proposed RV Park located at 100 Capistrano Road in Half Moon Bay, California. The project proposes to construct a 50-space RV park with 7 tent spaces and a supporting 832 square-foot laundry and restroom facility. The proposed RV park site is located on the northwest corner of the Cabrillo Highway (State Route 1) and Capistrano Road intersection, just north of Pillar Point Harbor (see Figure 1). The project site is currently vacant. The project would occupy two parcels with a total area of 141,350 square feet. The parcel terrain is flat and grassy with trees between the site and SR 1. There are shops and restaurants located in the region southwest to southeast of the project site. There is farmland to the northwest of the project site and residential area to the north and east across SR 1. The existing zoning is CCR/DR, and there is no proposed zoning change with the project. Access to the project site would be provided via a driveway operating as the north leg of the Pillar Point Harbor Boulevard/Capistrano Road intersection (see Figure 2). The driveway access would be shared with the existing Shoppes at Harbor Village.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the County of San Mateo and the City/County Association of Governments (C/CAG) of San Mateo County CMP. A County Congestion Management Program (CMP) analysis was not required because the project would add fewer than 100 peak hour trips to any CMP roadways (SR 1) designated by the C/CAG. The traffic study includes an analysis of AM, PM, and Saturday midday peak hour traffic conditions for one signalized intersection and one unsignalized intersection in the vicinity of the project site. The study also includes an analysis of the project driveway design, and transit, bicycle, and pedestrian access.

Study Intersections

1. Cabrillo Highway (State Route 1) and Capistrano Road
2. Pillar Point Harbor Boulevard and Capistrano Road (unsignalized)

Analysis Time Periods

Traffic conditions at the study intersections were analyzed for the weekday AM, PM, and Saturday midday peak hours of adjacent street traffic. The AM and PM peak hours are expected to occur between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM, respectively, on a regular weekday, and the Saturday midday peak hour is expected to occur between 11:00 AM and 3:00 PM. It is during these peak travel periods that traffic is busiest, and the impact on the roadway system by traffic from the proposed RV park would be greatest.

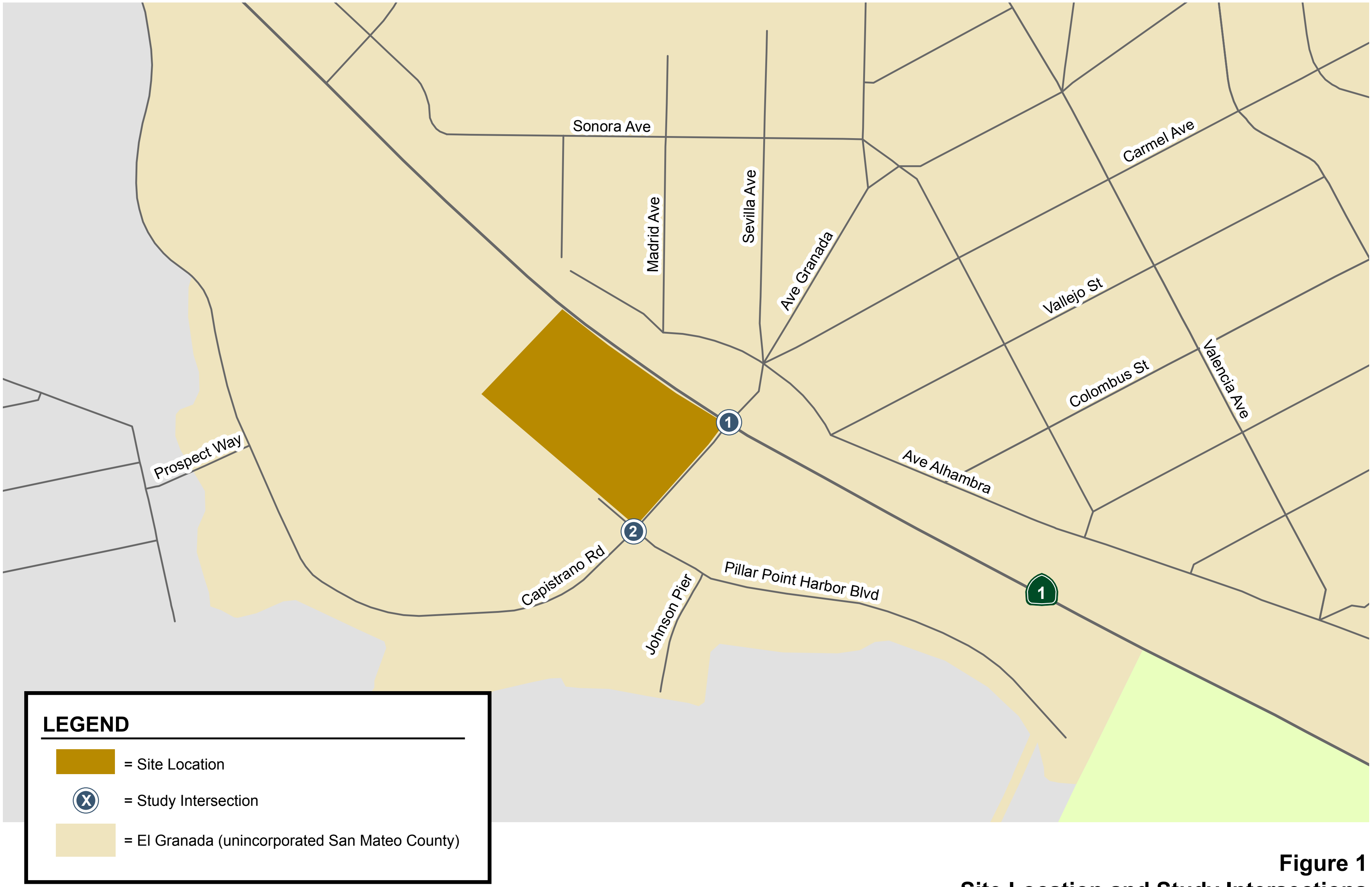


Figure 1
Site Location and Study Intersections

NORTH
Not to Scale

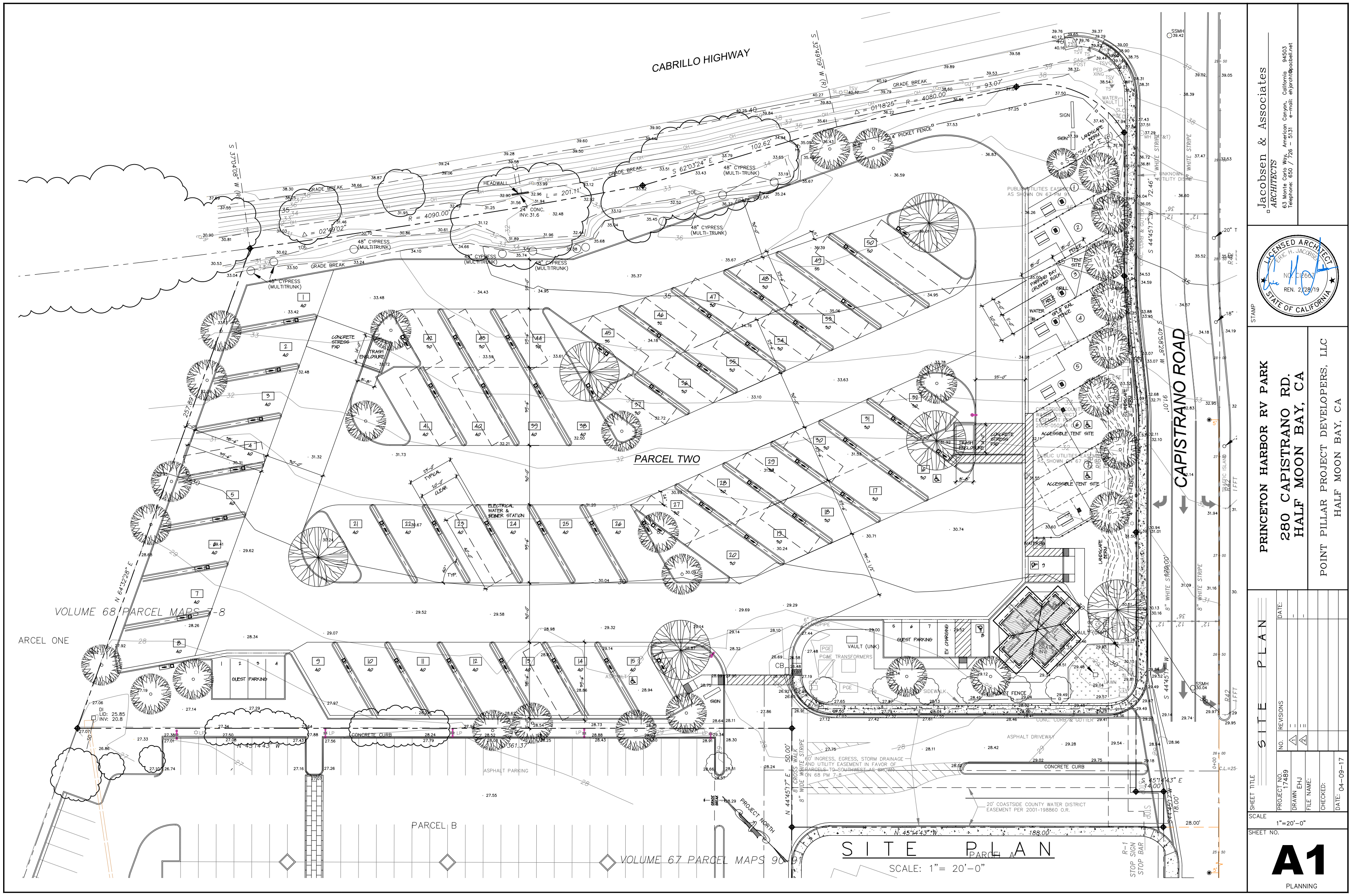


Figure 2
Project Site Plan

NORTH
Not to Scale

Analysis Scenarios

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing traffic volumes at study intersections were based on traffic counts conducted in March and May of 2017. The traffic counts and volume summary are included in Appendix A and Appendix B, respectively.

Scenario 2: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 3: *Background Conditions.* Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information was provided by the County of San Mateo. The County of San Mateo approved project information is included in Appendix C.

Scenario 4: *Background plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative traffic volumes represent traffic growth through the year 2040 (approximately twenty years of growth). Cumulative traffic volumes were estimated from forecasts obtained from C/CAG/VTA and added to the existing traffic counts. Cumulative plus project conditions were estimated by adding to the cumulative traffic volumes the additional traffic estimated to be generated by the proposed project. Cumulative plus project conditions were evaluated relative to cumulative conditions to determine potential project impacts.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the County of San Mateo, the Santa Clara Valley Transportation Authority (VTA), and field observations. The following data were collected from these sources:

- existing peak-hour intersection turning-movement volumes
- lane configurations
- intersection signal timing and phasing
- list of approved but not yet completed projects
- forecasted volumes for SR 1 in the year 2040

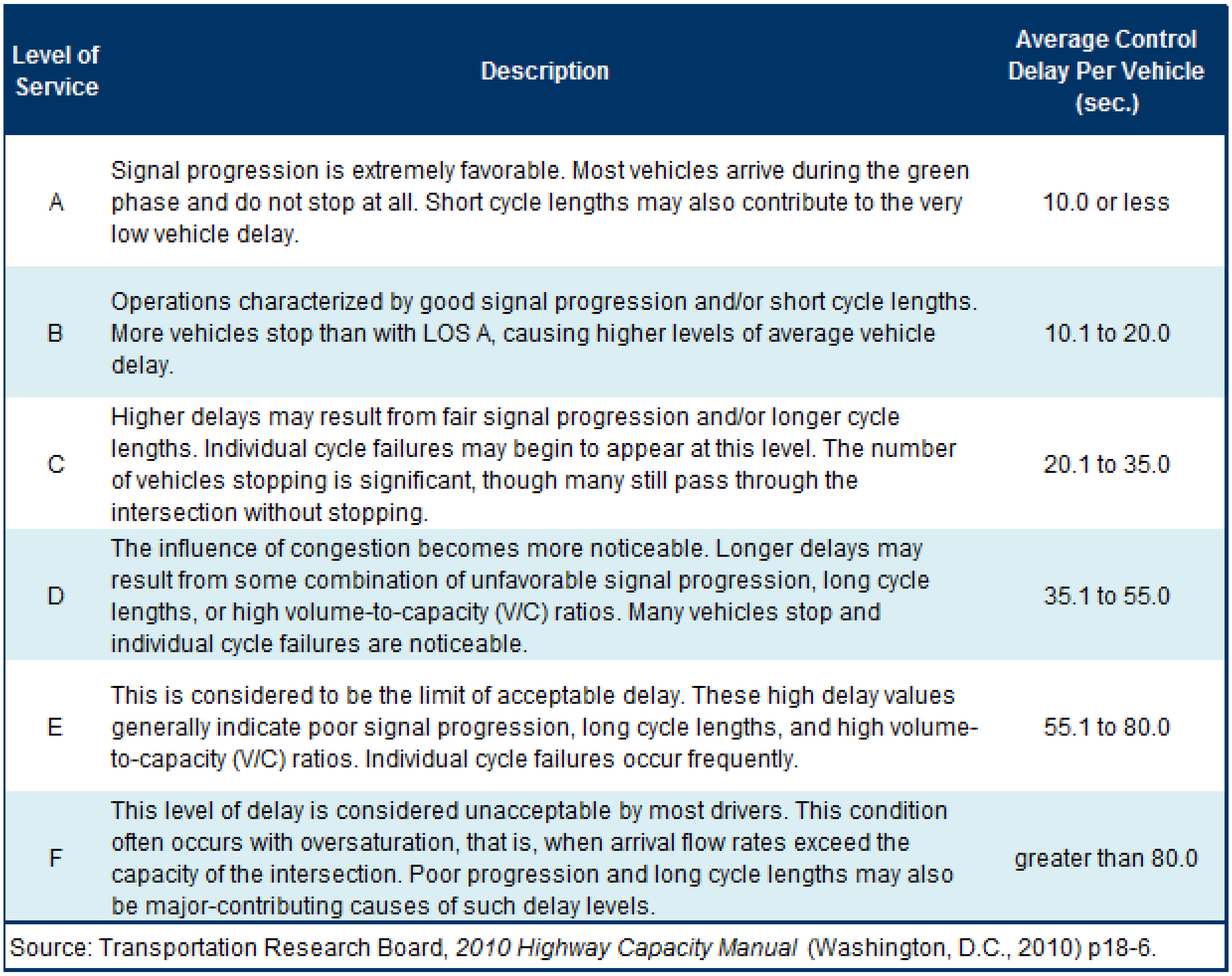
Level of Service Definitions and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

County of San Mateo Signalized Intersections

The County of San Mateo level of service standards were used to evaluate the signalized study intersection. The County of San Mateo evaluates intersection level of service based on the *Highway Capacity Manual* (HCM) 2010 method using Synchro Version 9.2. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. The County of San Mateo level of service standard for signalized intersections is LOS C or better, with each individual movement operating at LOS D or better. The correlation between delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay



Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p18-6.

Unsignalized Intersections

Level of service at the unsignalized intersection was based on the 2010 *Highway Capacity Manual* (2010 HCM) method using Synchro Version 9.2. This method is applicable for both two-way and all-way stop-controlled intersections. The one unsignalized study intersection operates with two-way stop control. For two-way stop-controlled intersections, the reported levels of service are based on the worst approach delay at the intersection. The County of San Mateo does not have a level of service standard for unsignalized intersections. Therefore, intersection levels of service for unsignalized intersections are reported for informational purposes only. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short Traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p20-3.

CMP Roadway System

Per CMP technical guidelines, a roadway system level of service analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. New SR 1 trips generated by the project are expected to be less than the one percent threshold of roadway capacity to all segments in the area. Therefore, a detailed analysis of roadway system levels of service was not performed. A simple roadway segment capacity evaluation to substantiate this determination is presented in Table 3.

Table 3
Roadway Segment Capacity Evaluation

			Existing Conditions[1]			Project Conditions		
Roadway	Segment	Peak Hour	# of Lanes	Capacity	LOS	Project Trips[2]	% Capacity	Impact
SR 1	Linda Mar Boulevard to French Mans Creek Road	AM	**2**	**2,800**	**E**	20	0.71%	NO
		PM	**2**	**2,800**	**E**	25	0.89%	NO
		Sat Midday	**2**	**2,800**	**E**	24	0.86%	NO

Notes:

[1] Existing freeway conditions referenced the Level of Service and Performance Measure Monitoring Report - 2015.

[2] Project trips are estimated via manual trip assignment.

BOLD indicates a substandard level of service.

Intersection Operations

The analysis of intersection level of service was supplemented with an analysis of traffic operations for intersections where the project would add a significant number of turning movements. The operations analysis is based on vehicle queuing for high demand turning movements at intersections. Vehicle queues were estimated using Synchro Version 9.2.

The basis of the analysis is as follows: (1) Synchro Version 9.2 is used to estimate the 95th percentile maximum queue length for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future turn pocket storage requirements at signalized intersections.

The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the “design queue length.”

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian facilities. Chapter 3 describes the methods used to estimate project traffic and its impact on the existing transportation system. Chapter 4 presents the intersection operations under background conditions, including the approved projects in the County of San Mateo. Chapter 5 presents the intersection operations under background plus project conditions. Chapter 6 describes cumulative traffic conditions. Chapter 7 presents the analysis of other transportation issues including site access and circulation, transit services, bicycle and pedestrian facilities, and vehicle queuing. Chapter 8 includes a summary of project impacts, any proposed mitigation measures, and recommended improvements.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the project site is provided via Cabrillo Highway (SR 1). Local access to the site is provided on Capistrano Road. These roadways are described below.

Cabrillo Highway (SR 1) is a two-lane, north-south highway in the vicinity of the site. Cabrillo Highway extends along the Pacific coastline, northward through San Francisco and southward through the San Mateo and Santa Cruz Counties. Access to and from the project study area is provided via Capistrano Road.

Capistrano Road is a local roadway that extends in an east-west direction. In the vicinity of the project site, Capistrano Road is a two-lane roadway and runs along the southern boundary of the project site. Capistrano Road provides direct access to the proposed Harbor Village RV Park site via the existing Shoppes at Harbor Village driveway at the Pillar Point Harbor Boulevard intersection.

Existing Pedestrian and Bicycle Facilities, and Transit Services

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the project vicinity, sidewalks exist along both sides of Capistrano Road and along the west side of Pillar Point Harbor Boulevard, providing pedestrian access to and from the project site. Marked crosswalks with pedestrian signal heads and push buttons are provided on three legs of the signalized study intersection of Cabrillo Highway and Capistrano Road. The north leg of the intersection does not have a crosswalk. At the unsignalized study intersection of Pillar Point Harbor Boulevard and Capistrano Road, crosswalks are provided on two legs of the intersection. Although some crosswalk connections are missing on Capistrano Road and Cabrillo Highway, the overall network of sidewalks and crosswalks in the study area has good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

The existing bicycle facilities within the study area comprise the Coastal Trail along the Cabrillo Highway corridor. The Coastal Trail is part of a larger network of public trails along the entire California coastline, extending northward through San Francisco and southward through San Mateo and Santa Cruz Counties. The trail consists of Class I Bike Paths, Class II Bike Lanes, Class III Bike Routes, and unpaved gravel trails. In the vicinity of the project, the Coastal Trail consists of a Class I multi-use path south of the project site and accessible via Pillar Point Harbor Boulevard, which is designated as a

Class III bike route (see Figure 3). According to the *2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan*, the County of San Mateo plans to provide the Parallel Trail (consisting of Class I Bike Paths and Class II Bike Lanes), which would run on the east side of the SR 1 from Montara to Half Moon Bay. This trail would provide enhanced bicycle connections to the project site.

Existing Transit Services

Existing transit services near the project site are provided by the San Mateo County Transit District (SamTrans) (See Figure 3). The study area is served directly by two local bus routes. Bus lines that run through the study area are listed in Table 4, including their route description and commute hour headways.

Local Route 17 operates on Cabrillo Highway in the vicinity of the project. The closest bus stop is within walking distance, located on the southern boundary of the project site. Route 17 operates between the Linda Mar Park & Ride lot and the Stage Road/Pescadero Creek Road intersection. Weekday service is from approximately 6:00 AM to 9:10 PM with 60-minute headways during commute hours.

Local Route 18 operates on Cabrillo Highway in the vicinity of the project. The closest bus stop is within walking distance, located on the southern boundary of the project site. Route 18 operates between the Moonridge Apartments southeast of Half Moon Bay and the Main Street/7th Street intersection in Montara. Service is provided only on school days with three runs in the morning and two runs in the afternoon.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 4.

Existing Traffic Volumes

Existing traffic volumes were obtained from new peak-hour turning movement counts collected in March and May of 2017. The existing peak-hour intersection volumes are shown in Figure 5. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Figure 3
Existing Bicycle Facilities and Transit Services

NORTH
Not to Scale

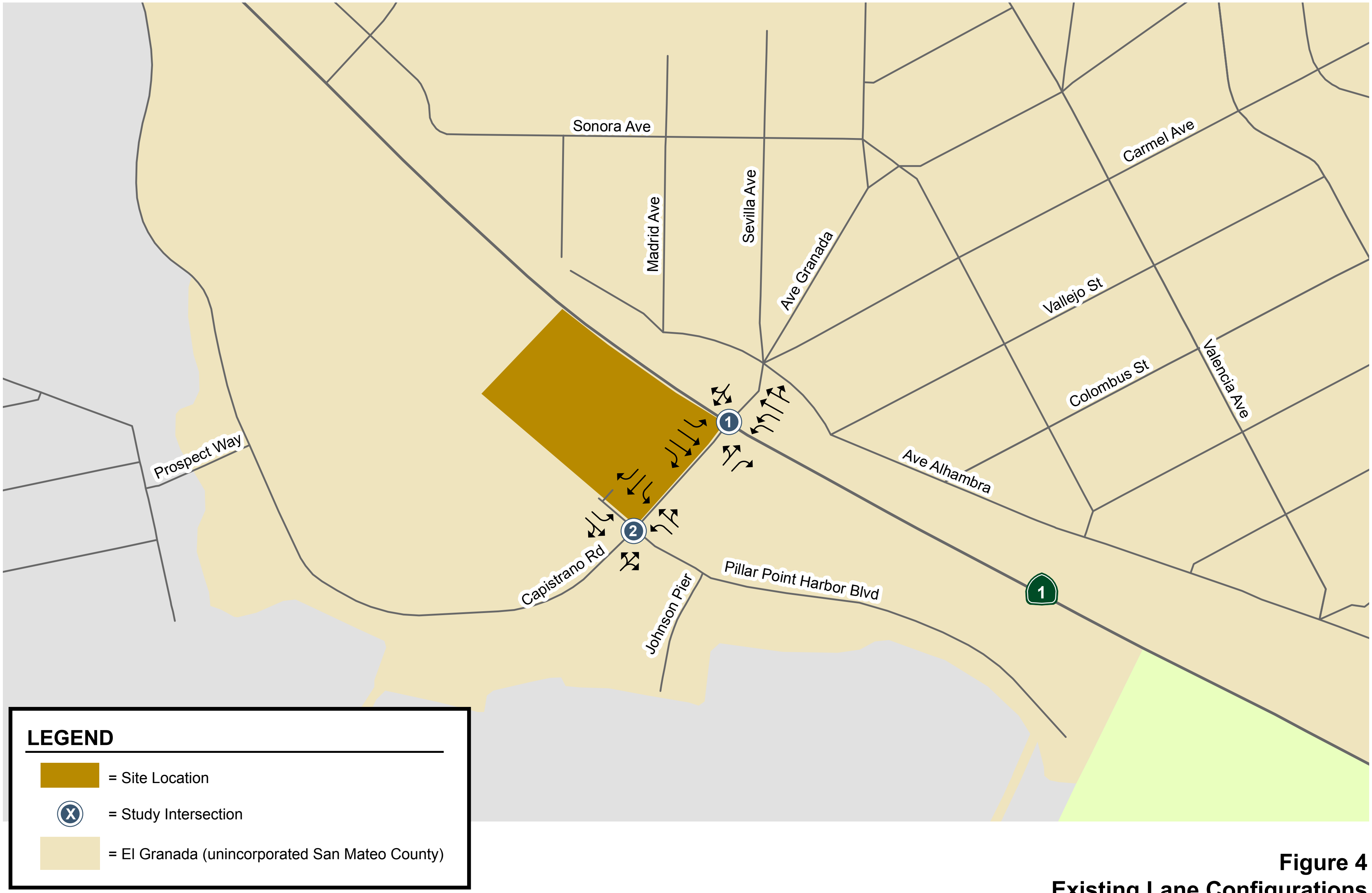


Figure 4
Existing Lane Configurations

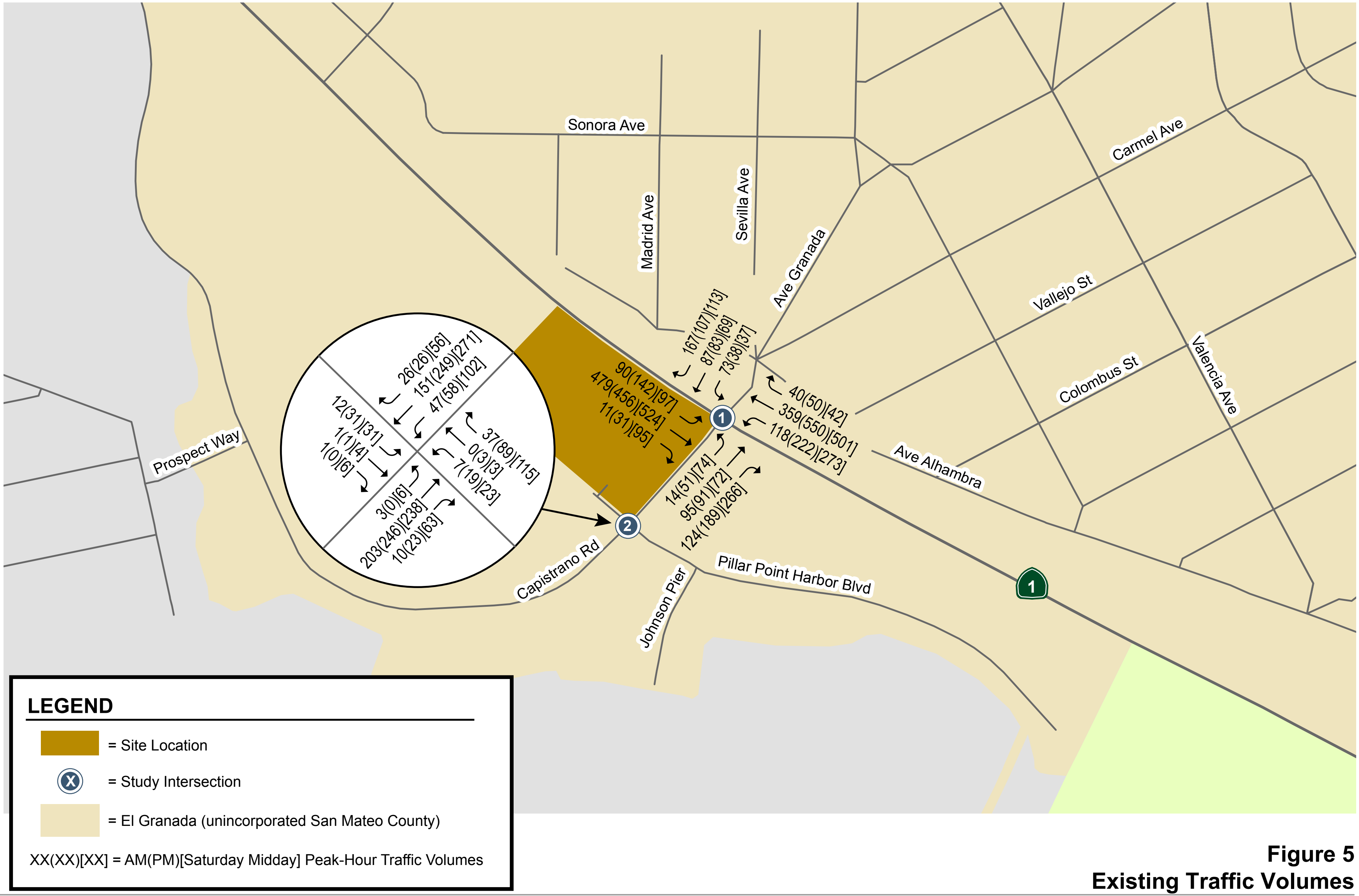


Figure 5
Existing Traffic Volumes

HEXAGON

NORTH
Not to Scale

Existing Intersection Levels of Service

Intersection levels of service were evaluated against County of San Mateo standards. The results of the analysis show that the signalized study intersection currently operates at acceptable levels of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours (see Table 4). The intersection levels of service calculation sheets are included in Appendix D.

The analysis results show that the stop-controlled study intersection currently operates at LOS C or better during all peak hours. The level of service analysis indicates that vehicles on the stop-controlled approaches (Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience moderate delays.

Table 4
Existing Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Control Type	Existing Conditions Average Delay (sec.)	Existing Conditions LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	3/2/17	Signal	17.9	B
		PM	3/2/17		15.9	B
		Sat Midday	3/4/17		16.2	B
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	5/4/17	TWSC [1]	12.7	B
		PM	5/4/17		17.5	C
		Sat Midday	5/6/17		20.4	C

Notes:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold (boxed) indicates a significant project impact.

Observed Existing Traffic Conditions

Traffic conditions were observed in the field in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

Overall, both study intersections operated adequately during the AM, PM, and Saturday midday peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. It should be noted that congestion exists in the southbound direction during the AM and Saturday midday peak hours and in the northbound direction during the PM peak hour along SR 1. However, the congestion does not spillback or cause any operational issues at the Cabrillo Highway (SR 1)/Capistrano intersection.

3. Existing Plus Project Conditions

This chapter describes traffic conditions with the project. It begins with a description of the transportation system under project conditions and the method by which project traffic is estimated. Project traffic is then added to existing conditions.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine impacts on intersections are based on the thresholds established by the County of San Mateo, Department of Public Works in the *2013 Traffic Impact Study Requirements*.

County of San Mateo Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in San Mateo County if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS C under background conditions to an unacceptable LOS D, E, or F under project conditions, or
2. The level of service of an individual movement degrades from an acceptable LOS D under background conditions to an unacceptable LOS E or F under project conditions, or
3. The level of service at the intersection is an unacceptable LOS D, E, or F under background conditions and the addition of project trips causes the average control delay at the intersection to increase by four (4) or more seconds.

A significant impact by the County of San Mateo standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Transportation Network under Project Conditions

The proposed project does not include any changes to the existing transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed RV park was estimated for the AM, PM, and Saturday midday peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that indicate the amount of traffic that can be expected to be generated by common land uses. The standard trip generation rates can be applied to help predict the future traffic increases that would result from a new development. The standard trip generation rates are published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual.*

Project trip generation was estimated by applying to the size and use of the development the appropriate trip generation rates obtained from the ITE *Trip Generation Manual, 10th Edition* (2017). The trip generation rates for Campground/Recreational Vehicle Park (ITE Land Use 416) were applied to the project. In consultation with County staff, the upper-range trip rate during each peak hour was used to present a conservative estimate. Given that the ITE trip generation rates do not include Saturday peak hours, the Saturday midday peak hour was derived from trip generation surveys Hexagon Transportation Consultants, Inc. conducted in March 2017 at comparable RV parks within the Bay Area. The observed trip generation rates are presented in Table 5. The magnitude of traffic generated by the proposed RV park was estimated by multiplying the ITE and the observed RV parks' trip generation rates by the proposed development (see Table 6). Trip generation survey sheets of comparable RV parks are included in Appendix A.

Table 5
Trip Generation Rate Surveys

		Saturday Peak Hour [1]			
Count Location	**Size**	**In**	**Rate**	**Out**	**Rate**
Pillar Point RV Park	49 spaces	12	0.24	17	0.35
Pelican Point RV Park	74 spaces	8	0.11	10	0.14
Maple Leaf RV Park	272 spaces	61	0.22	62	0.23
RV Park Average			**0.19**		**0.24**

Notes:

[1] The Saturday peak hour is the highest hour between 12 PM - 3 PM.

Based on a size of 57 spaces, the proposed development would generate a total of 20 trips (7 incoming and 13 outgoing) during the AM peak hour, 25 trips (16 incoming and 9 outgoing) during the PM peak hour, and 24 trips (11 incoming and 13 outgoing) during the Saturday midday peak hour.

Table 6
Project Trip Generation Estimates

		AM Peak Hour				PM Peak Hour				Saturday Peak Hour				
Land Use	**Size**	**Rate[1]**	**In**	**Out**	**Total**	**Rate[1]**	**In**	**Out**	**Total**	**Rate[2]**	**In**	**Rate[2]**	**Out**	**Total**
Proposed Project														
Harbor Village RV Park	57 spaces	0.35	7	13	20	0.43	16	9	25	0.19	11	0.24	13	24

Notes:

[1] Campground/Recreational Vehicle Park (Land Use 416) upper-range of rates published in ITE's *Trip Generation Manual, 10th Edition, 2017*.

[2] The observed peak hour trip rate (per space) was based on surveys conducted by Hexagon Transportation Consultants in March 2017 at comparable RV parks.

Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway network and major destinations in the area (see Figure 6). Project trips were assigned based on the directions of approach and departure, as well as the roadway network connections in accordance with the project trip distribution pattern.

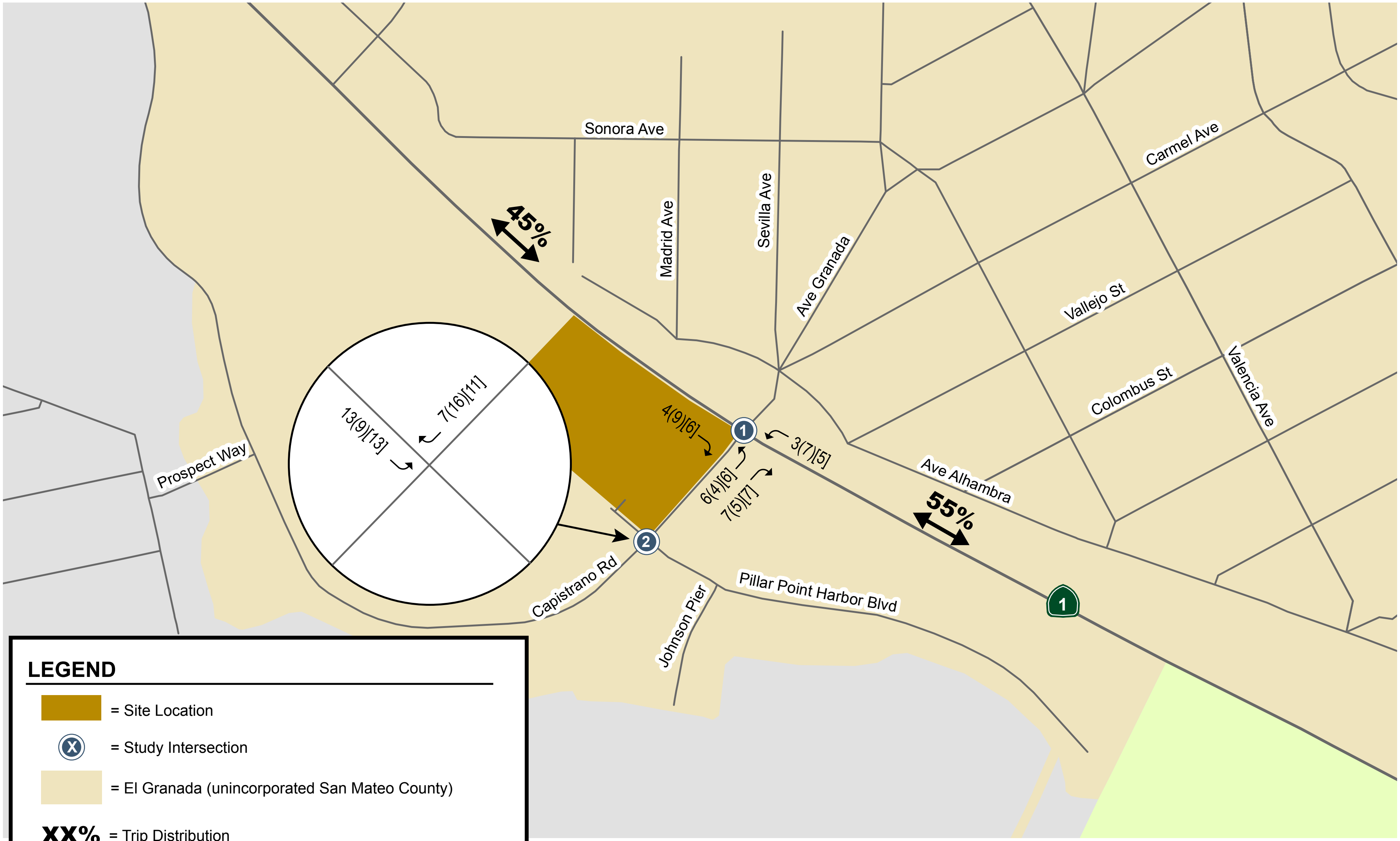
Existing Plus Project Traffic Volumes

Project trips, as represented in the previously mentioned project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 7.

Existing Plus Project Intersection Analysis

The results of the level of service analysis under existing plus project conditions show that the signalized study intersection would continue to operate at acceptable levels of service (LOS C or better, with each individual movement operating at LOS D or better) during all peak hours (see Table 7). The intersection levels of service calculation sheets are included in Appendix D.

The analysis results also show that, under existing plus project conditions, the stop-controlled study intersection would operate at LOS C or better during all peak hours. The level of service analysis indicates that vehicles on the stop-controlled approaches (Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.



LEGEND

🟫 = Site Location

ⓧ = Study Intersection

▭ = El Granada (unincorporated San Mateo County)

XX% ↔ = Trip Distribution

XX(XX)[XX] = AM(PM)[Saturday Midday] Peak-Hour Traffic Volumes

Figure 6
Project Trip Distribution and Assignment

HEXAGON

NORTH
Not to Scale

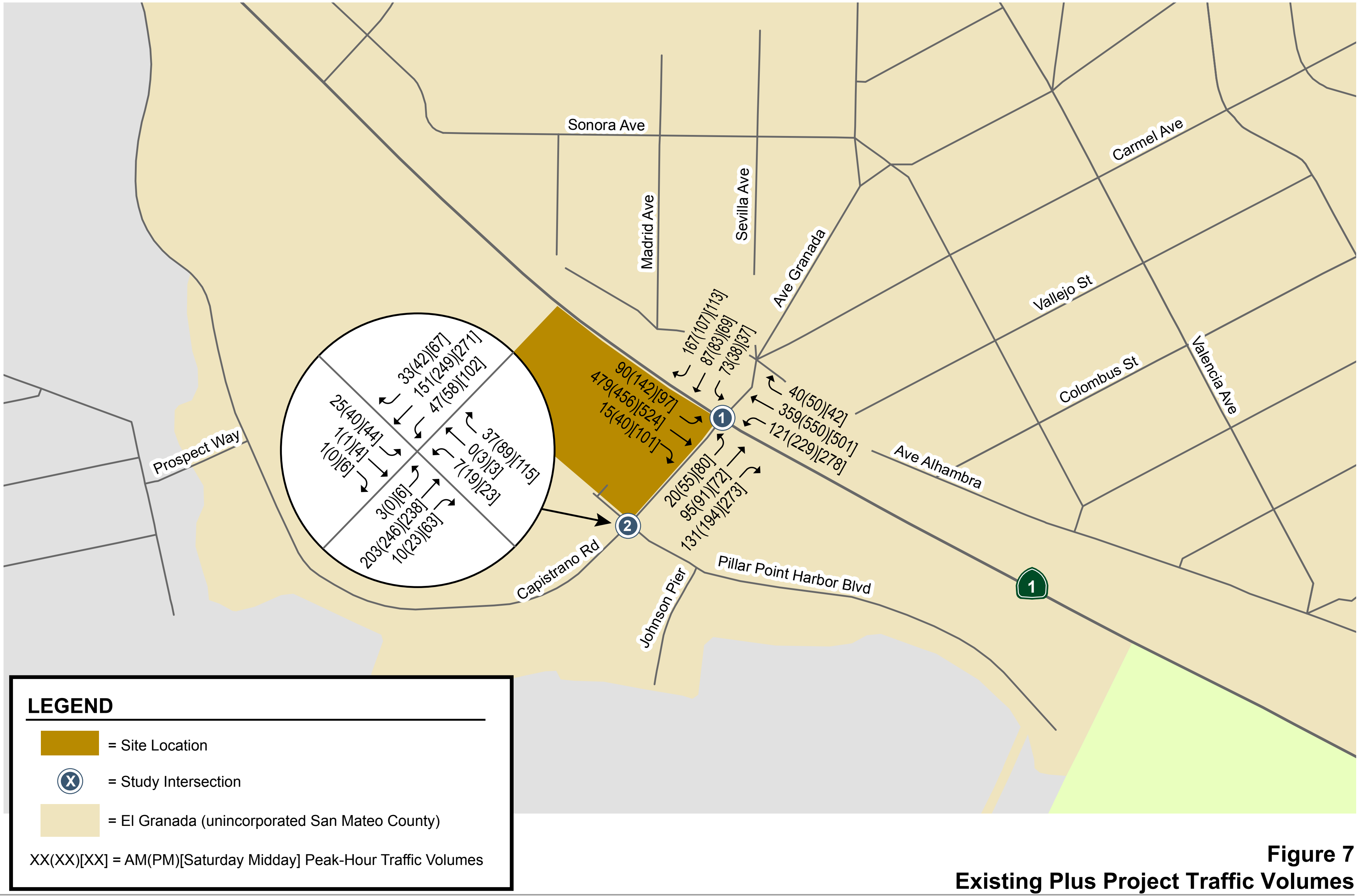


Figure 7
Existing Plus Project Traffic Volumes

NORTH
Not to Scale

Table 7
Existing Plus Project Level of Service Summary

				Existing Conditions			
				No Project		With Project	
Study Number	Intersection	Peak Hour	Control Type	Average Delay (sec.)	LOS	Average Delay (sec.)	LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	Signal	17.9	B	17.9	B
		PM		15.9	B	16.0	B
		Sat Midday		16.2	B	16.4	B
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	TWSC [1]	12.7	B	13.0	B
		PM		17.5	C	17.9	C
		Sat Midday		20.4	C	21.9	C

Notes:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold (boxed) indicates a significant project impact.

4. Background Conditions

This chapter presents a summary of the traffic conditions that would occur under background conditions. Background conditions are defined as conditions just prior to completion of the proposed development. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site.

Roadway Network and Traffic Volumes

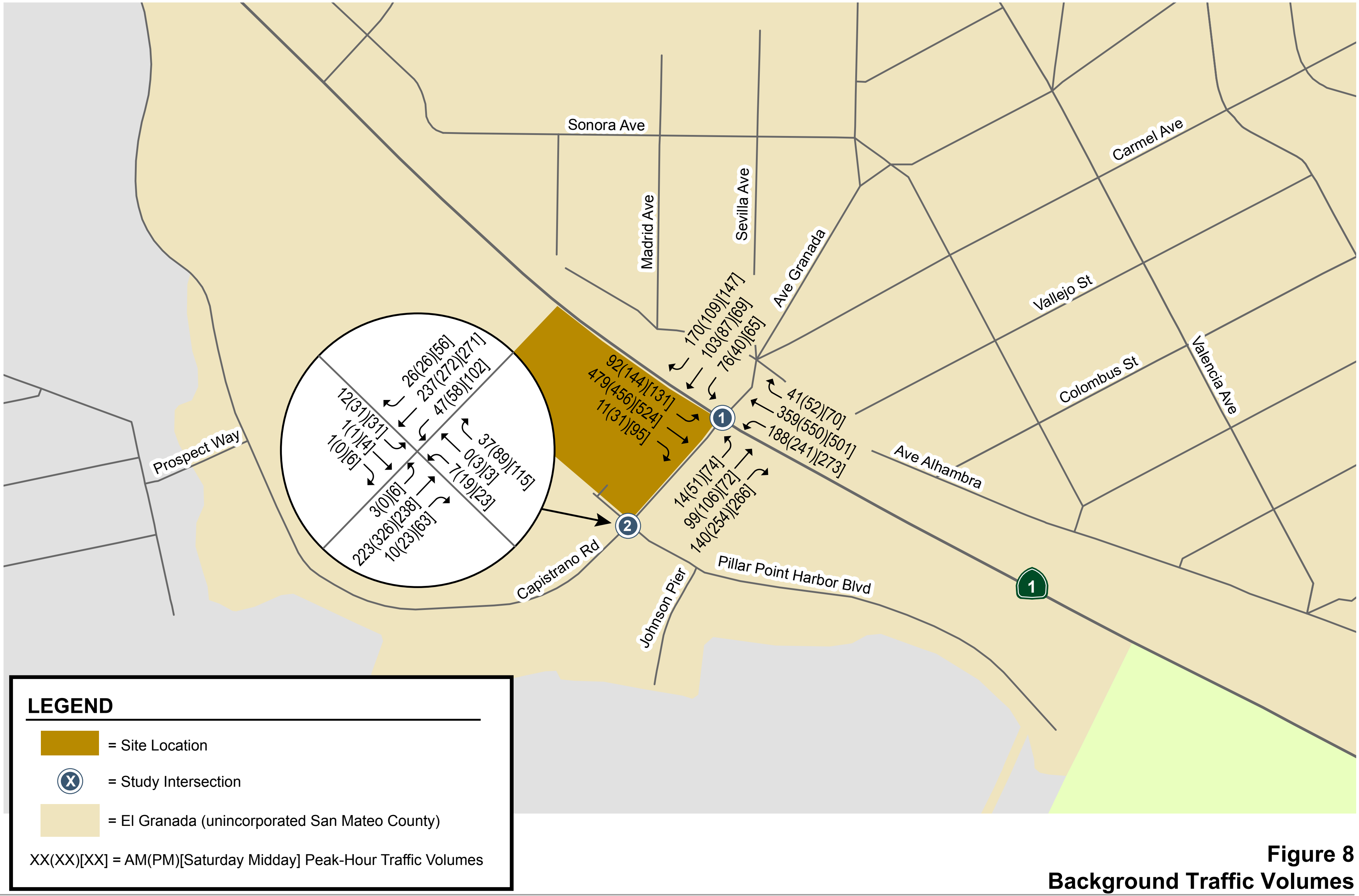
The roadway network under background conditions is assumed to be the same as under existing conditions.

Background traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved developments that have not yet been constructed or occupied. Approved project trips and/or approved project information was obtained from the County of San Mateo. The list of nearby projects that are included in the background scenario can be found in Appendix C. The approved projects that would add traffic to the study area of Princeton Harbor include a motel expansion at 11 Avenue Alhambra and the Big Wave North Parcel development. Traffic volumes for all components of traffic are tabulated in Appendix B. Figure 8 shows the intersection turning-movement volumes under background conditions.

Intersection Level of Service Analysis

The results of the level of service analysis under background conditions are summarized in Table 8. The results show that, when measured against the County of San Mateo level of service standards, the Cabrillo Highway/Capistrano Road study intersection is expected to operate at an acceptable LOS B or better during the AM, PM, and Saturday midday peak hours of traffic. Level of service calculation sheets are included in Appendix D.

The analysis results also show that, under background conditions, the stop-controlled study intersection would continue to operate at LOS C or better during all peak hours. The level of service analysis indicates that vehicles on the stop-controlled approaches (Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay under background conditions.



LEGEND

🟫 = Site Location

Ⓧ = Study Intersection

▨ = El Granada (unincorporated San Mateo County)

XX(XX)[XX] = AM(PM)[Saturday Midday] Peak-Hour Traffic Volumes

Figure 8
Background Traffic Volumes

NORTH
Not to Scale

Table 8
Background Intersection Levels of Service

Study Number	Intersection	Peak Hour	Control Type	Background Conditions Average Delay (sec.)	Background Conditions LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	Signal	19.6	B
		PM		16.9	B
		Sat Midday		18.6	B
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	TWSC [1]	14.1	B
		PM		20.3	C
		Sat Midday		20.4	C

Notes:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold (boxed) indicates a significant project impact.

5. Background Plus Project Conditions

This chapter presents a summary of the traffic conditions that would occur under background plus project conditions. Project trips, as represented in Chapter 3, were added to background traffic volumes to obtain background plus project traffic volumes.

Background Plus Project Traffic Volumes

Peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Project conditions were evaluated relative to background conditions in order to determine potential project impacts. The project traffic volumes are shown graphically on Figure 9 for background plus project conditions. Traffic volumes for all components of traffic are tabulated in Appendix B.

Background Plus Project Intersection Analysis

The results of the level of service analysis under background plus project conditions show that, when measured against the San Mateo County standards, the signalized study intersection would operate at acceptable levels of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours (see Table 9). The intersection levels of service calculation sheets are included in Appendix D.

The analysis results also show that, under background plus project conditions, the two-way stop-controlled study intersection would operate at LOS C or better during all peak hours. The analysis indicates that vehicles on the stop-controlled approaches (the Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.

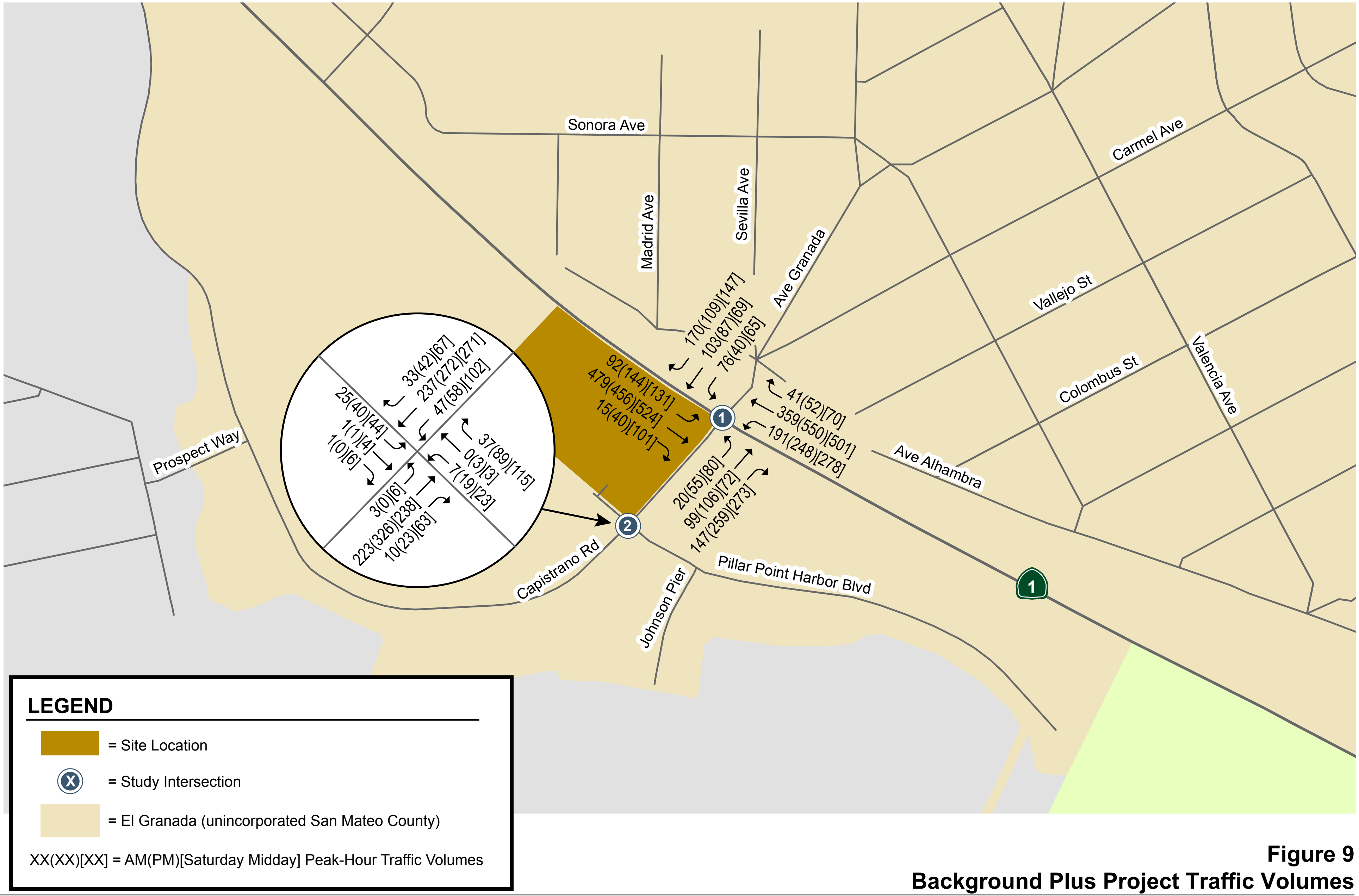


Figure 9
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Table 9
Background Plus Project Level of Service Summary

				Background Conditions			
				No Project		With Project	
Study Number	Intersection	Peak Hour	Control Type	Average Delay (sec.)	LOS	Average Delay (sec.)	LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	Signal	19.6	B	19.7	B
		PM		16.9	B	17.1	B
		Sat Midday		18.6	B	18.8	B
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	TWSC [1]	14.1	B	14.6	B
		PM		20.3	C	20.9	C
		Sat Midday		20.4	C	21.9	C

Notes:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold indicates a significant project impact.

6. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions with the proposed project. Cumulative conditions represent future traffic conditions with expected growth in the area. The year 2040 traffic volumes were obtained from the VTA travel demand forecasting model. The year 2040 model-forecast growth was added to the existing counts. Cumulative conditions reflect approximately twenty years of growth.

Roadway Network and Traffic Volumes

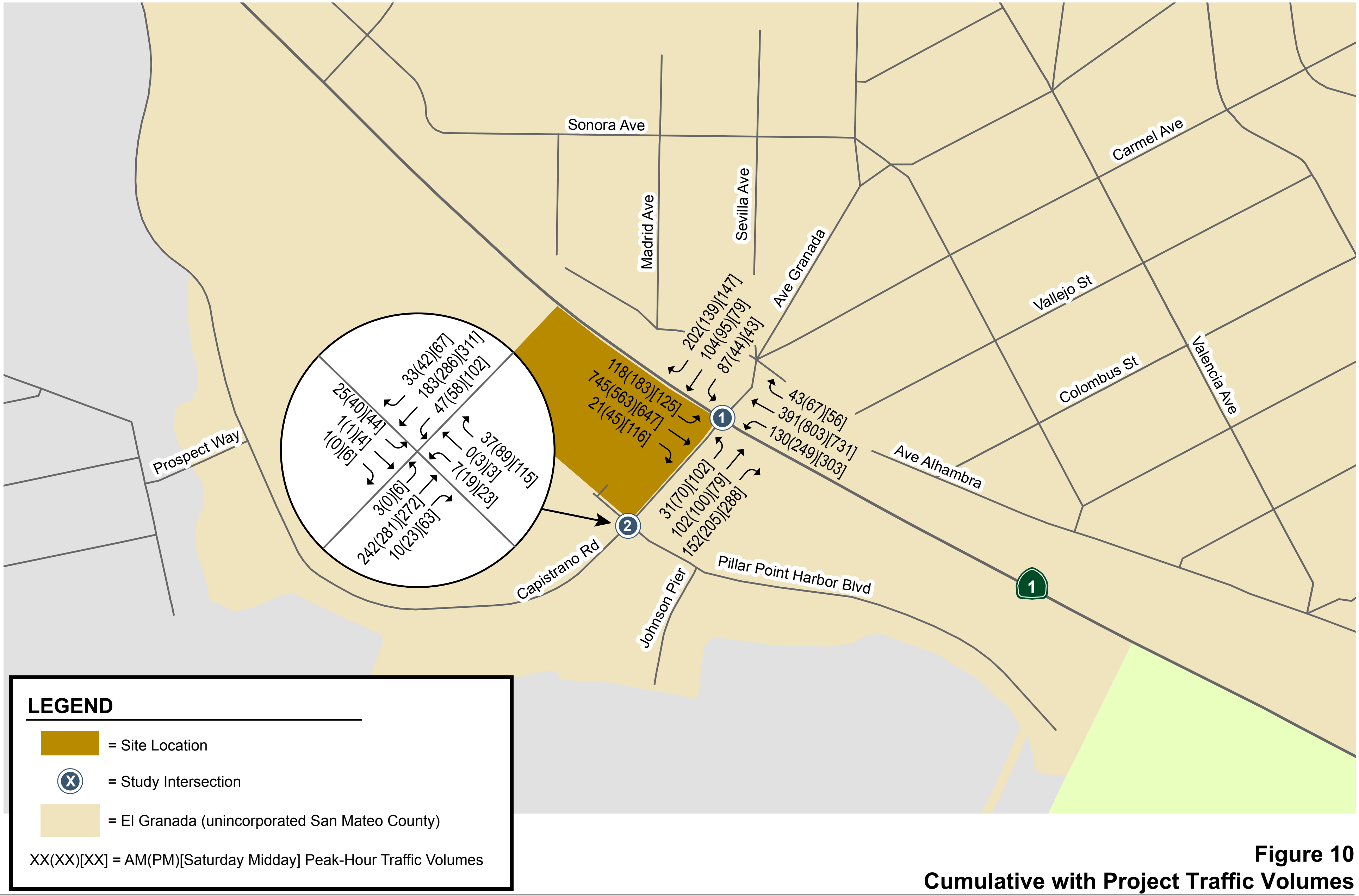
The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions.

Cumulative volumes for the study intersections were estimated by taking year 2040 growth forecasts from the VTA model and adding them to the existing traffic counts. Project trips were then added to the cumulative volumes to create the cumulative plus project conditions volumes (see Figure 10).

Intersection Levels of Service Analysis

The results of the level of service analysis under cumulative conditions show that, measured against the San Mateo County standards, the signalized study intersection would operate at an acceptable level of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours (see Table 10). The intersection levels of service calculation sheets are included in Appendix D.

The analysis results also show that, under cumulative plus project conditions, the two-way stop-controlled study intersection would operate at LOS C or better during all peak hours. The analysis indicates that vehicles on the stop-controlled approaches (the Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.



LEGEND

- 🟫 = Site Location
- ⓧ = Study Intersection
- ▨ = El Granada (unincorporated San Mateo County)

XX(XX)[XX] = AM(PM)[Saturday Midday] Peak-Hour Traffic Volumes

Figure 10
Cumulative with Project Traffic Volumes

Table 10
Cumulative Level of Service Summary

				Cumulative Conditions			
				No Project		With Project	
Study Number	Intersection	Peak Hour	Control Type	Average Delay (sec.)	LOS	Average Delay (sec.)	LOS
1	Capistrano Road and Cabrillo Highway (SR 1)	AM	Signal	19.5	B	19.6	B
		PM		18.5	B	18.7	B
		Sat Midday		19.6	B	20.1	C
2	Capistrano Road and Pillar Point Harbor Boulevard	AM	TWSC [1]	13.6	B	14.1	B
		PM		19.4	C	19.9	C
		Sat Midday		22.6	C	24.7	C

Notes:

TWSC = Two-Way Stop Control

[1] For TWSC intersections, the worst approach's delay and level of service are reported.

Bold indicates a substandard level of service.

Bold indicates a significant project impact.

7. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Vehicle Queuing
- Site access and circulation
- Potential impacts to transit, bicycle and pedestrian facilities

The analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by the traffic engineering community.

Queuing Analysis

The operations analysis is based on vehicle queuing for high-demand movements at intersections. Vehicle queues were estimated using Synchro Version 9.2.

The following four movements were examined as part of the queuing analysis for this project:

- Northbound left turn at Cabrillo Highway (SR 1) and Capistrano Road
- Eastbound left/through turn at Cabrillo Highway (SR 1) and Capistrano Road
- Eastbound right turn at Cabrillo Highway (SR 1) and Capistrano Road
- Southbound left turn at Pillar Point Harbor Boulevard and Capistrano Road

The estimated queue lengths based on the Synchro output show no queuing deficiencies at the four locations (see Table 11). The signalized intersection queues are included in Appendix E.

Table 11
Queuing Analysis Summary

	Cabrillo Highway (SR 1) and Capistrano Road									Capistrano Road and Pillar Point Harbor Boulevard		
	NBL			EBL/EBT			EBR			SBL		
Measurement	**AM**	**PM**	**Sat Mid**	**AM**	**PM**	**Sat Mid**	**AM**	**PM**	**Sat Mid**	**AM**	**PM**	**Sat Mid**
Existing												
Total Volume	118	222	273	109	142	146	124	189	266	12	31	31
Total 95th %. Queue (veh.)	3	4	5	4	5	5	2	2	3	1	1	1
Total 95th %. Queue (ft.)	75	100	125	100	125	125	50	50	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Existing Plus Project												
Total Volume	121	229	278	115	146	152	131	194	273	25	40	44
Total 95th %. Queue (veh.)	3	4	5	4	5	6	2	2	3	1	1	1
Total 95th %. Queue (ft.)	75	100	125	100	125	150	50	50	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Background												
Total Volume	188	241	271	113	157	146	140	254	266	12	31	31
Total 95th %. Queue (veh.)	4	4	5	4	5	5	2	3	3	1	1	1
Total 95th %. Queue (ft.)	100	100	125	100	125	125	50	75	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Background Plus Project												
Total Volume	191	248	278	119	161	152	147	259	273	25	40	44
Total 95th %. Queue (veh.)	4	4	5	4	5	6	2	3	3	1	1	1
Total 95th %. Queue (ft.)	100	100	125	100	125	150	50	75	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cumulative												
Total Volume	127	242	298	127	166	175	145	200	281	12	31	31
Total 95th %. Queue (veh.)	3	4	5	4	6	7	2	2	3	1	1	1
Total 95th %. Queue (ft.)	75	100	125	100	150	175	50	50	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cumulative Plus Project												
Total Volume	130	249	303	133	170	181	152	205	288	25	40	44
Total 95th %. Queue (veh.)	3	4	5	4	6	7	2	2	3	1	1	1
Total 95th %. Queue (ft.)	75	100	125	100	150	175	50	50	75	25	25	25
Total Storage (ft.)	1000	1000	1000	525	525	525	525	525	525	175	175	175
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes:

[1] Vehicle queue calculations based on output from Synchro Version 9.2

[2] Assumes 25 Feet Per Vehicle

Site Access and On-Site Circulation

The site access and circulation evaluation is based on the April 9, 2017 site plan prepared by Jacobsen & Associates Architects, LLC (see Figure 2). On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards.

Project Driveway Operations

Site access was evaluated to determine the adequacy of the site's proposed driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and corner sight distance. Vehicular access to the project site would be provided via a driveway adjacent to the Shoppes at Harbor Village shopping center parking lot. The project site driveway would measure 34 feet wide at the throat. Access to the project site driveway would be shared with the existing shopping center traffic via a shared full-access driveway located as the north leg of the Pillar Point Harbor Boulevard/Capistrano Road intersection. The shared-access driveway is 24 feet wide for the entrance lane and 26 feet wide for the exit lane with a 6-foot wide median The County of San Mateo does not specify standards for a two-way driveway. However, based on AASHTO's *Geometric Design of Highways and Streets, 6th Edition* (2011), a two-way driveway where large vehicles are expected should be a minimum of 18 feet wide.

Driveway Design

Based on the project description, the project would accommodate recreational vehicles and vehicles with attached trailers, thus requiring a larger turning radius within the driveway design to accommodate large vehicles. The shared-access driveway located at the Pillar Point Harbor Boulevard/Capistrano Road intersection includes a 6-foot wide raised median that would create challenges for large vehicles turning into the driveway. Therefore, vehicle turning paths for a smaller single-unit truck (WB 30), a larger motor home vehicle, and a passenger car with a camper trailer were reviewed at the shared-access driveway. The review of vehicle turning paths indicates that the approximately 24-foot width of the driveway entrance would be adequate for all three vehicle types to perform the right-turn movement into the shared-access driveway. A motor home vehicle with an attached boat may not be applicable to the project site given that it will not fit within any of the provided parking spaces. However, the review indicates that a motor home vehicle with an attached boat also would be able to complete the right-turn movement into the shared-access driveway, but would need to use some of the through-lane on Capistrano Road. Figure 11 shows that the proposed shared-access driveway design would accommodate a smaller single-unit trucks, larger motor home vehicles, and cars with a camper trailer.

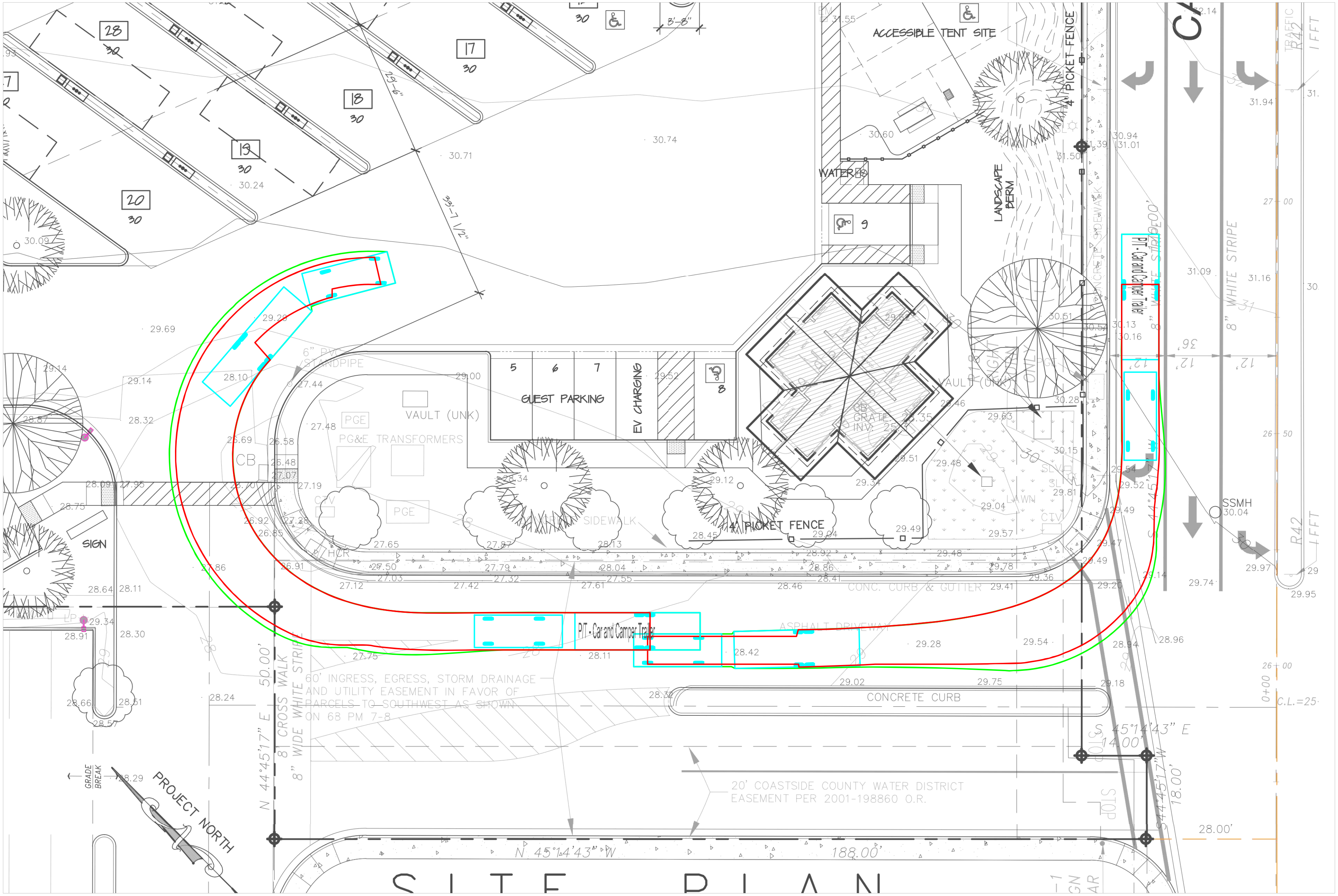


Figure 11
Shared-Access Driveway Turning Paths

NORTH
1" = 30'

Sight Distance at the Project Driveway

There are no existing trees or visual obstructions along the project frontage to obscure sight distance at the project driveway. There are also no curves in the roadway along the project frontage on Capistrano Road. Clear sight distance triangles should be provided at the project driveways to optimize sight distance. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

On-Site Circulation

The on-site circulation was reviewed in accordance with generally accepted traffic engineering standards. Generally, the proposed plan would provide vehicle traffic with adequate connectivity through the parking areas. The project would provide 60-degree parking throughout the project site, adjacent to 25-foot and 30-foot wide drive aisles accommodating two-way traffic flow. Typically, two-way drive aisles adjacent to 60-degree parking are required to be a minimum of 24 feet wide, to provide sufficient room for vehicles to back out of the parking stalls. The aisle widths are adequate for recreational vehicles and trailers. The RV parking stalls are shown to be 20 feet wide with varying lengths to accommodate various sizes of RVs.

Transit, Pedestrian and Bicycle Analysis

Pedestrian facilities in the study area consist of sidewalks located on both sides of Capistrano Road and along the west side of Pillar Point Harbor Boulevard in the vicinity of the project. Marked crosswalks are provided at the Cabrillo Highway/Capistrano Road and Pillar Point Harbor Boulevard/Capistrano Road intersections (see Chapter 2 for detailed discussion). The overall network of sidewalks and crosswalks in the study area has good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

Bicycle facilities within the study area consist of a multi-use path as part of the Coastal Trail, south of the project site and accessible via Pillar Point Harbor Boulevard, which is designated as a Class III bike route (see Chapter 2 for detailed discussion). The County of San Mateo plans to develop the Parallel Trail, which would run on the east side of SR 1 from Montara to Half Moon Bay. The sidewalks and bikeways in the vicinity of the project site are adequate to serve the proposed RV park.

Transit services in the study area are provided by SamTrans. The study area is served directly by two local bus routes. It is expected that there would be an insignificant number of people that would use transit to and from the project site. The traffic volumes added to Capistrano Road and Cabrillo Highway would have a less than significant impact on bus travel times.

8. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the County of San Mateo and the City/County Association of Governments (C/CAG) of San Mateo County CMP. The study included the analysis of traffic conditions at one signalized intersection and one unsignalized intersection during the weekday AM, PM, and Saturday midday peak hours. The analysis focuses on the weekday peak commute periods between 7:00 AM and 9:00 AM and 4:00 PM and 6:00 PM, and the Saturday midday peak hour is typically between 11:00 AM and 3:00 PM. It is during these hours that traffic conditions on the surrounding roadways are generally the most congested and the impact on the roadway system by traffic from the proposed RV park would be greatest.

Intersection Level of Service Analysis

The results of the intersection level of service analysis determined that under all scenarios with and without the project, the signalized study intersection, Cabrillo Highway (SR 1)/Capistrano Road, would operate at an acceptable level of service (LOS C or better, with each individual movement operating at LOS D or better) during the AM, PM, and Saturday midday peak hours. In addition, the analysis results show that the two-way stop-controlled study intersection would operate at LOS C or better during all peak hours. The analysis indicates that vehicles on the stop-controlled approaches (the Pillar Point Harbor Boulevard and the Shoppes at Harbor Village private driveway) would experience minimal increases in delay with added project traffic.

Other Transportation Issues

Based on a review of the project site plan, there would be no issues regarding site access along Capistrano Road; and no issues are expected to arise regarding on-site circulation. The driveway design of the proposed shared-access driveway would provide adequate clearance for large vehicles to perform turn movements. Furthermore, the proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the study area. Thus, no project sponsored improvements would be necessary.

100 Capistrano Road
Harbor Village RV Park TIA

Technical Appendices

January 18, 2019

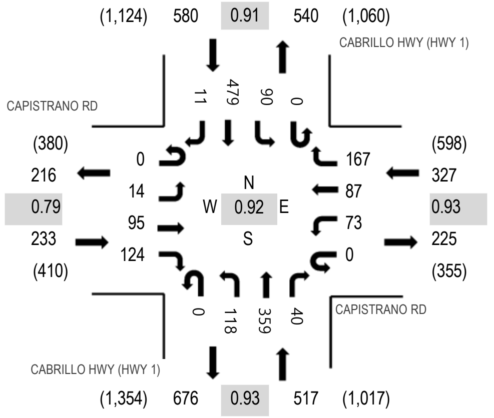
Appendix A

Traffic Counts

(303) 216-2439
www.alltrafficdata.net

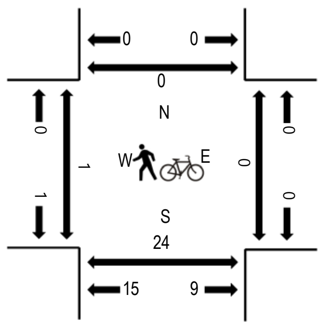
Location: 1 CABRILLO HWY (HWY 1) & CAPISTRANO RD AM
Date and Start Time: Thursday, March 2, 2017
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound				CAPISTRANO RD Westbound				CABRILLO HWY (HWY 1) Northbound				CABRILLO HWY (HWY 1) Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	3	10	23	0	12	12	40	0	19	95	2	0	7	111	1	335	1,559	0	0	5	0
7:15 AM	0	0	5	43	0	20	11	41	0	16	96	6	0	6	120	2	366	1,626	0	0	4	0
7:30 AM	0	5	27	35	0	25	15	43	0	23	83	6	0	17	126	2	407	1,657	0	0	4	0
7:45 AM	0	1	43	31	0	13	26	49	0	38	73	17	0	34	122	4	451	1,624	0	0	5	0
8:00 AM	0	3	12	31	0	17	29	43	0	27	103	8	0	16	112	1	402	1,590	1	0	11	0
8:15 AM	0	5	13	27	0	18	17	32	0	30	100	9	0	23	119	4	397		0	0	3	0
8:30 AM	0	2	7	30	0	18	19	28	0	23	84	13	0	25	123	2	374		0	0	4	0
8:45 AM	0	3	19	32	0	18	16	36	0	40	92	14	0	16	128	3	417		0	0	2	0

Peak Rolling Hour Flow Rates

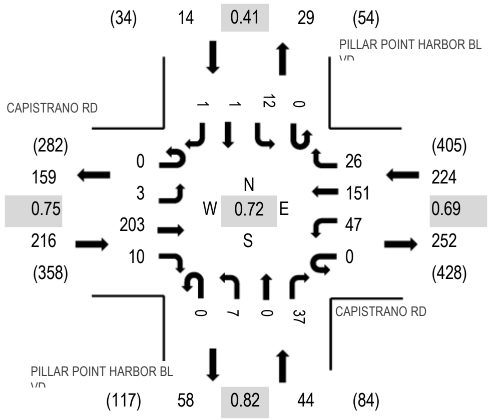
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5
Lights	0	13	91	116	0	69	83	167	0	111	330	39	0	89	463	11	1,582
Mediums	0	1	4	8	0	4	4	0	0	7	28	1	0	1	12	0	70
Total	0	14	95	124	0	73	87	167	0	118	359	40	0	90	479	11	1,657

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

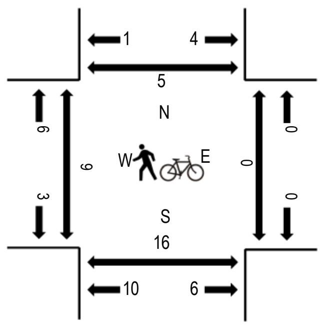
Location: 1 PILLAR POINT HARBOR BLVD & CAPISTRANO RD AM
Date and Start Time: Thursday, May 04, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound U-Turn	Left	Thru	Right	CAPISTRANO RD Westbound U-Turn	Left	Thru	Right	PILLAR POINT HARBOR BLVD Northbound U-Turn	Left	Thru	Right	PILLAR POINT HARBOR BLVD Southbound U-Turn	Left	Thru	Right	Total	Rolling Hour	Pedestrain Crossings West	East	South	North
7:00 AM	0	0	29	3	0	11	20	3	0	1	0	6	0	3	0	0	76	451	2	0	1	0
7:15 AM	0	1	44	4	0	18	18	8	0	2	0	4	0	4	0	0	103	498	1	0	5	2
7:30 AM	0	1	47	2	0	6	24	3	0	3	0	12	0	2	0	0	100	495	2	0	2	2
7:45 AM	0	1	69	2	0	10	67	9	0	0	0	12	0	1	0	1	172	481	1	0	2	1
8:00 AM	0	0	43	2	0	13	42	6	0	2	0	9	0	5	1	0	123	430	4	0	5	0
8:15 AM	0	0	37	4	0	8	30	10	0	1	1	9	0	0	0	0	100		6	0	1	1
8:30 AM	0	0	25	3	0	13	25	4	0	3	0	10	0	2	0	1	86		2	0	1	0
8:45 AM	0	1	35	5	0	12	39	6	0	3	0	6	0	14	0	0	121		3	0	2	0

Peak Rolling Hour Flow Rates

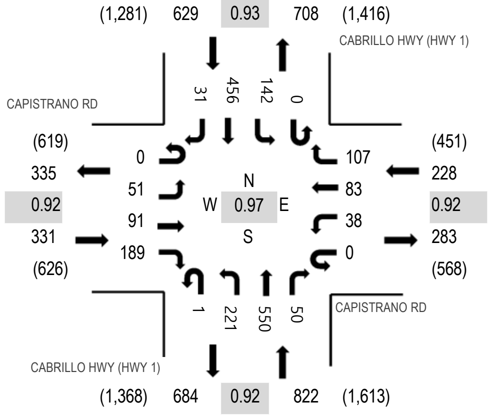
Vehicle Type	Eastbound U-Turn	Left	Thru	Right	Westbound U-Turn	Left	Thru	Right	Northbound U-Turn	Left	Thru	Right	Southbound U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	3	194	10	0	45	146	23	0	6	0	37	0	11	1	1	477
Mediums	0	0	9	0	0	2	5	3	0	1	0	0	0	1	0	0	21
Total	0	3	203	10	0	47	151	26	0	7	0	37	0	12	1	1	498

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

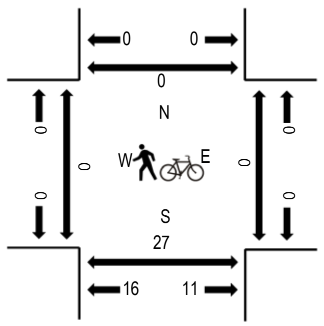
Location: 1 CABRILLO HWY (HWY 1) & CAPISTRANO RD PM
Date and Start Time: Thursday, March 2, 2017
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound				CAPISTRANO RD Westbound				CABRILLO HWY (HWY 1) Northbound				CABRILLO HWY (HWY 1) Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	14	14	51	0	5	27	24	0	46	161	18	0	26	135	2	523	1,976	0	0	4	0
4:15 PM	0	10	18	45	0	8	18	26	0	29	147	14	0	27	122	7	471	1,972	0	1	8	0
4:30 PM	0	15	16	47	0	12	18	29	1	49	146	19	0	34	111	8	505	2,010	0	0	7	0
4:45 PM	0	12	22	41	0	4	21	24	0	57	135	8	0	37	111	5	477	1,981	0	0	3	0
5:00 PM	0	10	23	55	0	10	26	28	0	55	139	9	0	33	121	10	519	1,995	0	0	6	0
5:15 PM	0	14	30	46	0	12	18	26	0	60	130	14	0	38	113	8	509		0	0	7	0
5:30 PM	0	10	23	37	0	11	21	24	0	45	134	14	0	41	106	10	476		2	0	4	0
5:45 PM	0	10	24	39	0	11	31	17	0	41	131	11	0	55	114	7	491		0	2	16	0

Peak Rolling Hour Flow Rates

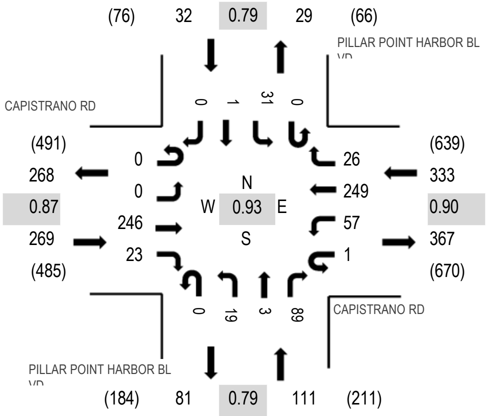
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	51	89	183	0	36	82	106	1	217	545	50	0	141	441	30	1,972
Mediums	0	0	2	5	0	2	1	1	0	4	5	0	0	1	15	1	37
Total	0	51	91	189	0	38	83	107	1	221	550	50	0	142	456	31	2,010

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

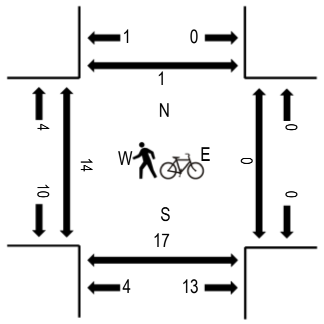
Location: 1 PILLAR POINT HARBOR BLVD & CAPISTRANO RD PM
Date and Start Time: Thursday, May 04, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound				CAPISTRANO RD Westbound				PILLAR POINT HARBOR BLVD Northbound				PILLAR POINT HARBOR BLVD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	37	5	0	18	47	5	0	3	0	28	0	8	2	0	155	666	0	0	3	0
4:15 PM	0	1	51	7	0	18	49	9	0	4	0	13	0	8	0	1	161	712	1	0	6	0
4:30 PM	0	0	48	4	0	19	41	13	0	6	0	20	0	11	3	0	165	744	8	0	5	0
4:45 PM	0	0	54	7	0	20	61	6	0	9	1	16	0	9	0	2	185	736	0	0	3	2
5:00 PM	0	0	74	6	0	12	68	5	0	7	0	22	0	6	1	0	201	745	5	0	3	1
5:15 PM	0	0	70	10	1	17	64	2	0	1	2	17	0	9	0	0	193		1	0	2	0
5:30 PM	0	0	51	5	0	13	53	5	0	7	1	19	0	3	0	0	157		1	0	3	0
5:45 PM	0	0	51	2	0	15	64	14	0	4	0	31	0	13	0	0	194		5	0	9	0

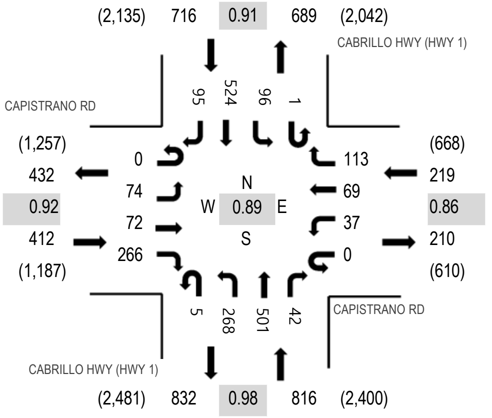
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	0	243	23	1	56	247	25	0	18	3	89	0	31	1	0	737
Mediums	0	0	2	0	0	1	2	1	0	1	0	0	0	0	0	0	7
Total	0	0	246	23	1	57	249	26	0	19	3	89	0	31	1	0	745

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

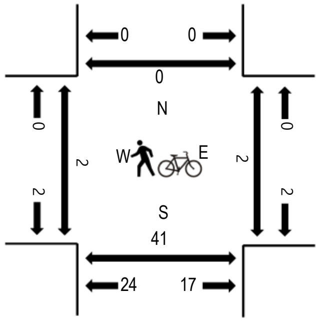
Location: 1 CABRILLO HWY (HWY 1) & CAPISTRANO RD Noon
Date and Start Time: Saturday, March 4, 2017
Peak Hour: 01:45 PM - 02:45 PM
Peak 15-Minutes: 02:30 PM - 02:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound				CAPISTRANO RD Westbound				CABRILLO HWY (HWY 1) Northbound				CABRILLO HWY (HWY 1) Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
12:00 PM	0	7	12	56	0	11	22	27	1	66	124	12	0	15	147	27	527	2,101	0	0	10	0
12:15 PM	0	19	24	67	0	12	18	29	0	61	115	14	0	29	121	17	526	2,095	0	0	7	0
12:30 PM	0	19	15	53	0	14	19	29	0	54	126	14	1	25	145	20	534	2,120	0	0	3	0
12:45 PM	0	19	23	64	0	7	12	31	2	71	100	12	0	18	134	21	514	2,132	0	0	11	0
1:00 PM	0	14	22	55	0	10	15	22	0	61	128	9	0	24	141	20	521	2,135	0	0	7	0
1:15 PM	0	30	18	65	0	14	17	32	0	68	130	7	1	13	133	23	551	2,158	0	4	6	0
1:30 PM	0	19	9	79	0	5	16	20	0	68	133	7	0	26	143	21	546	2,099	0	1	5	0
1:45 PM	0	12	15	66	0	12	14	27	1	75	116	15	0	20	126	18	517	2,163	1	0	9	0
2:00 PM	0	19	13	60	0	9	13	20	2	69	134	7	0	29	149	20	544	2,154	0	2	14	0
2:15 PM	0	12	17	62	0	10	23	35	1	60	103	8	1	21	129	10	492		0	0	5	0
2:30 PM	0	31	27	78	0	6	19	31	1	64	148	12	0	26	120	47	610		1	0	8	0
2:45 PM	0	20	15	51	0	12	26	29	1	62	129	9	0	28	106	20	508		3	0	5	0

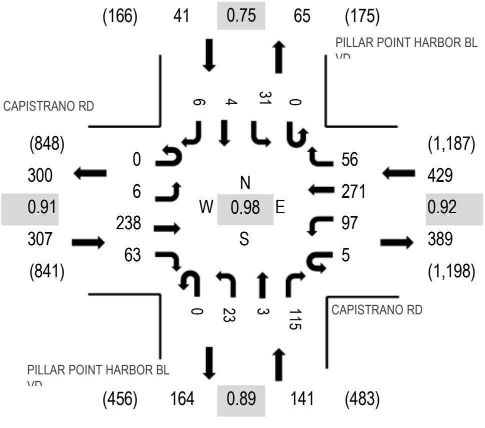
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	73	72	263	0	36	68	109	5	265	491	42	1	96	516	94	2,131
Mediums	0	1	0	3	0	1	1	4	0	3	10	0	0	0	8	1	32
Total	0	74	72	266	0	37	69	113	5	268	501	42	1	96	524	95	2,163

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

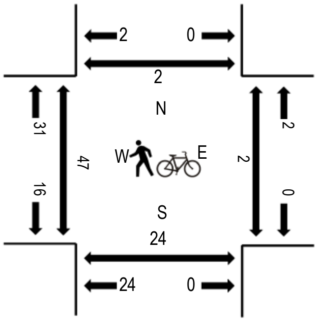
Location: 1 PILLAR POINT HARBOR BLVD & CAPISTRANO RD Noon
Date and Start Time: Saturday, May 06, 2017
Peak Hour: 01:00 PM - 02:00 PM
Peak 15-Minutes: 01:15 PM - 01:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CAPISTRANO RD Eastbound				CAPISTRANO RD Westbound				PILLAR POINT HARBOR BLVD Northbound				PILLAR POINT HARBOR BLVD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
12:00 PM	0	1	62	7	0	26	53	10	0	5	1	35	0	15	2	1	218	869	9	0	0	0
12:15 PM	0	0	57	14	1	21	65	8	0	3	1	39	0	20	0	3	232	882	5	0	3	0
12:30 PM	0	4	43	16	1	21	63	11	0	7	2	33	0	10	1	6	218	885	9	0	0	0
12:45 PM	0	2	43	7	0	23	66	9	0	4	1	35	0	8	2	1	201	896	10	0	1	1
1:00 PM	0	1	71	12	1	25	79	8	0	4	0	23	0	5	0	2	231	918	9	0	7	2
1:15 PM	0	2	56	18	2	28	66	21	0	2	1	28	0	7	1	3	235	907	9	0	0	0
1:30 PM	0	3	55	21	2	16	64	15	0	10	1	31	0	9	1	1	229	881	12	0	2	0
1:45 PM	0	0	56	12	0	28	62	12	0	7	1	33	0	10	2	0	223	905	16	2	14	0
2:00 PM	0	2	57	10	0	22	63	4	1	6	3	40	0	11	0	1	220	890	8	0	1	0
2:15 PM	0	0	53	18	0	27	52	9	0	9	1	28	0	10	1	1	209		10	0	4	0
2:30 PM	0	2	62	19	2	24	61	21	0	7	2	40	0	9	1	3	253		13	0	2	2
2:45 PM	0	3	45	7	0	21	62	12	0	5	1	33	0	17	1	1	208		12	0	1	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	6	235	63	5	96	269	55	0	23	3	115	0	30	4	6	910
Mediums	0	0	3	0	0	1	2	1	0	0	0	0	0	1	0	0	8
Total	0	6	238	63	5	97	271	56	0	23	3	115	0	31	4	6	918

PM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: Thursday March 2
Counter: Patti, Jo, Huy
Intersection Name: RV Trip Gen
Weather: Clear   Half Moon Bay and Morgan Hill

	Maple Leaf		**Pelican Point**		**Pillar Point**		**Pillar Point - Pay Lot**	
Start Time	In	Out	In	Out	In	Out	In	Out
7:00	0	0	0	0	0	0	0	0
7:15	0	0	0	1	0	1	0	1
7:30	0	0	0	1	0	2	0	1
7:45	0	0	5	1	0	2	0	1
8:00	0	0	6	2	0	2	0	1
8:15	0	0	6	3	2	3	2	2
8:30	0	0	6	6	3	5	2	2
8:45	0	0	8	6	4	7	2	2
9:00	0	0	10	9	4	7	2	2

Peak Hour									Hourly Totals
7:00 - 8:00	0	0	6	2	0	2	0	1	11
7:15 - 8:15	0	0	6	2	2	2	2	1	15
7:30 - 8:30	0	0	6	5	3	3	2	1	20
7:45 - 8:45	0	0	3	5	4	5	2	1	20
8:00 - 9:00	0	0	4	7	4	5	2	1	23
Peak Volumes:	**0**	**0**	**4**	**7**	**4**	**5**	**2**	**1**	**23**

PM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: Thursday March 2
Counter: Patti, Jo, Huy
Intersection Name: RV Trip Gen
Weather: Clear Half Moon Bay and Morgan Hill

	Maple Leaf		**Pelican Point**		**Pillar Point - All**		**Pillar Point - Pay Lot**	
Start Time	In	Out	In	Out	In	Out	In	Out
4:00	0	0	0	0	0	0	0	0
4:15	0	0	2	0	3	1	2	1
4:30	0	0	4	1	8	1	3	1
4:45	0	0	7	1	15	5	8	5
5:00	0	0	8	2	16	8	9	8
5:15	0	0	9	5	16	9	9	9
5:30	0	0	9	6	16	14	9	14
5:45	0	0	10	7	19	15	11	15
6:00	0	0	12	9	22	19	13	18

Peak Hour									Hourly Totals
4:00 - 5:00	0	0	8	2	16	8	9	8	51
4:15 - 5:15	0	0	7	5	13	8	7	8	48
4:30 - 5:30	0	0	5	5	8	13	6	13	50
4:45 - 5:45	0	0	3	6	4	10	3	10	36
5:00 - 6:00	0	0	4	7	6	11	4	10	42
Peak Volumes:	**0**	**0**	**8**	**2**	**16**	**8**	**9**	**8**	**51**

PM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: March 4th, 2017
Counter: Patti, Jo, Huy
Intersection Name: RV Trip Gen
Weather: Clear   Half Moon Bay and Morgan Hill

	Maple Leaf		**Pelican Point**		**Pillar Point**		**Pillar Point - Pay Lot**	
Start Time	In	Out	In	Out	In	Out	In	Out
12:00 PM	0	0	0	0	0	0	0	0
12:15 PM	12	16	1	1	4	6	2	3
12:30 PM	22	31	1	3	5	11	2	5
12:45 PM	34	40	3	4	9	13	4	5
1:00 PM	42	46	6	7	10	15	4	7
1:15 PM	56	54	6	10	15	17	8	8
1:30 PM	66	59	8	13	19	19	10	9
1:45 PM	77	71	11	14	22	20	10	10
2:00 PM	90	82	13	17	24	22	11	10
2:15 PM	104	99	14	17	29	28	13	11
2:30 PM	111	110	15	18	31	31	14	12
2:45 PM	134	122	17	21	33	34	15	14
3:00 PM	151	144	19	23	36	39	17	17

Peak Hour									Hourly Totals
12:00 - 1:00	42	46	6	7	10	15	4	7	137
12:15 - 1:15	44	38	5	9	11	11	6	5	129
12:30 - 1:30	44	28	7	10	14	8	8	4	123
12:45 - 1:45	43	31	8	10	13	7	6	5	123
1:00 - 2:00	48	36	7	10	14	7	7	3	132
1:15 - 2:15	48	45	8	7	14	11	5	3	141
1:30 - 2:30	45	51	7	5	12	12	4	3	139
1:45 - 2:45	57	51	6	7	11	14	5	4	155
2:00 - 3:00	61	62	6	6	12	17	6	7	177
Peak Volumes:	**42**	**46**	**6**	**7**	**10**	**15**	**4**	**7**	**137**

Appendix B

Volume Summary

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Cabrillo Highway (SR 1) & Capistrano Road
Peak Hour: AM
Date of Analysis: 01/16/19
Count Date: 03/02/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	11	479	90	167	87	73	40	359	118	124	95	14	1657
Approved Project Trips													
11 Avenue Alhambra	0	0	2	3	0	3	1	0	0	0	0	0	9
Big Wave North Parcel	0	0	0	0	16	0	0	0	70	16	4	0	106
Total Approved Trips	0	0	2	3	16	3	1	0	70	16	4	0	115
Background Conditions	11	479	92	170	103	76	41	359	188	140	99	14	1772
Project Trips	4	0	0	0	0	0	0	0	3	7	0	6	20
Existing + Project	15	479	90	167	87	73	40	359	121	131	95	20	1677
Background + Project	15	479	92	170	103	76	41	359	191	147	99	20	1792
Cumulative Baseline Conditions	17	745	118	202	104	87	43	391	127	145	102	25	2106
Cumulative + Proj Conditions	21	745	118	202	104	87	43	391	130	152	102	31	2126

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Pillar Point Harbor Boulevard & Capistrano Road
Peak Hour: AM
Date of Analysis: 01/16/19
Count Date: 05/04/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	1	1	12	26	151	47	37	0	7	10	203	3	498
Approved Project Trips													
11 Avenue Alhambra	0	0	0	0	0	0	0	0	0	0	0	0	0
Big Wave North Parcel	0	0	0	0	86	0	0	0	0	0	20	0	106
Total Approved Trips	0	0	0	0	86	0	0	0	0	0	20	0	106
Background Conditions	1	1	12	26	237	47	37	0	7	10	223	3	604
Project Trips	0	0	13	7	0	0	0	0	0	0	0	0	20
Existing + Project	1	1	25	33	151	47	37	0	7	10	203	3	518
Background + Project	1	1	25	33	237	47	37	0	7	10	223	3	624
Cumulative Baseline Conditions	1	1	12	26	183	47	37	0	7	10	242	3	569
Cumulative + Proj Conditions	1	1	25	33	183	47	37	0	7	10	242	3	589

Harbor Village RV Park TIA
PM Conditions

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Cabrillo Highway (SR 1) & Capistrano Road
Peak Hour: PM Date of Analysis: 01/16/19
Count Date: 03/02/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	31	456	142	107	83	38	50	550	222	189	91	51	2010
Approved Project Trips													
11 Avenue Alhambra	0	0	2	2	0	2	2	0	0	0	0	0	8
Big Wave North Parcel	0	0	0	0	4	0	0	0	19	65	15	0	103
Total Approved Trips	0	0	2	2	4	2	2	0	19	65	15	0	111
Background Conditions	31	456	144	109	87	40	52	550	241	254	106	51	2121
Project Trips	9	0	0	0	0	0	0	0	7	5	0	4	25
Existing + Project	40	456	142	107	83	38	50	550	229	194	91	55	2035
Background + Project	40	456	144	109	87	40	52	550	248	259	106	55	2146
Cumulative Baseline Volumes	36	563	183	139	95	44	67	803	242	200	100	66	2538
Cumulative + Proj Conditions	45	563	183	139	95	44	67	803	249	205	100	70	2563

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Pillar Point Harbor Boulevard & Capistrano Road
Peak Hour: PM Date of Analysis: 01/16/19
Count Date: 05/04/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	0	1	31	26	249	58	89	3	19	23	246	0	745
Approved Project Trips													
11 Avenue Alhambra	0	0	0	0	0	0	0	0	0	0	0	0	0
Big Wave North Parcel	0	0	0	0	23	0	0	0	0	0	80	0	103
Total Approved Trips	0	0	0	0	23	0	0	0	0	0	80	0	103
Background Conditions	0	1	31	26	272	58	89	3	19	23	326	0	848
Project Trips	0	0	9	16	0	0	0	0	0	0	0	0	25
Existing + Project	0	1	40	42	249	58	89	3	19	23	246	0	770
Background + Project	0	1	40	42	272	58	89	3	19	23	326	0	873
Cumulative Baseline Volumes	0	1	31	26	286	58	89	3	19	23	281	0	817
Cumulative + Proj Conditions	0	1	40	42	286	58	89	3	19	23	281	0	842

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Cabrillo Highway (SR 1) & Capistrano Road
Peak Hour: Saturday Midday
Date of Analysis: 01/16/19
Count Date: 03/04/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	95	524	97	113	69	37	42	501	273	266	72	74	2163
Approved Project Trips													
11 Avenue Alhambra	0	0	34	34	0	28	28	0	0	0	0	0	124
Big Wave North Parcel	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	34	34	0	28	28	0	0	0	0	0	124
Background Conditions	95	524	131	147	69	65	70	501	273	266	72	74	2287
Project Trips	6	0	0	0	0	0	0	0	5	7	0	6	24
Existing + Project	101	524	97	113	69	37	42	501	278	273	72	80	2187
Background + Project	101	524	131	147	69	65	70	501	278	273	72	80	2311
Cumulative Baseline Volumes	110	647	125	147	79	43	56	731	298	281	79	96	2692
Cumulative + Proj Conditions	116	647	125	147	79	43	56	731	303	288	79	102	2716

Intersection Number: 2
Traffix Node Number: 2
Intersection Name: Pillar Point Harbor Boulevard & Capistrano Road
Peak Hour: Saturday Midday
Date of Analysis: 01/16/19
Count Date: 05/06/17
Scenario: Harbor Village RV Park

Number of Years to Cumulative Horizon: 20

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	6	4	31	56	271	102	115	3	23	63	238	6	918
Approved Project Trips													
11 Avenue Alhambra	0	0	0	0	0	0	0	0	0	0	0	0	0
Big Wave North Parcel	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	6	4	31	56	271	102	115	3	23	63	238	6	918
Project Trips	0	0	13	11	0	0	0	0	0	0	0	0	24
Existing + Project	6	4	44	67	271	102	115	3	23	63	238	6	942
Background + Project	6	4	44	67	271	102	115	3	23	63	238	6	942
Cumulative Baseline Volumes	6	4	31	56	311	102	115	3	23	63	272	6	992
Cumulative + Proj Conditions	6	4	44	67	311	102	115	3	23	63	272	6	1016

Appendix C

List of Approved Projects

RECORD ID	APN	RECORD STATUS	RECORD STATUS DATE	ADDR FULL LINE#	COMMUNITY AREA	DESCRIPTION
PLN2011-00164	4.7E+07	Approved	8/22/2011	345 SAN PEDRO RD, EL GRANADA, CA 94018	EL GRANADA	Coastside Design Review & CDX for a new 2,597 sq/ft single family residence with an attached 684 sq/ft 3-car garage on a 6,938 sq/ft parcel.
PLN2012-00132	4.7E+07	Approved	1/15/2015	280 CAPISTRANO RD, PRINCETON, CA 94018	PRINCETON	4/2014 AMENDMENT- Use Permit Amendment and Coastal Development Permit to replace existing use of a 3,831 sq ft season tent structure with a 4,000 sq ft permanent building for the purpose of hosting wedding events. Use Permit & 'After-the-Fact' CDP to legalize an existing 3,831 s/f tent (to be up for 6 months), a permanent 10'x10' gazebo & permanent 360 lineal ft. long, 6' high fence.
PLN2013-00451	4.7E+07	Agency Referrals	2/28/2017	AIRPORT RD, PRINCETON	PRINCETON	12/28/16 CML - Major Modification to a 2015 Project Approval of a CDP (appealable to the California Coastal Commission) and Use Permit for the Wellness Center for requested changes to 1) Project Phasing as regulated by Condition No. 73, 2) Change to the Wellness Center type of construction from Type 1 (steel and concrete) to Type 5. The proposed modification requires the amendment of an executed Development Agreement. NOTE: On 1/17/17, the applicant withdrew proposed changes to Mitigation Measure TRANS-1.Consideration of: Certification of an Addendum to the Certified 2010 Big Wave Wellness Center and Office Park Project Draft Environmental Impact Report; the proposed Use Permit, Minor and Major Subdivisions, Coastal Development Permit (appealable to the California Coastal Commission), Design Review Permit, and Grading Permit; Adoption of an Ordinance approving the execution of a Development Agreement to allow project construction over 15 years; and Approve the execution of an Affordable Housing Agreement, for the Big Wave North Parcel Alternative (NPA) Project consisting of a 5-building Office Park and a 3-building Wellness Center (consisting of affordable housing for 50 developmentally disabled (DD) adults and 20 staff) on the north parcel and a boat storage lot and 92 coastal access public parking spaces on the south parcel, on two undeveloped parcels along Airport Street in the unincorporated Princeton-by-the-Sea area of San Mateo County.Consideration of: Certification of an Addendum to the Certified 2010 Big Wave Wellness Center and Office Park Project Draft Environmental Impact Report; the proposed Use Permit, Minor and Major Subdivisions, Coastal Development Permit (appealable to the California Coastal Commission), Design Review Permit, and Grading Permit; Adoption of an Ordinance approving the execution of a Development Agreement to allow project construction over 15 years; and Approve the execution of an Affordable Housing Agreement, for the Big Wave North Parcel Alternative (NPA) Project consisting of a 5-building Office Park and a 3-building Wellness Center (consisting of affordable housing for 50 developmentally disabled (DD) adults and 20 staff) on the north parcel and a boat storage lot and 92 coastal access public parking spaces on the south parcel, on two undeveloped parcels along Airport Street in the unincorporated Princeton-by-the-Sea area of San Mateo County. http://planning.smcgov.org/big-wave-north-parcel-alternative-project
PLN2014-00007	3.7E+07	Approved	12/27/2016	123 BERNAL AVE, MOSS BEACH, CA	MOSS BEACH	Coastside Design Review Permit & CDP (appealable to the Coastal Commission) to construct a new 2,900 sq/ft single family residence with a 400 sq/ft garage. No tree removals or grading.
PLN2014-00126	4.7E+07	Approved	9/25/2014	101 AVENUE PORTOLA, EL GRANADA, CA 94019	EL GRANADA	Coastside Design Review, CDP, Grading Permit & Negative Declaration for a new 12-unit apartment building. Pre-application workshop was held (PRE2104-00002).
PLN2014-00273	4.7E+07	Approved	1/21/2016	923 COLUMBUS ST, EL GRANADA	EL GRANADA	CDP & Subdivision to split a 16,292 sq/ft parcel into 2 lots (8,146 sq/ft each). Requires an Initial Study/Neg. Dec. because the slope of the parcel is over 20% (does not qualify for Cat. Exempt. Sec 15315)
PLN2014-00310	3.7E+07	Agency Referrals	10/15/2014	520 MARINE BLVD, MOSS BEACH, CA 94038	MOSS BEACH	Coastside Design Review & CDX for a new 2,443 sq/ft 2-story single family residence with an attached 503 sq/ft garage on a 7,666 sq/ft parcel; includes removal of 1 tree.
PLN2014-00350	4.7E+07	Agency Referrals	10/15/2014	224 DEL MONTE RD, EL GRANADA 94019	EL GRANADA	Coastside Design Review, CDP & Grading Permit for a new 2,658 s/f single family residence with 506 s/f attached garage. Grading includes 1,300 cubic yards of cut (no fill) & removal of one 48" Monterey pine tree.
PLN2014-00435	4.7E+07	Agency Referrals	11/20/2014	435 AVENUE DEL ORO, EL GRANADA, CA 94018	EL GRANADA	Coastside Design Review, CDX & Certificate of Compliance (to confirm parcel legality) for new 2,320 s/f single-family residence with attached 410 s/f garage & 154 s/f rear yard deck; includes 5 trees proposed for removal (12" pine, 36" pine, 24" pine, 28" pine, 52" pine) & Grading of 215 cu/yds of cut.
PLN2014-00453	4.8E+07	CEQA Preparation	5/27/2016	412 LEE AVE, MIRAMAR, CA 94019	MIRAMAR	Coastside Design Review & Staff-level CDP for a new 1,819 s/f 2-story single family residence, plus an attached 396 s/f garage on a legal 4,800 s/f parcel (COC recorded PLN2014-00138); no trees proposed for removal. Associated with BLD2015-00603.
PLN2014-00490	3.7E+07	Agency Referrals	2/18/2015	1900 EAST AVE, MONTARA, CA	MONTARA	Coastside Design Review & CDX for new 3,152 sq/ft residence (includes 625 s/f garage & 60 s/f covered porch) & COC/Type A to confirm parcel legality of APN 037-015-090 (lots 39 & 40 separately conveyed on 9/20/1915) on a 6,000 s/f parcel; includes removal of 6 trees. (7/5/16 TBD: Waiting for CCC to determine whether a CDP is required; waiting for civil engineer to estimate grading for house to see if Grading Permit is required).
PLN2015-00007	3.6E+07	Approved	5/19/2015	1160 CEDAR ST, MONTARA, CA	MONTARA	Admin Review & CDX for new 2nd Unit - involving the conversion of 654 sq/ft of an existing lower level residence into a 2nd unit; associated with BLD2015-00763.

PLN2015-00152	4.8E+07	Approved	4/27/2017	3260 N CABRILLO HWY, MIRAMAR, CA	MIRAMAR	Certification of a Re-circulated Initial Study/Mitigated Negative Declaration (IS/MND) and consideration of a Coastal Development Permit and Design Review to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. Second Unit, on an existing 5,080 sq. ft. legal parcel. The Second Unit requires a staff-level ministerial permit. Arroyo de en Medio Creek is located on a southeast portion of the parcel. The project is appealable to the California Coastal Commission.
PLN2015-00376	4.7E+07	Approved	6/9/2016	Coronado Ave. @ Ave. Portola, El Granada, CA	EL GRANADA	Design Review & staff-level CDP for a triplex, consisting of three 1-BR units each with a 1-car garage on APN 047-233-360. No tree removal & only minor grading. Project is not appealable to the CA Coastal Commission. (Associated with similar & concurrent triplex proposal, PLN2015-00377 on adjacent parcel).
PLN2015-00404	4.7E+07	Approved	6/9/2016	401 PALOMA AVE, EL GRANADA, CA	EL GRANADA	Coastside Design Review, Certificate of Compliance (Type A), & CDX for construction of a new 2,280 s.f. single family residence, with a 510 s.f. attached garage on a corner parcel (7,818 s.f.) in El Granada. No trees to be removed & 233 c.y. of grading.
PLN2015-00412	4.7E+07	Approved	3/28/2017	265 EL GRANADA BLVD, EL GRANADA, CA	EL GRANADA	MAJOR REVISION of a previous approval - rotafton of home, expansion of roof deck & a new 507 sf 2nd dwelling unit. Coastside Design Review & CDX for a new 2-story 2308 s/f single-family residence with attached 436 s/f garage. No grading; 8 eucalyptus trees proposed for removal.
PLN2016-00011	4.7E+07	Approved	12/13/2016	755 SAN CARLOS AVE, EL GRANADA, CA	EL GRANADA	Certification of an Initial Study/Mitigated Negative Declaration and approval of a Coastal Development Permit, a Design Review, and a Certificate of Compliance (Type B) to legalize a 6,350 sq. ft. undeveloped parcel and to allow construction of a 2,200 sq. ft. single-family residence located on San Carlos Avenue in the El Granada area of San Mateo County. The project is appealable to the California Coastal Commission.
PLN2016-00016	4.7E+07	Approved	6/29/2016	640 FERDINAND AVE, EL GRANADA, CA	EL GRANADA	Coastside Design Review, CDX and Grading Permit involving 400 cu yds. of cut and 0 cu. yds. of fill for a new single-family dwelling on an existing legal lot (COC recorded; PLN2013-00159)
PLN2016-00024	4.7E+07	Approved	3/10/2016	847 FRANCISCO ST, UNIT 2ND, EL GRANADA, CA 94019	EL GRANADA	2nd Unit Admin Review & CDX for conversion of 2 BRs on lower floor of existing 4-BR house (no expansion of footprint) to a 403 s/f 2nd unit, with a compliant single car parking space to side of house; associated with BLD2016-00004
PLN2016-00054	4.7E+07	Approved	7/8/2016	917 PALMA ST, EL GRANADA, CA	EL GRANADA	Coastside Design Review & CDX for a new 2337 s/f 2-story with attached 527 s/f garage on a 6000 s/f legal parcel. Grading includes 90 cu/yds of cut; no tree removal; parcel legality previously confirmed by Merger (MIS94-0015).
PLN2016-00136	4.7E+07	Agency Referrals	4/14/2016	11 AVENUE ALHAMBRA, EL GRANADA, CA 94019	EL GRANADA	CDP, Design Review, & Use Permit Amendment (original UP USE84-52) to allow for the addition of 14 guest rooms, one manager's apartment, a conference room, a storage room, & a new reception area to an existing 18-room motel. Will require an Initial Study/Neg Dec. This project is appealable to the California Coastal Commission.
PLN2016-00160	3.6E+07	Project Decision	9/1/2016	1060 DATE ST, MONTARA, CA	MONTARA	Coastside Design Review & CDX for a new 1,682 sq/ft single family residence with an attached 440 sq/ft garage on a 4,998 sq/ft parcel. LLA in 1993 established the parcel as legal (LLA93-0011)
PLN2016-00283	4.7E+07	Approved	3/28/2017	910 MALAGA ST, EL GRANADA, CA	EL GRANADA	Coastside DR & CDX for a 480 SF addition of 1st floor living room & 2nd floor enclosed "sun room" to existing 1511 SF single family residence.
PLN2016-00317	3.7E+07	Agency Referrals	9/15/2016	146 LA GRANDE AVE, MOSS BEACH, CA	MOSS BEACH	Coastside Design Review & CDP (hearing level) for a new 2-story single family house (includes demolition of exsiting house) located at 147 La Grande Ave., Moss Beach (037-258-260; zoning: R-1/S-17/DR/GH); parcel legality not applicable since this replaces existing house. Project is appealable to the California Coastal Commission.
PLN2016-00337	4.8E+07	Staff Decision - Hearings	2/10/2017	Terrace Ave @ Miramar Dr., Miramar	MIRAMAR	Coastside Design Review to allow construction of a new 2-story 3,546 sq. ft. single-family residence with an attached 487 sq. ft. 2-car garage, including a 1,152 sq. ft. 2nd Unit with a detached 400 sq. ft. carport, on an existing 22,337 sq. ft. legal parcel (COC PLN2015-00444) and "After-the-Fact" staff level Coastal Development Permit (CDP) for removal of 17 significant trees, in order to resolve VIO2016-00141. Only minor grading is proposed. Seventeen (17) existing significant trees are proposed for removal. The project is not appealable to the California Coastal Commission.
PLN2016-00346	4.7E+07	Agency Referrals	8/24/2016	0 OBISPO RD, EL GRANADA, CA 94019	EL GRANADA	CDP, Design Review, Use Permit, Variance & Grading Permit to construct a new 12,340 SF fire station on a vacant legal parcel (PLN2015-00019), along with a Subdivision to split the 2.5-acre parcel along the C-1 & EG zoning boundary line. Project includes for 10,310 cy of grading (10,150 cy of cut & 160 cy of fill) & removal of 7 trees. Coastside Fire Protection District is acting as lead agency for the EIR. This project relocates existing fire station at 531 Obispo Rd.
PLN2016-00429	3.7E+07	Project Analysis	2/10/2017	Marine BLVD, Moss Beach, CA	MOSS BEACH	Coastside Design Review & CDP for new 1824 sq/ft SFD on a 3,800 sq/ft parcel. Project does not require a non-conforming use permit because the parcel exceeds the 3,500 sq/ft threshold as stipulated by Sect. 6133(3)(b)(1)(a). Parcel is legal pursuant to recorded COC (PLN2014-00140).
PLN2016-00525	4.7E+07	Agency Referrals	4/21/2017	155 BROADWAY, EL GRANADA, CA	PRINCETON	CDP & Use Permit for the HMB Distillery. The Distillery already has a UP to operate at a different location, but they are proposing to move to another location in Princeton. This is a change of use for this new location & an intensification of use, thus requiring a new UP & CDP. Project qualifies for a Use Permit in the CCR zoning district because they do limited indoor sales during tasting tours.
PLN2017-00154	3.6E+07	Submitted	4/20/2017	George St @ Birch St., Montara	MONTARA	Coastside Design Review & CDX for a new 3,300 sq/ft SFD with attached garage on a legal 6,249 sq/ft parcel (COC recorded; PLN2017-00020).

RECORD ID	APN	RECORD STATUS	RECORD STATUS DATE	ADDR FULL LINE#	COMMUNITY AREA	DESCRIPTION
PLN2011-00164	4.7E+07	Approved	8/22/2011	345 SAN PEDRO RD, EL GRANADA, CA 94018	EL GRANADA	Coastside Design Review & CDX for a new 2,597 sq/ft single family residence with an attached 684 sq/ft 3-car garage on a 6,938 sq/ft parcel.
PLN2012-00132	4.7E+07	Approved	1/15/2015	280 CAPISTRANO RD, PRINCETON, CA 94018	PRINCETON	4/2014 AMENDMENT- Use Permit Amendment and Coastal Development Permit to replace existing use of a 3,831 sq ft season tent structure with a 4,000 sq ft permanent building for the purpose of hosftng wedding events. Use Permit & 'After-the-Fact' CDP to legalize an existing 3,831 s/f tent (to be up for 6 months), a permanent 10'x10' gazebo & permanent 360 lineal ft. long, 6' high fence.
PLN2013-00451	4.7E+07	Agency Referrals	2/28/2017	AIRPORT RD, PRINCETON	PRINCETON	12/28/16 CML - Major Modification to a 2015 Project Approval of a CDP (appealable to the California Coastal Commission) and Use Permit for the Wellness Center for requested changes to 1) Project Phasing as regulated by Condition No. 73, 2) Change to the Wellness Center type of construction from Type 1 (steel and concrete) to Type 5. The proposed modification requires the amendment of an executed Development Agreement. NOTE: On 1/17/17, the applicant withdrew proposed changes to Mitigation Measure TRANS-1.Consideration of: Certification of an Addendum to the Certified 2010 Big Wave Wellness Center and Office Park Project Draft Environmental Impact Report; the proposed Use Permit, Minor and Major Subdivisions, Coastal Development Permit (appealable to the California Coastal Commission), Design Review Permit, and Grading Permit; Adoption of an Ordinance approving the execution of a Development Agreement to allow project construction over 15 years; and Approve the execution of an Affordable Housing Agreement, for the Big Wave North Parcel Alternative (NPA) Project consisting of a 5-building Office Park and a 3-building Wellness Center (consisting of affordable housing for 50 developmentally disabled (DD) adults and 20 staff) on the north parcel and a boat storage lot and 92 coastal access public parking spaces on the south parcel, on two undeveloped parcels along Airport Street in the unincorporated Princeton-by-the-Sea area of San Mateo County.Consideration of: Certification of an Addendum to the Certified 2010 Big Wave Wellness Center and Office Park Project Draft Environmental Impact Report; the proposed Use Permit, Minor and Major Subdivisions, Coastal Development Permit (appealable to the California Coastal Commission), Design Review Permit, and Grading Permit; Adoption of an Ordinance approving the execution of a Development Agreement to allow project construction over 15 years; and Approve the execution of an Affordable Housing Agreement, for the Big Wave North Parcel Alternative (NPA) Project consisting of a 5-building Office Park and a 3-building Wellness Center (consisting of affordable housing for 50 developmentally disabled (DD) adults and 20 staff) on the north parcel and a boat storage lot and 92 coastal access public parking spaces on the south parcel, on two undeveloped parcels along Airport Street in the unincorporated Princeton-by-the-Sea area of San Mateo County. http://planning.smcgov.org/big-wave-north-parcel-alternative-project
PLN2014-00007	3.7E+07	Approved	12/27/2016	123 BERNAL AVE, MOSS BEACH, CA	MOSS BEACH	Coastside Design Review Permit & CDP (appealable to the Coastal Commission) to construct a new 2,900 sq/ft single family residence with a 400 sq/ft garage. No tree removals or grading.
PLN2014-00126	4.7E+07	Approved	9/25/2014	101 AVENUE PORTOLA, EL GRANADA, CA 94019	EL GRANADA	Coastside Design Review, CDP, Grading Permit & Negative Declaration for a new 12-unit apartment building. Pre-application workshop was held (PRE2104-00002).
PLN2014-00273	4.7E+07	Approved	1/21/2016	923 COLUMBUS ST, EL GRANADA	EL GRANADA	CDP & Subdivision to split a 16,292 sq/ft parcel into 2 lots (8,146 sq/ft each). Requires an Initial Study/Neg. Dec. because the slope of the parcel is over 20% (does not qualify for Cat. Exempt. Sec 15315)
PLN2014-00310	3.7E+07	Agency Referrals	10/15/2014	520 MARINE BLVD, MOSS BEACH, CA 94038	MOSS BEACH	Coastside Design Review & CDX for a new 2,443 sq/ft 2-story single family residence with an attached 503 sq/ft garage on a 7,666 sq/ft parcel; includes removal of 1 tree.
PLN2014-00350	4.7E+07	Agency Referrals	10/15/2014	224 DEL MONTE RD, EL GRANADA 94019	EL GRANADA	Coastside Design Review, CDP & Grading Permit for a new 2,658 s/f single family residence with 506 s/f attached garage. Grading includes 1,300 cubic yards of cut (no fill) & removal of one 48" Monterey pine tree.
PLN2014-00435	4.7E+07	Agency Referrals	11/20/2014	435 AVENUE DEL ORO, EL GRANADA, CA 94018	EL GRANADA	Coastside Design Review, CDX & Certificate of Compliance (to confirm parcel legality) for new 2,320 s/f single-family residence with attached 410 s/f garage & 154 s/f rear yard deck; includes 5 trees proposed for removal (12" pine, 36" pine, 24" pine, 28" pine, 52" pine) & Grading of 215 cu/yds of cut.
PLN2014-00453	4.8E+07	CEQA Preparation	5/27/2016	412 LEE AVE, MIRAMAR, CA 94019	MIRAMAR	Coastside Design Review & Staff-level CDP for a new 1,819 s/f 2-story single family residence, plus an attached 396 s/f garage on a legal 4,800 s/f parcel (COC recorded PLN2014-00138); no trees proposed for removal. Associated with BLD2015-00603.
PLN2014-00490	3.7E+07	Agency Referrals	2/18/2015	1900 EAST AVE, MONTARA, CA	MONTARA	Coastside Design Review & CDX for new 3,152 sq/ft residence (includes 625 s/f garage & 60 s/f covered porch) & COC/Type A to confirm parcel legality of APN 037-015-090 (lots 39 & 40 separately conveyed on 9/20/1915) on a 6,000 s/f parcel; includes removal of 6 trees. (7/5/16 TBD: Waiting for CCC to determine whether a CDP is required; waiting for civil engineer to estimate grading for house to see if Grading Permit is required).
PLN2015-00007	3.6E+07	Approved	5/19/2015	1160 CEDAR ST, MONTARA, CA	MONTARA	Admin Review & CDX for new 2nd Unit - involving the conversion of 654 sq/ft of an existing lower level residence into a 2nd unit; associated with BLD2015-00763.

PLN2015-00152	4.8E+07	Approved	4/27/2017	3260 N CABRILLO HWY, MIRAMAR, CA	MIRAMAR	Certification of a Re-circulated Initial Study/Mitigated Negative Declaration (IS/MND) and consideration of a Coastal Development Permit and Design Review to allow construction of a new 1,724 sq. ft., two-story, single-family residence, plus a 400 sq. ft. attached two-car garage, and a 551 sq. ft. Second Unit, on an existing 5,080 sq. ft. legal parcel. The Second Unit requires a staff-level ministerial permit. Arroyo de en Medio Creek is located on a southeast portion of the parcel. The project is appealable to the California Coastal Commission.
PLN2015-00376	4.7E+07	Approved	6/9/2016	Coronado Ave. @ Ave. Portola, El Granada, CA	EL GRANADA	Design Review & staff-level CDP for a triplex, consisting of three 1-BR units each with a 1-car garage on APN 047-233-360. No tree removal & only minor grading. Project is not appealable to the CA Coastal Commission. (Associated with similar & concurrent triplex proposal, PLN2015-00377 on adjacent parcel).
PLN2015-00404	4.7E+07	Approved	6/9/2016	401 PALOMA AVE, EL GRANADA, CA	EL GRANADA	Coastside Design Review, Certificate of Compliance (Type A), & CDX for construction of a new 2,280 s.f. single family residence, with a 510 s.f. attached garage on a corner parcel (7,818 s.f.) in El Granada. No trees to be removed & 233 c.y. of grading.
PLN2015-00412	4.7E+07	Approved	3/28/2017	265 EL GRANADA BLVD, EL GRANADA, CA	EL GRANADA	MAJOR REVISION of a previous approval - rotafton of home, expansion of roof deck & a new 507 sf 2nd dwelling unit. Coastside Design Review & CDX for a new 2-story 2308 s/f single-family residence with attached 436 s/f garage. No grading; 8 eucalyptus trees proposed for removal.
PLN2016-00011	4.7E+07	Approved	12/13/2016	755 SAN CARLOS AVE, EL GRANADA, CA	EL GRANADA	Certification of an Initial Study/Mitigated Negative Declaration and approval of a Coastal Development Permit, a Design Review, and a Certificate of Compliance (Type B) to legalize a 6,350 sq. ft. undeveloped parcel and to allow construction of a 2,200 sq. ft. single-family residence located on San Carlos Avenue in the El Granada area of San Mateo County. The project is appealable to the California Coastal Commission.
PLN2016-00016	4.7E+07	Approved	6/29/2016	640 FERDINAND AVE, EL GRANADA, CA	EL GRANADA	Coastside Design Review, CDX and Grading Permit involving 400 cu yds. of cut and 0 cu. yds. of fill for a new single-family dwelling on an existing legal lot (COC recorded; PLN2013-00159)
PLN2016-00024	4.7E+07	Approved	3/10/2016	847 FRANCISCO ST, UNIT 2ND, EL GRANADA, CA 94019	EL GRANADA	2nd Unit Admin Review & CDX for conversion of 2 BRs on lower floor of existing 4-BR house (no expansion of footprint) to a 403 s/f 2nd unit, with a compliant single car parking space to side of house; associated with BLD2016-00004
PLN2016-00054	4.7E+07	Approved	7/8/2016	917 PALMA ST, EL GRANADA, CA	EL GRANADA	Coastside Design Review & CDX for a new 2337 s/f 2-story with attached 527 s/f garage on a 6000 s/f legal parcel. Grading includes 90 cu/yds of cut; no tree removal; parcel legality previously confirmed by Merger (MIS94-0015).
PLN2016-00136	4.7E+07	Agency Referrals	4/14/2016	11 AVENUE ALHAMBRA, EL GRANADA, CA 94019	EL GRANADA	CDP, Design Review, & Use Permit Amendment (original UP USE84-52) to allow for the addition of 14 guest rooms, one manager's apartment, a conference room, a storage room, & a new reception area to an existing 18-room motel. Will require an Initial Study/Neg Dec. This project is appealable to the California Coastal Commission.
PLN2016-00160	3.6E+07	Project Decision	9/1/2016	1060 DATE ST, MONTARA, CA	MONTARA	Coastside Design Review & CDX for a new 1,682 sq/ft single family residence with an attached 440 sq/ft garage on a 4,998 sq/ft parcel. LLA in 1993 established the parcel as legal (LLA93-0011)
PLN2016-00283	4.7E+07	Approved	3/28/2017	910 MALAGA ST, EL GRANADA, CA	EL GRANADA	Coastside DR & CDX for a 480 SF addition of 1st floor living room & 2nd floor enclosed "sun room" to existing 1511 SF single family residence.
PLN2016-00317	3.7E+07	Agency Referrals	9/15/2016	146 LA GRANDE AVE, MOSS BEACH, CA	MOSS BEACH	Coastside Design Review & CDP (hearing level) for a new 2-story single family house (includes demolition of exsiting house) located at 147 La Grande Ave., Moss Beach (037-258-260; zoning: R-1/S-17/DR/GH); parcel legality not applicable since this replaces existing house. Project is appealable to the California Coastal Commission.
PLN2016-00337	4.8E+07	taff Decision - Hearing	2/10/2017	Terrace Ave @ Miramar Dr., Miramar	MIRAMAR	Coastside Design Review to allow construction of a new 2-story 3,546 sq. ft. single-family residence with an attached 487 sq. ft. 2-car garage, including a 1,152 sq. ft. 2nd Unit with a detached 400 sq. ft. carport, on an existing 22,337 sq. ft. legal parcel (COC PLN2015-00444) and "After-the-Fact" staff level Coastal Development Permit (CDP) for removal of 17 significant trees, in order to resolve VIO2016-00141. Only minor grading is proposed. Seventeen (17) existing significant trees are proposed for removal. The project is not appealable to the California Coastal Commission.
PLN2016-00346	4.7E+07	Agency Referrals	8/24/2016	0 OBISPO RD, EL GRANADA, CA 94019	EL GRANADA	CDP, Design Review, Use Permit, Variance & Grading Permit to construct a new 12,340 SF fire station on a vacant legal parcel (PLN2015-00019), along with a Subdivision to split the 2.5-acre parcel along the C-1 & EG zoning boundary line. Project includes for 10,310 cy of grading (10,150 cy of cut & 160 cy of fill) & removal of 7 trees. Coastside Fire Protection District is acting as lead agency for the EIR. This project relocates existing fire station at 531 Obispo Rd.
PLN2016-00429	3.7E+07	Project Analysis	2/10/2017	Marine BLVD, Moss Beach, CA	MOSS BEACH	Coastside Design Review & CDP for new 1824 sq/ft SFD on a 3,800 sq/ft parcel. Project does not require a non-conforming use permit because the parcel exceeds the 3,500 sq/ft threshold as stipulated by Sect. 6133(3)(b)(1)(a). Parcel is legal pursuant to recorded COC (PLN2014-00140).
PLN2016-00525	4.7E+07	Agency Referrals	4/21/2017	155 BROADWAY, EL GRANADA, CA	PRINCETON	CDP & Use Permit for the HMB Distillery. The Distillery already has a UP to operate at a different location, but they are proposing to move to another location in Princeton. This is a change of use for this new location & an intensification of use, thus requiring a new UP & CDP. Project qualifies for a Use Permit in the CCR zoning district because they do limited indoor sales during tasting tours.
PLN2017-00154	3.6E+07	Submitted	4/20/2017	George St @ Birch St., Montara	MONTARA	Coastside Design Review & CDX for a new 3,300 sq/ft SFD with attached garage on a legal 6,249 sq/ft parcel (COC recorded; PLN2017-00020).

Appendix D

Level of Service Calcluations

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Existing AM Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	14	95	124	73	87	167	118	359	40	90	479	11
Future Volume (veh/h)	14	95	124	73	87	167	118	359	40	90	479	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	14	95	66	73	87	140	118	359	38	90	479	-19
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	430	396	140	139	185	231	1545	163	119	1691	756
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.48	0.48	0.07	0.48	0.00
Sat Flow, veh/h	100	1718	1583	286	557	738	3442	3232	340	1774	3539	1583
Grp Volume(v), veh/h	109	0	66	300	0	0	118	196	201	90	479	-19
Grp Sat Flow(s),veh/h/ln	1819	0	1583	1582	0	0	1721	1770	1803	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.1	7.5	0.0	0.0	2.2	4.3	4.3	3.3	5.4	0.0
Cycle Q Clear(g_c), s	3.1	0.0	2.1	11.4	0.0	0.0	2.2	4.3	4.3	3.3	5.4	0.0
Prop In Lane	0.13		1.00	0.24		0.47	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	517	0	396	464	0	0	231	846	862	119	1691	756
V/C Ratio(X)	0.21	0.00	0.17	0.65	0.00	0.00	0.51	0.23	0.23	0.76	0.28	-0.03
Avail Cap(c_a), veh/h	1459	0	1261	1304	0	0	1070	846	862	605	1691	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.7	0.0	19.3	22.7	0.0	0.0	29.7	10.1	10.1	30.2	10.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.5	0.0	0.0	1.7	0.6	0.6	9.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.0	5.2	0.0	0.0	1.1	2.2	2.3	1.9	2.7	0.0
LnGrp Delay(d),s/veh	19.9	0.0	19.5	24.2	0.0	0.0	31.5	10.7	10.8	39.7	10.8	0.0
LnGrp LOS	B		B	C			C	B	B	D	B	
Approach Vol, veh/h		175			300			515			550	
Approach Delay, s/veh		19.7			24.2			15.5			15.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.0	8.9	36.0		21.0	8.9	36.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.1	4.2	7.4		13.4	5.3	6.3
Green Ext Time (p_c), s		3.1	0.3	6.0		3.1	0.2	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Intersection												
Int Delay, s/veh	2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	3	203	10	47	151	26	7	0	37	12	1	1
Future Vol, veh/h	3	203	10	47	151	26	7	0	37	12	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	203	10	47	151	26	7	0	37	12	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	213	0	0	460	459	208	478	464	151
Stage 1	-	-	-	-	-	-	214	214	-	245	245	-
Stage 2	-	-	-	-	-	-	246	245	-	233	219	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1357	-	-	512	499	832	498	495	895
Stage 1	-	-	-	-	-	-	788	725	-	759	703	-
Stage 2	-	-	-	-	-	-	758	703	-	770	722	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1430	-	-	1357	-	-	496	481	832	463	477	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	481	-	463	477	-
Stage 1	-	-	-	-	-	-	786	724	-	757	679	-
Stage 2	-	-	-	-	-	-	730	679	-	734	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	10	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	496	832	1430	-	-	1357	-	-	463	622
HCM Lane V/C Ratio	0.014	0.044	0.002	-	-	0.035	-	-	0.026	0.003
HCM Control Delay (s)	12.4	9.5	7.5	0	-	7.7	-	-	13	10.8
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0.1	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Existing PM Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	51	91	189	38	83	107	222	550	50	142	456	31
Future Volume (veh/h)	51	91	189	38	83	107	222	550	50	142	456	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	51	91	38	38	83	65	222	550	46	142	456	5
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	233	284	112	149	100	360	1585	132	187	1700	761
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.10	0.48	0.48	0.11	0.48	0.48
Sat Flow, veh/h	442	1298	1583	203	832	556	3442	3308	276	1774	3539	1583
Grp Volume(v), veh/h	142	0	38	186	0	0	222	294	302	142	456	5
Grp Sat Flow(s),veh/h/ln	1740	0	1583	1591	0	0	1721	1770	1814	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.2	2.4	0.0	0.0	3.5	5.9	6.0	4.5	4.4	0.1
Cycle Q Clear(g_c), s	3.9	0.0	1.2	6.3	0.0	0.0	3.5	5.9	6.0	4.5	4.4	0.1
Prop In Lane	0.36		1.00	0.20		0.35	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	284	361	0	0	360	848	869	187	1700	761
V/C Ratio(X)	0.36	0.00	0.13	0.52	0.00	0.00	0.62	0.35	0.35	0.76	0.27	0.01
Avail Cap(c_a), veh/h	899	0	788	873	0	0	1233	848	869	666	1700	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	19.8	21.7	0.0	0.0	24.5	9.3	9.3	24.9	8.9	7.7
Incr Delay (d2), s/veh	0.5	0.0	0.2	1.1	0.0	0.0	1.7	1.1	1.1	6.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.5	2.9	0.0	0.0	1.8	3.1	3.2	2.5	2.2	0.0
LnGrp Delay(d),s/veh	21.4	0.0	20.0	22.9	0.0	0.0	26.3	10.4	10.4	31.0	9.3	7.8
LnGrp LOS	C		B	C			C	B	B	C	A	A
Approach Vol, veh/h		180			186			818			603	
Approach Delay, s/veh		21.1			22.9			14.7			14.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.8	10.5	32.0		14.8	10.5	31.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		5.9	5.5	6.4		8.3	6.5	8.0
Green Ext Time (p_c), s		2.1	0.6	7.0		2.0	0.3	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	0	246	23	58	249	26	19	3	89	31	1	0
Future Vol, veh/h	0	246	23	58	249	26	19	3	89	31	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	246	23	58	249	26	19	3	89	31	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	0	269	0	0	624	623	258	669	634	249
Stage 1	-	-	-	-	-	-	258	258	-	365	365	-
Stage 2	-	-	-	-	-	-	366	365	-	304	269	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1317	-	-	1295	-	-	398	402	781	371	397	790
Stage 1	-	-	-	-	-	-	747	694	-	654	623	-
Stage 2	-	-	-	-	-	-	653	623	-	705	687	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1317	-	-	1295	-	-	384	384	781	316	379	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	384	384	-	316	379	-
Stage 1	-	-	-	-	-	-	747	694	-	654	595	-
Stage 2	-	-	-	-	-	-	623	595	-	622	687	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	11.2	17.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	384	756	1317	-	-	1295	-	-	316	379
HCM Lane V/C Ratio	0.049	0.122	-	-	-	0.045	-	-	0.098	0.003
HCM Control Delay (s)	14.9	10.4	0	-	-	7.9	-	-	17.6	14.5
HCM Lane LOS	B	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	0.4	0	-	-	0.1	-	-	0.3	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Existing Saturday Midday Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	74	72	266	37	69	113	273	501	42	97	524	95
Future Volume (veh/h)	74	72	266	37	69	113	273	501	42	97	524	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	74	72	50	37	69	64	273	501	28	97	524	75
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	164	279	102	127	97	409	1843	103	127	1746	781
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.12	0.54	0.54	0.07	0.49	0.49
Sat Flow, veh/h	642	931	1583	190	723	551	3442	3409	190	1774	3539	1583
Grp Volume(v), veh/h	146	0	50	170	0	0	273	260	269	97	524	75
Grp Sat Flow(s),veh/h/ln	1573	0	1583	1464	0	0	1721	1770	1829	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.7	2.2	0.0	0.0	4.8	5.0	5.1	3.4	5.6	1.6
Cycle Q Clear(g_c), s	5.1	0.0	1.7	7.3	0.0	0.0	4.8	5.0	5.1	3.4	5.6	1.6
Prop In Lane	0.51		1.00	0.22		0.38	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	362	0	279	327	0	0	409	957	989	127	1746	781
V/C Ratio(X)	0.40	0.00	0.18	0.52	0.00	0.00	0.67	0.27	0.27	0.77	0.30	0.10
Avail Cap(c_a), veh/h	766	0	707	758	0	0	1160	957	989	375	1746	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	22.4	24.4	0.0	0.0	26.9	7.9	7.9	29.1	9.6	8.6
Incr Delay (d2), s/veh	0.7	0.0	0.3	1.3	0.0	0.0	1.9	0.7	0.7	9.3	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.8	2.9	0.0	0.0	2.4	2.6	2.7	2.0	2.8	0.7
LnGrp Delay(d),s/veh	24.4	0.0	22.7	25.7	0.0	0.0	28.8	8.6	8.6	38.4	10.1	8.8
LnGrp LOS	C		C	C			C	A	A	D	B	A
Approach Vol, veh/h		196			170			802			696	
Approach Delay, s/veh		23.9			25.7			15.5			13.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.7	12.1	36.0		15.7	9.1	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		7.1	6.8	7.6		9.3	5.4	7.1
Green Ext Time (p_c), s		2.0	0.8	7.0		2.0	0.1	8.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	6	238	63	102	271	56	23	3	115	31	4	6
Future Vol, veh/h	6	238	63	102	271	56	23	3	115	31	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	238	63	102	271	56	23	3	115	31	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	301	0	0	762	757	270	816	788	271
Stage 1	-	-	-	-	-	-	282	282	-	475	475	-
Stage 2	-	-	-	-	-	-	480	475	-	341	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	1260	-	-	322	337	769	296	323	768
Stage 1	-	-	-	-	-	-	725	678	-	570	557	-
Stage 2	-	-	-	-	-	-	567	557	-	674	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	1260	-	-	295	308	769	233	295	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	308	-	233	295	-
Stage 1	-	-	-	-	-	-	721	674	-	567	512	-
Stage 2	-	-	-	-	-	-	513	512	-	567	653	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1.9	12	20.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	295	741	1292	-	-	1260	-	-	233	468
HCM Lane V/C Ratio	0.078	0.159	0.005	-	-	0.081	-	-	0.133	0.021
HCM Control Delay (s)	18.2	10.8	7.8	0	-	8.1	-	-	22.8	12.9
HCM Lane LOS	C	B	A	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.5	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	20	95	131	73	87	167	121	359	40	90	479	15
Future Volume (veh/h)	20	95	131	73	87	167	121	359	40	90	479	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	20	95	73	73	87	140	121	359	38	90	479	-15
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	411	398	140	140	185	232	1543	162	119	1688	755
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.48	0.48	0.07	0.48	0.00
Sat Flow, veh/h	166	1635	1583	286	557	737	3442	3232	340	1774	3539	1583
Grp Volume(v), veh/h	115	0	73	300	0	0	121	196	201	90	479	-15
Grp Sat Flow(s),veh/h/ln	1801	0	1583	1579	0	0	1721	1770	1803	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.4	7.5	0.0	0.0	2.2	4.3	4.3	3.3	5.4	0.0
Cycle Q Clear(g_c), s	3.3	0.0	2.4	11.4	0.0	0.0	2.2	4.3	4.3	3.3	5.4	0.0
Prop In Lane	0.17		1.00	0.24		0.47	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	517	0	398	465	0	0	232	845	861	119	1688	755
V/C Ratio(X)	0.22	0.00	0.18	0.65	0.00	0.00	0.52	0.23	0.23	0.76	0.28	-0.02
Avail Cap(c_a), veh/h	1430	0	1258	1299	0	0	1068	845	861	604	1688	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.7	0.0	19.4	22.7	0.0	0.0	29.8	10.1	10.2	30.3	10.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.5	0.0	0.0	1.8	0.6	0.6	9.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.1	5.2	0.0	0.0	1.1	2.2	2.3	1.9	2.7	0.0
LnGrp Delay(d),s/veh	19.9	0.0	19.6	24.2	0.0	0.0	31.6	10.8	10.8	39.7	10.9	0.0
LnGrp LOS	B		B	C			C	B	B	D	B	
Approach Vol, veh/h		188			300			518			554	
Approach Delay, s/veh		19.8			24.2			15.6			15.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.1	9.0	36.0		21.1	8.9	36.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.3	4.2	7.4		13.4	5.3	6.3
Green Ext Time (p_c), s		3.2	0.3	6.0		3.2	0.2	5.9

Intersection Summary			
HCM 2010 Ctrl Delay			17.9
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	3	203	10	47	151	33	7	0	37	25	1	1
Future Vol, veh/h	3	203	10	47	151	33	7	0	37	25	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	203	10	47	151	33	7	0	37	25	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	213	0	0	460	459	208	478	464	151
Stage 1	-	-	-	-	-	-	214	214	-	245	245	-
Stage 2	-	-	-	-	-	-	246	245	-	233	219	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1357	-	-	512	499	832	498	495	895
Stage 1	-	-	-	-	-	-	788	725	-	759	703	-
Stage 2	-	-	-	-	-	-	758	703	-	770	722	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1430	-	-	1357	-	-	496	481	832	463	477	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	481	-	463	477	-
Stage 1	-	-	-	-	-	-	786	724	-	757	679	-
Stage 2	-	-	-	-	-	-	730	679	-	734	721	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	10	13
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	496	832	1430	-	-	1357	-	-	463	622
HCM Lane V/C Ratio	0.014	0.044	0.002	-	-	0.035	-	-	0.054	0.003
HCM Control Delay (s)	12.4	9.5	7.5	0	-	7.7	-	-	13.2	10.8
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0.2	0

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	55	91	194	38	83	107	229	550	50	142	456	40
Future Volume (veh/h)	55	91	194	38	83	107	229	550	50	142	456	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	55	91	43	38	83	65	229	550	46	142	456	14
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	228	286	112	150	100	368	1584	132	187	1691	757
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.11	0.48	0.48	0.11	0.48	0.48
Sat Flow, veh/h	474	1260	1583	200	827	552	3442	3308	276	1774	3539	1583
Grp Volume(v), veh/h	146	0	43	186	0	0	229	294	302	142	456	14
Grp Sat Flow(s),veh/h/ln	1734	0	1583	1580	0	0	1721	1770	1814	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.3	2.3	0.0	0.0	3.7	6.0	6.0	4.5	4.4	0.3
Cycle Q Clear(g_c), s	4.0	0.0	1.3	6.4	0.0	0.0	3.7	6.0	6.0	4.5	4.4	0.3
Prop In Lane	0.38		1.00	0.20		0.35	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	400	0	286	361	0	0	368	848	869	187	1691	757
V/C Ratio(X)	0.37	0.00	0.15	0.52	0.00	0.00	0.62	0.35	0.35	0.76	0.27	0.02
Avail Cap(c_a), veh/h	891	0	784	865	0	0	1226	848	869	663	1691	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	19.9	21.8	0.0	0.0	24.6	9.4	9.4	25.0	9.0	7.9
Incr Delay (d2), s/veh	0.6	0.0	0.2	1.1	0.0	0.0	1.7	1.1	1.1	6.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.6	2.9	0.0	0.0	1.8	3.1	3.2	2.5	2.2	0.1
LnGrp Delay(d),s/veh	21.5	0.0	20.1	22.9	0.0	0.0	26.3	10.5	10.5	31.2	9.4	8.0
LnGrp LOS	C		C	C			C	B	B	C	A	A
Approach Vol, veh/h		189			186			825			612	
Approach Delay, s/veh		21.2			22.9			14.9			14.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		14.9	10.6	32.0		14.9	10.6	32.1
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		6.0	5.7	6.4		8.4	6.5	8.0
Green Ext Time (p_c), s		2.1	0.6	7.0		2.1	0.3	6.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	0	246	23	58	249	42	19	3	89	40	1	0
Future Vol, veh/h	0	246	23	58	249	42	19	3	89	40	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	246	23	58	249	42	19	3	89	40	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	249	0	0	269	0	0	624	623	258	669	634	249
Stage 1	-	-	-	-	-	-	258	258	-	365	365	-
Stage 2	-	-	-	-	-	-	366	365	-	304	269	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1317	-	-	1295	-	-	398	402	781	371	397	790
Stage 1	-	-	-	-	-	-	747	694	-	654	623	-
Stage 2	-	-	-	-	-	-	653	623	-	705	687	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1317	-	-	1295	-	-	384	384	781	316	379	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	384	384	-	316	379	-
Stage 1	-	-	-	-	-	-	747	694	-	654	595	-
Stage 2	-	-	-	-	-	-	623	595	-	622	687	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	11.2	17.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	384	756	1317	-	-	1295	-	-	316	379
HCM Lane V/C Ratio	0.049	0.122	-	-	-	0.045	-	-	0.127	0.003
HCM Control Delay (s)	14.9	10.4	0	-	-	7.9	-	-	18	14.5
HCM Lane LOS	B	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	0.4	0	-	-	0.1	-	-	0.4	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Existing+Project Saturday Midday Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	80	72	273	37	69	113	278	501	42	97	524	101
Future Volume (veh/h)	80	72	273	37	69	113	278	501	42	97	524	101
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	80	72	57	37	69	64	278	501	28	97	524	81
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	157	287	101	129	97	414	1832	102	127	1729	773
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.12	0.54	0.54	0.07	0.49	0.49
Sat Flow, veh/h	659	870	1583	180	710	538	3442	3409	190	1774	3539	1583
Grp Volume(v), veh/h	152	0	57	170	0	0	278	260	269	97	524	81
Grp Sat Flow(s),veh/h/ln	1529	0	1583	1428	0	0	1721	1770	1829	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.0	2.0	0.0	0.0	5.0	5.1	5.1	3.4	5.7	1.8
Cycle Q Clear(g_c), s	5.6	0.0	2.0	7.6	0.0	0.0	5.0	5.1	5.1	3.4	5.7	1.8
Prop In Lane	0.53		1.00	0.22		0.38	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	362	0	287	327	0	0	414	951	983	127	1729	773
V/C Ratio(X)	0.42	0.00	0.20	0.52	0.00	0.00	0.67	0.27	0.27	0.77	0.30	0.10
Avail Cap(c_a), veh/h	752	0	703	745	0	0	1152	951	983	373	1729	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	22.3	24.3	0.0	0.0	27.0	8.1	8.1	29.3	9.9	8.9
Incr Delay (d2), s/veh	0.8	0.0	0.3	1.3	0.0	0.0	1.9	0.7	0.7	9.3	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.9	2.9	0.0	0.0	2.5	2.6	2.7	2.0	2.9	0.8
LnGrp Delay(d),s/veh	24.4	0.0	22.7	25.6	0.0	0.0	28.9	8.8	8.7	38.6	10.3	9.1
LnGrp LOS	C		C	C			C	A	A	D	B	A
Approach Vol, veh/h		209			170			807			702	
Approach Delay, s/veh		24.0			25.6			15.7			14.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.1	12.2	35.9		16.1	9.1	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		7.6	7.0	7.7		9.6	5.4	7.1
Green Ext Time (p_c), s		2.1	0.8	7.0		2.0	0.1	8.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	6	238	63	102	271	67	23	3	115	44	4	6
Future Vol, veh/h	6	238	63	102	271	67	23	3	115	44	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	238	63	102	271	67	23	3	115	44	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	301	0	0	762	757	270	816	788	271
Stage 1	-	-	-	-	-	-	282	282	-	475	475	-
Stage 2	-	-	-	-	-	-	480	475	-	341	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	1260	-	-	322	337	769	296	323	768
Stage 1	-	-	-	-	-	-	725	678	-	570	557	-
Stage 2	-	-	-	-	-	-	567	557	-	674	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	1260	-	-	295	308	769	233	295	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	308	-	233	295	-
Stage 1	-	-	-	-	-	-	721	674	-	567	512	-
Stage 2	-	-	-	-	-	-	513	512	-	567	653	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1.9	12	21.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	295	741	1292	-	-	1260	-	-	233	468
HCM Lane V/C Ratio	0.078	0.159	0.005	-	-	0.081	-	-	0.189	0.021
HCM Control Delay (s)	18.2	10.8	7.8	0	-	8.1	-	-	24	12.9
HCM Lane LOS	C	B	A	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↱		↰↰	↑↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	14	99	140	76	103	170	188	359	41	92	479	11
Future Volume (veh/h)	14	99	140	76	103	170	188	359	41	92	479	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	14	99	82	76	103	143	188	359	39	92	479	-19
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	453	417	138	158	185	298	1525	165	121	1611	721
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.09	0.47	0.47	0.07	0.46	0.00
Sat Flow, veh/h	100	1720	1583	281	598	703	3442	3223	348	1774	3539	1583
Grp Volume(v), veh/h	113	0	82	322	0	0	188	196	202	92	479	-19
Grp Sat Flow(s),veh/h/ln	1820	0	1583	1583	0	0	1721	1770	1801	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.8	8.7	0.0	0.0	3.7	4.5	4.6	3.5	5.9	0.0
Cycle Q Clear(g_c), s	3.3	0.0	2.8	12.8	0.0	0.0	3.7	4.5	4.6	3.5	5.9	0.0
Prop In Lane	0.12		1.00	0.24		0.44	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	538	0	417	481	0	0	298	838	853	121	1611	721
V/C Ratio(X)	0.21	0.00	0.20	0.67	0.00	0.00	0.63	0.23	0.24	0.76	0.30	-0.03
Avail Cap(c_a), veh/h	1391	0	1201	1244	0	0	1019	838	853	577	1611	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.0	0.0	19.8	23.4	0.0	0.0	30.5	10.8	10.8	31.7	11.9	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.6	0.0	0.0	2.2	0.7	0.7	9.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.2	5.9	0.0	0.0	1.8	2.3	2.4	2.0	3.0	0.0
LnGrp Delay(d),s/veh	20.2	0.0	20.0	25.0	0.0	0.0	32.7	11.5	11.5	40.9	12.4	0.0
LnGrp LOS	C		C	C			C	B	B	D	B	
Approach Vol, veh/h		195			322			586			552	
Approach Delay, s/veh		20.1			25.0			18.3			17.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		22.7	10.5	36.0		22.7	9.2	37.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.3	5.7	7.9		14.8	5.5	6.6
Green Ext Time (p_c), s		3.4	0.5	6.0		3.4	0.2	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↳		↰	↳	
Traffic Vol, veh/h	3	223	10	47	237	26	7	0	37	12	1	1
Future Vol, veh/h	3	223	10	47	237	26	7	0	37	12	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	223	10	47	237	26	7	0	37	12	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	233	0	0	566	565	228	584	570	237
Stage 1	-	-	-	-	-	-	234	234	-	331	331	-
Stage 2	-	-	-	-	-	-	332	331	-	253	239	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1330	-	-	1335	-	-	435	434	811	423	431	802
Stage 1	-	-	-	-	-	-	769	711	-	682	645	-
Stage 2	-	-	-	-	-	-	681	645	-	751	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1330	-	-	1335	-	-	421	417	811	392	415	802
Mov Cap-2 Maneuver	-	-	-	-	-	-	421	417	-	392	415	-
Stage 1	-	-	-	-	-	-	767	709	-	680	622	-
Stage 2	-	-	-	-	-	-	655	622	-	715	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.2	10.3	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	421	811	1330	-	-	1335	-	-	392	547
HCM Lane V/C Ratio	0.017	0.046	0.002	-	-	0.035	-	-	0.031	0.004
HCM Control Delay (s)	13.7	9.7	7.7	0	-	7.8	-	-	14.5	11.6
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.1	0.1	0	-	-	0.1	-	-	0.1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	51	106	254	40	87	109	241	550	52	144	456	31
Future Volume (veh/h)	51	106	254	40	87	109	241	550	52	144	456	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	51	106	103	40	87	67	241	550	48	144	456	5
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	258	303	112	157	103	380	1555	135	190	1658	742
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.11	0.47	0.47	0.11	0.47	0.47
Sat Flow, veh/h	396	1352	1583	198	820	537	3442	3295	287	1774	3539	1583
Grp Volume(v), veh/h	157	0	103	194	0	0	241	295	303	144	456	5
Grp Sat Flow(s),veh/h/ln	1748	0	1583	1555	0	0	1721	1770	1812	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	3.3	2.4	0.0	0.0	3.9	6.2	6.2	4.6	4.6	0.1
Cycle Q Clear(g_c), s	4.4	0.0	3.3	6.8	0.0	0.0	3.9	6.2	6.2	4.6	4.6	0.1
Prop In Lane	0.32		1.00	0.21		0.35	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	303	371	0	0	380	835	855	190	1658	742
V/C Ratio(X)	0.38	0.00	0.34	0.52	0.00	0.00	0.63	0.35	0.35	0.76	0.28	0.01
Avail Cap(c_a), veh/h	885	0	769	834	0	0	1202	835	855	650	1658	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	20.5	21.8	0.0	0.0	25.0	9.8	9.8	25.5	9.5	8.3
Incr Delay (d2), s/veh	0.6	0.0	0.7	1.1	0.0	0.0	1.8	1.2	1.2	6.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.5	3.0	0.0	0.0	2.0	3.2	3.4	2.6	2.3	0.0
LnGrp Delay(d),s/veh	21.5	0.0	21.2	23.0	0.0	0.0	26.7	11.0	11.0	31.6	9.9	8.3
LnGrp LOS	C		C	C			C	B	B	C	A	A
Approach Vol, veh/h		260			194			839			605	
Approach Delay, s/veh		21.4			23.0			15.5			15.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.7	11.0	32.0		15.7	10.8	32.2
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		6.4	5.9	6.6		8.8	6.6	8.2
Green Ext Time (p_c), s		2.5	0.7	7.0		2.4	0.3	6.6

Intersection Summary			
HCM 2010 Ctrl Delay			16.9
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	0	326	23	58	272	26	19	3	89	31	1	0
Future Vol, veh/h	0	326	23	58	272	26	19	3	89	31	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	23	58	272	26	19	3	89	31	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	349	0	0	727	726	338	772	737	272
Stage 1	-	-	-	-	-	-	338	338	-	388	388	-
Stage 2	-	-	-	-	-	-	389	388	-	384	349	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1210	-	-	339	351	704	317	346	767
Stage 1	-	-	-	-	-	-	676	641	-	636	609	-
Stage 2	-	-	-	-	-	-	635	609	-	639	633	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1210	-	-	326	334	704	265	329	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	326	334	-	265	329	-
Stage 1	-	-	-	-	-	-	676	641	-	636	580	-
Stage 2	-	-	-	-	-	-	604	580	-	556	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	12.1	20.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	326	679	1291	-	-	1210	-	-	265	329
HCM Lane V/C Ratio	0.058	0.135	-	-	-	0.048	-	-	0.117	0.003
HCM Control Delay (s)	16.7	11.1	0	-	-	8.1	-	-	20.4	16
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.5	0	-	-	0.2	-	-	0.4	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	74	72	266	65	69	147	273	501	70	131	524	95
Future Volume (veh/h)	74	72	266	65	69	147	273	501	70	131	524	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	74	72	50	65	69	98	273	501	56	131	524	75
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	176	362	124	119	130	396	1561	174	168	1649	738
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.11	0.49	0.49	0.09	0.47	0.47
Sat Flow, veh/h	562	769	1583	260	519	570	3442	3211	358	1774	3539	1583
Grp Volume(v), veh/h	146	0	50	232	0	0	273	275	282	131	524	75
Grp Sat Flow(s),veh/h/ln	1331	0	1583	1349	0	0	1721	1770	1800	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.8	5.6	0.0	0.0	5.4	6.7	6.8	5.1	6.6	1.9
Cycle Q Clear(g_c), s	6.5	0.0	1.8	12.1	0.0	0.0	5.4	6.7	6.8	5.1	6.6	1.9
Prop In Lane	0.51		1.00	0.28		0.42	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	381	0	362	374	0	0	396	860	875	168	1649	738
V/C Ratio(X)	0.38	0.00	0.14	0.62	0.00	0.00	0.69	0.32	0.32	0.78	0.32	0.10
Avail Cap(c_a), veh/h	634	0	636	640	0	0	1043	860	875	337	1649	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	0.0	21.8	25.8	0.0	0.0	30.2	11.1	11.1	31.4	11.9	10.6
Incr Delay (d2), s/veh	0.6	0.0	0.2	1.7	0.0	0.0	2.2	1.0	1.0	7.6	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.8	4.4	0.0	0.0	2.7	3.5	3.6	2.9	3.3	0.9
LnGrp Delay(d),s/veh	23.9	0.0	22.0	27.5	0.0	0.0	32.3	12.1	12.1	39.0	12.4	10.9
LnGrp LOS	C		C	C			C	B	B	D	B	B
Approach Vol, veh/h		196			232			830			730	
Approach Delay, s/veh		23.4			27.5			18.7			17.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.7	12.7	37.6		20.7	11.2	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		8.5	7.4	8.6		14.1	7.1	8.8
Green Ext Time (p_c), s		2.5	0.8	7.0		2.2	0.2	8.1

Intersection Summary			
HCM 2010 Ctrl Delay			19.6
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	6	238	63	102	271	56	23	3	115	31	4	6
Future Vol, veh/h	6	238	63	102	271	56	23	3	115	31	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	238	63	102	271	56	23	3	115	31	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	301	0	0	762	757	270	816	788	271
Stage 1	-	-	-	-	-	-	282	282	-	475	475	-
Stage 2	-	-	-	-	-	-	480	475	-	341	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	1260	-	-	322	337	769	296	323	768
Stage 1	-	-	-	-	-	-	725	678	-	570	557	-
Stage 2	-	-	-	-	-	-	567	557	-	674	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	1260	-	-	295	308	769	233	295	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	308	-	233	295	-
Stage 1	-	-	-	-	-	-	721	674	-	567	512	-
Stage 2	-	-	-	-	-	-	513	512	-	567	653	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1.9	12	20.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	295	741	1292	-	-	1260	-	-	233	468
HCM Lane V/C Ratio	0.078	0.159	0.005	-	-	0.081	-	-	0.133	0.021
HCM Control Delay (s)	18.2	10.8	7.8	0	-	8.1	-	-	22.8	12.9
HCM Lane LOS	C	B	A	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.5	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	20	99	147	76	103	170	191	359	41	92	479	15
Future Volume (veh/h)	20	99	147	76	103	170	191	359	41	92	479	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	20	99	89	76	103	143	191	359	39	92	479	-15
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	429	418	138	158	185	301	1524	165	121	1606	718
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.09	0.47	0.47	0.07	0.45	0.00
Sat Flow, veh/h	162	1624	1583	281	598	702	3442	3223	348	1774	3539	1583
Grp Volume(v), veh/h	119	0	89	322	0	0	191	196	202	92	479	-15
Grp Sat Flow(s),veh/h/ln	1786	0	1583	1580	0	0	1721	1770	1801	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	3.0	8.7	0.0	0.0	3.7	4.6	4.6	3.5	5.9	0.0
Cycle Q Clear(g_c), s	3.5	0.0	3.0	12.9	0.0	0.0	3.7	4.6	4.6	3.5	5.9	0.0
Prop In Lane	0.17		1.00	0.24		0.44	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	533	0	418	482	0	0	301	837	852	121	1606	718
V/C Ratio(X)	0.22	0.00	0.21	0.67	0.00	0.00	0.63	0.23	0.24	0.76	0.30	-0.02
Avail Cap(c_a), veh/h	1359	0	1197	1238	0	0	1016	837	852	575	1606	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	0.0	19.9	23.4	0.0	0.0	30.6	10.8	10.9	31.8	12.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	1.6	0.0	0.0	2.2	0.7	0.7	9.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.3	5.9	0.0	0.0	1.9	2.4	2.5	2.1	3.0	0.0
LnGrp Delay(d),s/veh	20.3	0.0	20.2	25.0	0.0	0.0	32.8	11.5	11.5	41.0	12.5	0.0
LnGrp LOS	C		C	C			C	B	B	D	B	
Approach Vol, veh/h		208			322			589			556	
Approach Delay, s/veh		20.2			25.0			18.4			17.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		22.8	10.6	36.0		22.8	9.2	37.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.5	5.7	7.9		14.9	5.5	6.6
Green Ext Time (p_c), s		3.5	0.5	6.0		3.5	0.2	5.9

Intersection Summary			
HCM 2010 Ctrl Delay			19.6
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	3	223	10	47	237	33	7	0	37	25	1	1
Future Vol, veh/h	3	223	10	47	237	33	7	0	37	25	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	223	10	47	237	33	7	0	37	25	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	233	0	0	566	565	228	584	570	237
Stage 1	-	-	-	-	-	-	234	234	-	331	331	-
Stage 2	-	-	-	-	-	-	332	331	-	253	239	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1330	-	-	1335	-	-	435	434	811	423	431	802
Stage 1	-	-	-	-	-	-	769	711	-	682	645	-
Stage 2	-	-	-	-	-	-	681	645	-	751	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1330	-	-	1335	-	-	421	417	811	392	415	802
Mov Cap-2 Maneuver	-	-	-	-	-	-	421	417	-	392	415	-
Stage 1	-	-	-	-	-	-	767	709	-	680	622	-
Stage 2	-	-	-	-	-	-	655	622	-	715	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.2	10.3	14.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	421	811	1330	-	-	1335	-	-	392	547
HCM Lane V/C Ratio	0.017	0.046	0.002	-	-	0.035	-	-	0.064	0.004
HCM Control Delay (s)	13.7	9.7	7.7	0	-	7.8	-	-	14.8	11.6
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.1	0.1	0	-	-	0.1	-	-	0.2	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Background+Project PM Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	55	106	259	40	87	109	248	550	52	144	456	40
Future Volume (veh/h)	55	106	259	40	87	109	248	550	52	144	456	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	55	106	108	40	87	67	248	550	48	144	456	14
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	253	305	111	157	103	388	1554	135	190	1648	737
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.11	0.47	0.47	0.11	0.47	0.47
Sat Flow, veh/h	424	1312	1583	195	815	533	3442	3295	287	1774	3539	1583
Grp Volume(v), veh/h	161	0	108	194	0	0	248	295	303	144	456	14
Grp Sat Flow(s),veh/h/ln	1737	0	1583	1543	0	0	1721	1770	1812	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	3.5	2.4	0.0	0.0	4.1	6.2	6.3	4.7	4.7	0.3
Cycle Q Clear(g_c), s	4.6	0.0	3.5	7.0	0.0	0.0	4.1	6.2	6.3	4.7	4.7	0.3
Prop In Lane	0.34		1.00	0.21		0.35	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	305	371	0	0	388	835	855	190	1648	737
V/C Ratio(X)	0.39	0.00	0.35	0.52	0.00	0.00	0.64	0.35	0.35	0.76	0.28	0.02
Avail Cap(c_a), veh/h	876	0	764	827	0	0	1195	835	855	646	1648	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	20.6	21.9	0.0	0.0	25.0	9.9	9.9	25.6	9.7	8.5
Incr Delay (d2), s/veh	0.6	0.0	0.7	1.1	0.0	0.0	1.8	1.2	1.2	6.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.6	3.0	0.0	0.0	2.0	3.3	3.4	2.6	2.4	0.1
LnGrp Delay(d),s/veh	21.6	0.0	21.3	23.0	0.0	0.0	26.8	11.1	11.1	31.8	10.1	8.5
LnGrp LOS	C		C	C			C	B	B	C	B	A
Approach Vol, veh/h		269			194			846			614	
Approach Delay, s/veh		21.5			23.0			15.7			15.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		15.9	11.2	32.0		15.9	10.8	32.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		6.6	6.1	6.7		9.0	6.7	8.3
Green Ext Time (p_c), s		2.5	0.7	7.0		2.4	0.3	6.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	0	326	23	58	272	42	19	3	89	40	1	0
Future Vol, veh/h	0	326	23	58	272	42	19	3	89	40	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	23	58	272	42	19	3	89	40	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	272	0	0	349	0	0	727	726	338	772	737	272
Stage 1	-	-	-	-	-	-	338	338	-	388	388	-
Stage 2	-	-	-	-	-	-	389	388	-	384	349	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1210	-	-	339	351	704	317	346	767
Stage 1	-	-	-	-	-	-	676	641	-	636	609	-
Stage 2	-	-	-	-	-	-	635	609	-	639	633	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1291	-	-	1210	-	-	326	334	704	265	329	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	326	334	-	265	329	-
Stage 1	-	-	-	-	-	-	676	641	-	636	580	-
Stage 2	-	-	-	-	-	-	604	580	-	556	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	12.1	20.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	326	679	1291	-	-	1210	-	-	265	329
HCM Lane V/C Ratio	0.058	0.135	-	-	-	0.048	-	-	0.151	0.003
HCM Control Delay (s)	16.7	11.1	0	-	-	8.1	-	-	21	16
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.5	0	-	-	0.2	-	-	0.5	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Background+Project Saturday Midday Conditions
01/16/2019

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	80	72	273	65	69	147	278	501	70	131	524	101
Future Volume (veh/h)	80	72	273	65	69	147	278	501	70	131	524	101
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	80	72	57	65	69	98	278	501	56	131	524	81
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	168	373	123	120	130	400	1546	172	168	1627	728
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.12	0.48	0.48	0.09	0.46	0.46
Sat Flow, veh/h	571	712	1583	247	508	552	3442	3211	358	1774	3539	1583
Grp Volume(v), veh/h	152	0	57	232	0	0	278	275	282	131	524	81
Grp Sat Flow(s),veh/h/ln	1283	0	1583	1308	0	0	1721	1770	1800	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.0	5.5	0.0	0.0	5.6	6.8	6.9	5.2	6.7	2.1
Cycle Q Clear(g_c), s	7.2	0.0	2.0	12.7	0.0	0.0	5.6	6.8	6.9	5.2	6.7	2.1
Prop In Lane	0.53		1.00	0.28		0.42	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	379	0	373	372	0	0	400	852	866	168	1627	728
V/C Ratio(X)	0.40	0.00	0.15	0.62	0.00	0.00	0.69	0.32	0.33	0.78	0.32	0.11
Avail Cap(c_a), veh/h	614	0	630	622	0	0	1032	852	866	334	1627	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	21.7	25.8	0.0	0.0	30.5	11.4	11.4	31.7	12.3	11.0
Incr Delay (d2), s/veh	0.7	0.0	0.2	1.7	0.0	0.0	2.2	1.0	1.0	7.6	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.9	4.5	0.0	0.0	2.7	3.5	3.6	2.9	3.4	1.0
LnGrp Delay(d),s/veh	24.0	0.0	21.9	27.5	0.0	0.0	32.6	12.4	12.4	39.3	12.8	11.3
LnGrp LOS	C		C	C			C	B	B	D	B	B
Approach Vol, veh/h		209			232			835			736	
Approach Delay, s/veh		23.5			27.5			19.2			17.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.4	12.8	37.5		21.4	11.3	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		9.2	7.6	8.7		14.7	7.2	8.9
Green Ext Time (p_c), s		2.5	0.8	7.0		2.2	0.2	8.1

Intersection Summary		
HCM 2010 Ctrl Delay		19.9
HCM 2010 LOS		B

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	6	238	63	102	271	67	23	3	115	44	4	6
Future Vol, veh/h	6	238	63	102	271	67	23	3	115	44	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	238	63	102	271	67	23	3	115	44	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	301	0	0	762	757	270	816	788	271
Stage 1	-	-	-	-	-	-	282	282	-	475	475	-
Stage 2	-	-	-	-	-	-	480	475	-	341	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1292	-	-	1260	-	-	322	337	769	296	323	768
Stage 1	-	-	-	-	-	-	725	678	-	570	557	-
Stage 2	-	-	-	-	-	-	567	557	-	674	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	1260	-	-	295	308	769	233	295	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	308	-	233	295	-
Stage 1	-	-	-	-	-	-	721	674	-	567	512	-
Stage 2	-	-	-	-	-	-	513	512	-	567	653	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1.9	12	21.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	295	741	1292	-	-	1260	-	-	233	468
HCM Lane V/C Ratio	0.078	0.159	0.005	-	-	0.081	-	-	0.189	0.021
HCM Control Delay (s)	18.2	10.8	7.8	0	-	8.1	-	-	24	12.9
HCM Lane LOS	C	B	A	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	25	102	145	87	104	202	127	391	43	118	745	17
Future Volume (veh/h)	25	102	145	87	104	202	127	391	43	118	745	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	25	102	87	87	104	175	127	391	41	118	745	-13
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	443	469	149	156	222	224	1375	143	155	1583	708
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.07	0.43	0.43	0.09	0.45	0.00
Sat Flow, veh/h	206	1497	1583	289	529	749	3442	3235	337	1774	3539	1583
Grp Volume(v), veh/h	127	0	87	366	0	0	127	213	219	118	745	-13
Grp Sat Flow(s),veh/h/ln	1703	0	1583	1567	0	0	1721	1770	1803	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.9	10.7	0.0	0.0	2.5	5.5	5.6	4.6	10.4	0.0
Cycle Q Clear(g_c), s	3.6	0.0	2.9	14.9	0.0	0.0	2.5	5.5	5.6	4.6	10.4	0.0
Prop In Lane	0.20		1.00	0.24		0.48	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	565	0	469	527	0	0	224	752	767	155	1583	708
V/C Ratio(X)	0.22	0.00	0.19	0.69	0.00	0.00	0.57	0.28	0.29	0.76	0.47	-0.02
Avail Cap(c_a), veh/h	1301	0	1180	1214	0	0	1002	752	767	567	1583	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.7	0.0	18.5	22.5	0.0	0.0	32.0	13.2	13.2	31.4	13.6	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.7	0.0	0.0	2.2	0.9	0.9	7.5	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.3	6.7	0.0	0.0	1.3	2.9	2.9	2.6	5.3	0.0
LnGrp Delay(d),s/veh	18.9	0.0	18.7	24.2	0.0	0.0	34.2	14.2	14.2	39.0	14.6	0.0
LnGrp LOS	B		B	C			C	B	B	D	B	
Approach Vol, veh/h		214			366			559			850	
Approach Delay, s/veh		18.8			24.2			18.7			18.2	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.3	9.1	36.0		25.3	10.6	34.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.6	4.5	12.4		16.9	6.6	7.6
Green Ext Time (p_c), s		4.0	0.3	7.8		3.9	0.2	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	3	242	10	47	183	26	7	0	37	12	1	1
Future Vol, veh/h	3	242	10	47	183	26	7	0	37	12	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	242	10	47	183	26	7	0	37	12	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	252	0	0	531	530	247	549	535	183
Stage 1	-	-	-	-	-	-	253	253	-	277	277	-
Stage 2	-	-	-	-	-	-	278	277	-	272	258	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1392	-	-	1313	-	-	459	455	792	446	452	859
Stage 1	-	-	-	-	-	-	751	698	-	729	681	-
Stage 2	-	-	-	-	-	-	728	681	-	734	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1392	-	-	1313	-	-	444	437	792	413	435	859
Mov Cap-2 Maneuver	-	-	-	-	-	-	444	437	-	413	435	-
Stage 1	-	-	-	-	-	-	749	696	-	727	657	-
Stage 2	-	-	-	-	-	-	700	657	-	698	692	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.4	10.3	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	444	792	1392	-	-	1313	-	-	413	578
HCM Lane V/C Ratio	0.016	0.047	0.002	-	-	0.036	-	-	0.029	0.003
HCM Control Delay (s)	13.2	9.8	7.6	0	-	7.8	-	-	14	11.3
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0.1	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑	↱		↰↑↱		↰↰	↑↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	66	100	200	44	95	139	242	803	67	183	563	36
Future Volume (veh/h)	66	100	200	44	95	139	242	803	67	183	563	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	100	49	44	95	97	242	803	63	183	563	10
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	244	340	109	158	138	376	1437	113	235	1612	721
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.11	0.43	0.43	0.13	0.46	0.46
Sat Flow, veh/h	475	1133	1583	182	737	641	3442	3325	261	1774	3539	1583
Grp Volume(v), veh/h	166	0	49	236	0	0	242	427	439	183	563	10
Grp Sat Flow(s),veh/h/ln	1608	0	1583	1560	0	0	1721	1770	1817	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.5	3.6	0.0	0.0	4.1	11.1	11.1	6.1	6.3	0.2
Cycle Q Clear(g_c), s	5.1	0.0	1.5	8.7	0.0	0.0	4.1	11.1	11.1	6.1	6.3	0.2
Prop In Lane	0.40		1.00	0.19		0.41	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	428	0	340	405	0	0	376	765	785	235	1612	721
V/C Ratio(X)	0.39	0.00	0.14	0.58	0.00	0.00	0.64	0.56	0.56	0.78	0.35	0.01
Avail Cap(c_a), veh/h	807	0	736	804	0	0	1151	765	785	622	1612	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	19.5	22.2	0.0	0.0	26.2	13.0	13.0	25.7	10.8	9.1
Incr Delay (d2), s/veh	0.6	0.0	0.2	1.3	0.0	0.0	1.8	2.9	2.9	5.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.7	3.8	0.0	0.0	2.0	6.0	6.1	3.4	3.2	0.1
LnGrp Delay(d),s/veh	21.4	0.0	19.7	23.5	0.0	0.0	28.0	16.0	15.9	31.2	11.4	9.2
LnGrp LOS	C		B	C			C	B	B	C	B	A
Approach Vol, veh/h		215			236			1108			756	
Approach Delay, s/veh		21.0			23.5			18.6			16.2	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		17.7	11.2	32.4		17.7	12.6	31.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		7.1	6.1	8.3		10.7	8.1	13.1
Green Ext Time (p_c), s		2.6	0.7	9.5		2.5	0.4	7.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	0	281	23	58	286	26	19	3	89	31	1	0
Future Vol, veh/h	0	281	23	58	286	26	19	3	89	31	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	281	23	58	286	26	19	3	89	31	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	304	0	0	696	695	293	741	706	286
Stage 1	-	-	-	-	-	-	293	293	-	402	402	-
Stage 2	-	-	-	-	-	-	403	402	-	339	304	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1257	-	-	356	366	746	332	361	753
Stage 1	-	-	-	-	-	-	715	670	-	625	600	-
Stage 2	-	-	-	-	-	-	624	600	-	676	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1276	-	-	1257	-	-	343	349	746	280	344	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	349	-	280	344	-
Stage 1	-	-	-	-	-	-	715	670	-	625	572	-
Stage 2	-	-	-	-	-	-	594	572	-	593	663	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.3			11.6			19.4		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	343	719	1276	-	-	1257	-	-	280	344
HCM Lane V/C Ratio	0.055	0.128	-	-	-	0.046	-	-	0.111	0.003
HCM Control Delay (s)	16.1	10.7	0	-	-	8	-	-	19.5	15.5
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.4	0	-	-	0.1	-	-	0.4	0

HCM 2010 Signalized Intersection Summary
1: Highway 1 & Capistrano Road

Cumulative Saturday Midday Conditions
01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	96	79	281	43	79	147	298	731	56	125	647	110
Future Volume (veh/h)	96	79	281	43	79	147	298	731	56	125	647	110
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	96	79	65	43	79	98	298	731	42	125	647	90
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	153	375	92	136	134	423	1645	94	161	1598	715
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.12	0.48	0.48	0.09	0.45	0.45
Sat Flow, veh/h	565	647	1583	134	573	568	3442	3402	195	1774	3539	1583
Grp Volume(v), veh/h	175	0	65	220	0	0	298	380	393	125	647	90
Grp Sat Flow(s),veh/h/ln	1212	0	1583	1275	0	0	1721	1770	1828	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.3	3.0	0.0	0.0	5.9	10.1	10.1	4.9	8.8	2.4
Cycle Q Clear(g_c), s	9.6	0.0	2.3	12.6	0.0	0.0	5.9	10.1	10.1	4.9	8.8	2.4
Prop In Lane	0.55		1.00	0.20		0.45	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	365	0	375	362	0	0	423	856	884	161	1598	715
V/C Ratio(X)	0.48	0.00	0.17	0.61	0.00	0.00	0.70	0.44	0.44	0.78	0.40	0.13
Avail Cap(c_a), veh/h	598	0	632	620	0	0	1037	856	884	336	1598	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	21.7	24.9	0.0	0.0	30.0	12.1	12.1	31.7	13.1	11.4
Incr Delay (d2), s/veh	1.0	0.0	0.2	1.6	0.0	0.0	2.2	1.7	1.6	7.8	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.0	4.2	0.0	0.0	2.9	5.3	5.4	2.7	4.4	1.1
LnGrp Delay(d),s/veh	25.0	0.0	21.9	26.6	0.0	0.0	32.2	13.8	13.7	39.5	13.9	11.7
LnGrp LOS	C		C	C			C	B	B	D	B	B
Approach Vol, veh/h		240			220			1071			862	
Approach Delay, s/veh		24.2			26.6			18.9			17.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.4	13.3	36.7		21.4	11.0	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		11.6	7.9	10.8		14.6	6.9	12.1
Green Ext Time (p_c), s		2.5	0.9	8.6		2.3	0.1	10.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection												
Int Delay, s/veh	3.6											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	6	272	63	102	311	56	23	3	115	31	4	6
Future Vol, veh/h	6	272	63	102	311	56	23	3	115	31	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	272	63	102	311	56	23	3	115	31	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	335	0	0	836	831	304	890	862	311
Stage 1	-	-	-	-	-	-	316	316	-	515	515	-
Stage 2	-	-	-	-	-	-	520	515	-	375	347	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1249	-	-	1224	-	-	287	305	736	264	293	729
Stage 1	-	-	-	-	-	-	695	655	-	543	535	-
Stage 2	-	-	-	-	-	-	539	535	-	646	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1224	-	-	262	278	736	206	267	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	278	-	206	267	-
Stage 1	-	-	-	-	-	-	691	651	-	540	490	-
Stage 2	-	-	-	-	-	-	486	490	-	539	631	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	12.6	22.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	262	706	1249	-	-	1224	-	-	206	431
HCM Lane V/C Ratio	0.088	0.167	0.005	-	-	0.083	-	-	0.15	0.023
HCM Control Delay (s)	20.1	11.1	7.9	0	-	8.2	-	-	25.5	13.6
HCM Lane LOS	C	B	A	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.5	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	31	102	152	87	104	202	130	391	43	118	745	21
Future Volume (veh/h)	31	102	152	87	104	202	130	391	43	118	745	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	31	102	94	87	104	175	130	391	41	118	745	-9
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	411	470	149	157	222	225	1373	143	155	1580	707
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.07	0.42	0.42	0.09	0.45	0.00
Sat Flow, veh/h	253	1383	1583	288	528	748	3442	3235	337	1774	3539	1583
Grp Volume(v), veh/h	133	0	94	366	0	0	130	213	219	118	745	-9
Grp Sat Flow(s),veh/h/ln	1636	0	1583	1565	0	0	1721	1770	1803	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	3.1	10.7	0.0	0.0	2.6	5.6	5.6	4.6	10.4	0.0
Cycle Q Clear(g_c), s	3.8	0.0	3.1	15.0	0.0	0.0	2.6	5.6	5.6	4.6	10.4	0.0
Prop In Lane	0.23		1.00	0.24		0.48	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	549	0	470	528	0	0	225	751	765	155	1580	707
V/C Ratio(X)	0.24	0.00	0.20	0.69	0.00	0.00	0.58	0.28	0.29	0.76	0.47	-0.01
Avail Cap(c_a), veh/h	1265	0	1178	1210	0	0	1000	751	765	566	1580	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	0.0	18.5	22.5	0.0	0.0	32.0	13.3	13.3	31.5	13.7	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	1.6	0.0	0.0	2.3	0.9	0.9	7.5	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.4	6.7	0.0	0.0	1.3	2.9	3.0	2.6	5.3	0.0
LnGrp Delay(d),s/veh	19.0	0.0	18.7	24.2	0.0	0.0	34.4	14.2	14.2	39.0	14.7	0.0
LnGrp LOS	B		B	C			C	B	B	D	B	
Approach Vol, veh/h		227			366			562			854	
Approach Delay, s/veh		18.9			24.2			18.9			18.2	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.5	9.1	36.0		25.5	10.7	34.5
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		52.5	20.5	31.5		52.5	22.5	29.5
Max Q Clear Time (g_c+I1), s		5.8	4.6	12.4		17.0	6.6	7.6
Green Ext Time (p_c), s		4.1	0.3	7.8		4.0	0.2	8.3

Intersection Summary			
HCM 2010 Ctrl Delay			19.6
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✛		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	3	242	10	47	183	33	7	0	37	25	1	1
Future Vol, veh/h	3	242	10	47	183	33	7	0	37	25	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	242	10	47	183	33	7	0	37	25	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	252	0	0	531	530	247	549	535	183
Stage 1	-	-	-	-	-	-	253	253	-	277	277	-
Stage 2	-	-	-	-	-	-	278	277	-	272	258	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1392	-	-	1313	-	-	459	455	792	446	452	859
Stage 1	-	-	-	-	-	-	751	698	-	729	681	-
Stage 2	-	-	-	-	-	-	728	681	-	734	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1392	-	-	1313	-	-	444	437	792	413	435	859
Mov Cap-2 Maneuver	-	-	-	-	-	-	444	437	-	413	435	-
Stage 1	-	-	-	-	-	-	749	696	-	727	657	-
Stage 2	-	-	-	-	-	-	700	657	-	698	692	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.4	10.3	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	444	792	1392	-	-	1313	-	-	413	578
HCM Lane V/C Ratio	0.016	0.047	0.002	-	-	0.036	-	-	0.061	0.003
HCM Control Delay (s)	13.2	9.8	7.6	0	-	7.8	-	-	14.3	11.3
HCM Lane LOS	B	A	A	A	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0.2	0

1: Highway 1 & Capistrano Road

01/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✣		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	70	100	205	44	95	139	249	803	67	183	563	45
Future Volume (veh/h)	70	100	205	44	95	139	249	803	67	183	563	45
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	70	100	54	44	95	97	249	803	63	183	563	19
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	237	345	108	159	138	384	1431	112	235	1597	714
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.11	0.43	0.43	0.13	0.45	0.45
Sat Flow, veh/h	491	1087	1583	178	729	633	3442	3325	261	1774	3539	1583
Grp Volume(v), veh/h	170	0	54	236	0	0	249	427	439	183	563	19
Grp Sat Flow(s),veh/h/ln	1578	0	1583	1540	0	0	1721	1770	1817	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	1.7	3.5	0.0	0.0	4.3	11.2	11.2	6.1	6.4	0.4
Cycle Q Clear(g_c), s	5.4	0.0	1.7	8.9	0.0	0.0	4.3	11.2	11.2	6.1	6.4	0.4
Prop In Lane	0.41		1.00	0.19		0.41	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	426	0	345	405	0	0	384	761	782	235	1597	714
V/C Ratio(X)	0.40	0.00	0.16	0.58	0.00	0.00	0.65	0.56	0.56	0.78	0.35	0.03
Avail Cap(c_a), veh/h	796	0	733	795	0	0	1145	761	782	619	1597	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	19.5	22.2	0.0	0.0	26.2	13.2	13.2	25.8	11.0	9.4
Incr Delay (d2), s/veh	0.6	0.0	0.2	1.3	0.0	0.0	1.8	3.0	2.9	5.5	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.8	3.8	0.0	0.0	2.1	6.0	6.1	3.4	3.3	0.2
LnGrp Delay(d),s/veh	21.4	0.0	19.7	23.5	0.0	0.0	28.1	16.2	16.1	31.3	11.6	9.5
LnGrp LOS	C		B	C			C	B	B	C	B	A
Approach Vol, veh/h		224			236			1115			765	
Approach Delay, s/veh		21.0			23.5			18.8			16.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		17.9	11.4	32.3		17.9	12.7	31.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	20.5	27.5		28.5	21.5	26.5
Max Q Clear Time (g_c+I1), s		7.4	6.3	8.4		10.9	8.1	13.2
Green Ext Time (p_c), s		2.7	0.7	9.5		2.5	0.4	7.6

Intersection Summary			
HCM 2010 Ctrl Delay			18.7
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱		↰	↑	↱	↰	↑↱		↰	↑↱	
Traffic Vol, veh/h	0	281	23	58	286	42	19	3	89	40	1	0
Future Vol, veh/h	0	281	23	58	286	42	19	3	89	40	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	281	23	58	286	42	19	3	89	40	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	304	0	0	696	695	293	741	706	286
Stage 1	-	-	-	-	-	-	293	293	-	402	402	-
Stage 2	-	-	-	-	-	-	403	402	-	339	304	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1257	-	-	356	366	746	332	361	753
Stage 1	-	-	-	-	-	-	715	670	-	625	600	-
Stage 2	-	-	-	-	-	-	624	600	-	676	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1276	-	-	1257	-	-	343	349	746	280	344	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	349	-	280	344	-
Stage 1	-	-	-	-	-	-	715	670	-	625	572	-
Stage 2	-	-	-	-	-	-	594	572	-	593	663	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.2	11.6	19.9
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	343	719	1276	-	-	1257	-	-	280	344
HCM Lane V/C Ratio	0.055	0.128	-	-	-	0.046	-	-	0.143	0.003
HCM Control Delay (s)	16.1	10.7	0	-	-	8	-	-	20	15.5
HCM Lane LOS	C	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.4	0	-	-	0.1	-	-	0.5	0

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		✥		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	102	79	288	43	79	147	303	731	56	125	647	116
Future Volume (veh/h)	102	79	288	43	79	147	303	731	56	125	647	116
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	102	79	72	43	79	98	303	731	42	125	647	96
Adj No. of Lanes	0	1	1	0	1	0	2	2	0	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	147	390	89	136	134	427	1622	93	161	1569	702
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.48	0.48	0.09	0.44	0.44
Sat Flow, veh/h	559	595	1583	122	553	542	3442	3402	195	1774	3539	1583
Grp Volume(v), veh/h	181	0	72	220	0	0	303	380	393	125	647	96
Grp Sat Flow(s),veh/h/ln	1154	0	1583	1218	0	0	1721	1770	1828	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	2.6	2.8	0.0	0.0	6.1	10.4	10.4	5.0	9.0	2.6
Cycle Q Clear(g_c), s	10.8	0.0	2.6	13.6	0.0	0.0	6.1	10.4	10.4	5.0	9.0	2.6
Prop In Lane	0.56		1.00	0.20		0.45	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	362	0	390	359	0	0	427	843	871	161	1569	702
V/C Ratio(X)	0.50	0.00	0.18	0.61	0.00	0.00	0.71	0.45	0.45	0.78	0.41	0.14
Avail Cap(c_a), veh/h	572	0	623	592	0	0	1022	843	871	331	1569	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	0.0	21.5	24.7	0.0	0.0	30.5	12.6	12.6	32.2	13.7	11.9
Incr Delay (d2), s/veh	1.1	0.0	0.2	1.7	0.0	0.0	2.2	1.7	1.7	7.8	0.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	1.2	4.3	0.0	0.0	3.0	5.4	5.6	2.8	4.6	1.2
LnGrp Delay(d),s/veh	25.2	0.0	21.8	26.4	0.0	0.0	32.7	14.4	14.3	40.1	14.5	12.4
LnGrp LOS	C		C	C			C	B	B	D	B	B
Approach Vol, veh/h		253			220			1076			868	
Approach Delay, s/veh		24.2			26.4			19.5			18.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		22.3	13.5	36.6		22.3	11.1	39.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		28.5	21.5	26.5		28.5	13.5	34.5
Max Q Clear Time (g_c+I1), s		12.8	8.1	11.0		15.6	7.0	12.4
Green Ext Time (p_c), s		2.5	0.9	8.6		2.3	0.1	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥		↰	↑	↱	↰	↱		↰	↱	
Traffic Vol, veh/h	6	272	63	102	311	67	23	3	115	44	4	6
Future Vol, veh/h	6	272	63	102	311	67	23	3	115	44	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	272	63	102	311	67	23	3	115	44	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	335	0	0	836	831	304	890	862	311
Stage 1	-	-	-	-	-	-	316	316	-	515	515	-
Stage 2	-	-	-	-	-	-	520	515	-	375	347	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1249	-	-	1224	-	-	287	305	736	264	293	729
Stage 1	-	-	-	-	-	-	695	655	-	543	535	-
Stage 2	-	-	-	-	-	-	539	535	-	646	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1249	-	-	1224	-	-	262	278	736	206	267	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	278	-	206	267	-
Stage 1	-	-	-	-	-	-	691	651	-	540	490	-
Stage 2	-	-	-	-	-	-	486	490	-	539	631	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.7	12.6	24.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	262	706	1249	-	-	1224	-	-	206	431
HCM Lane V/C Ratio	0.088	0.167	0.005	-	-	0.083	-	-	0.214	0.023
HCM Control Delay (s)	20.1	11.1	7.9	0	-	8.2	-	-	27.2	13.6
HCM Lane LOS	C	B	A	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.3	0.6	0	-	-	0.3	-	-	0.8	0.1

Appendix E

Signalized Intersection Queues

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	109	124	327	118	399	90	479	11
v/c Ratio	0.24	0.25	0.73	0.30	0.25	0.39	0.29	0.01
Control Delay	22.3	5.7	30.1	32.9	14.6	35.1	14.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	5.7	30.1	32.9	14.6	35.1	14.2	0.0
Queue Length 50th (ft)	38	0	108	24	54	37	67	0
Queue Length 95th (ft)	78	36	202	53	111	86	128	0
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1368	1251	1221	1040	1578	588	1653	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.10	0.27	0.11	0.25	0.15	0.29	0.01

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	142	189	228	222	600	142	456	31
v/c Ratio	0.53	0.41	0.64	0.43	0.37	0.49	0.29	0.04
Control Delay	31.1	6.9	27.1	28.3	14.1	30.9	13.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	6.9	27.1	28.3	14.1	30.9	13.2	0.7
Queue Length 50th (ft)	49	0	61	40	77	50	55	0
Queue Length 95th (ft)	105	45	134	78	154	108	110	4
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	618	818	755	1115	1638	603	1563	740
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.30	0.20	0.37	0.24	0.29	0.04

Intersection Summary

1: Highway 1 & Capistrano Road

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	146	266	219	273	543	97	524	95
v/c Ratio	0.71	0.52	0.63	0.51	0.30	0.41	0.32	0.12
Control Delay	46.6	7.6	27.5	31.5	12.0	35.1	13.8	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	7.6	27.5	31.5	12.0	35.1	13.8	2.1
Queue Length 50th (ft)	60	0	62	56	66	39	68	0
Queue Length 95th (ft)	124	56	134	101	135	90	136	17
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	462	816	703	1083	1828	350	1624	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.33	0.31	0.25	0.30	0.28	0.32	0.12

Intersection Summary

Queues

Existing+Project AM Conditions

1: Highway 1 & Capistrano Road

01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	131	327	121	399	90	479	15
v/c Ratio	0.27	0.26	0.75	0.32	0.25	0.40	0.30	0.02
Control Delay	22.8	5.7	31.7	33.0	14.4	35.6	14.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	5.7	31.7	33.0	14.4	35.6	14.7	0.1
Queue Length 50th (ft)	40	0	108	25	54	37	67	0
Queue Length 95th (ft)	82	37	202	55	112	86	129	0
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1259	1206	1169	992	1625	561	1576	735
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.11	0.28	0.12	0.25	0.16	0.30	0.02

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	146	194	228	229	600	142	456	40
v/c Ratio	0.56	0.42	0.64	0.44	0.37	0.49	0.29	0.05
Control Delay	32.4	6.9	27.1	28.3	14.1	31.0	13.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	6.9	27.1	28.3	14.1	31.0	13.3	1.7
Queue Length 50th (ft)	51	0	61	41	77	50	55	0
Queue Length 95th (ft)	109	46	134	80	154	108	111	8
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	601	820	754	1114	1639	602	1557	737
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.24	0.30	0.21	0.37	0.24	0.29	0.05

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	152	273	219	278	543	97	524	101
v/c Ratio	0.72	0.52	0.61	0.52	0.30	0.41	0.33	0.13
Control Delay	46.5	7.4	26.6	31.9	12.4	35.5	14.2	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	7.4	26.6	31.9	12.4	35.5	14.2	2.5
Queue Length 50th (ft)	63	0	62	57	67	39	70	0
Queue Length 95th (ft)	129	56	134	104	138	91	140	20
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	457	816	697	1073	1812	347	1607	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.33	0.31	0.26	0.30	0.28	0.33	0.13

Intersection Summary

1: Highway 1 & Capistrano Road

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	113	140	349	188	400	92	479	11
v/c Ratio	0.24	0.27	0.77	0.43	0.25	0.42	0.32	0.02
Control Delay	22.5	5.4	33.2	34.7	15.4	37.9	16.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	5.4	33.2	34.7	15.4	37.9	16.7	0.0
Queue Length 50th (ft)	41	0	126	41	58	40	74	0
Queue Length 95th (ft)	82	38	226	81	120	93	144	0
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1250	1160	1124	947	1609	536	1501	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.12	0.31	0.20	0.25	0.17	0.32	0.02

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

Background PM Conditions
01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	157	254	236	241	602	144	456	31
v/c Ratio	0.56	0.49	0.66	0.46	0.37	0.49	0.30	0.04
Control Delay	31.7	6.9	27.9	28.6	14.5	31.4	13.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	6.9	27.9	28.6	14.5	31.4	13.7	0.7
Queue Length 50th (ft)	55	0	66	44	80	51	57	0
Queue Length 95th (ft)	114	52	140	84	158	110	114	3
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	625	847	744	1102	1628	596	1537	728
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.32	0.22	0.37	0.24	0.30	0.04

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	146	266	281	273	571	131	524	95
v/c Ratio	0.61	0.48	0.73	0.52	0.33	0.52	0.34	0.12
Control Delay	38.2	6.6	32.7	33.9	14.1	39.4	15.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	6.6	32.7	33.9	14.1	39.4	15.7	2.2
Queue Length 50th (ft)	62	0	94	61	82	57	78	0
Queue Length 95th (ft)	123	54	180	106	155	122	151	18
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	432	785	643	1021	1724	330	1563	770
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.34	0.44	0.27	0.33	0.40	0.34	0.12

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

Background+Project AM Conditions
01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	119	147	349	191	400	92	479	15
v/c Ratio	0.26	0.28	0.77	0.43	0.25	0.42	0.32	0.02
Control Delay	22.9	5.3	33.2	34.8	15.4	38.0	16.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	5.3	33.2	34.8	15.4	38.0	16.8	0.1
Queue Length 50th (ft)	43	0	126	42	58	40	74	0
Queue Length 95th (ft)	86	39	228	82	120	93	145	0
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1203	1160	1121	945	1610	535	1498	701
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.13	0.31	0.20	0.25	0.17	0.32	0.02

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	161	259	236	248	602	144	456	40
v/c Ratio	0.59	0.49	0.65	0.46	0.37	0.49	0.30	0.06
Control Delay	33.0	6.9	27.8	28.6	14.5	31.5	13.9	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	6.9	27.8	28.6	14.5	31.5	13.9	1.8
Queue Length 50th (ft)	57	0	66	45	80	52	57	0
Queue Length 95th (ft)	119	53	140	86	158	110	114	8
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	608	849	742	1101	1629	595	1530	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.31	0.32	0.23	0.37	0.24	0.30	0.06

Intersection Summary

Queues

1: Highway 1 & Capistrano Road

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	152	273	281	278	571	131	524	101
v/c Ratio	0.66	0.49	0.73	0.52	0.33	0.52	0.34	0.13
Control Delay	41.3	6.6	32.7	33.8	14.1	39.5	15.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	6.6	32.7	33.8	14.1	39.5	15.8	2.7
Queue Length 50th (ft)	65	0	94	62	82	57	78	0
Queue Length 95th (ft)	130	55	180	108	155	122	151	21
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	416	789	642	1021	1724	330	1556	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.35	0.44	0.27	0.33	0.40	0.34	0.13

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

Cumulative AM Conditions
01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	127	145	393	127	434	118	745	17
v/c Ratio	0.26	0.26	0.79	0.34	0.29	0.49	0.50	0.02
Control Delay	22.1	4.9	33.7	36.7	18.3	39.6	19.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	4.9	33.7	36.7	18.3	39.6	19.5	0.1
Queue Length 50th (ft)	45	0	145	28	71	52	131	0
Queue Length 95th (ft)	92	37	263	63	147	117	247	0
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1137	1135	1088	922	1496	522	1492	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.13	0.36	0.14	0.29	0.23	0.50	0.02

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	166	200	278	242	870	183	563	36
v/c Ratio	0.62	0.40	0.70	0.47	0.62	0.57	0.37	0.05
Control Delay	35.2	6.3	29.6	30.8	20.5	33.6	15.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	6.3	29.6	30.8	20.5	33.6	15.4	1.3
Queue Length 50th (ft)	62	0	82	47	143	69	78	0
Queue Length 95th (ft)	130	47	171	92	278	143	154	6
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	522	788	715	1051	1397	568	1519	721
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.25	0.39	0.23	0.62	0.32	0.37	0.05

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

Cumulative Saturday Midday Conditions
01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	175	281	269	298	787	125	647	110
v/c Ratio	0.80	0.49	0.66	0.54	0.46	0.51	0.42	0.15
Control Delay	54.6	6.5	27.6	33.8	16.0	39.6	17.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	6.5	27.6	33.8	16.0	39.6	17.3	3.4
Queue Length 50th (ft)	78	0	83	65	124	54	101	0
Queue Length 95th (ft)	153	55	164	116	233	119	198	26
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	387	792	668	1018	1728	329	1527	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.35	0.40	0.29	0.46	0.38	0.42	0.15

Intersection Summary

Queues
1: Highway 1 & Capistrano Road

Cumulative+Project AM Conditions
01/16/2019

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	133	152	393	130	434	118	745	21
v/c Ratio	0.29	0.27	0.79	0.35	0.29	0.49	0.50	0.03
Control Delay	22.5	4.9	33.8	36.7	18.3	39.6	19.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	4.9	33.8	36.7	18.3	39.6	19.6	0.4
Queue Length 50th (ft)	48	0	145	29	71	52	131	0
Queue Length 95th (ft)	96	38	263	65	147	117	247	2
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	1090	1136	1085	922	1496	522	1490	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.13	0.36	0.14	0.29	0.23	0.50	0.03

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	205	278	249	870	183	563	45
v/c Ratio	0.65	0.41	0.70	0.48	0.62	0.57	0.37	0.06
Control Delay	37.2	6.3	29.6	30.7	20.5	33.7	15.5	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	6.3	29.6	30.7	20.5	33.7	15.5	2.2
Queue Length 50th (ft)	64	0	82	48	143	69	78	0
Queue Length 95th (ft)	135	48	171	94	278	143	155	11
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	508	791	715	1050	1398	567	1513	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.26	0.39	0.24	0.62	0.32	0.37	0.06

Intersection Summary

	→	↘	←	↖	↑	↘	↓	↙
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	181	288	269	303	787	125	647	116
v/c Ratio	0.79	0.49	0.64	0.55	0.46	0.52	0.43	0.16
Control Delay	51.8	6.2	26.3	34.3	16.6	40.4	18.1	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	6.2	26.3	34.3	16.6	40.4	18.1	3.9
Queue Length 50th (ft)	81	0	84	69	131	56	107	0
Queue Length 95th (ft)	157	55	163	119	238	121	205	30
Internal Link Dist (ft)	376		80		406		1007	
Turn Bay Length (ft)		225		350		275		
Base Capacity (vph)	385	790	660	1004	1707	325	1500	744
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.36	0.41	0.30	0.46	0.38	0.43	0.16

Intersection Summary

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT I

DKS

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MEMORANDUM

DATE:	November 30, 2018
TO:	Ruemel Panglao, San Mateo County
FROM:	Josh Pilachowski, DKS Associates Erin Vaca, DKS Associates
SUBJECT:	Draft Peer Review of Princeton Harbor RV Park TIA

INTRODUCTION

This technical memorandum summarizes the results of a peer review of the Transportation Impact Assessment (TIA) done for the 280 Capistrano Road Princeton Harbor RV Park Project, prepared for the Point Pillar Project Developers, LLC.

The following document was reviewed as part of the peer review:

> *280 Capistrano Road Princeton Harbor RV Park Draft Traffic Impact Analysis* (June 7, 2017) – prepared by Hexagon Transportation Consultants.

Comments are summarized in the following section which corresponds to the structure of the TIA. The final section summarizes the most critical comments and findings.

TIA REVIEW BY SECTION

Executive Summary

- Page i - The intersection of Pillar Point Harbor Boulevard and Capistrano Road should be described as an "unsignalized" intersection in the first paragraph to clarify that the driveway entrance is not signalized.
- Page i - ***Just as a point of information***, the ITE Trip Generation Manual 9th Edition was used and referenced throughout the report. Although published after the TIA was prepared, there is a 10th edition now in use (Trip Generation Manual, 10th Edition, September 2017).
- Page ii - Under project impacts, vehicles on stop-controlled approaches to the unsignalized intersection of Pillar Point Harbor Boulevard and Capistrano Road are said to "experience moderate delays." Impacts should focus instead on expected change due to the project, so this should be revised to say the intersection would "experience minimal increases in delay" between the no-project and project conditions. This comment applies to descriptions of project impacts throughout the document.

Chapter 1: Introduction

Scope of Study

- **Missing Requirements** – Introduction should include parcel size, general terrain features, surrounding use, and existing/proposed zoning categories.
- Page 2 - Figure 1: Legend should read "El Granada (unincorporated San Mateo County)". This change to the legend should be made on all the figures in the document.
- Page 4 Section is unlabeled and should have a section heading, such as "Analysis Scenarios": The reference to Synchro also belongs in the methodology section instead of scenario listing. It is also typical to specify the version of the Synchro software used, even though this information can be obtained from the worksheets in the Appendix D. This comment also applies anywhere the Synchro software package is mentioned..
- Page 4 - The bullet point for Scenario 2 should note that the list of approved projects is included in Appendix **C** (not B). Also, it is standard to order Appendices in the order they appear in the report, so it is unusual to start with Appendix C. The previous appendices could be referenced in the description of Scenario 1.
- Page 4 - **Just as a point of information**, the standard TIA order generally places Project description and Existing Plus Project scenario analysis before the introduction of Background and Background Plus Project, unless there is no Existing Plus Project analysis included. I don't think I've seen this scenario order before.
- Page 4 – Section heading should read Level of Service Definitions and Analysis Methodologies as Standards are not discussed.

Methodology

- Page 5 - Since Highway Capacity Manual (HCM) 2010 methods were used in the analysis, Table 1 should reference this source and not HCM 2000, even though the LOS definitions have not changed between the two references. The same comment applies to Table 2.
- Page 6 - The second sentence of the paragraph under "CMP Roadway System" should be revised as follows, "~~Given that n~~New SR 1 trips generated by the project are expected to be considerably less…"
- Page 6 - In Table 3, the source of the existing roadway lanes and capacity is unclear. The first table note gives source as the "Level of Service and Performance Measure Monitoring Report – 2015". However, the 2015 CMP Appendix A, inventory lists State Route 1 (SR 1) from Santa Cruz County to Linda Mar Boulevard as a two-lane highway (while there are additional through and turning lanes at the intersection with Capistrano Road, SR-1 in the project vicinity is generally a two-lane highway). Appendix B of the 2015 CMP specifies that LOS for two-lane highways is to be based on two-way volume compared to a total capacity of 2,800 vehicles per hour (vph) and should not be separated by direction.

Revised analysis suggested - Table 3 should be revised to follow the methodology outlined in the 2015 CMP, combining project traffic into bi-directional volumes with accurate capacity. In addition, the same analysis should be shown for the Saturday midday period.

- Page 7 - The section under “Intersection Operations” should specify whether the calculations were carried out by hand or using the Synchro software.
- Page 7 – **Revised Analysis suggested** - The Poisson arrivals analysis described under Intersection Operations is inadequate to fully analyze queue lengths as this method measures only arrivals and not the rate that vehicles can disperse based on gaps in conflicting traffic flows. Either use Synchro output or methodology from the 2010 Highway Capacity Manual for estimating queue lengths found in Chapters 18 and 19.

Chapter 2: Existing Conditions

Existing Transit Services

- Page 10 - Figure 3 should show the location of bus stops within walking distance to the project site.

Existing Intersection Levels of Service

- Page 13 – Peak Hours should be ordered as Weekday AM, Weekday PM, Saturday Midday. As presented it is easy to assume that midday analysis occurs during the weekday.

Chapter 3. Background Conditions

Roadway Network and Traffic Volumes

- Page 14 - The correct reference to the appendix containing a list of approved projects in the second paragraph is Appendix C and the correct reference to the appendix with the traffic volume tabulations is Appendix B.

Chapter 4 Project Conditions

Significant Impact Criteria

- Page 17 - The source document for the thresholds of significance for impacts should be cited.

Transportation Network Under Project Conditions

- Page 17 - The description of the transportation network under project conditions could be more clearly worded as, “The proposed project does not include any changes to the existing transportation network.” This is not an assumption but based upon the project description.

Trip Generation

- Page 18 - In Table 6, the total and number of inbound trips and outbound trips calculated from the survey data should not be averaged, as they describe different size parks. Instead in/out should be calculated as a rate similar to total and then averaged.
- Page 18 –In the report, the RV Park trip generation survey was said to have been conducted in March 2017. The first sheets in Appendix A are dated Tuesday and Wednesday in August of 2016. The trip generation sheets are also labelled as “AM Peak Hour” and “PM Peak Hour” and the peak volumes do not appear to correspond to the data in the table. We would suggest removing the unnecessary pages from the appendix.
- Page 19 - **Revised analysis suggested** - In Table 7, the trip generation calculations are based on 50 RV spaces, but the project definition also includes 7 tent spaces. There needs to be an explanation as to why these would not generate trips, or the generation/analysis needs to be revised. In addition, given the conservative assumption of 100 percent occupancy of the RV spaces (the ITE trip generation rate is per occupied space), it may have thought not to be necessary to include the tent spaces in the calculation. However, all assumptions should be clearly stated.

Chapter 5. Cumulative Conditions

- Page 25 – The Roadway Network and Traffic Volumes methodology is confusing and should be rewritten for clarity. First, it’s stated that 1% growth plus approved developments make up baseline cumulative. Then it’s stated that 1% growth plus (presumably) trips from this project were added without restating addition of approved developments.
- Page 25 - **Revised analysis suggested** - Standard cumulative horizon period is 15-20 years. This cumulative analysis was done for a 5-year horizon period, which is more consistent with a near-term or background analysis. If needed, a source of year 2040 traffic forecasts for SR 1 is readily available in the C/CAG travel demand model. Otherwise, this section of the analysis should be removed if not deemed necessary by the County.

Chapter 6. Other Transportation Issues

- Page 28 – **Revised analysis suggested** - As stated in the Methodology section, the Poisson arrivals analysis described under Intersection Operations is not an appropriate methodology. Also, the methodology does not need to be completely restated in this section.

CONCLUSIONS

Analysis Requirements

Based upon the San Mateo County Traffic Impact Study Guidelines, the proposed development does not meet minimum threshold of 100 vehicles generated during a peak hour that would require a traffic study, however other considerations can prompt a similar study, such as community or staff concerns for potential impacts to the surrounding network. The traffic study as submitted meets San Mateo County Traffic Study with a couple notable omissions including general site description (parcel size, general terrain features, surrounding use, and existing/proposed zoning categories), daily roadway volumes, and 20-year traffic volumes and analysis (cumulative scenario is presented as 5-year analysis). The Local Coastal Program policies do not include any relevant information in conflict with the analysis as presented. The appropriate checklist is attached.

Environmental Requirements

From a CEQA standpoint, the analysis does not present any impacts, with the one exception being the potential of needing roadway analysis pending the corrected roadway capacity analysis to confirm if the project adds 1% to Highway 1 as an adjacent CMP facility. The appropriate checklist is attached.

Pending Analysis

- A final confirmation of the conclusions above is pending a revised roadway segment capacity evaluation, a corrected queueing analysis, a corrected trip generation analysis, and addition of an appropriate 20-year cumulative condition volume and analysis. Additionally, it should be noted that the organization of the report chapters is atypical and somewhat confusing. A more standard and easier-to-follow presentation would organize the discussion of conditions as follows:
    - Existing Conditions
    - Existing plus Project Conditions
    - Background Conditions
    - Background plus Project Conditions
    - Cumulative Conditions

Cumulative plus Project Conditions

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT J

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

EECAP DEVELOPMENT CHECKLIST

HARBOR VILLAGE RV PARK

Measure		Description & Performance Criteria	Compliance			
			Complies	Does Not Comply	N/A	See Discussion
1.1	Energy Upgrade California	Participate in an energy retrofit rebate program, to achieve a minimum of 30% energy savings.			X	✓
1.2	Residential Energy Efficiency Financing	Participate in a residential energy efficiency financing program, to achieve 30% energy savings.			X	✓
1.3	Low-Income Weatherization	Complete weatherization, to achieve average energy savings of 25%.			X	✓
1.4	Tree Planting	Tree plantings to shade new or existing homes.	X			
1.5	Propane Switch	Switch from propane heater to more energy-efficient options, such as Energy Star furnaces or electric air-source pumps.			X	✓
2.1	Commercial and Industrial Efficiency	Complete energy efficiency upgrades through third-party programs.			X	✓
2.2	Commercial Financing	Participate in commercial energy efficiency financing programs, to achieve a minimum of 30% energy savings.			X	✓
2.3	Institutional Energy Efficiency	Complete energy efficiency retrofits at large institutional facilities.			X	✓
3.1	Green Building Ordinance	Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, for all construction projects subject to the Green Building Ordinance.	X			

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

HARBOR VILLAGE RV PARK

Measure	Description & Performance Criteria	Compliance			
		Complies	Does Not Comply	N/A	See Discussion
3.2 Green Building Incentives	Comply with the Green Building Ordinance and achieve CALGreen Tier 1 energy efficiency standards, regardless of applicability of the Green Building Ordinance.	X			
3.3 Urban Heat Island	Install shading, "cool" surfaces design, and/or open-grid paving to reduce hardscape through strategies such as interlocking concrete pavement, stones, or blocks.	X			
3.6 Regional Energy Efficiency Efforts	Procure and install energy-efficient equipment, through programs such as bulk-purchasing, to achieve a minimum of 8% energy savings.			X	✓
4.1 Solar PV Incentives	Install a solar photovoltaic system, using private resources and/or local or state incentives, including County incentives, and state rebates through the California Solar Initiative.	X			
4.2 Solar Water Heater Incentives	Install solar water heaters, using private resources and/or local or state incentives, including County incentives and state rebates through the California Solar Initiative.	X			
4.3 Pre-Wired Solar Homes	Pre-wire and pre-plumb for solar thermal or PV systems.			X	✓
4.4 Pilot Solar Program	Install a solar photovoltaic system through a development project program.			X	✓
4.5 Renewable Financing	Install a solar photovoltaic system or solar water heater using financing programs such as power purchase agreements or Property Assessed Clean Energy.			X	✓

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

HARBOR VILLAGE RV PARK

Measure		Description & Performance Criteria	Compliance			
			Complies	Does Not Comply	N/A	See Discussion
4.7	Incentivize Wind Energy	Install small distributed generation wind power systems on existing development.			X	✓
4.9	Emissions Offset Programs	Participate in an energy offset program to purchase electricity generated from renewable sources off site.		X		
5.1	General Plan and Zoning Updates	Provide transit-oriented, mixed-use developments.			X	✓
5.3	Pedestrian Design	Incorporate pedestrian design elements to enhance walkability and connectivity, while balancing impacts on vehicle congestion.			X	✓
6.1	Neighborhood Retail	Provide neighborhood retail, daily service and commercial amenities in residential communities.			X	✓
6.2	Traffic Calming in New Construction	Incorporate appropriate traffic-calming features, such as marked crosswalks, countdown signal timers, planter strips with street trees, and curb extensions.			X	✓
6.4	Expand Transit	Enhance bus and safety shelter amenities to support public transit ridership.			X	✓
7.1	Parking Ordinance	Provide staggered parking demand, reduced parking, or parking based on demand levels that is lower than required in the code, if supported by parking study findings or proximity to mixed-use and public transit services.			X	✓
7.3	Unbundled Parking	Price parking separately from rentals or leases, using strategies such as metered parking or parking permits.			X	✓

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

HARBOR VILLAGE RV PARK

Measure		Description & Performance Criteria	Compliance			
			Complies	Does Not Comply	N/A	See Discussion
8.1	Employee Commute	Provide a Commute Trip Reduction program to discourage single-occupancy vehicle trips and encourage other modes of alternative transportation.			X	✓
8.2	Workplace Parking	Implement workplace parking pricing programs.			X	✓
8.3	Employer Transit Subsidies	Provide transit subsidies or transit passes to employees.			X	✓
8.4	Work Shuttles	Expand worker shuttle programs.			X	✓
10.1	Low Carbon Fuel Infrastructure	Install electric vehicle charging stations or provide neighborhood electric vehicle networks.		X		
13.1	Use of Recycled Materials	Incorporate a minimum of 15% recycled materials into construction.		X		
13.2	Zero Waste	Provide trash, recycling, and composting collection enclosures.	X			
14.1	Smart Water Meters	Install smart water meters.	X			
14.2	Water Reuse	Use grey, rain, and recycled water for landscaping or agricultural purposes.		X		✓
15.1	Construction Idling	Construction equipment for new development to comply with best management practices from Bay Area Air Quality Management District guidance.	X			
15.2	Electrification in New Homes	Provide outdoor electrical outlets for charging outdoor household equipment.	X			

APPENDIX F: EECAP DEVELOPMENT CHECKLIST

HARBOR VILLAGE RV PARK

Discussion (please list policy #)

* THE FOLLOWING POLICY NUMBERS 1.1, 1.2, 1.3, 2.1, 22, 23, 3.6, 4.3 AND 4.4 ARE NOT APPLICABLE SINCE THE PROPOSED PROJECT IS A NON-RESIDENTIAL / COMMERCIAL PROJECT.
* POLICY NUMBERS 8.1, 8.2, 8.3 AND 8.4 ARE NOT APPLICABLE AS THE PARK WILL NOT HAVE ANY EMPLOYEES EXCEPT FOR THE PARK MANAGERS WHO WILL LIVE ONSITE IN THERE RV'S 24/7.
* POLICY # 4.5 THE PROJECT IS NOT LARGE ENOUGH TO WARRENT RENEWABLE FINANCING.
* POLICY # 4.7 THERE IS NO EXISTING DEVELOPMENT FOR WIND ENERGY INCENTIVE.
* POLICY NUMBERS 5.1, 5.3 6.1, 6.2, 6.4, 7.1 AND 7.3 THE PROJECT IS NOT LARGE ENOUGH TO WARRENT THESE MEASURES
* POLICY # 14.2 THE PROPOSED 869 SQFT LAUNDRY BATH BUILDING IS NOT LARGE ENOUGH TO GENERATE RECYCLED WATER FOR THE PROJECT