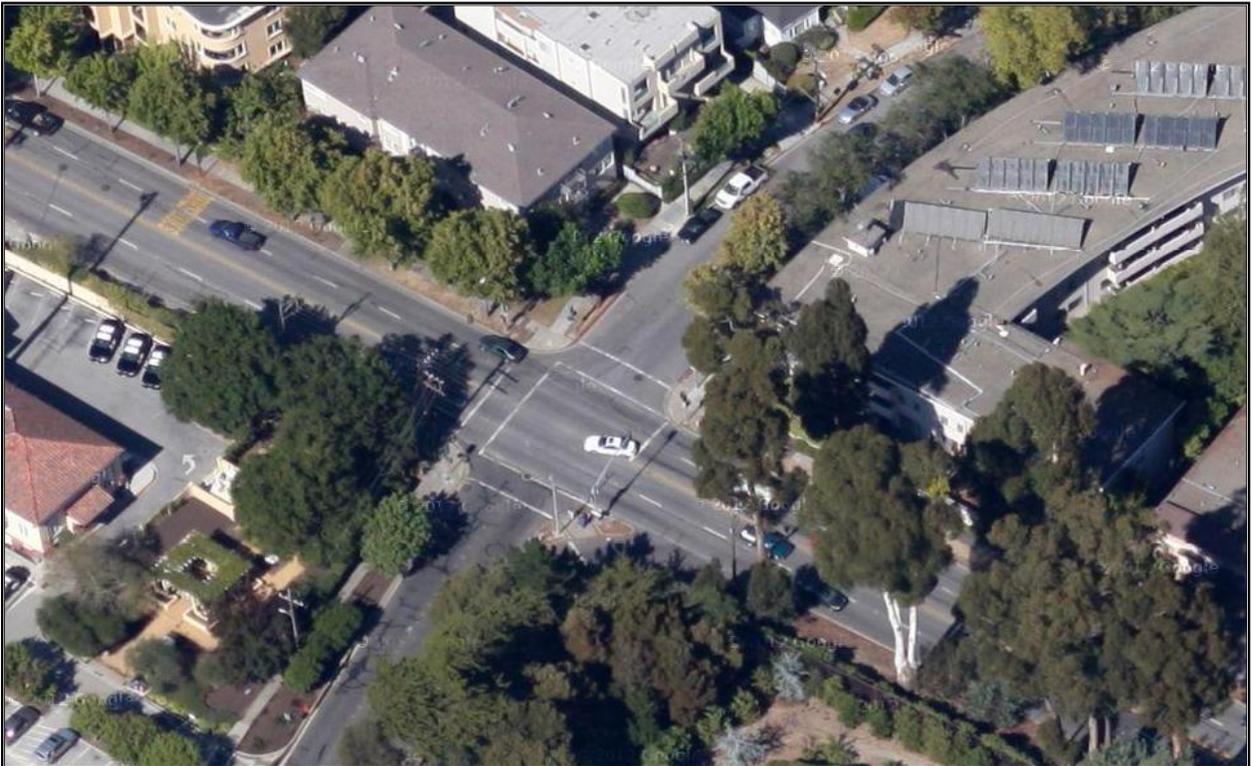


SR 82 at Floribunda Avenue Intersection Safety Improvement Project

SAN MATEO COUNTY, CALIFORNIA
DISTRICT 4 – SM – 82, (PM 13.69) Expenditure Authorization 1G020

Draft Environmental Impact Report/Environmental Assessment



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.



September 2014

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Environmental Impact Report/Environmental Assessment (EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in San Mateo County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

Please read this Environmental Impact Report/Environmental Assessment. Additional copies of this document are available for review at the City of Burlingame Main Library at 480 Primrose Road, Burlingame, CA 94010; the document as well as the technical studies is available for review at the Caltrans office at 111 Grand Avenue, Oakland, CA 94612. The document and facts about the project can also be viewed on the internet at: <http://www.dot.ca.gov/dist4/projects/floribunda82/>.

We welcome your comments. If you have any comments regarding the proposed project, please attend the open house planned for Thursday, November 13, 2014, at the following location:

Burlingame Community Center, Multipurpose Room
850 Burlingame Avenue
Burlingame, CA 94010
(650) 558-7300

Submit comments via postal mail to:
Yolanda Rivas, Environmental Branch Chief, Attention: Sam Fielding, Department of Transportation, Office of Environmental Analysis MS 8B
111 Grand Avenue, Oakland, CA 94612

Submit comments via e-mail to: yolanda_rivas@dot.ca.gov.

Submit comments by the deadline: 11/23/2014

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project. For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attention: Yolanda Rivas, Office of Environmental Analysis; (510) 286-6216 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

SR 82 at Floribunda Avenue Intersection Safety Improvement Project,
San Mateo County.

DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to:
(State) Division 13, California Public Resources Code

(Federal) 42 USC 4332(2)(C) and 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: Town of Hillsborough, City of Burlingame,
California Transportation Commission

9-30-14
Date of Approval


Bijan Sartipi, District Director
California Department of Transportation
NEPA and CEQA Lead Agency

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SUMMARY

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under both NEPA and CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, quite often a "lower level" document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

This project proposes to improve the safety of the intersection of State Route (SR) 82 at Floribunda Avenue, most specifically, to reduce left-turn collisions. There is a need to construct safety improvements at this intersection to significantly reduce the occurrence of left-turn related accidents. The lack of dedicated left-turn lanes and left-turn signals contributes to the occurrence of intersection accidents. The estimated project cost would be approximately \$3.6 million, funded from State Highway Operation and Protection Program (SHOPP) funds. Construction is estimated to begin sometime in 2018.

After public circulation of this DEIR/EA, a Final Environmental Impact Report/Environmental Assessment (EIR/EA) would be prepared for this project. Caltrans may undertake additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative.

Overview of Project Area

State Route (SR) 82 is a California State highway that begins at Interstate 880 (I-880) in San Jose and ends at Interstate 280 (I-280) in San Francisco, forming a central artery through several San Francisco peninsula communities including Palo Alto, San Carlos, San Mateo, Burlingame and Millbrae. Commonly referred to as "El Camino Real" (Spanish for The King's Highway) it was part of the 600-mile Mission Trail connecting the 21 Spanish Missions from San Diego to Sonoma. SR 82 runs south to north for approximately 42 miles, with 17 miles in Santa Clara County, 25 miles in San Mateo County, and terminates a short distance into San

Francisco County at I-280. Throughout San Mateo County, SR 82 serves as a parallel arterial to I-280 and US 101. SR 82 is functionally classified by the Federal government, as a ‘Principal Arterial-Urban.’”

The proposed project is located at the intersection of SR 82 and Floribunda Avenue, within the jurisdiction of both the city of Burlingame and the town of Hillsborough in San Mateo County. SR 82 at Floribunda Avenue is a four-lane, undivided highway with two 11-ft. through lanes with uncontrolled left-turn movements in both directions at the signalized intersection with Floribunda Avenue. SR 82 at this location has two bus stops served by the San Mateo County Transit Agency (SamTrans). Floribunda Avenue is a designated bicycle route.

Related Plans and Projects

Regional Planning

In addition to the proposed project there are state, regional and local plans in the vicinity of SR 82 including on State Highway 101 and selected interchanges. At the regional level, the Metropolitan Transportation Commission (MTC) is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities. The MTC’s 2040 Regional Transportation Plan (Plan Bay Area), adopted July 18, 2013, lists programmed and planned projects throughout the nine counties of the Bay Area. Plan Bay Area is the successor to Transportation 2035, the long-range plan adopted by MTC in 2009. Plan Bay Area will address new requirements flowing from California’s 2008 Senate Bill 375 (Steinberg), which calls on each of the state’s 18 metropolitan areas to reduce greenhouse gas (GHG) emissions from cars and light trucks. The transportation sector represents about 40 percent of the GHG pollution that scientists claim is causing climate change.¹

State Planning

In the summer of 2013 there was an existing Caltrans project completed to improve the drainage system along both sides of SR 82 in the vicinity of Floribunda Avenue to address flooding on the east side of SR 82 that occurs after heavy rainfall.

There is a Caltrans America Disability Act (ADA) Sidewalk Safety Project that is programmed for July, 2014 which will repair and improve existing sidewalk pedestrian infrastructure, specifically existing damaged sidewalks along SR82 (SR 82 Boulevard). Please see Section 2.23 Cumulative Impact Assessment, for a more detailed discussion about this project.

Local Planning

The federal The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) act, enacted in August 2005 as the reauthorization of The United States federal Transportation Equity Act for the 21st Century (TEA-21), provided the following expenditures on or near SR 82:

1. High Priority project #1942: SR 82 “Grand Boulevard” initiative in San Mateo County. \$3,000,000.

The Grand Boulevard Initiative is a collaboration of 19 cities, counties, local and regional agencies united to improve the performance, safety, and aesthetics of SR 82 Boulevard. This project has multi-modal streetscape improvement components at locations to the north and south of this safety project at the intersection of SR 82 and Floribunda Avenue.

¹ MTC Bay Area Plan. Retrieved on May 14, 2014 from http://www.mtc.ca.gov/planning/plan_bay_area/.

The San Mateo SMART Corridor project, begun in the summer of 2011, installed equipment on various State Routes and local arterials in San Mateo County to reduce congestion and improve traffic operations. The project included installation of camera and optical fiber cables and conduits along SR 82, including the intersection with Floribunda Avenue.

Purpose and Need

The purpose of the proposed project is to improve intersection safety of SR 82 at Floribunda Avenue to reduce the occurrence and potential for collisions involving left-turn movements.

According to state accident monitoring data, the intersection has a higher left-turn related collision rate than the statewide average. There were 22 reported collisions over a three year period, (according to most recent available data) with over 54.5% of those collisions identified as broadside accidents related to left-turns, followed by 13.6% rear end, 9.1% sideswipe, 9.1% head-on and 4.5% auto-pedestrian collisions.²

The proposed project is needed to address the following:

- vehicles not having enough time or gaps to turn left safely;
- inadequate sight distance to turn left due to opposing vehicles making left-turns and blocking the view of opposite oncoming through vehicle traffic;
- no protected green arrow for left-turns
- vehicles stopping in the SR 82 inner through lanes to make left-turns, creating traffic flow congestion cues during peak hours.

Proposed Action

Caltrans' environmental scoping process includes an analysis of reasonable build alternatives. A No Build Alternative is also considered and represents the existing condition. All build alternatives are compared to the No Build. A reasonable range of alternatives were compiled based upon input from Caltrans project development team (PDT), cities of Burlingame and Hillsborough and the public. After a thorough alternatives analysis, Caltrans identified a Build Alternative which is presented in this draft environmental document with the No Build Alternative. The other alternatives considered are summarized under Alternatives Considered and Withdrawn.

Alternatives were identified based on meeting the purpose and need for this project to increase traffic safety by reducing left-turn collisions. The No Build and Build Alternatives are described below.

1. Build Alternative: Widen both sides of SR 82 (majority within existing Caltrans right-of-way)

The proposed Build Alternative would widen SR 82 at the Floribunda Avenue intersection at Post Mile (PM) 13.69 between Oak Grove Avenue and Bellevue Avenue, to install left-turn pockets and left-turn signals in the northbound and southbound directions. The project is approximately 500 ft. long and 60 ft. wide and includes the north and south approaches to Floribunda Avenue on SR 82. Two existing, through lanes would be maintained in both the north and southbound directions on SR 82.

² California Department of Transportation Traffic Accident Surveillance and Analysis Systems (TASAS), Data collected over three year period from 4/1/09 to 3/31/12.

The signalized intersection of SR 82/Floribunda Avenue would be widened on both sides of SR 82 to construct a 10 ft. wide left-turn channel along both northbound and southbound of SR 82. A 10-ft. wide, center left-turn lane, including approach tapers would be added, as well as 1.5-ft. shoulders in both directions of SR 82 for the majority of the 500 ft. by 60 ft. project limits. Currently, there is no roadway shoulder at the SR 82 and Floribunda Avenue intersection. The proposed roadway cross-section would consist of two 11 ft. wide travel through lanes in each direction, and 10-ft. wide left-turn pocket in both directions, with 1.5 ft. shoulder and maintain the existing 4 to 5 ft. wide sidewalks. The roadway within the project limits would be approximately 60 ft. wide and the left-turn pocket in the southbound direction would be 50 ft. long with a 50 ft. taper. The left-turn pocket in the northbound direction would be 75 ft. long with a 60 ft. taper. The construction limit length for this alternative would be approximately 500 ft. long by 60 ft. wide. The total Construction Site Area would be 0.87 acres. The total disturbed Soil Area would be 0.32 acres.

The majority of work would occur within the state right-of-way except for some minor work at specific points. Partial acquisition of right-of-way from two properties at northeast and southeast intersection quadrants would be required for construction of the curb ramps. Permits to Enter and Construct (PECs) would be required from the Town of Hillsborough and City of Burlingame local streets. This includes a small landscaped portion of Hillsborough's municipal site known as Centennial Park. Temporary Construction Easements (TCEs) would be required on 4 parcels for the grading and construction of driveways.

Under the Build Alternative 14 trees would be removed. Of the 14 trees, 9 are non-historic (sweet gum, blue gum, blackwood acacia, and young eucalyptus trees) and (5) five trees (four mature eucalyptus trees and one young elm tree) have been identified as contributors to the Howard-Ralston Eucalyptus Tree Rows, a National Register of Historic Places-listed property. Please see the Cultural Section 2.7.2.

A Pacific Gas and Electric (PG&E) overhead electrical line along the west side of SR 82 is in conflict with the roadway widening. Burying the PG&E electrical line within the State right of way is anticipated. In addition, the PG&E gas line, the AT&T underground line and the City of Burlingame water line on the east side of SR 82 are in conflict and relocating them within the State Right of Way are anticipated. Several existing utility boxes and manholes need to be relocated or adjusted to the finished grade. Potholing will be required to identify the underground utilities and detailed utility verification will be done during the PS&E phase.

The existing utilities will be determined during the Plans, Specifications and Estimates (PS&E) phase of the project. The PS&E phase follows the environmental review and final document public release for the project. The size of utility trenches will be determined by the utility companies. Usually, utility trenches are 2.5 to 3 ft. deep and 1.5 to 2 ft. wide. The need for lane closures and detours will be identified in a Transportation Management Plan (TMP), which will be prepared during the PS&E phase.

Figure 3, displays the draft plan for the Build Alternative including the five trees (four mature eucalyptus trees and one young elm tree) that are contributors to the Howard-Ralston Eucalyptus Tree Rows as well as the nine other non-historic trees that would require removal. Please see Visual/Aesthetic section for more information about trees.

2. No Build (No Action) Alternative

The existing facility is a four lane, undivided, conventional state highway, SR 82, approximately 40 ft. wide, consisting of approximately two 11-ft. wide through lanes with uncontrolled left-turn movements in the north and southbound directions. The posted speed limit on SR 82 is 35 miles per hour (mph). In the northbound direction, toward McKinley Elementary School, 1 block north of Floribunda Avenue, the speed limit is 25 mph when school children are present. While this alternative would not meet the purpose and need, it serves as the baseline to which the Build Alternative can be compared. As traffic volumes on SR 82 increase, it is expected that accidents would increase, including broadside collisions at the intersection with Floribunda Avenue. The No Build Alternative would not reduce the high broadside collision rate involving left-turn traffic movements nor reduce the congestion and traffic flow for left-turning vehicles on SR 82 at Floribunda Avenue.

Project Impacts

Project impacts that would require avoidance, minimization, and/or mitigation measures as a result of the proposed SR 82 (SR 82) at Floribunda Intersection Safety Improvement Project include impacts to Traffic and Transportation/Pedestrian and Bicycle Facilities, Cultural Resources, Visual/Aesthetics, Noise, Paleontological Resources, Geology/Soils/Seismicity/Topography, Hazardous Waste/Materials, and the Biological Environment. A summary of the avoidance, minimization and mitigation measures for the Build Alternative is included in Table S-1.

Table S-1: Build Alternative Project Impacts

Resource Area	Potential Impacts	Avoidance, Minimization and/or Mitigation Measures
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Disruption to transportation, transit, pedestrian and bicycle facilities during construction.	<p>Traffic and Transportation: A Transportation Management Plan (TMP), Construction Zone Enhance Enforcement Program (COZEEP), Portable changeable message signs and notification of impacted groups (public transit, bicyclists, pedestrians).</p> <p>Construction Impacts: Construction activities would result in temporary traffic detours and possibly single lanes impacting traffic/transportation, pedestrian circulation and bicycles on the Floribunda Avenue bicycle route. These impacts would be minimized through coordination with the Town of Hillsborough, City of Burlingame and emergency providers. Efforts would be made to concentrate the majority of road closures and construction activity during off-peak hours to reduce traffic impacts. Traffic would be diverted to one side of SR 82 and traffic would be controlled by flaggers stationed at both ends of the closure.</p>
Cultural Resources	The proposed Build Alternative would remove (5) five contributor trees to the Howard-Ralston Eucalyptus Tree Rows, a National Register of Historic Places listed property, within the 500 ft. project boundary at the intersection of SR 82 and Floribunda Avenue.	<p>Caltrans will make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees where space is available within the Howard-Ralston Eucalyptus Tree Rows on SR 82.³ Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety.</p> <p>Caltrans may remove and replace the last Sweetgum (<i>Liquidamber styraciflua</i>), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species to help maintain the integrity of the landscape/visual character of the tree rows.</p> <p>The replacement trees would be Accolade © elm or similar species and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the elm</p>

³ Contributing trees are tree species that are considered to be contributing elements of the historic resource and continue to strengthen the integrity of the Howard-Ralston Eucalyptus Tree Rows as they carry out McLaren's original design of a landscaped, shaded avenue. These contributing trees include the mature eucalyptus and mature elm trees planted originally between 1873 and 1876. Elms planted as replacements are also considered contributors. Non-contributing trees are trees that do not contribute to the Howard-Ralston Eucalyptus Tree Rows. There are 201 non-contributing trees within the resource which include orange gum (*E. bancrofti*), desert box gum (*E. microtheca*), flowering gum (*E. ficifolia*), Nichol's willow-leaf peppermint, swamp mahogany (*E. robusta*), swamp gum (*E. rudis*), silver dollar gum, pink iron bark (*E. sideroxylon* 'Rosea'), and acacia, as well as redwood, sycamore, horse chestnut and sweet gum trees.

Resource Area	Potential Impacts	Avoidance, Minimization and/or Mitigation Measures
		trees would grow to 40-60 ft. in height and have a 35-40 ft. wide crown. ⁴
Visual/Aesthetics	The Build Alternative would remove 14 (5 historic and 9 non-historic) trees. The proposed project Build Alternative would have a moderate-low impact to the landscape/visual character of the tree rows.	<p>Caltrans would make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees where space is available within the Howard-Ralston Eucalyptus Tree Rows on SR 82. Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety.</p> <p>Caltrans may remove and replace the last Sweetgum (<i>Liquidamber styraciflua</i>), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species to help maintain the integrity of the landscape/visual character of the tree rows.</p> <p>The replacement trees would be Accolade © elm or similar species and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the elm trees would grow to 40-60 ft. in height and have a 35-40 ft. wide crown.⁵</p>
Noise	<p><i>NEPA conclusion:</i> The federal noise abatement criteria were met or exceeded at 556 and 707 El Camino Real property addresses and McKinley Elementary School Yard with existing noise.</p> <p><i>CEQA conclusion:</i> Noise levels are not expected to increase above the existing, or baseline, levels.</p> <p>Temporary construction noise.</p>	<p>There are no reasonable and feasible abatement measures for existing and future noise that could be implemented. No sound walls required.</p> <p>Construction noise abatement would be implemented as required by Caltrans' Standard Specification 14-8.02, "Noise Control".</p>
Paleontological Resources	Under the proposed Build Alternative, planned ground-disturbing activities within the project foot print could potentially impact paleontological resources.	<p>The following mitigation measures for paleontological resources are recommended and in accordance to Caltrans' Standard Environmental Reference Guidelines (Caltrans, 2007). It is recommended that Caltrans implement the following measures:</p> <ul style="list-style-type: none"> It is recommended that a Paleontological Evaluation Report (PER) be prepared prior to construction to define actual locations where monitoring will be necessary based upon the project design. For budgeting, the PER will provide enough information about the level of effort needed.

⁴ The Morton Arboretum. Retrieved from <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/elm-cultivars>, on 6/23/14.

⁵ The Morton Arboretum. Retrieved from <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/elm-cultivars>, on 6/23/14.

Resource Area	Potential Impacts	Avoidance, Minimization and/or Mitigation Measures
Paleontological Resources (cont'd)		<ul style="list-style-type: none"> • Based on the findings from the PER, a Paleontological Mitigation Plan (PMP) may be recommended to define the specific mitigation measures and methods that will be implemented. • These recommendations may include: <ul style="list-style-type: none"> a. A qualified paleontologist be present to consult with grading and excavation contractors at pre-grading meetings. b. The Principal Paleontologist also have an environmental meeting to train grading and excavation contractors in the identification of fossils. c. When fossils are discovered, the paleontologist (or paleontological monitor) will be called to recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner. d. Fossil remains collected during the monitoring and salvage portion of the mitigation program will be cleaned, stabilized, sorted, and cataloged. e. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will then be deposited in a scientific institution with paleontological collections. f. A final report will be completed that outlines the results of the mitigation program. g.
Geology/Soils/ Seismicity	<p>For the Build Alternative, excavation, trenching and possible deep foundation work for light signals would be required during construction.</p> <p>Environmental borings show mostly silts, clays and silty sands surrounding the site. A geotechnical investigation should be performed to determine</p>	<p><i>Exploration and Investigations:</i> Field and subsurface exploration, laboratory tests and analysis shall be performed to evaluate foundation designs, and if necessary slope ratios, and to determine soil strengths and mitigation.</p> <p>For each traffic signal location a geotechnical boring should be completed in advance to</p>

Resource Area	Potential Impacts	Avoidance, Minimization and/or Mitigation Measures
Geology/Soils/ Seismicity, continued	stability of excavations and if shoring will be needed. To our knowledge there is no hazardous waste within the project site. Soil properties will be evaluated during geotechnical investigation.	<p>determine groundwater levels, soil types and strengths, and structural conditions in rock if encountered. Several investigative methods may be used, including but not limited to: soil borings, rock coring, Cone Penetrometer Tests (CPTs), and geophysical studies. Laboratory testing may be required to determine soil strength, permeability, moisture content, and grain size.</p> <p><i>Groundwater:</i> Groundwater levels can be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels. CPTs may be used to determine groundwater depth, and subsurface soil types. It may also be useful in locating or characterizing thick, potentially expansive clays.</p> <p><i>Dewatering:</i> The exploratory drilling during the Geotechnical Design Report phase will discover any areas that will require dewatering.</p> <p><i>Corrosion:</i> Corrosivity tests shall be conducted where appropriate as part of the drilling program for the any proposed retaining walls.</p>
Hazardous Waste/Materials	<p>An environmental regulatory database search did not reveal any known hazardous waste sites that could negatively impact the project.</p> <p>Shallow soils to be excavated within the unpaved areas adjacent to the roadway likely contain elevated levels of aerially deposited lead (ADL) from historic vehicle emissions.</p>	A site investigation that ascertains the presence and concentrations of metals, particularly lead, in soils will be conducted during the project's PS&E phase. The findings of the site investigation will be used to prepare the appropriate standard special provisions that address the proper soil handling requirements and worker health and safety concerns.
Biological Environment	No impacts to listed species are anticipated. Potential impact to migratory bird species nesting.	Migratory Bird Treaty Act (MBTA) avoidance measures shall be implemented including surveys and avoiding nesting periods. (Please see Threatened and Endangered Species Section 2.20.4, Avoidance, Minimization and/or Mitigation, for details on surveys and nesting period avoidance measures.)

Coordination with public and other agencies

Collaborative efforts have taken place throughout the planning process with the project development team from as early as 2011 when initial conceptual road widening alternatives at the intersection were developed and analyzed. These alternatives were further evaluated and refined to reduce environmental impacts until the recommended Build Alternative was proposed, which reduces environmental impacts including minimizing tree removal. Consultation has occurred with the Town of Hillsborough, City of Burlingame, the State Historic Preservation Officer, the Burlingame Historical Society and the Native American Heritage Commission on the proposed project to improve intersection safety. In addition, both Hillsborough and Burlingame

are members of the project development team and participated in several meetings and were consulted in the development of the proposed safety improvement project.

The Town of Hillsborough’s General Plan Circulation Element has identified this intersection as needing safety improvements and the intersection of SR 82 and Floribunda Avenue was included in a study Hillsborough completed of the intersection, calling for safety improvements.

Under Section 106, consultation is required with the State Historic Preservation Officer (SHPO). A Water Pollution Control Plan is required from the U.S. EPA and would be completed before project construction. The following reviews and approvals would be required for project construction:

Agency Consultation

Agency	Permit/Approval	Status
California State Historic Preservation Officer (SHPO)	Section 106 National Historic Preservation Act and PRC 5024.5	SHPO concurrence on the National Register of Historic Places eligibility of historic properties within the Area of Potential Effects was received on April 21, 2014. SHPO consultation and concurrence regarding the Finding of Effect will be completed by the final environmental document.
Town of Hillsborough and City of Burlingame	Encroachment Permits to enter and construct in Floribunda Avenue.	During Plans, Specifications and Estimates (PS&E) Caltrans would request permit.

Environmental Process

The Final EIR/EA evaluates the environmental effects of the proposed project and when warranted, identifies mitigation measures to reduce project effects.

After publishing and circulating the Draft EIR/EA for public review and comment, Caltrans followed typical CEQA/NEPA procedures and:

- Conducted a public scoping meeting (November 19, 2013) on the Notice of Preparation of the EIR/EA and potential project options that would be analyzed for the project. The public was invited to provide comments on the scope and content of the EIR/EA until December 21, 2013.
- Caltrans will conduct a public “open house” community meeting to present the Draft EIR/EA to the public in October, 2014. A 45 day public comment period will be provided where interested parties submitted written comments on this Draft EIR/EA
- Caltrans will Identify the preferred Project Alternative with the Project Development Team (PDT)
- Will prepare and distribute a Final EIR/EA with NOA. This Final EIR/EA will include responses to comments received on the Draft EIR/EA and identify the Preferred Alternative.

The next steps will include circulation of the Final EIR/EA and issuance of the CEQA Notice of Determination (NOD).

Alternatives Considered but Withdrawn from Further Discussion

The following five alternatives summarized below were analyzed but withdrawn from further discussion because they would not meet the purpose and need of the project, were not physically feasible or would have significant environmental and community impacts. Four additional options are discussed in *Chapter 1, Section 1.3.4 Alternatives Considered but Withdrawn from Further Consideration* including: Other Signal Timing Options, Speed Enforcement, Traffic Barriers (Calming) and Improve Lighting.

1. Signal Timing Adjustment Alternative

This alternative would not meet the purpose and need of the project. This alternative would not improve safety for left-turn movements from SR 82 to Floribunda Avenue and solely involves signal timing adjustments of the existing traffic signals. Signal timing adjustments have already been made in 2005, 2011 and most recently in January of 2013 at the intersections of SR 82 at Bellevue Avenue, Floribunda Avenue and Oak Grove Avenue. These signal timing adjustments included adding additional green time on SR 82 at Bellevue and Floribunda Avenues. At Oak Grove Avenue the through traffic signal time was shortened, stopping traffic southbound on SR 82 early, thus allowing a gap for the SR 82 northbound traffic to turn left when the green through phase begins. There was no significant improvement for left-turn accidents as a result of the timing adjustment.

Although creating a gap for SR 82 northbound left-turn at Floribunda Avenue helps, it is not a long term solution to reducing left-turn collisions at the intersection since it does not address southbound left-turn movements.

There would continue to be inadequate sight distance for left turn movements from SR 82 to Floribunda Avenue when vehicles from both directions on SR 82 are attempting to turn left simultaneously, blocking each other's view of approaching through traffic in the curbside lane.

Operationally, the signal modification option would function poorly causing vehicle congestion and pedestrian crossing delay. For example, if a dedicated left-turn signal is installed on SR 82 at Floribunda Avenue without a left-turn lane, the other three legs of the intersection would experience delays to accommodate the left-turn movements and pedestrian crossings. The Level of Service (LOS) and delays for the AM and PM would be C (33.1) seconds and D (48.6) seconds, respectively.

Finally, the operation of the intersection would preclude this intersection from being coordinated with other intersections on SR 82 in the middle of the Burlingame system and northbound, southbound signal progression would be negatively affected. Long back-ups or queues may increase the potential for rear-end types of accidents.

2. No Left-turn/Intersection Closure Alternative

Prohibiting the left-turn movement from SR 82 onto Floribunda Avenue was considered but was determined to be impractical from an operational and safety perspective as the two local agencies (Town Hall of Hillsborough and City of Burlingame's City Hall and their fire and police stations) are situated on both sides of the intersection. Fire trucks, police, safety, maintenance and related emergency response vehicles from both local agencies would need to make left-turn movements at the intersection. Prohibiting left-turn movements may delay emergency and public safety response and it is anticipated that there would be enforcement challenges on closure implementation. The prohibition

of left-turn movements at SR 82 and Floribunda Avenue would most likely shift the occurrence of left-turn traffic accidents to the intersections of Willow Avenue heading north and to Bellevue Avenue heading south of Floribunda Avenue.

3. *Widen West Side of SR 82 (Widened to Caltrans dimension standards)*

This alternative proposed to install left-turn channelization for both north and southbound direction on SR 82 with protected left-turn signal phase at Floribunda Avenue. Widening would only be on the west side of SR 82, and would require an additional 30 ft. of new right-of-way. SR 82 Right-of-Way (ROW) on the west side would widen by approximately 10 ft.-10 inches to 15 ft.-4 inches, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. There would be impacts to Centennial Park, the Hillsborough Police Departments' parking lot, the Adventist Church (northwest leg of the intersections) and 4(f) historic properties (located along the southwest leg of the intersection). Twenty trees (20), including (16) sixteen eucalyptus trees that are contributors to the Howard-Ralston Historic Tree Rows, a National Register of Historic Places listed property, would need to be removed. There would be no impacts to properties or contributors to the Howard-Ralston Historic Tree Rows located on the east side of SR 82. Retaining walls would be needed on the northwest and southwest sides of SR 82 due to the elevation difference between the roadway and sides. This alternative would require partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property.

4. *Widen Both Sides of SR 82 (Widened to Caltrans dimension standards)*

This alternative proposed to install left-turn channelization for both north and southbound direction on SR 82 with protected left-turn signal phase along SR 82 at Floribunda Avenue. There would be widening on both sides of SR 82 Boulevard. ROW on the east side of SR 82 would increase approximately 3 ft.-8 inches. ROW on the west side of SR 82 would widen approximately 10 ft.-9 inches to 11 ft.-1 inch, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. There would be no impacts to Centennial Park, the Hillsborough Police Departments' parking lot, the Adventist Church (northwest leg of the intersections) and historic properties (located along the southwest leg of the intersection). There would be impacts to thirty trees, including sixteen contributors to the Howard-Ralston Historic Tree Rows located on both sides of SR 82. Retaining walls would be needed on the northwest and southwest sides of SR 82 due to the elevation difference between the roadway and sides. This alternative would remove 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows and would require partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property.

5. *Widen East Side Only of SR 82 (Widened to Caltrans dimension standards)*

This alternative proposed to install left-turn channelization for both north and southbound direction with protected left-turn signal phase along SR 82 at Floribunda Avenue. Widening would only be on the east side of SR 82 Boulevard. ROW on the east side of SR 82 would widen approximately 30 ft. from the existing curb, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. After initial analysis of the right-of-way required for this alternative, it was eliminated from further consideration because of its community impacts. To widen SR 82 on the east side only, right-of-way would need to be acquired and 4 large apartment complexes would have to be demolished. It would not be feasible to relocate the community residents of 74 units in 4 apartment complexes

located east of SR 82 for this alternative. There also would be impacts to trees. Twenty four trees would need to be removed, including (10) ten trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows, A National register of Historic places listed property, located on the east side of SR 82.

CHAPTER 1 – PROPOSED PROJECT

Introduction

Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and under the California Environmental Quality Act (CEQA). Caltrans proposes to address reducing left-turn accidents at the intersection of SR 82 and Floribunda Avenue by widening the intersection of SR 82 at Floribunda Avenue to construct a left-turn channelized lane in both directions and modify the signal to provide protected left-turn signals on SR 82 at Floribunda Avenue.

State Route (SR) 82 is a California State highway that begins at I-880 in San Jose and ends at I-280 in San Francisco, forming a central artery through several San Francisco peninsula communities including Palo Alto, San Carlos, San Mateo, Burlingame and Millbrae. Commonly referred to as “El Camino Real” (Spanish for The King’s Highway) it was part of the 600-mile Mission Trail connecting the 21 Spanish Missions from San Diego to Sonoma. SR 82 runs south to north for approximately 42 miles, with 17 miles in Santa Clara County, 25 miles in San Mateo County, and terminates a short distance into San Francisco County at I-280. Throughout San Mateo County, SR 82 serves as a parallel arterial to I-280 and US 101. SR 82 is functionally classified by the Federal government, as a ‘Principal Arterial-Urban.’ An Urban principal arterial primarily functions to provide continuity for through traffic between major centers within an urban area. SR 82 is a conventional facility serving mainly local travel demand and is not included in the Interregional Road System (IRRS) designated by the state. SR 82 allows use by trucks under both the federally-classified STAA (Surface Transportation Assistance Act) designation, and the California Legal Truck designation (65 ft. maximum length). These allowances enable accommodation of 5+ axle trucks. The posted speed limit on SR 82 is 35 miles per hour (mph).

The total length of the proposed project is about 500 ft. The project is located at post mile 13.69 at the intersection of SR 82 and Floribunda Avenue along the limits of the City of Burlingame and the Town of Hillsborough in San Mateo County. SR 82 at Floribunda Avenue is a four-lane, undivided highway with two 11-ft. through lanes and no shoulders, with uncontrolled left-turn movements in both directions at the signalized intersection with Floribunda Avenue.

The Town of Hillsborough requested that Caltrans study this intersection because the actual accident rate is greater than the statewide average for traffic involving vehicles with left-turn movements. A total of 22 accidents occurred at the intersection of SR 82 and Floribunda Avenue within the project limits during the three-year period from April 1, 2009 through March 31, 2012. The following accident rates for this period show the total actual accident rate of 0.86 accidents per million vehicle miles (acc/mvm) is higher than the average accident rate of 0.27 for similar facilities statewide.

There are a sufficient number of accidents to warrant the intersection safety improvement project to address this safety and operational concern. Conceptual approval for the funding of this Safety Improvement Project was granted to District 4 on November 5, 2009 by the Headquarters Office of Traffic Safety Program.

Purpose and Need

The purpose of this project is to improve the safety of the intersection to reduce the occurrence and potential for collisions involving left-turn movements. The project is needed to improve safety at the intersection to reduce left-turn related accidents and collisions rates involving left-turn traffic movements at the intersection of SR 82 and Floribunda Avenue.

The State Traffic Accident Surveillance and Analysis System (TASAS) data from April 1, 2009 through March 31, 2012 (most recent available data) identified the intersection as a location of high left-turn related accidents with an accident rate greater than the statewide average rate for similar intersection facilities statewide. There were a total of 22 accidents that occurred at this intersection with 55% of them left-turn broadside accidents. There is a need to construct safety improvements at this intersection in order to significantly reduce the occurrence of left-turn related accidents. The lack of dedicated left-turn lanes and a modified left-turn signal contributes to the occurrence of intersection accidents. The Town of Hillsborough's General Plan Circulation Element identified this intersection as needing safety improvements.⁶ The project is funded under the State Highway Operations and Protection Program.

Three-year safety and traffic accident data from April 1, 2009 through March 31, 2012 are provided in Table 1.

Table 1 - TASAS Accident Rate

Number of Accidents/Significance		Accident Rate (accidents/million vehicles)		
Dark	4			
Other	7			
Wet	1		Actual	Average
Injuries	10	Fatalities + Injuries	0.39	0.11
Fatalities	0	Fatalities	0.00	0.01
Total	22	Total	0.86	0.27

Source: California Department of Transportation Traffic Accident Surveillance and Analysis Systems (TASAS)

Table 2 below details the accident type, total number of accidents (22) and percentage by accident type. The majority of the accidents occurred under clear weather in daylight (81.8%) and dry roadway conditions (95.5%). No unusual roadway conditions are noted for (90.9%) of the accidents. The highest percentage of accidents was broadside accidents and the primary collision factor of this type of accident was failure to yield to approaching traffic. The proposed project seeks to reduce these types of accidents by creating a left-turn channel and protected left-turn signal at the intersection of SR 82 and Floribunda Avenue.

Table 2 - TASAS Accident Type

Type of Accident	Number of Accidents	Percent%
Broadside (Left-Turn)	12	54.5
Rear End	3	13.6
Sideswipe	2	9.1
Head-on	2	9.1
Auto-Pedestrian	1	4.5
Hit Object	2	9.1
Overturn	0	0.0
Other	0	0.0

Source: California Department of Transportation Traffic Accident Surveillance and Analysis Systems (TASAS), 4/1/09 to 3/31/12.

⁶ Town of Hillsborough General Plan, Chapter 3 Circulation Element, Floribunda Avenue/EI Camino Real Intersection Safety, 2005.

Figure 1 - Project Vicinity

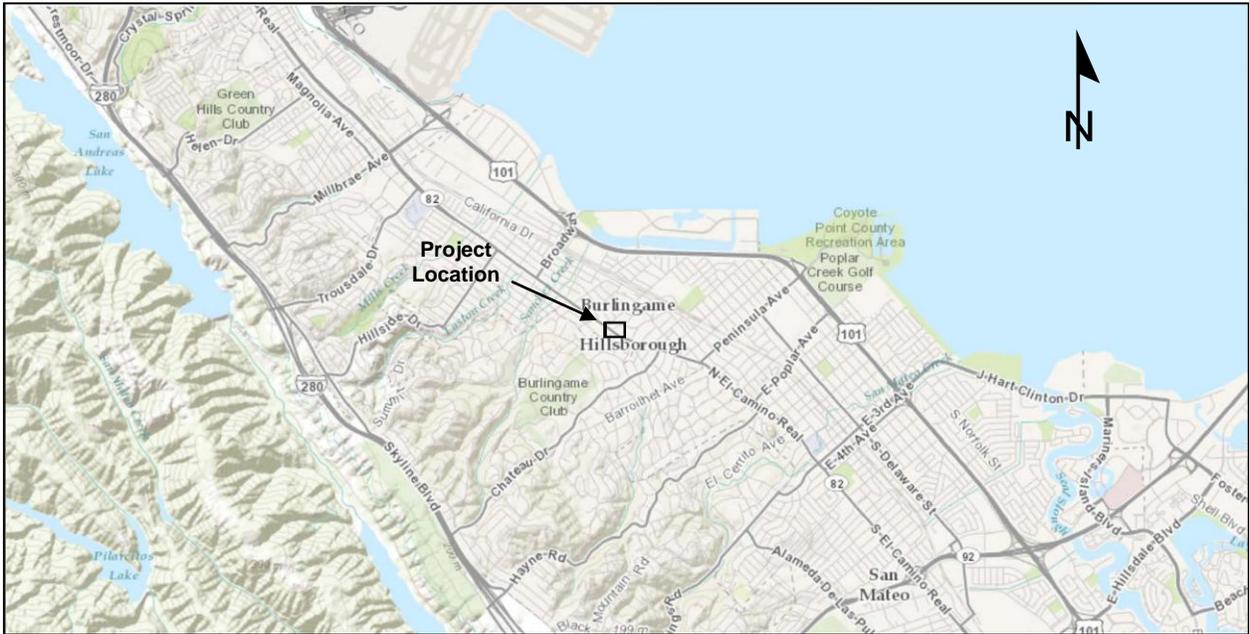


Figure 2 - Project Location



1.3 Project Description

This project is the SR 82 at Floribunda Avenue Intersection Safety Improvement Project located at PM 13.69. The project area is approximately 500 ft. long and 60 ft. wide. Safety improvements would include installing left-turn pockets, protected left-turn signals, upgraded curb ramps at 3 corners and intersection street lighting.

1.3.1 Alternatives

This section describes the proposed action and the design alternatives that were analyzed by a multi-disciplinary team. They include the No-Build Alternative, a Build Alternative and Alternatives Evaluated but Withdrawn from Further Consideration.

1.3.2 Build Alternative

The signalized intersection of SR 82 and Floribunda Avenue would be widened on both sides of SR 82 to construct a left-turn channelization along both northbound and southbound approaches of SR 82 to Floribunda Avenue. A center 10-ft. wide left-turn lane, including approach tapers will be added, as well as 1.5-ft. shoulders in both directions of SR 82 for the majority of the project limits. Currently, there is no roadway shoulder at the SR 82/Floribunda Avenue intersection. The proposed roadway cross-section will maintain both existing travel lanes in each direction as well as existing 4 to 5 ft. sidewalks. The left-turn pocket in the southbound direction would be 50 ft. long with a 50 ft. taper. The left-turn pocket in the northbound direction would be 75 ft. long with a 60 ft. taper. The construction limit length for this alternative would be approximately 500 ft. long. SR 82 would be widened mostly within the existing Caltrans state ROW. There is a designated Class III bicycle route on Floribunda Avenue. There will be no impact to the bicycle route. See Section 2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities for more detailed information.

Overhead utilities along the west side of SR 82 in the project area will need to be relocated. Burying the utilities within the State ROW is anticipated. Existing utility boxes, manholes and drainage facilities need to be relocated or adjusted to the finished grade. The existing utilities will be determined during the Plans, Specifications and Estimates (PS&E) phase of the project. The size of utility trenches will be determined by the utility companies. Usually, utility trenches are 2.5 to 3 ft. deep and 1.5 to 2 ft. wide. The disturbed area for the utility trenching and foundation for the 4 signal lights would be an estimated 3,100 cubic ft..

In addition, excavation will be needed for foundations for traffic signals with intersection street lighting. The estimated ground-disturbing activities for this project would be foundations for 4 traffic signal poles, 12 ft. deep by 3.5 wide. Table 3 (below) presents the estimated quantities of disturbance from construction excavation.

Table 3 - Estimated Quantities of Soil Disturbance

Excavation Location	Depth ft	Length ft	Width ft	Total ft ³
Utilities Trenching	3	400	1	1,200
Foundation 4 Signal Light	12	N/A	3.5	1,900
Total estimated cubic ft.				3,100

The majority of work would be occurring within the state right of way except for some minor work at (specific points) and three intersection corners. Partial acquisition of ROW on two

properties at northeast (APN 029100220), and southeast (APN 029111010) intersection quadrants would be required for construction of ADA compliant curb ramps. A Permit to Enter and Construct (PEC) would be required from the Town of Hillsborough for two property parcels, a small landscaped portion of Centennial Park (APN 028141090) and entryway of the local street (Floribunda Avenue). Temporary Construction Easements (TCE) would be required on four (4) parcels (APNs 028141080, 029100330, 029111010 and 029111260) for the grading and construction of driveways. Total TCE would be 3,214.72 square ft. and total PEC would be 3,269.09 square ft.

Utilities and Other Owner Involvement

Overhead PG&E utilities along the west side of SR 82 in the project area are in conflict with the roadway widening. Burying PG&E electrical utilities within the State right-of-way may occur. In addition, PG&E gas line, AT&T underground line and City of Burlingame water line on the east side of SR 82 are in conflict and relocating of them within the State right-of-way are anticipated. Several existing utility boxes, manholes and drainage facilities need to be relocated or adjusted to the finished grade. Potholing will be required to identify the underground utilities and detailed utility verification will be done during the Plans, Specifications and Estimates (PS&E) phase of the project.

The size of utility trenches will be determined by the utility companies. Usually, utility trenches are 2.5 to 3 ft. deep and 1.5 to 2 ft. wide. The need for lane closures and detours will be identified in a Transportation Management Plan (TMP), which will be prepared during the PS&E phase. The following conceptual drawings display the preliminary plan with tree removal and cross section drawing of the preferred build alternative. (see figures 4 and 5).

Transportation System and Demand Management (TSM)

TSM strategies increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of TSM strategies include: ramp metering, auxiliary lanes, turning lanes, reversible lanes and traffic signal coordination. TSM also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit.

The City/County Association of Governments of San Mateo County and the San Mateo County Transportation Authority, along with the City of Burlingame and Town of Hillsborough have policies that encourage Transit System and Demand Management Alternatives such as ridesharing programs, public transit, shuttle programs, rail, bicycle and pedestrian transportation modes. SR 82 has existing traffic signal coordination with the intersections to the north and south of Floribunda Avenue. In addition, SR 82 is served by public transit (SamTrans) and has sidewalks for pedestrian travel. Both cities have Bicycle Plans and Floribunda Avenue is a designated bicycle route. The City of Burlingame has completed projects to improved pedestrian lighting and bicycle facility improvements.

Although TSM measures alone could not satisfy the purpose and need of the project, the following TSM pedestrian improvement measures have been incorporated into the proposed Build Alternative for this project:

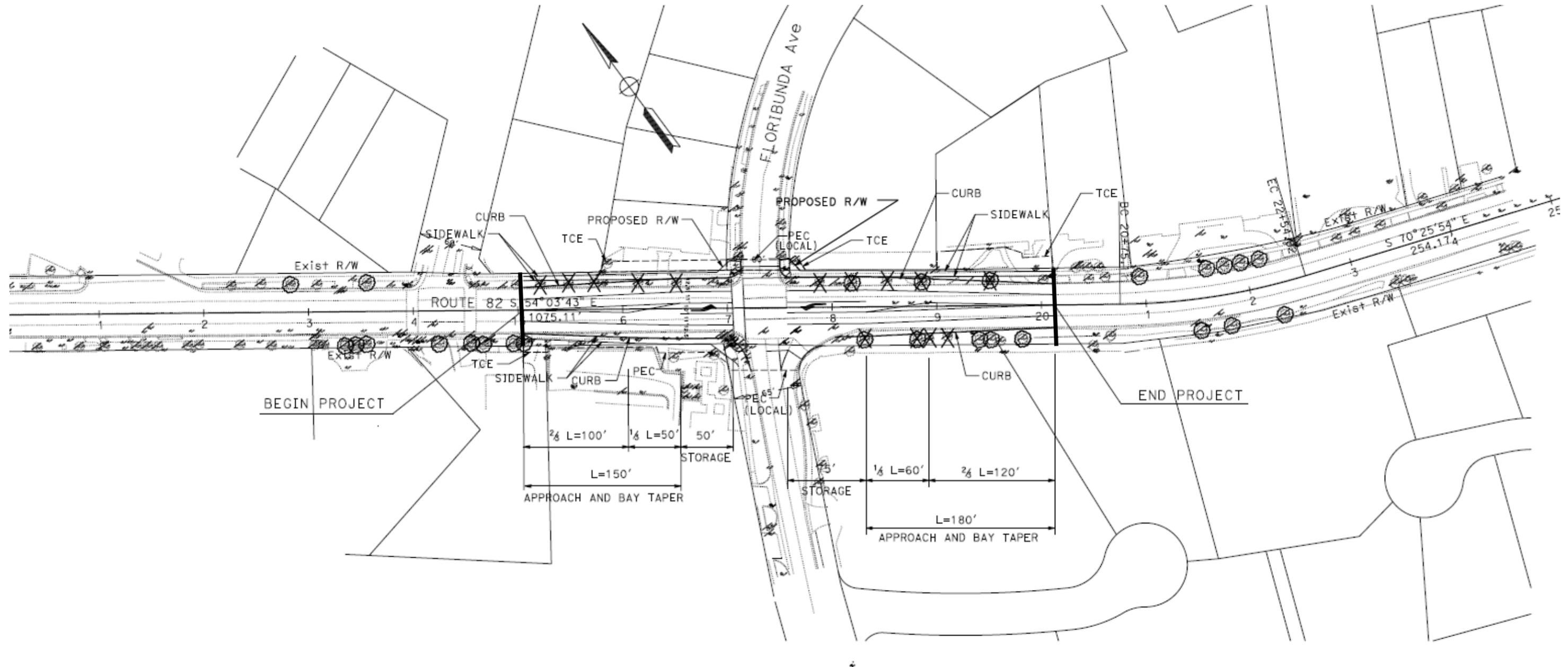
- Upgraded pedestrian curb ramps
- Upgraded pedestrian traffic signals
- Intersection traffic street lighting
- Installation of left-turn traffic signals

- Painted crosswalks
- Installation of painted medians as part of left-turn channelization lane

1.3.3 No Build Alternative

The no build alternative would leave the current intersection configuration intact, with no left-turn storage to accommodate conflicting movements. Potential safety benefits would not be realized. The existing facility is a four lane, undivided, conventional state highway, (SR 82) consisting of approximately two 11-ft. wide through lanes with uncontrolled left-turn movements in the north and southbound directions. The posted speed limit on SR 82 is 35 miles per hour (mph). In the northbound direction, toward McKinley Elementary School, 1 block north of Floribunda Avenue, the speed limit is 25 mph when school children are present. This alternative would not meet the purpose and need of this project. It would not reduce the potential for collisions involving left-turn traffic movements nor reduce congestion and improve traffic flow.

Figure 3 – Proposed Build Alternative



ABBREVIATION

TCE TEMPORARY CONSTRUCTION EASEMENT
 PEC PERMIT TO ENTER AND CONSTRUCT

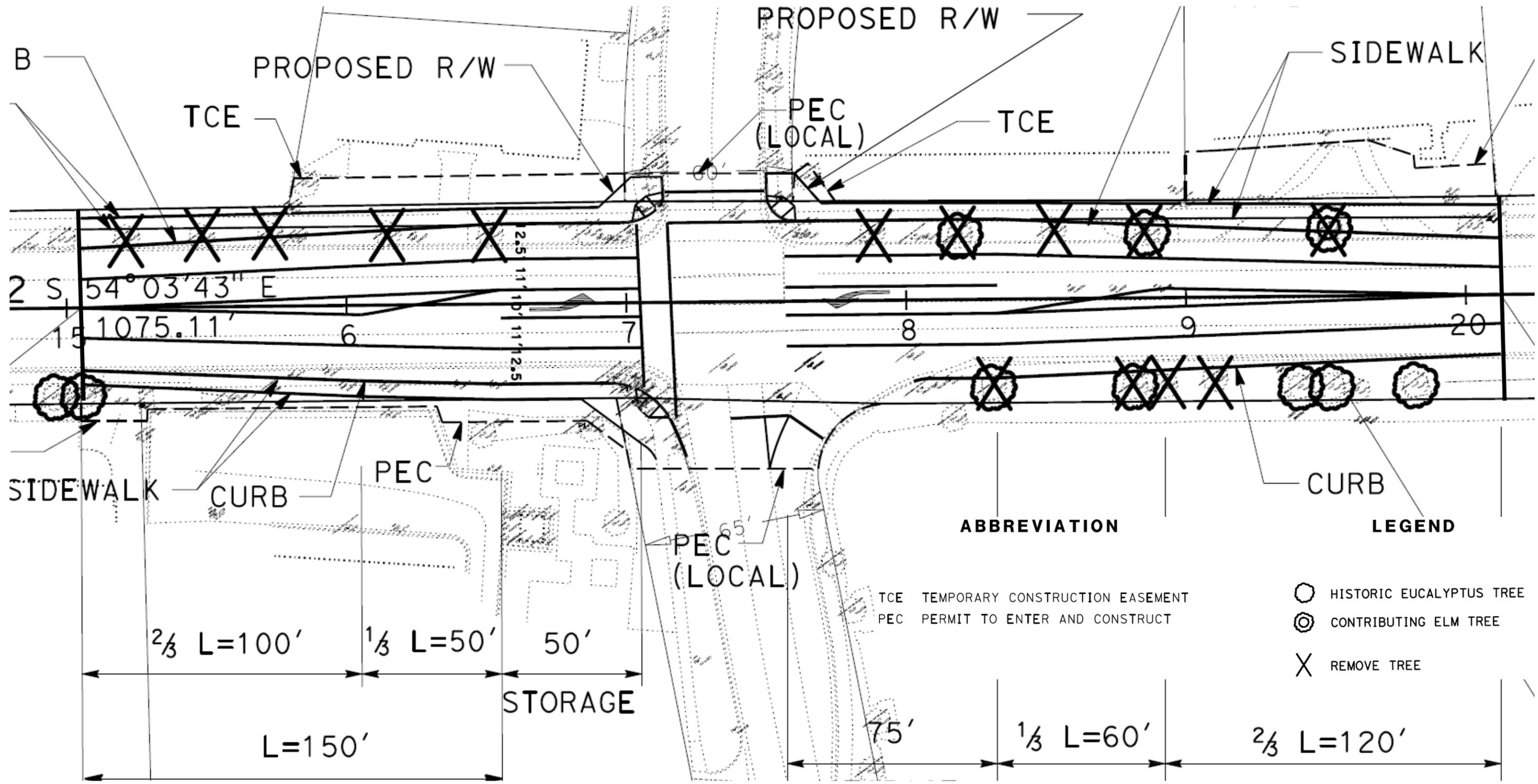
LEGEND

○ HISTORIC EUCALYPTUS TREE
 ⊙ CONTRIBUTING ELM TREE
 X REMOVE TREE

LAYOUT
 SCALE 1"=50'

**PRELIMINARY PLAN
 SUBJECT TO REVISION**

Figure 3 – Continued, Proposed Build Alternative (Enlarged)



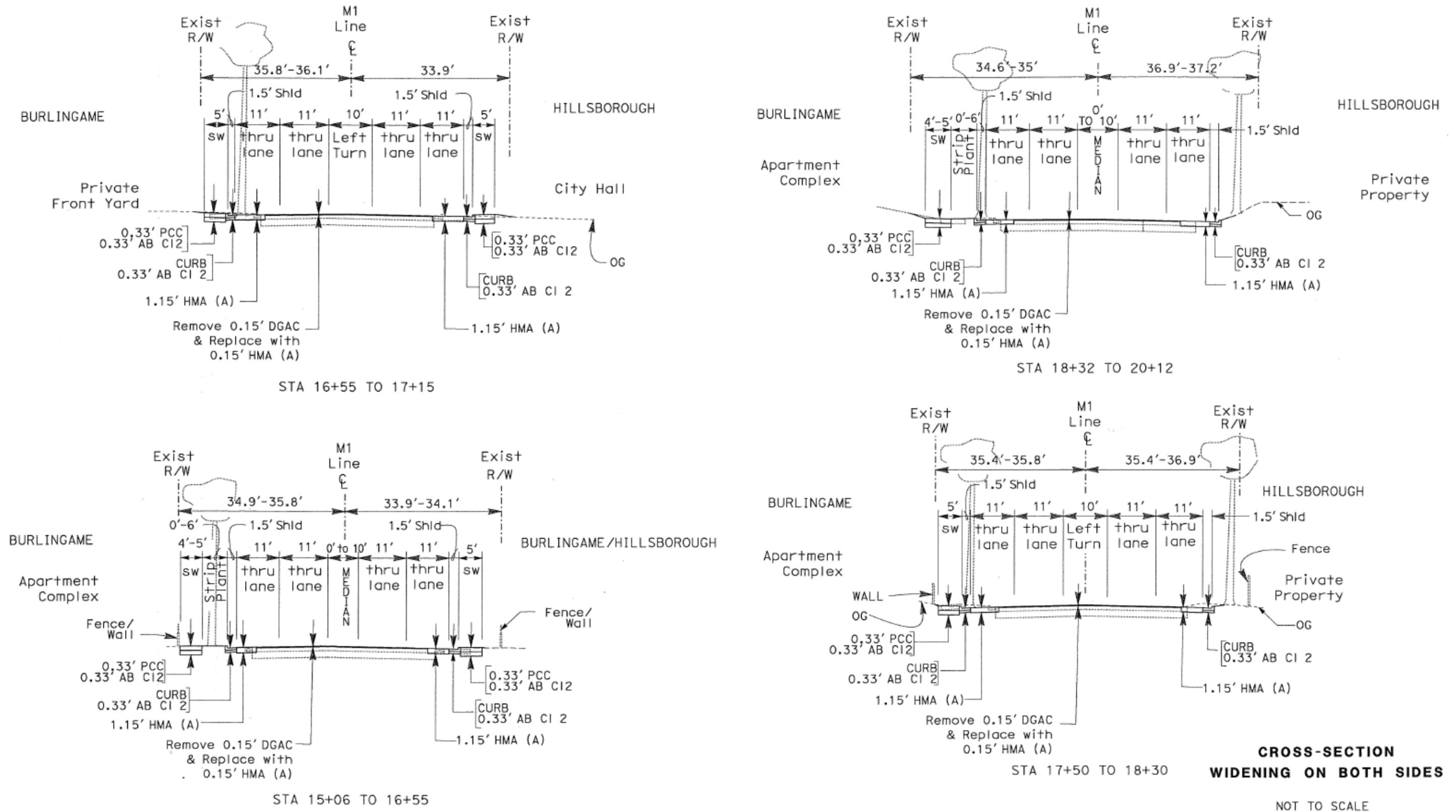
ABBREVIATION

- TCE TEMPORARY CONSTRUCTION EASEMENT
- PEC PERMIT TO ENTER AND CONSTRUCT

LEGEND

- HISTORIC EUCALYPTUS TREE
- ⊙ CONTRIBUTING ELM TREE
- X REMOVE TREE

Figure 4 – Proposed Build Alternative Cross Sections (All facing south on SR 82)



1.3.4 Operational Measures Considered but Withdrawn

The Caltrans project development team analyzed several traffic operational measures instead of the proposed Build Alternative, including examining suggestions received from the public. The following summarizes the signal timing adjustments and traffic operational measures analyzed and the reasons why they were eliminated from further consideration.

1. *Signal Timing Adjustments*

Caltrans evaluated several signal timing modifications to determine if they would adequately address the left-turn collisions at the intersections of SR 82 and Floribunda Avenue. Signal timing adjustments would not provide left-turn channelization and solely involve signal timing adjustments of the existing traffic signals on SR 82 in the project vicinity. Signal timing adjustments have been made in 2005, 2011 and most recently in January of 2013 at the intersections of SR 82 at Bellevue, Floribunda and Oak Grove Avenues. Despite these signal timing adjustments left-turn collisions have continued to be a problem at this intersection.

The Signal timing adjustments were evaluated to adjust signal timing at SR 82 at Bellevue, Floribunda, Oak Grove and Chapin Avenues to create gaps in the traffic flow on SR 82 to improve the opportunities for northbound drivers to make a left-turn by adjusting signal timing at Oak Grove Avenue. This signal modification however, would not increase the opportunity for southbound SR 82 left-turn and these timing adjustments have not reduced the pattern of left-turn collisions at the intersection of SR 82 and Floribunda Avenue.

Another possibility was to adjust signal timing at Chapin Ave. similarly as was done at Oak Grove Ave. However, this signal adjustment would not create an opportunity for SR 82 southbound left-turn or have much benefit for the following reasons:

- The distance between Chapin Ave. and Floribunda Ave. is considerably much further than Oak Grove Ave. and Floribunda Avenue and therefore gaps will occur naturally.
- There are multiple access points to SR 82 which includes Bellevue Ave. and driveways which are not signal controlled.

In addition, alternative signal timing adjustments at Floribunda Ave. were explored to provide extra time at the beginning of the green interval for vehicles to make left-turns. Two options were evaluated to create gaps for southbound left-turners at the beginning of the green or the end of the green at Floribunda.

- LT at Beginning of Green: Would allow left-turns at beginning of green interval. However, after the beginning green interval ended, drivers would continue to desire to make a left-turn at any point during the green interval for SR 82. Once the "improved" opportunity has passed we would be left with the existing situation of no or small gaps in traffic and drivers trying to "dart" into left-turns. Additionally, the models do show left-turns predominantly during the middle of the green interval.
- LT at End of Green: Southbound drivers would be provided an improved opportunity to make a left-turn towards the end of the green interval for the southbound direction. Before this happens, a yellow and red will be displayed for northbound drivers. However, this would give northbound drivers a false sense of security that

the southbound drivers are also stopping which would lead to a yellow trap⁷ situation and is highly undesirable.

Despite Caltrans implementation of these signal timing changes, left-turn traffic collisions have continued over the years and there is no direct evidence that these signal timing changes have led to changes in the left-turn collision patterns at the intersection of SR 82 and Floribunda Avenue. In addition, if a left-turn signal were installed at SR 82 at Floribunda Avenue the other three legs of the intersection would experience delays. The Level of Service (LOS) and delays for the AM and PM would be C (33.1) seconds and D (48.6) seconds. The operation of the intersection would preclude this intersection from being coordinated with other intersections on SR 82 in the middle of the Burlingame system and northbound, southbound signal progression would be negatively affected. Long back-ups or queues may increase the potential for rear-end types of accidents.

Signal timing adjustment is performed on an as-needed basis to improve intersections and for the San Mateo County Smart Corridors Project (SMART) corridor signal progression operations based on changing traffic conditions on SR 82. The SMART Project is an Intelligent Transportation System (ITS) project designed to improve cross jurisdictional day-to-day traffic signal operation and facilitate naturally diverting traffic off Highway 101 during an incidents on the highway system. SR 82 between I-380 and the Santa Clara County line is designated or identified as the primary diversion route for Highway 101. The Project enables Caltrans and its stakeholders, San Mateo cities and County, to implement traffic management strategies through the deployment of ITS elements such as signal timing adjustments, directional signs, fixed or pan-tilt-zoom, closed-circuit television cameras, communications (conduit, fiber, copper, wireless, software, and associated equipment), arterial changeable message signs, vehicle detection systems, communications between San Mateo County Hub and District 4 Traffic Management Center and power supply line and equipment along state routes and major local streets.⁸ Therefore, signal timing adjustments are part of a toolbox to facilitate through movements on ECR, and not a stand-alone alternative.

Signal timing adjustments have been implemented within the past 10 years at the intersections of SR 82 at Oak Grove Avenue and at Floribunda Avenue. Timing changes were made to Floribunda during this 10-year period but the intent of the timing changes were to improve signal progression on SR 82, not to facilitate left-turn movements. No changes in the pattern of left-turn traffic collisions were observed as a result of these signal timing adjustments.

In conclusion, the signal timing adjustment option, to address left-turn collisions, was rejected because signal timing changes have already been made at SR 82 and Floribunda Avenue and Oak Grove Avenue, there has been no identifiable reduction in left-turn collisions at the intersection of SR 82 at Floribunda Avenue.

⁷ The "yellow trap" is a potentially adverse safety situation inherent in some signal phasing sequences involving lagging left turns in one direction. A left-turning driver, in the intersection waiting for gaps in oncoming traffic in order to turn left on a permissive green signal indication, sees the signals change from green to yellow and mistakenly assumes that oncoming through traffic also has yellow signals at the same time and will be soon coming to a stop. This mistaken assumption "traps" the permissive left turner into thinking it is OK to safely complete the turn when in reality it is not safe, because the opposing traffic continues to move on a green indication along with a lagging left turn, and a severe crash can be the result. Section 4D.05, paragraph 03, item B.4 prohibits the "yellow trap" sequence except in rare and unusual cases and then only with a W25-1 or W25-2 sign to warn drivers of the condition. U.S. Federal Highway Administration, Manual on Uniform Traffic Control Devices, retrieved from http://mutcd.fhwa.dot.gov/knowledge/faqs/faq_part4.htm#tcsfq3, on 9/2/14.

⁸ San Mateo County SMART Corridor Project, retrieved from <http://www.co.sanmateo.ca.us/> on 3/11/14.

2. *No Left-turn/Intersection Closure*

This option would prohibit the left-turn movement from SR 82 onto Floribunda Avenue in both north and southbound directions to address the left-turn collisions.

This option was rejected because it was determined to be impractical from an operational and safety perspective. Specifically, this option would be impractical for the following reasons: The two local agencies (Town Hall of Hillsborough and City of Burlingame's City Hall and their fire and police stations) are situated on both sides of the intersection. Fire trucks, police, safety, maintenance and related emergency response vehicles from both local agencies would need to make left-turn movements at the intersection. Prohibiting left-turn movements would delay emergency and public safety response and it is anticipated that there would be enforcement challenges on closure implementation. The prohibition of left-turn movements at SR 82 and Floribunda Avenue may shift the occurrence of left-turn traffic accidents to the intersections of Willow Avenue heading north and to Bellevue Avenue heading south of Floribunda Avenue.

These streets would see increased traffic by vehicles turning left from SR 82 and reduce direct access to downtown Burlingame and its City Hall or the Town of Hillsborough. Finally, a left-turn prohibition may lead to an increase in cut through traffic into adjacent neighborhoods via the cross streets north and south of SR 82 at Floribunda Avenue intersection.

3. *Widen West Side of SR 82 with Private ROW Acquisition*

This alternative proposed to install left-turn channelization for both north and southbound direction with protected left-turn signal phase along SR 82 at Floribunda Avenue. Widening would only be on the west side of SR 82 Boulevard. The project length would be approximately 1,024 ft. The SR 82 highway would be widened approximately 30 ft. on the west side.

The alternative was rejected because of design infeasibility (CEQA Guidelines Section 15126.6(f)(1)) and would have worse environmental impacts than the Build Alternative. There would be right-of-way impacts to Centennial Park, the Hillsborough Police Departments' parking lot would lose parking spaces, loss of access to the Adventist Church (northwest leg of the intersections) and impacts to 4(f) resource historic properties (located along the southwest leg of the intersection). There would be no impacts to properties or contributor trees to the Howard-Ralston Eucalyptus Tree Rows located on the east side of SR 82 however, 16 trees on the west side of SR 82 that are contributors to the Howard-Ralston Eucalyptus Tree Rows would be removed. The design would also impact 4(f) resources by requiring partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property, two historic properties.

4. *Widen Both Sides of SR 82 with Private ROW Acquisition*

This alternative proposed to install left-turn channelization for both north and southbound direction with protected left-turn signal phase along SR 82 at Floribunda Avenue. Project length would be approximately 1,024 ft. There would be widening on both sides of SR 82. The design would widen the highway to 10-ft. left-turn channel, 11-ft. through lanes with 5-ft. shoulders, including 4-ft. sidewalks and utility relocations. There would be widening of approximately 15 ft. additional on both sides of SR 82, compared to the existing roadway configuration.

The alternative was rejected because of design infeasibility (CEQA Guidelines Section 15126.6(f)(1)) and environmental impacts worse than the Build Alternative. There would be right-of-way impacts to Centennial Park, the Hillsborough Police Departments' parking lot, the Adventist Church (northwest leg of the intersection) and historic properties (located along the southwest leg of the intersection). There would be impacts to contributor trees to the Howard-Ralston Eucalyptus Tree Rows located on both sides of SR 82. This alternative would remove 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows and would require partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property.

5. *Widen East Side of SR 82 with Private ROW Acquisition*

This alternative proposed to install left-turn channelization for both north and southbound direction with protected left-turn signal phase along SR 82 at Floribunda Avenue. Widening would only be on the east side of SR 82 Boulevard only. ROW on the east side of SR 82 would widen approximately 30 ft. Project length would be approximately 1,024 ft.

The alternative was rejected because of design infeasibility (CEQA Guidelines Section 15126.6(f)(1)) and environmental impacts worse than the Build Alternative. The alternative would require Caltrans purchase ROW consisting of several apartment complexes and relocate the community residents of 74 units in 4 apartment complexes located east of SR 82. After relocation of residents Caltrans would demolish the apartment complexes to widen SR 82 on the east side only. This alternative would also adversely impact three apartment driveways with access to tenant parking. The alternative would remove 10 trees on the east side of SR 82 that are contributors to the Howard-Ralston Eucalyptus Tree Rows.

6. *Other Signal Timing Modifications*

These signal timing modifications function to create protected left-turn signals, without changing the lane configuration, for northbound and southbound drivers on SR 82 to make left-turns onto Floribunda Avenue. The following summary describes the signal timing modification and the reasons why they were eliminated from further consideration.

- a. At SR 82 and Floribunda Ave., maintain existing SR 82 configuration but split the main line with a left-turn signal. Protected left/split phase signal.

This signal modification would cause vehicle traffic delay at the intersection in all directions due to the signal phase allowing left-turns in the northbound and southbound directions. It would also cause disruption of SR 82 signal timing progression on SR 82 corridor leading to increased vehicle emissions from idling vehicles and driver frustration due to delays. Queues would extend southbound and northbound during AM/PM peaks.

- b. Remove the existing traffic signal at SR82 and Floribunda Avenue.

The removal of a signal would likely increase left-turn related accidents. This would make the existing left-turn problem worse and does not meet the purpose and need of the project to improve safety at the intersection. A signal warrant study would be needed to remove a signal and the existing high traffic volumes on SR 82 indicate that a traffic signal would be required for safety reasons.

7. *Speed Enforcement*

This measure would reduce the existing 35 mph speed limit on SR 82 to improve safety at intersection of SR 82 and Floribunda Avenue.

This measure was eliminated from further consideration for the following reasons: Reducing speeds on SR 82 would not address left-turn collisions and visibility issues (opposing left-turning vehicles blocking visibility of through traffic) at SR 82 and Floribunda Avenue intersection. A 25 mph posted speed limit sign on SR 82 has already been added for McKinley Elementary School Zone.

8. *Traffic Barriers (Calming)*

These measures include installation of traffic calming devices such as speed humps, delineators (plastic safe hit posts), Bott's dots (Bott's dots are small, protruding, reflecting ceramic tiles used on some roads instead of painted lines to mark lanes), and zebra striping on roadway pavement to make it appear narrower (road diet), to reduce speeds.

These measures were eliminated from further consideration for the following reasons:

Speed humps are a speed reduction measure and do not address left-turn collisions. There is a maintenance issue (cost) with installing delineators (plastic safe hit posts) because based on experience they would be constantly knocked down by vehicles. There is also a safety and maintenance issue with delineators being knocked down by vehicle drivers merging out or into the center lane.

Botts' dots would increase noise to adjacent residents by vehicles, especially buses and trucks, driving over them on SR82. There is no space in the SR 82 roadway to install these types of devices, there is no highway shoulder. Installation of these types of devices would require private property acquisition to install. This measure was eliminated from further consideration because it would essentially be a through lane reduction and would reduce through traffic capacity on SR82 causing traffic delay and congestion. Vehicles wanting to proceed through the intersection and caught in the center left-turn delineated lane on SR 82 would be delayed. There is also a safety and maintenance issue with delineators being knocked down by vehicle drivers merging out or into the center lane.

Reducing the two lanes on SR 82 approaching the Floribunda Avenue intersection with zebra pavement striping (road diet) would essentially reduce SR 82 to a single lane in both directions and vehicle left-turn movements would occur in the through lane. This was eliminated from further consideration because it would reduce SR 82 to a single lane in both directions at Floribunda Avenue which would increase traffic delays, congestion and vehicle emissions on SR 82.

9. *Improve Lighting*

The improvement of intersection street lighting at SR 82 and Floribunda Avenue would be included in the proposed Build Alternative with the installation of new traffic signals and pedestrian signals.

1.3.5 Comparison of Alternatives

Typically the environmental process includes a range of reasonable build alternatives. A no Build Alternative represents the existing condition. All other alternatives are compared to the No Build. For this document, several alternatives were studied and rejected including: No Build, Signal Modification Only, Left-turn Prohibition/Closure, Widen Both Sides (Majority within State Right-of-way), Widen West Side of SR 82 Only, Widening on Both Sides SR 82 and Widen on East Side of SR 82 Only. After initial studies, the PDT determined that the signal modification and left-turn prohibition alternatives were not reasonable alternatives. The last three widening alternatives were categorized as Alternatives Considered but Withdrawn from Further Consideration based on having greater environmental and community impacts, operational and traffic issues, costs, and constructability/unfeasibility issues. For these reasons this is why there is only one build alternative presented as reasonable build alternative.

The principle criteria used for evaluating the alternatives included: whether the alternative met the purpose and need of the project to improve safety by reducing left-turn collisions and improving traffic operations at the intersection, engineering geometric feasibility, cultural resource impacts, Individual 4(f) Resources impacts, right-of-way impacts, cost, visual and biological impacts. The summary Table 4 on next page offers a comparison of the alternatives.

Table 4 - Project Alternatives Comparison

ALTERNATIVE	Description	Geometric Standards	Cultural Resources	Section 4(f) Resources	Right-of-Way (ROW) Impact	Paleontology	Community Impacts	Meets Project Purpose and Need
1.No Build Alternative	The no build alternative would leave the current intersection configuration intact. Potential safety benefits would not be realized. Does not meet purpose and need of project.	Existing: Four-lane undivided highway, with two, approximately 11-ft through lanes, and no shoulders with uncontrolled left-turn movements in both directions at signalized intersection.	No Impacts	No Impacts	No Impacts	No impacts	No impacts	No
2.Build Alternative: Widen Both Sides SR 82 (Within State right-of-way)	Left-turn channelization for both north and southbound direction on SR 82 with protected left-turn signal phase at Floribunda Avenue. Majority of construction within the existing Caltrans right-of-way. 500 ft. long project length.	Four-lane undivided highway with two 11 ft. through lanes and north and southbound, 10 ft., left-turn channel and 1.5 ft. shoulders. This alternative reduces the length and width of geometrics for the project.	Removal of (5) five trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows Potential indirect visual impacts to 1615 Floribunda Avenue property	Removal of (5) five trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. Potential indirect visual impacts to 1615 Floribunda Avenue property	The majority of work will be done within the State right-of-way. Right-of-way encroachment permit would be needed from Hillsborough and Burlingame for the three curb ramps at the northwest, northeast, and southeast corners of SR 82 – Floribunda intersection. Temporary Construction Easements would be needed for two driveways – one at the church on the west side of SR 82, and one at an apartment on the east side of SR 82. No retaining or sound walls needed. Utility relocation required.	No impacts	No impacts	Yes
ALTERNATIVES ANALYZED AND WITHDRAWN FROM CONSIDERATION								
1.Signal Adjustments Only	Maintain existing SR 82 highway configuration but add through and left-turn lane signals on SR 82 at Floribunda Avenue.	Four-lane undivided highway, with two, approximately 11-ft through lanes, and no shoulders with signalized through and left-turn movements in both directions at Floribunda Avenue. No left-turn pocket.	No impacts	No impacts	No Impacts	No impacts	No impacts	No
2.Left-turn Prohibition/Closure	Prohibit Left-turn movements from SR 82 onto Floribunda Avenue.	Maintain existing four-lane undivided highway with no shoulders.	No impacts	No impacts	No Impacts	No impacts	No impacts	No
3.Widen West Side of SR 82 Only with Private ROW Acquisition	Widen west side only. Install left-turn channelization for both NB and SB directions on Rt. 82 with protected left-turn signal. Road widening to current Caltrans standards.	Proposed 11 ft. through lanes, 10 ft. left-turn lanes and 5 ft. shoulders. Approximately 900 ft. from southern to northern project boundary.	-Removal of 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. -Partial ROW acquisition from 1615 Floribunda Avenue property. - Partial ROW acquisition from 50	-Partial ROW acquisition from 1615 Floribunda Avenue property. -Removal of 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. - Partial R/W acquisition from 50 Kammerer Court property. ¹⁰ -3 trees and hedge vegetation on East side of Centennial Park would be impacted.	Partial right-of-way acquisition in the NW and SW quadrants of the intersection. Total ROW take = 8,710 sq. ft. (0.20 acres) -Utilities, traffic signals, signs and lighting impacts in the NW and SW quadrants. -Church driveway will be partially impacted. -Town of Hillsborough Police Dpt. parking lot wall and (7 parking spaces) would be	Based on the Paleontological Identification Report, High Potential for fossils based on the geologic characteristics of the site	-Church driveway will be partially impacted. -Potential loss of 10 parking spaces behind the Town of Hillsborough Police Department. -3 trees and hedge vegetation on East side of Centennial Park would be impacted.	Yes

ALTERNATIVE	Description	Geometric Standards	Cultural Resources	Section 4(f) Resources	Right-of-Way (ROW) Impact	Paleontology	Community Impacts	Meets Project Purpose and Need
			Kammerer Court property. ⁹		impacted. -Retaining walls needed on southwest and northwest sides of SR 82.	on an alluvial fan with potential fluvial deposits.		
4. Widen on Both Sides of SR 82 with Private ROW Acquisition	Widen both sides of SR 82. Install left-turn channelization for both NB and SB directions with protected turn signal. Road widening to current Caltrans standards.	Proposed 11 ft. through lanes, 10 ft. left-turn lanes and 5 ft. shoulders. Approximately 900 ft. from southern to northern project boundary.	-Removal of 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. -Partial ROW acquisition from 1615 Floribunda Avenue property. Partial ROW acquisition from 50 Kammerer Court property. ¹¹	-Partial ROW acquisition from 1615 Floribunda Avenue property. -Removal of 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. - Partial R/W acquisition from 50 Kammerer Court property. ¹² -3 trees and hedge vegetation on East side of Centennial Park would be impacted.	Partial acquisition in the NW and SW quadrants of the intersections. Total ROW take = 8,000 sq. ft. (0.18 acres) -Utilities, traffic signals, signs and lighting impacts in the NW and SW quadrants. -Retaining walls needed on NW and SW sides of ECR -Church driveway would be partially impacted. -Town of Hillsborough Police Dpt. parking lot wall and (7 parking spaces) would be impacted.	Based on the Paleontological Identification Report, High Potential for fossils based on the geologic characteristics of the site on an alluvial fan with potential fluvial deposits.	-Church driveway will be partially impacted. -Potential loss of 10 parking spaces behind the Town of Hillsborough Police Department. -3 trees and hedge vegetation on East side of Centennial Park would be impacted.	Yes
5. Widen on East Side of SR 82 Only with Private ROW Acquisition	Widen on east side only. Install left-turn channelization for both NB and SB directions with protected turn signal. Road widening to current Caltrans standards.	Proposed 11 ft. through lanes, 10 ft. left-turn lanes and 5 ft. shoulders. Approximately 900 ft. from southern to northern project boundary.	Removal of 10 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows.	Removal of 10 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows. McKinley Elementary School. There would be impact to the school yard. (the school yard is considered a 4(f) resource because it is a "recreation facility."	-Partial acquisition in the NE and SE quadrants of the intersection. Relocation of residents and demolition of 4 apartment complexes on eastside of SR 82 Boulevard north and south of Floribunda Avenue. -Utilities, traffic signals, signs and lighting impact in the NE and SE quadrants. -Total ROW take = 15,590 sq. ft. (0.36 acres)	Based on the Paleontological Identification Report, High Potential for fossils based on the geologic characteristics of the site on an alluvial fan with potential fluvial deposits.	4 apartment complexes with 76 units would be physically impacted with this widening in addition to 3 apartment driveways to tenant parking. Possible impact to McKinley elementary school playground located north of Oak Street on east side of SR 82 requiring partial acquisition of right-of-way and construction of sound wall.	Yes

¹⁰ Ibid.

⁹ The 50 Kammerer Court property was outside of the Area of Potential Effects for the current study but appears eligible for listing in the National Register of Historic Places based on previous evaluations.

¹¹ Ibid. T

¹² Ibid.

After comparing and weighing the benefits and impacts of all of the alternatives, the Project Development Team has identified the Build Alternative to widen both sides of SR 82 (majority within Caltrans right-of-way), as the alternative with the least environmental impacts, impacts to 4(f) resources (historic trees) and design feasible, subject to public review. Final identification of a preferred alternative will occur after the public review and comment period. The No Build Alternative would not meet the purpose and need of the project to reduce the left-turn collisions and improve intersection safety.

After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment. In accordance with the CEQA, Caltrans will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by the FHWA, determines the NEPA action does not significantly impact the environment, Caltrans will issue a FONSI in accordance with NEPA.

1.4 Permits and Approvals Needed

Table 5 - Agency Permits and Approvals

Agency	Permit/Approval	Status
California State Historic Preservation Officer (SHPO)	Section 106 National Historic Preservation Act Individual and under the CEQA Public Resources Code (PRC) 5024.5	SHPO concurrence on the National Register of Historic Places eligibility of historic properties within the Area of Potential Effects was received on April 21, 2014. SHPO consultation and concurrence regarding the Finding of Effect will be completed by the Final Environmental Document
Town of Hillsborough and City of Burlingame	Encroachment Permits to enter and construction in Floribunda Avenue.	During Plans, Specifications and Estimates (PS&E) Caltrans would request permit.

CHAPTER 2 – AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The purpose of this chapter is to provide a discussion of the natural and built environment, including many of the community features within the SR 82 at Floribunda Avenue intersection project area. Potential impacts and proposed avoidance, minimization, and mitigation measures, by alternative, are also summarized. Data sources and methodology used for this analysis are briefly discussed with each resource.

A detailed listing of sources can be found in Chapter 7, References. The respective technical reports prepare in support of this Final EIR/EA are available from Caltrans.

General Environmental Review Process

This chapter presents results of the analysis of social, economic, and environmental issues relevant to this project. Issues were identified through an initial screening using generally available information about the project and its environmental setting. This chapter covers resource areas where the initial screening identified a possibility for adverse impact.¹³ (see Table 6 – Environmental Resources).

Table 6 - Environmental Resources

Human Environment	Parks and Recreation Utilities/Emergency Facilities Traffic and Transportation/Pedestrian Facilities Visual/Aesthetics Cultural Resources (archaeological and historic resources)
Physical Environment	Hydrology and Floodplain Water Quality and Storm Water Runoff Geology/Soils/Seismic/Topography Paleontology Hazardous Waste/Materials Noise Energy
Biological Environment	Natural Communities Wetlands and Other Waters Plant Species Animal Species Threatened and Endangered Species Invasive Species

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered under the proposed Build Alternative but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in the document. (see Table 7 – No Adverse Impact Determination Summary).

¹³ A Preliminary Environmental Analysis report (PEAR) was prepared for the Project Study Report (PSR) of this project and determined that the anticipated environmental document would be a combined EIR/EA with Individual 4(f) Resource Evaluation.

Table 7 - No Adverse Impact Determination Summary

AIR QUALITY
The project was found to be exempt from Regional and Project level air conformity under 40 CFR 83.126 as a safety project to widen road for left-turn channel and install a protected left-turn signal.
FARMLAND AND FOREST/TIMBERLAND
The project does not conflict with farmland, forest or timberland.
COASTAL ZONE
The project is not within the coastal zone.
GROWTH
The project is a safety improvement project and the proposed improvements do not alter or increase the capacity of the State Route.
HYDROLOGY AND FLOODPLAIN
The project will not affect hydrology and floodplains. The Technical Information for Location Hydraulic Study and Floodplain Evaluation Report Summary for San Mateo County indicate that the project study area is not located in FEMA-designated floodplains.
MINERAL RESOURCES
The project does not conflict with resource recovery plans or operations in the vicinity.
PUBLIC SERVICES
The project will not affect provisions of existing public services or measurably increase the need for new or physically altered government facilities in order to maintain acceptable service rations, response times, and other performance objectives for any public service. Standard Department Management practices will preclude substantial adverse impacts during construction. A traffic management plan (TMP) will be completed prior to construction to address lane closures and traffic rerouting.
NOISE
The project will not cause a substantial noise level increase (12 dBA or more), it will not directly or indirectly reduce the value of any nearby recreational properties. Access to adjacent properties will remain unchanged and therefore the project will not measurably change the use of existing neighborhood and regional parks or other recreational facilities.
WATER QUALITY
Since the project is not anticipated to create any impacts to the Waters of the State or Waters of the U.S., the project is unlikely to require a 404 permit from the U.S.Army Corps of Engineers as well as a 401 Water Quality Certification from the SF Bay RWQCB. The final determination on 404 permit will be determined by biologists.

2.1 LAND USE

2.1.1. Existing and Future Land Use

The land uses in the vicinity of SR 82 and Floribunda Avenue intersection consist primarily of low-density residential housing, condominiums/apartments, institutional/public service, recreation and transportation. In the immediate intersection of SR 82 and Floribunda Avenue are the Town of Hillsborough City Hall and Police Department, Adventist Church, private residences, condominium/apartment complexes on the east and west sides of SR 82 Boulevard and an elementary school north of the project footprint. Overhead utility cables are present along the west side of SR 82 in the project study area and on the north side of Floribunda Avenue. A large channelized creek is located north west of the intersection which is outside of the APE. SR 82 is identified as the hiking/equestrian Juan Bautista de Anza National Historic Trail in the Town of Hillsborough's General Plan Circulation Element. SamTrans bus stops are located on SR 82 on the northwest and southwest corners. Floribunda Avenue is a designated bicycle route by the Town of Hillsborough and City of Burlingame. There are pedestrian curb ramps and signals crossing the west, north and east legs of the intersection of SR 82 at Floribunda Avenue. The south leg crossing is closed to pedestrian crossing. There is no sidewalk on the west side of SR 82 Boulevard from Floribunda Avenue to Bellevue Avenue.

The community within the project area is build-out urban area with residential, institutional and recreation uses. According to the city general plans for the City of Burlingame and the Town of Hillsborough, there are no new, large development projects planned for the project area.

Town of Hillsborough

The Circulation Element of the Town of Hillsborough General Plan reports that there are seven to eight traffic accidents per month within Hillsborough and the city has identified the intersection of Floribunda Avenue and SR 82 as having the highest number of traffic collisions per month within Hillsborough. The town completed a study of the intersection and several potential improvements were identified to address the intersection's various safety concerns. The town noted that they would work with Caltrans to implement the study's recommendations.

The Housing element of the Hillsborough General Plan is designed to plan for the housing needs of the Hillsborough community while meeting the State's housing goals required under Article 10.6 of the California Government Code. The Housing Element analyzes the housing needs in Hillsborough, the resources available to meet those needs, and the governmental and non-governmental constraints that can work against increasing the supply of affordable housing.

The Town of Hillsborough 2007-2014 General Plan, Housing Element has identified locations suitable for new housing development. None of the locations identified are adversely affected by the proposed project at the intersection of SR 82 and Floribunda Avenue.

City of Burlingame

According to the City of Burlingame General Plan the project area east of SR 82 at Floribunda Avenue bounded by Oak Grove Avenue to its north; the rail road tracks to its east; SR 82 to its west and portions of land to the south of Floribunda Avenue is designated for medium-high density residential (R-3) uses. The land uses are predominantly multifamily residential including some lower intensity residential uses such as single family homes, duplexes, apartment homes, multifamily homes and accessory buildings. Uses in this district also include public buildings, public parks and playgrounds, and religious facilities. These areas will continue to be regulated by the same zoning standards that apply to R-3 properties Citywide.

Northwest of intersection

On the northwest corner there is a small park (Centennial Park) next to the Hillsborough Town Hall and Police Department. Originally called the Hillsborough Water Conservation Park, it was built in 1989 to demonstrate water conservation techniques for the benefit of homeowners in the Town and in surrounding communities. Native, low-water use and drought tolerant plants are planted in the garden utilizing mulch and an automatic drip irrigation system. The park was funded by grants from the State of California and contributions from private citizens and local garden clubs. The park was renovated in 2009 thanks to a grant from the Hillsborough Beautification Foundation. The park has a small garden, a gazebo and tiered water fountain, benches and water for pedestrians and dogs. This site was also the location of a former pet cemetery. The garden park was refurbished with new landscaping, restored gazebo and plantings in 2009. The park is a 4(f) Resources, a public park owned by the Town of Hillsborough. North and adjacent to the Hillsborough Police Department is the Seventh-Day Adventist Church.

Figure 5 - Northeast and Northwest corners of SR 82 and Floribunda Avenue



Southwest of intersection

Southwest of SR 82, which is in the Town of Hillsborough, there is low-density residential housing from Floribunda Avenue to Bellevue Avenue. One property, 1615 Floribunda Avenue, has been identified as a historic property adjacent to SR 82, southwest of the intersection.

Figure 6 - Southwest corner of SR 82 and Floribunda Avenue



Northeast of intersection

This area is within jurisdiction of the City of Burlingame. Its land use is zoned medium density with 21-50 dwelling units per acre. The northeast corner properties are condominium and apartment complexes. McKinley Elementary School is located one block north of Floribunda Avenue on SR 82, between Oak Grove Ave. and Fairfield Road, on east side of SR 82 Boulevard (SR 82). The McKinley Elementary School playground, bordering SR 82 Boulevard, may be considered a 4(f) resource (recreation facility). Flooding regularly occurs on SR 82 north of Floribunda Avenue, from rain run-off entering SR 82 from the west approach of Floribunda Avenue. The flooding impacts the properties underground parking lots on the east side and property owner pump the flood waters back onto SR 82.

Figure 7 - Northeast corner of SR 82 and Floribunda Avenue



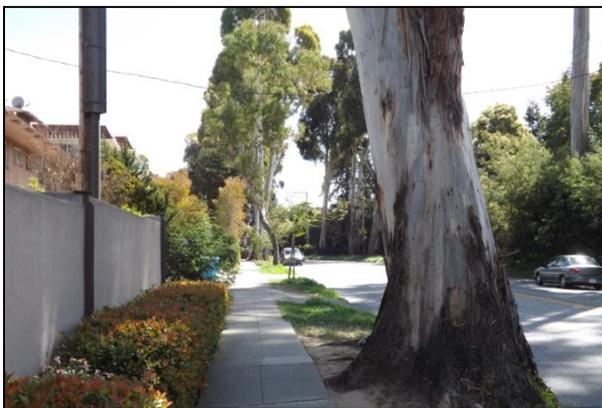
Southeast of intersection

This area is within the jurisdiction of the City of Burlingame. Its land use is zoned high density with 51 or greater dwelling units per acre. On the southeast corner of SR 82 and Floribunda Avenue there are four, 76 unit apartment complexes. The apartment complexes have driveway entrances to ground level parking spaces.

Figure 8 - Southeast corner of SR 82 and Floribunda Avenue



Figure 9 - Existing photos of east, west and south sides of SR 82 near Floribunda Avenue



Eastside of SR 82 south of Floribunda Ave.



Westside of SR 82 north of Floribunda Ave.



Eastside of SR 82



SR 82 south of Floribunda Ave.

2.1.2 Consistency with State, Regional, and Local Plans and Programs

The purpose of the proposed Intersection Safety Improvement project at SR 82 (SR82) and Floribunda Avenue is to improve operations and reduce left-turn collisions. This project does not increase vehicle capacity on SR82 (SR 82) and is consistent with State, Regional, and Local Plans and Programs.

Table 8 - Consistency with State, Regional and Local Plans

State, Regional and Local Plans-Programs	Policies and Goals
Strategic Highway Safety Plan (2006)	Make streets, highway and transit service safer.
San Mateo Countywide Transportation Plan 2010	Goal: Reduce traffic congestion in San Mateo County. Improve mobility and increase safety. ¹⁴
Metropolitan Transportation Commission	Regional Transportation Plan (Bay Area Plan): Target #4 to Reduce injuries and fatalities from all collisions by 50%. ¹⁵
Town of Hillsborough General Plan	Chapter 3, Circulation Element, page C-7. SR82 at Floribunda intersection was identified for safety improvement to reduce collisions.
City of Burlingame General Plan	Chapter 2, Circulation Element, page PP-11. Policy CI (A): The system of circulation proposed in this plan recognizes Burlingame's situation astride a major transportation corridor on the San Mateo Peninsula. Action CI(1): Develop an integrated system of regional rapid transit and local transit to serve Burlingame residents and workers and to provide for the high volume through- movement that will have to be accommodated in this transit corridor in the future.
SAFETEA-LU Act, TEA-21	Project #1942 SR 82 "Grand Boulevard" Initiative to improve performance, safety and aesthetics of SR 82.

The project is consistent with the San Mateo Countywide Transportation Plan 2010. The county strategy is focused on road efficiency, in addition to improved transit service, increasing housing densities near transit, programs to reduce single-occupancy vehicles and pricing strategies that favor alternative transportation. In addition, the project is consistent with the federal SAFETEA-LU Act, enacted in 2005 which reauthorized TEA-21 and provides expenditures on SR 82 for the High Priority Project #1942: SR 82 "Grand Boulevard" initiative in San Mateo County. This project is a regional collaboration dedicated to revitalize the SR 82 corridor through the San Mateo and Santa Clara Counties. It is a collaboration of 19 cities, counties, local and regional agencies to improve the performance, safety and aesthetic of SR 82.

General and community plans

The Town of Hillsborough General Plan Transportation Circulation Section discusses SR 82 at Floribunda Avenue as an intersection in need of safety improvements to address left-turn collisions and describes the Hillsborough City staff desire to work with Caltrans in analyzing options to improve traffic safety at this intersection.¹⁶ The City of Burlingame also expressed a desire to work with the Town of Hillsborough and Caltrans to improve the traffic safety at this

¹⁴ County of San Mateo Transportation Plan. Retrieved on 1/27/14 from <http://planning.smcgov.org/documents/san-mateo-county-countywide-transportation-plan>

¹⁵ Metropolitan Transportation Commission, Chapter 5-Performance, Target #4, pg. 101. Retrieved on 5/16/14 from http://www.mtc.ca.gov/planning/plan_bay_area/

¹⁶ Town of Hillsborough General Plan, Chapter 3 Circulation Element, page C-7. <http://www.hillsborough.net/civica/filebank/blobload.asp?BlobID=2674>

intersection. Both cities have monitored this intersection for over ten years and there have been several community meetings and city council meetings to discuss ideas to improve the intersection. In the past year a signal timing change was made at SR 82 (SR82) at Oak Grove Avenue to stop southbound traffic before the through traffic signal changes at SR 82 at Floribunda Avenue. This was done to create a gap in southbound traffic on SR 82 Boulevard to allow easier left-turns from SR 82 northbound to Floribunda Avenue westbound. This change has improved the operations of the ECR at Floribunda Ave. intersection but the pattern of left-turn collisions at the intersection has continued.

2.1.3 Environmental Consequences

1. Build Alternative (within existing Caltrans right-of-way with design exemptions)

The proposed build alternative would improve intersection safety by widening SR 82 in both the north and southbound direction approaches to Floribunda Avenue in order to install a left-turn channel and left-turn signal. The project length would be approximately 300 ft. including the approaches and intersection. TCEs would be required at three of the corners of the intersection to widen SR 82, mostly within Caltrans right-of-way. In addition, two temporary PECs would be needed on the west side of the intersection and two small right-of-way acquisitions would be required on the NE and SE corners to construct sidewalk curb ramps. Lastly, fifteen (14) trees would need to be removed, of which five (5) trees are contributors to the Howard-Ralston Eucalyptus Tree Rows. There would be no other impacts to land use or environmental resources.

2.1.4 Avoidance, Minimization, and/or Mitigation Measures

The Build alternative proposes the following measures to avoid, minimize and/or mitigate land use impacts including:

- Relocation of utilities and some drainage facilities as required.
- Avoidance and minimization measures to reduce construction impacts to transportation, landscaping, migratory birds and water quality.

2.1.5 Parks and Recreational Facilities

There is a public park, Centennial Park, located on the northwest corner of the intersection of SR 82 and Floribunda Avenue. The park is a 4(f) Resource; however there is no use of the resource. The small public park is located on the northwest corner of the intersection next to the Hillsborough Town Hall and Police Department. Originally called the Hillsborough Water Conservation Park, it was built in 1989 to demonstrate water conservation techniques for the benefit of homeowners in the Town and in surrounding communities. Native, low-water use and drought tolerant plants are planted in the garden utilizing mulch and an automatic drip irrigation system. The park was funded by grants from the State of California and contributions from private citizens and local garden clubs. The park was renovated in 2009 thanks to a grant from the Hillsborough Beautification Foundation. The park has a small garden, seven trees, a gazebo and tiered water fountain, benches and water for pedestrians and dogs. The proposed Build Alternative for the Intersection Safety Improvement project would not adversely impact Centennial Park. Caltrans would request a permit to enter and construct from Hillsborough for temporary construction activities at the northwest corner of the intersection.

2.2 Community Impacts

2.2.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 Code of Federal Regulations [CFR] 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.2.2 Affected Environment

The proposed project is located on SR 82, between Oak Grove Avenue and Bellevue Avenue at the north and south approaches to Floribunda Avenue, in both the City of Burlingame and Town of Hillsborough, in San Mateo County, California. The landscape is characterized by flat terrain with dense, urban vegetation. The land use within the project corridor is primarily urban, with heavy residential developments of single family and multi-family buildings as well as a church and an elementary school. The Town of Hillsborough Police Station, Town Hall and Town Offices are located at the northwest corner of the project intersection. SR 82 is a State Conventional Highway and is not designated as a Scenic Highway, nor is it listed as eligible.

The land uses in the vicinity of SR 82 and Floribunda Avenue intersection in Hillsborough consist primarily of low-density residential housing, condominiums/apartments, institutional/public service, parks and recreation and transportation. The land uses in Burlingame are predominantly multifamily residential including some lower intensity residential uses such as single family homes, duplexes, apartment homes, multifamily homes and accessory buildings. Uses in this district also include public buildings, public parks and playgrounds, and religious facilities.

The community median-income for the four census tracts surrounding the project range from \$58,970 to \$209,444 and are not considered low-income. Below is a table with the estimated total housing units for each of the census tracts surrounding the proposed project site at SR 82 at Floribunda Avenue.

Table 9 - Total Housing Units in Project Area

Subject	Census Tract 6053, San Mateo County, California	Census Tract 6054, San Mateo County, California	Census Tract 6055, San Mateo County, California	Census Tract 6056, San Mateo County, California
	Estimate	Estimate	Estimate	Estimate
Total housing units	1,930	2,803	2,883	1,995

Source: U.S. Census, American Community Survey, Demographic and Housing Estimates, 2007-2011

2.2.3 Environmental Consequences

The proposed project site would not have impacts on the community including: housing, minority and low income populations, hospitals, businesses, shopping areas, parks or recreation areas. The proposed Build alternative would widen SR 82 within Caltrans ROW only and not require property acquisition from adjacent private property, except for temporary construction easements and to construct curb ramps at three intersection corners.

2.2.4 Avoidance, Minimization, and/or Mitigation Measures

The proposed Build Alternative will include a Transportation Management Plan (TMP) to minimize temporary construction impacts to the community. Caltrans will develop a TMP to address impacts to motor vehicle, transit, bicycle, and pedestrian access during project construction. Please see Section 2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities for more details.

Several Build alternatives were analyzed for the project including widening to current Caltrans design standards on the west, east and both sides of SR 82 at Floribunda Avenue. This alternative would require the real property acquisition and relocations of the apartment residents by Caltrans. There also would have been negative impacts to the school yard (acquisition of a portion of the recreation area) of McKinley Elementary School on the east side of SR 82, north of Oak Grove Avenue. For these reasons the alternative to widen SR 82 on the east side was eliminated from further consideration for the project.

The initial project footprint included potential acquisition of residential and public school, Hillsborough Police Department and church properties. Through alternatives analysis and avoidance measures Caltrans has reduced the project footprint to State ROW. (See Table 5 - Project Alternatives Comparison).

2.3 Relocations and Real Property Acquisition

2.3.1 Regulatory Setting

Caltrans's Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24. The purpose of RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see [Appendix D](#) for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code [USC] 2000d, et seq.). Please see Appendix C for a copy of Caltrans's Title VI Policy Statement.

2.3.2 Affected Environment

Under the proposed Build alternative there would be no relocation and real property acquisition. There would be TCEs on the NW, NE and SE segments of the intersection for construction of the project. In addition, Caltrans would work with the Town of Hillsborough and City of Burlingame to acquire PCEs on the south and north intersection crosswalks of the SR 823 and Floribunda Avenue intersection. Finally, Caltrans would acquire two small corners of sidewalk property on the NE and SE corner to complete ADA pedestrian curb ramp improvements.

2.3.3 Environmental Consequences

There are no relocations for the proposed Build alternative. There would be two small acquisitions of property at the NE (24.57 sq. ft.) and SE (50.21 sq. ft.) corners of the intersection of SR82 and Floribunda Avenue to upgrade the curb ramps to current ADA standards.

2.3.4 Avoidance, Minimization, and/or Mitigation Measures

The proposed Build alternative to widen SR 82 for a distance of approximately 500 ft. including the intersection and north/south approaches to Floribunda Avenue would avoid the necessity for relocations and property acquisition. Caltrans would work with both the Town of Hillsborough and City of Burlingame to notify the community of any TCE and PCE construction zones and detours during project implementation.

2.4 Environmental Justice

2.4.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and impacts of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on Caltrans of Health and Human Services poverty guidelines. For 2013, this was \$23,550 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix D of this document.

2.4.2 Affected Environment

Town of Hillsborough

The land uses in the vicinity of SR 82 and Floribunda Avenue intersection consist primarily of low-density residential housing, condominiums/apartments, institutional/public service, recreation and transportation. In the immediate intersection of SR 82 and Floribunda Avenue are the Town of Hillsborough City Hall and Police Department, Adventist Church, private residences, condominium/apartment complexes on the east and west sides of SR 82 Boulevard and an elementary school north of the project footprint

City of Burlingame

According to the City of Burlingame General Plan, the project area east of SR 82 at Floribunda Avenue bounded by Oak Grove Avenue to its north; the rail road tracks to its east; SR 82 to its west and portions of land to the south of Floribunda Avenue, is designated for medium-high density residential (R-3) uses. The land uses are predominantly multifamily residential including some lower intensity residential uses such as single family homes, duplexes, apartment homes, multifamily homes and accessory buildings. Uses in this district also include public buildings, public parks and playgrounds, and religious facilities. These areas will continue to be regulated by the same zoning standards that apply to R-3 properties Citywide.

2.4.3 Environmental Consequences

Research based on the 2010 U.S. Census of the adjacent properties and properties in the area of the proposed project at SR 82 at Floribunda Avenue was conducted to examine potential disproportionate impact on low-income and/or minority residents. Data was analyzed for U.S. Census Tracts 6053, 6054, 6055 and 6056, which cover the surrounding communities in the Town of Hillsborough and City of Burlingame including the intersection of SR 82 at Floribunda Avenue. Socio-economic data including minority populations and income level from the U.S. Census Tract data was analyzed. The following information from the U.S. Census analyzed to determine the minority and low-income populations adjacent to this project.

Community Median-Income

Based on research of the U.S. 2010 Census information on median income, low-income housing and ethnic information to the 'block' level, no disproportionate minority or low-income populations would be adversely affected by the proposed project have been identified. Low income is defined based on Caltrans of Health and Human Services poverty guidelines. For 2013, this was \$23,550 for a family of four. The median-income for the four census tracts surrounding the project range from \$58,970 to \$209,444, therefore, this project is not subject to the provisions of EO 12898.

The following tables and figures from the U.S. Census indicate that the proposed project would not disproportionately affect low-income or minority populations:

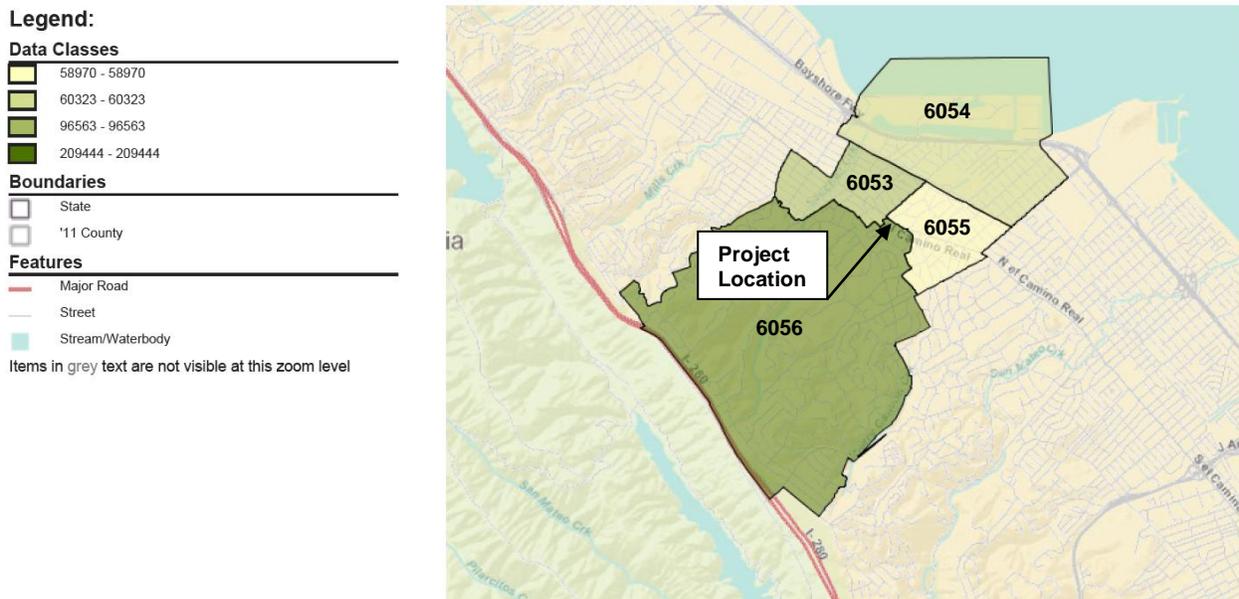
Table 10 - Median-Income: Project Area Census Tracts

Subject	Census Tract 6053, San Mateo County, California		Census Tract 6054, San Mateo County, California		Census Tract 6055, San Mateo County, California		Census Tract 6056, San Mateo County, California	
	Estimate	Margin of Error						
Median household income (dollars)	\$96,563	+/-19,053	\$60,323	+/-5,328	\$58,970	+/-9,178	\$209,444	+/-39,290

Source: U.S. Census, Selected Economic Characteristics, 2007-2011 ACS 5-Year Estimates

The median-income in the four census tracts surrounding the project location ranges from \$58,970 to \$209,444 with the highest median-income of \$209,444 located to the west of the project location in census tract 6056 and the lowest, \$58,970 in census tract 6055, located to the southeast of the project site. Below is a map of median-income for the four census tracts surrounding the project site location.

Figure 10 - Median Income in Project Vicinity



Source: U.S. Census, Selected Economic Characteristics, 2007-2011 ACS 5-Year Estimates

Minority Populations

There are no disproportionate minority populations located near the proposed project site at SR 82 at Floribunda Avenue. The table below presents a breakdown of race for the vicinity surrounding the project site. The largest population for each census tract is White, followed by Asian, Hispanic and Black.

Table 11 - Racial Population in Project Area

Subject	Census Tract 6053, San Mateo County, California		Census Tract 6054, San Mateo County, California		Census Tract 6055, San Mateo County, California		Census Tract 6056, San Mateo County, California	
	Estimate	Percent	Estimate	Percent	Estimate	Percent	Estimate	Percent
White	3090	73%	3765	62%	2896	70%	3709	74%
Black or African American	73	2%	79	1%	21	1%	0	0%
Asian	505	12%	852	14%	693	17%	1186	24%
Hispanic or Latino (of any race)	570	13%	1348	22%	522	13%	146	3%
Total	4,238		6,044		4,132		5,041	

Source: U.S. Census, Demographic and Housing Estimates, 2007-2011 ACS 5-Year Estimates

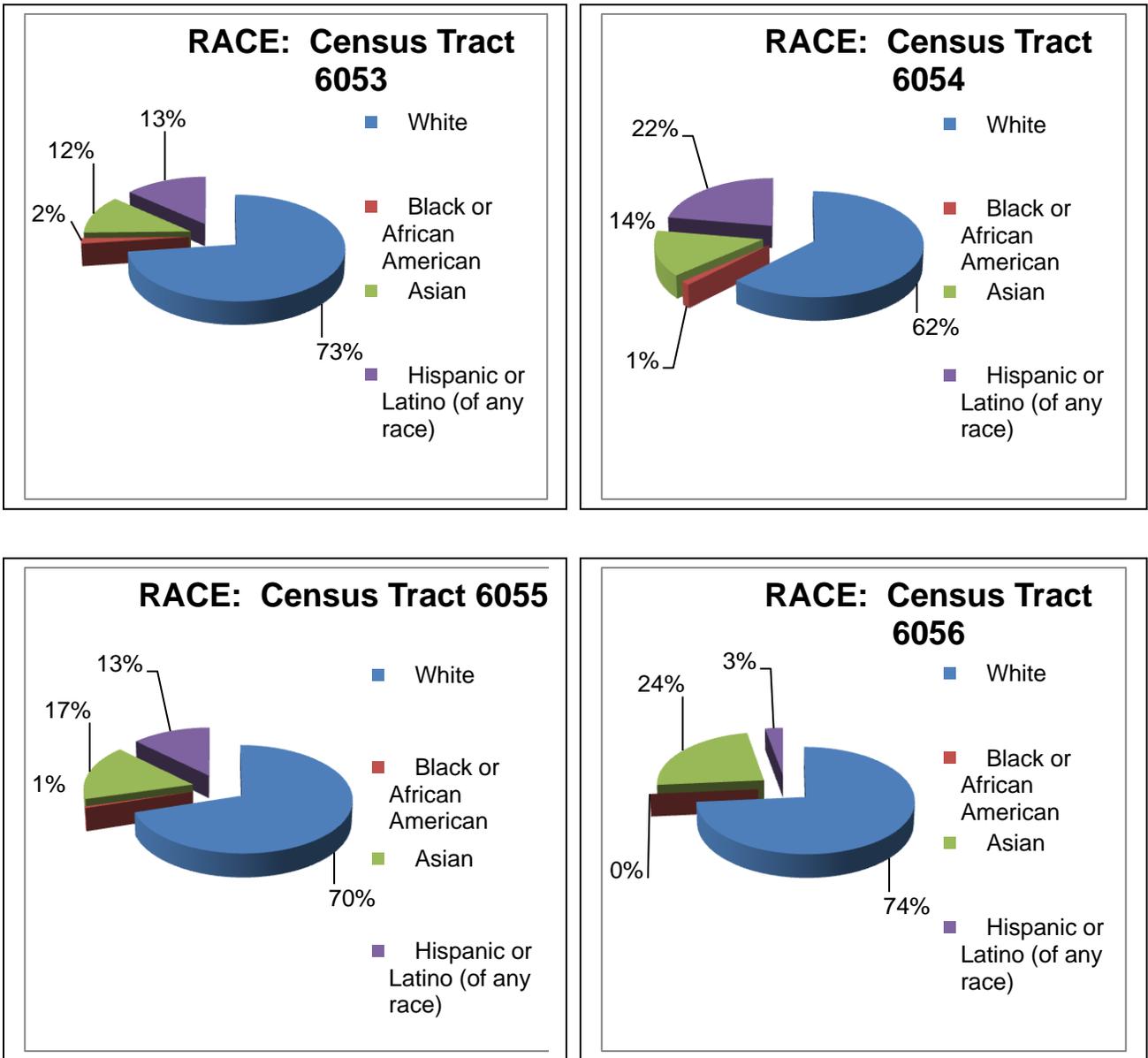
The charts in Figure 6 on the following page break down the four predominate races by percentages and by census tract. Table 12 and the charts in Figure 6 indicate that the project location would not affect proportionately minority populations.

Conclusion

Based on research from the 2010 U.S. Census of census tracts within the project site, presented above, no minority or low-income population would be adversely affected by the proposed project. Therefore, this project is not subject to the provisions of EO 12898.

No Build Alternative: Under the No Build Alternative, there would be no impacts requiring consideration of minority or low-income populations within the project study area under EO 12898.

Figure 11 - Racial Profile in Project Vicinity



2.4.4 Avoidance, Minimization, and/or Mitigation Measures

Based on the above discussion and analysis of the alternatives, no avoidance, minimization or mitigation measures are required. The Build Alternative-Widen within Caltrans Right-of-way (ROW), Widen Westside only, and Widen both sides-some acquisition of ROW, would not cause disproportionately high and impacts on any minority or low-income populations as per E.O. 12898 regarding environmental justice.

No Build Alternative: Under the No Build Alternative, there would be no impacts requiring avoidance, minimization or mitigation measures for minority or low-income populations within the project study area under EO 12989.

2.4.5 UTILITIES AND EMERGENCY SERVICES

2.4.6 Affected Environment

Utilities

The proposed Build alternative would require relocation of utilities including Pacific Gas and Electric (PG&E), cable, telephone, sewer and water.

Emergency Services

Central County Fire provides fire protection and emergency services for the City of Burlingame and the Town of Hillsborough. Caltrans has a staff of approximately 63 in a total of five fire stations, three of which are in Burlingame and two in Hillsborough.¹⁷ The nearest fire station to the project location is the Central County Burlingame Fire Station, located at 799 California Drive, 0.5 miles from SR 82 at Floribunda Avenue.

The Burlingame Police Department provides public safety services within the city limits. Caltrans employs a staff of 37 full-time sworn police officers and 25 full-time professional staff (Burlingame Police Department, 2014). The police station is located at 1111 Trousdale drive, approximately 2 miles from the project area.

The Town of Hillsborough Police Department is located very close to the project site, at 1600 Floribunda Avenue next to the Hillsborough Town Hall at SR 82 and Floribunda Avenue. The Hillsborough Police Department maintains a small staff working in the Patrol, Investigations, Administration Services and Dispatch Divisions.

Burlingame has one hospital, the recently renovated Mills-Peninsula Medical Center at 1501 Trousdale Drive (2.1 miles northwest of the project site). This facility is a 241-bed, 450,000 square ft. general acute-care hospital which provides a wide range of outpatient services including surgery, rehabilitation and diagnostics and has an Emergency Department.¹⁸

2.4.8 Environmental Consequences

The Build Alternative would relocate several utilities within the project limits. PG&E overhead electrical line along the west side of SR 82 is in conflict with the roadway widening. Burying PG&E electrical line within the State right-of-way is anticipated. In addition, PG&E gas line, AT&T underground line and City of Burlingame water line on the east side of SR 82 are in conflict and relocating of them within the State right-of-way is anticipated. Several existing utility boxes and manholes need to be relocated or adjusted to the finished grade. Potholing will be required to identify the underground utilities and detailed utility verification will be done during the PS&E phase

Further utility investigation would be performed to verify all utility relocations requirements and data during the final project design phase. No short-term or long-term impacts to utilities would occur.

The project would have no impacts on emergency services. By providing left-turn pockets on SR 82 at Floribunda Avenue, the proposed design has the potential to reduce response times for emergency service providers at this intersection.

¹⁷ Central County Fire Department, Adopted Budget FY 2013-14. Retrieved on 5/12/14 from <http://www.hillsborough.net/civica/filebank/blobdload.asp?BlobID=4928>.

¹⁸ Sutter Health Mills-Peninsula Health Services. Retrieved on 5/12/14 from <http://www.mills-peninsula.org/about/>.

No Build:

The No Build Alternative would not require utilities to be relocated. Impacts to emergency service providers and emergency response times are too speculative to determine but travel times through the SR 82 at Floribunda Avenue intersection could be prolonged due to longer wait times and higher traffic volumes in the future. (See Table 13 Existing and Forecasted Average Annual Daily Traffic (AADT) in 2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities Section)

2.4.9 Avoidance, Minimization, and/or Mitigation Measures

Construction

Project construction duration is estimated to be approximately five months. A Transportation Management Plan (TMP) will be developed as part of the project to address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction. Access will be maintained for emergency response vehicles, and no disruption to existing emergency service access is expected. The TMP will be shared with both the Town of Hillsborough and City of Burlingame and members of the public.

2.5 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

2.5.1 Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally-assisted programs is governed by the USDOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). FHWA has enacted regulations for the implementation of the 1990 ADA, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities.

2.5.2 Affected Environment

Current and Forecasted Traffic

The proposed Build Alternative is a safety improvement project and would not increase vehicle capacity on SR 82. There would be no impact on existing and forecasted Average Annual Daily Traffic (AADT) at the intersection.

Table 12 below shows the existing and forecasted Average Annual Daily Traffic (AADT) at the intersection.

Table 12 - Existing and Forecasted AADT

SR 82 Direction	AADT			
	Year 2013	Year 2017	Year 2027	Year 2037
NB	15,683	16,923	20,022	23,120
SB	14,102	15,217	18,003	20,789

Pedestrian Facilities

There are existing painted crosswalks crossing the west leg of Floribunda Avenue, the north leg of SR 82 and the east leg of Floribunda Avenue. There are no painted crosswalks crossing the south leg of SR 82 and NO PED CROSSING USE CROSSWALK barricades are in place. Pedestrian activated push buttons and pedestrian signals are installed at crossings with painted crosswalks. There are three diagonal curb ramps with no truncated domes.

Bicycle Facilities

There are no bicycle facilities located on SR 82 at Floribunda Avenue, however, Floribunda Avenue is a signed Class III (bicycle route) that shares the road with vehicles. There are no proposed changes planned for bicycle facilities.

Public Transit Facilities

SamTrans public transit Routes 397 and SR 82 (ECR) operate in the north and southbound directions on SR 82. Route 397 operates about every 15 minutes on weekdays and weekends from San Francisco to Palo Alto Transit Center with Limited Overnight Service and serves SF Airport. Route 397 does not operate mid-day or in the evening. Route ECR operates about every 15 minutes on weekdays and 20 minutes on weekends along SR 82 from the Palo Alto Transit Center to the Daly City BART Station. The nearest existing bus stops are located on the northwest corner of SR 82 at Floribunda Avenue for the SB direction, at Oak Grove Avenue (NB direction) and Bellevue Avenue (SB direction).

2.5.3 Environmental Consequences

Build Alternative:

The proposed project would widen SR 82 at Floribunda Avenue to add a left-turn channel in the north and south bound directions. The proposed Build Alternative would reduce the high broadside collision rate involving left-turn traffic movements and reduce the congestion and traffic flow for left-turning vehicles on SR 82 at Floribunda Avenue.

Construction would temporarily detour sidewalks and bicycle routes and cause traffic delays. The proposed construction and improvements may include roadwork that requires lane closures and detours. Duration of construction is estimated to be five months.

No Build Alternative:

Under the No Build Alternative, the future AADT would be the same as shown in Table 13. However, the pattern of broadside accidents would continue. Existing pedestrian, bicycle and public transit facilities would be expected to continue according to local city plans, already discussed in *Section 2.1.2 Consistency with State, Regional, and Local Plans and Programs*.

2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Reconstruction of sidewalks and curb ramps would be construction to ADA standards. Existing sidewalks would be replaced and sidewalk curb ramps would be added at the NW, NE and SE corners. Pedestrian walk signals would be upgraded and intersection street lighting added. The existing south side leg crossing SR 82 would remain a closed crosswalk. Sidewalks would be replaced (to ADA standards), a landscaped vegetation strip added and replacement Accolade® elm trees or similar approved tree variety, would be planted where feasible (where there is space) within the Howard-Ralston Eucalyptus Tree Rows. Replanted trees would be planted at least two ft. away from curb.

Construction

Caltrans will develop a TMP to address impacts to motor vehicle, transit, bicycle, and pedestrian access during project construction. The TMP for the project would be developed and refined during the Project Scope and Engineering phase and supported by detailed traffic studies to evaluate traffic operations. The need for necessary lane closures during off-peak hours or at night, or short-term detour routes would be identified, as required. The TMP would include press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming closures or detours. Various TMP elements such as portable Changeable Message Signs and CHIP Construction Zone Enhance Enforcement Program (COZEEP) may be utilized to alleviate and minimize delay to the traveling public. There is an existing designated bicycle route on Floribunda Avenue within the project area. A plan would be included to detour bicycle traffic and local bicycle advocacy groups would be notified of planned bicycle route detours.

2.6 VISUAL/AESTHETICS

2.6.1 Regulatory Setting

The NEPA of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the FHWA in its implementation of NEPA (23 USC 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the State “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” (CA Public Resources Code [PRC] Section 21001[b]).

For this project a Visual Impact Assessment (VIA) was completed by Caltrans staff to document potential visual impacts caused by the proposed project and to identify measures to lessen any detrimental impacts that were identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes.

2.6.2 Affected Environment

A Visual Impact Assessment was completed by Caltrans Office of Landscape Architecture on November 25, 2013 and is available upon request. The proposed project is located on SR 82, between Oak Grove Ave. and Bellevue Ave, in the City of Burlingame and the Town of Hillsborough, in San Mateo County, California. The project length is approximately 500 ft. encompassing the north and southbound approaches to the intersection of SR 82 and Floribunda Avenue. The landscape is characterized by flat terrain with dense, urban vegetation. The land use within the project corridor is primarily urban, with heavy residential developments of single family and multi-family buildings as well as a church and an elementary school nearby. The Town of Hillsborough Police Station, Town Hall and Town Offices are located on the north west corner next to a small public park (Centennial Park).

SR 82 is a State Conventional Highway and is not designated as a Scenic Highway, nor is it listed as eligible. Under CEQA guidelines however, scenic resources are present within the project limits. The major project feature that would be impacted is the removal of 15 mature trees, four of which are historic eucalyptus trees from the Howard-Ralston Eucalyptus Tree Rows, listed as a historic resource in the National Historic Register of Historic Places. These trees were planted between 1873 and 1876. The tree row was listed in the National Historic Register of Historic Places in 2012, for their association with the founding of the City of Burlingame and the Town of Hillsborough, and criterion C, as an example of master landscape designer John McLaren’s early work. The tree row highlights McLaren’s foresight into roadway beautification and accentuates the historical significance El Camino Real (SR 82) as the primary route of travel from San Francisco to what is now known as the Peninsula. It is also a predecessor to the California Highway Tree Planting Program which began 48 years later, in 1921.

The Howard-Ralston Eucalyptus Tree Rows contains 557 total trees within the boundaries of the Tree Rows. Based on the 2012 Howard-Ralston Eucalyptus Tree Rows National Register Nomination and adjusted numbers reflecting the trees removed and replaced (for health and safety reasons). For a breakdown of the number and type species of trees contained in the Tree Rows see Section 2.23 Cumulative Impact Assessment.

The Howard-Ralston Eucalyptus Tree Rows, when originally planted, spanned four miles in length from San Mateo to Hillsborough as a tunnel of eucalyptus and elm trees. Due to urbanization, this scenic resource has been reduced to 2.2 miles residing predominantly within the City of Burlingame, with a smaller section within the Town of Hillsborough.

There has been a history of protection by the community and the City of Burlingame, for the Howard-Ralston Eucalyptus Tree Rows dating back to 1908. The portion of the tree row within Burlingame was designated as a "Heritage Grove" in 1975 by the City of Burlingame. The San Mateo Historic Sites Committee designated the tree rows as a "Point of Historic Significance" within Burlingame.

Beginning in early 2003 Caltrans along with the City of Burlingame and the Burlingame Historical Society began replacing any historical eucalyptus removed with contributing elms (*ulmus 'morton'*, common name Accolade ® elms) to maintain the visual integrity of the tree rows along SR 82.

Within the project limits along SR 82, from just north of Oak Grove Avenue to just north of Bellevue Avenue, the Howard-Ralston Eucalyptus Tree Rows is heavily intact except for a one block long section on both sides of SR 82, between Oak Grove and Floribunda Avenue. This block consists of the Hillsborough Town Hall and police department to the west, and the multifamily townhouses to the east. The west side, south of Floribunda Avenue, is characterized as very natural with dense vegetation, both trees and large shrubs, and no sidewalk, but rather an informal trail created by pedestrian seeking a path along the western side. On the east side of SR 82, between Oak Grove and Floribunda Avenue, sweet gum (*liquidambar styraciflua*) trees have been planted adjacent to residential townhomes, currently heavily landscaped. South of Floribunda Avenue, historical eucalyptus trees line pedestrian sidewalks adjacent to high-density, residential apartments and condominiums.

2.6.3 Environmental Consequences

The proposed project build alternative would have a moderate-low impact to the visual environment. The greatest impact from this project would be to the residents living in the on the east side of SR 82, south of Floribunda Avenue. The loss of trees on the east side of SR 82 would increase natural light to residential units as well as bring the SR 82 roadway closer. Some may see the increase in light as a welcome addition, while others may feel the loss of the trees is a negative change. Specifically, a total of fourteen trees would be removed by the build alternative including: (5) five contributors to the Howard-Ralston Eucalyptus Tree Rows (four mature eucalyptus trees and one contributing young elm tree), (5) five non-historic, sweetgum (*liquidambar styraciflua*) trees located on the north east side of SR 82 north of Floribunda Avenue, and (4) four non-historic trees on SR 82 south of Floribunda Avenue (one young blue gum eucalyptus tree, two young eucalyptus and one acacia tree).

The visual quality of the existing corridor will be moderately affected by the loss of the trees and the widened intersection. The loss of trees will increase natural light to residential units as well as lesson the vegetative buffer. The overall character and quality of the visual environment will remain. The loss of street trees, while noticeable, does not substantially change the character and quality of the urban landscape due to the density of the remaining planting.

Figure 12 – Visual Impacts: Before and After Project Build



View from Oak Grove Ave. (Existing)



View from Oak Grove Ave. (After construction)



View from Floribunda Ave. (Before Construction)



View from Floribunda Ave. (After Construction)

2.6.4 Avoidance, Minimization, and/or Mitigation Measures

Caltrans will make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees, where space is available, within the Howard-Ralston Eucalyptus Tree Rows on SR 82. Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety. Caltrans may remove and replace the last Sweetgum (*Liquidamber styraciflua*), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species, to help maintain the integrity of the landscape/visual character of the tree rows.

Tree removal includes four mature eucalyptus trees and one young elm tree which are contributors to the Howard-Ralston Eucalyptus Tree Rows, a National Register of Historic Places listed property. The replacement trees would be Accolade ® elm or similar approved variety and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the Accolade ® elm trees would grow to 40-60 ft. in height and have a 35-40 ft. wide crown.¹⁹ In addition, Caltrans will have a qualified tree arborist monitor excavation for the project to minimize damage to existing tree roots during project construction.

There are several constraints that will determine where and how many new contributing trees may be planted including:

Physical space: Caltrans encroachment permit guidelines for tree planting on conventional highways states that trees shall not be approved for planting where their growth causes interference, obstruction, damage or injury either directly or indirectly to the use of a highway, sidewalk, overhead utilities, or State ROW. For example, new planted trees shall be planted no less than 2 ft. behind the curb and 10 ft. away from driveways, utility poles, fire plug or to the rear of any highway sign.²⁰

Utilities: Where PG&E has overhead utilities their guidelines for new tree plantings require that utilities be undergrounded if the tree heights will interfere with existing overhead utilities. If there are no plans for undergrounding at the tree planting location, then PG&E recommends that the trees chosen for replanting remain below 25 feet in height and at least 10 feet away from power lines. Consideration must be given to space for trees both above and below ground.²¹

PG&E will be consulted to determine if there are any plans for undergrounding utilities within the project area. Where there are no overhead utilities and no sidewalk, there may be greater flexibility for new tree planting. In addition, the location of existing underground utilities (water, communication, and sewer) may affect where new trees can be planted.

Funding: There is funding in the proposed project for tree replanting and monitoring of tree roots of nearby existing trees during project construction. However, depending on the constraints encountered during project construction, funding may be a constraint if extensive utility undergrounding, relocation or modification of driveways and sidewalks is needed to plant new trees.

¹⁹ The Morton Arboretum. Retrieved from <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/elm-cultivars>, on 6/23/14.

²⁰ Caltrans Encroachment Permit Manual, Section 500 Specific Encroachment Permits, Table 5.15 Trees on Conventional Highways.

²¹ PG&E, Right Tree Right Place. Retrieved from <http://www.pge.com/myhome/customerservice/other/treetrimming/customerresources/righttree/index.shtml> on 9/2/14.

2.7 CULTURAL RESOURCES

2.7.1 Regulatory Setting

“Cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations [CFR] 800).

On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, the FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The cultural studies conducted for this environmental document were prepared in accordance with the January 1, 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans regarding Compliance with Section 106 of the National Historic Preservation Act (PA)*.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties. See Appendix B for specific information regarding Section 4(f).

Historical resources are considered under the CEQA, as well as CA Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks.

2.7.2 Affected Environment

Several cultural resource studies were completed examining the Area of Potential Effects for this project, including a Historic Property Survey Report (HPSR), Historical Resources Evaluation Report, (HRER) and Archaeological Survey Report (ASR). The HPSR and HRER are available to the public upon request. California SHPO concurrence on the National Register of Historic Places eligibility of historic properties within the Area of Potential Effects was

received on April 21, 2014. SHPO consultation and concurrence regarding the Finding of Effect will be completed by the Final Environmental Document.

Area of Potential Effects

The Area of Potential Effects (APE) for the project was established in consultation with Professional Qualified Staff (PQS) Architectural Historian, PQS Co-Principal Investigator – Prehistoric Archaeology, and the Project Manager, on November 21, 2013.

The APE for archaeology was established as any location where construction and ground-disturbing activities will take place. This includes grading, trenching for utilities, temporary construction easements, staging areas, tree removal and replacement, and new right-of-way acquisition. The vertical APE for archaeology extends from the ground surface to a depth of 13 ft., the maximum drill depth for Caltrans signal poles.

The Architectural APE for this study encompasses the foot print of the selected build alternative. This APE includes the entire Caltrans right-of-way along SR 82 within the approximate 500 ft. project limits, which extends from approximately 200 ft. north of the SR 82 and Floribunda Avenue intersection to approximately 255 ft. south of the SR 82 and Floribunda Avenue intersection. This APE also includes adjacent properties and all proposed new right-of-way and TCE. For properties where a partial right-of-way acquisition is proposed, the entire parcel was included in the APE.

Research Methods

The purpose of this inventory is to identify historic properties previously listed on or eligible for listing on the National Register of Historic Places (NRHP). Existing listings of historic properties were examined, including the National Register of Historic Places, the California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. The Town of Hillsborough, City of Burlingame, County of San Mateo, Burlingame Historical Society, and San Mateo County Historical Association were contacted for assistance in identifying historic properties in the area. A records search was conducted at the Northwest Information Center. Land Vision was utilized for obtaining County of San Mateo assessor and parcel data. Previous evaluations of historic properties in Hillsborough and Burlingame were reviewed, including the Hillsborough Historic Resources Inventory (1990), Preliminary Historic Inventory: City of Burlingame (1982), and Draft Inventory of Historic Resources: Burlingame Downtown Specific Plan (2008). Additional research materials (including photographs, area maps, Sanborn Fire Insurance Company maps, and periodicals) were obtained from the San Francisco Public Library and the Burlingame Historical Society archives. Historic maps and aerials from Caltrans District 4 map files were reviewed, as well as periodicals and books in Caltrans District 4 Office of Cultural Resource Studies library.

The Caltrans Cultural Resource Database (CCRD) and Caltrans District 4 Office of Cultural Resource Studies files were reviewed to identify previous projects or studies in the area.

Field Methods

Professionally Qualified Staff archaeologists and architectural historians surveyed the project area for potential historic properties. The results of the survey are described below.

Historic Properties Eligible for or Listed in the National Register of Historic Places

The cultural resources studies identified the following two National Register of Historic Places eligible/listed historic properties within the Area of Potential Effects: the Howard-Ralston Eucalyptus Tree Rows and 1615 Floribunda Avenue, Hillsborough, APN 029-090-320 (Sharon Estate Speculative House/A. Page Brown Cottage/Newlands Estate).

Howard-Ralston Eucalyptus Tree Rows

The Howard-Ralston Eucalyptus Tree Rows were planted by John McLaren, between 1873 and 1876, and were comprised of elms, interspersed with eucalyptus, which were planted to nurse the elms by protecting them from the winds. The original design intent of John McLaren was to beautify and protect from wind the portion of the County Highway leading to the grand estates of several San Francisco Peninsula property owners. Under McLaren's instruction the eucalyptus trees were to be removed after the elms had become established. The resource consists of two rows of trees, one row planted on either side of SR 82 within the Caltrans 60 to 66-ft. right-of-way. There is a history of protection of the tree row dating back to 1908. Notably, the city of Burlingame designated the portion of the tree row within their city limits as a "Heritage Grove" in 1975, and the San Mateo Sites Committee has designated the tree row within Burlingame as a "Point of Historic Significance."

The Howard-Ralston Eucalyptus Tree Rows contains 557 total trees within the boundaries of the Tree Rows. Based on the 2012 Howard-Ralston Eucalyptus Tree Rows National Register Nomination and adjusted numbers reflecting the trees removed and replaced, (for health and safety reasons), the following is a breakdown of the number of trees contained in the Tree Rows:

- 557 tree contained within the boundaries of the Tree Rows
- 356 are considered contributing trees
- 245 are contributing mature eucalyptus from the original planting
- 25 are contributing mature elms from the original planting
- 86 are new elms planted as contributing replacements

Of the total 557 trees on SR 82 contained within the boundaries of Ray Drive/Rosedale Avenue and Peninsula Avenue, 356 are considered contributing trees to the Howard-Ralston Eucalyptus Tree Rows. The majority of these, 245 (approximately 70%) are mature blue and manna gums from the original planting, reaching over 100 ft. in height and 5 ft. in diameter at breast height. Also contributing to the resource are 25 mature elms, as well as 86 new elms comprised mainly of plantings from Caltrans in 2006 and 2008 and from a grant to City of Burlingame from Cal Fire, planted on Arbor Day, March 7, 2011. There are 201 non-contributing trees within the resource which include orange gum (*E. bancrofti*), desert box gum (*E. microtheca*), flowering gum (*E. ficifolia*), Nichol's willow-leaf peppermint, swamp mahogany (*E. robusta*), swamp gum (*E. rudis*), silver dollar gum, pink iron bark (*E. sideroxylon* 'Rosea'), and acacia, as well as redwood, sycamore, horse chestnut and sweet gum trees.

In 2012, the Howard-Ralston Eucalyptus Tree Rows property was listed on the National Register of Historic Places and California Register of Historical Resources. Planted for property owners George H. Howard and William C. Ralston in the mid-1870s, the Howard-Ralston Eucalyptus Tree Rows were determined eligible for inclusion on the National Register of Historic Places under Criterion A for their association with the founding of the cities of Burlingame and Hillsborough. The Howard-Ralston Eucalyptus Tree Rows directly influenced Burlingame's first laws, most notably zoning ordinances specifically crafted to protect the trees from destruction

due to development. For over a century, citizens and elected officials have recognized the importance of the Howard-Ralston Eucalyptus Tree Rows to local identity and history. The Howard-Ralston Eucalyptus Tree Rows have a long history of protection within the Burlingame city limits and were designated as a “Heritage Grove” under the City of Burlingame’s Heritage Tree Ordinance in 1975.

The Howard-Ralston Eucalyptus Tree Rows are also eligible for the National Register of Historic Places under Criterion C, as an excellent example of master landscape designer John McLaren’s early work and serve as a reminder of McLaren’s foresight in the area of roadway beautification. The trees also express the importance of El Camino Real (SR 82) as the main overland route to the City of San Francisco, dating from California’s Spanish era into the 1930s. In a letter dated April 21, 2014, The SHPO concurred with Caltrans’s findings that the property is eligible for the NRHP. (See Appendix H)

1615 Floribunda Avenue, Hillsborough, APN 029-090-320
Sharon Estate Speculative House/A. Page Brown Cottage/Newlands Estate

The property located at 1615 Floribunda Avenue, alternatively known as the Sharon Estate Speculative House, A. Page Brown Cottage, or Newlands Estate, was one of five homes built in 1893 for the William Sharon Estate, under its executor, Francis Newlands. Architect A. Page Brown designed all five Tudor-style homes for this new residential subdivision entitled “Burlingame Park,” which is now a part of northern Hillsborough. The construction of these five houses was an important event in the founding of Hillsborough. A. Page Brown was an influential San Francisco Bay Area architect and the 1615 Floribunda Avenue property is one of the only surviving examples of his residential architecture design and of his work in the rustic architectural styles.

In a 1999 evaluation, Caltrans determined that this property is a historical resource for the purposes of compliance with the CEQA. Through the current evaluation, Caltrans determined that this property is also eligible for the National Register of Historic Places under Criterion A at a local level of significance for its association with the planning and development of Hillsborough and Burlingame and under Criterion C at a local level of significance for residential architecture and the work of a master, A. Page Brown.

In a letter dated April 21, 2014, The SHPO concurred with Caltrans’s findings that the property is eligible for the NRHP. (See Appendix H)

SR 82 (El Camino Real)

The segment of the SR 82 (El Camino Real) highway from Peninsula Avenue to Ray Drive/Rosedale Avenue was also evaluated in this survey and has been determined to be ineligible for the National Register of Historic Places. SHPO concurrence on this determination occurred on April 21, 2014. This segment of SR 82 was previously determined not to be a historical resource for the purposes of CEQA by Caltrans in 1999.

Historic Properties Ineligible for Listing in the National Register of Historic Places

The cultural resources studies identified the following properties within the Area of Potential Effects which are ineligible for listing in the National Register of Historic Places.

Individual Buildings

Five additional buildings were evaluated within the Area of Potential Effects: 600 El Camino Real, Burlingame; 1545 Floribunda Avenue, Burlingame; 556 El Camino Real, Burlingame; 25 Highgate Lane, Hillsborough; and, 1600 Floribunda Avenue, Hillsborough. All five were determined ineligible for listing in the National Register of Historic Places. SHPO concurrence on these determinations was received on April 21, 2014.

Table 13 - Properties Evaluated Within the APE

Historic/Common Name	Address	APN #
Ineligible for or listed in National Register of Historic Places		
Luxury Condominiums	600 El Camino Real, Burlingame	029-100-330
Crestmoor Apartments	1545 Floribunda Ave., Burlingame	029-111-010
Condominiums	556 El Camino Real, Burlingame	029-111-260
Private Residence	25 Highgate Lane, Hillsborough	029-090-030
Hillsborough Town Hall/Police Station	1600 Floribunda Ave., Hillsborough	028-141-090
El Camino Real)	El Camino Real from Oak Grove to Bellevue Ave.	
Eligible for National Register of Historic Places		
Sharon Estate Speculative House/A. Page Brown Cottage/Newlands Estate	1615 Floribunda Ave., Hillsborough	029-090-320
Howard-Ralston Eucalyptus Tree Rows	SR 82 from Peninsula Avenue to Ray Drive/Rosedale Avenue	

Archeological Resources

No archeological resources were identified within the APE and no concurrence from the SHPO was requested. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 4 Environmental Branch, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

2.7.3 Environmental Consequences

Howard-Ralston Eucalyptus Tree Rows

The proposed Build Alternative would remove five trees (four mature eucalyptus trees and one young elm tree) which are contributors to the Howard-Ralston Eucalyptus Tree Rows. The removal of 5 out of 356 contributing trees represents an impact of 1.4 percent on the Howard-

Ralston Eucalyptus Tree Rows. Caltrans finds that the proposed Build Alternative would have No Adverse Effect on the Howard-Ralston Eucalyptus Tree Rows. A Finding of No Adverse Effect pursuant to Section 106 of the National Historic Preservation Act is currently in preparation and will be completed by the Final Environmental Document. SHPO consultation and concurrence regarding the Finding of No Adverse Effect will be included in the Final Environmental Document.

1615 Floribunda Avenue

There would be some loss of shade and minor visual change resulting from the removal of these two mature eucalyptus trees, however, these trees only contribute to the setting of the property in a minor way due to their physical separation from the property by a modern wall. As such, removal of these eucalyptus trees would not undermine the characteristics which qualify 1615 Floribunda Avenue for listing on the National Register of Historic Places and would not constitute an adverse effect on the property.

The proposed Build Alternative would not directly impact the 1615 Floribunda Avenue property; there would be no right-of-way acquisition or temporary construction easements involving the 1615 Floribunda Avenue property. However, the proposed Build Alternative would remove two mature eucalyptus trees on the southwest side of El Camino Real adjacent to the 1615 Floribunda Avenue property. These two mature eucalyptus trees are located within State right-of-way and are separated from the 1615 Floribunda Avenue property by the property's northeastern fence. There would be some loss of shade and visual change resulting from the removal of these two mature eucalyptus trees. Caltrans finds that the proposed Build Alternative would have No Adverse Effect on the 1615 Floribunda Avenue property.

Results of Consultation with SHPO

A Finding of No Adverse Effect pursuant to Section 106 of the National Historic Preservation Act is currently in preparation and will be completed by the Final Environmental Document. SHPO consultation and concurrence regarding the Finding of No Adverse Effect will be included in the Final Environmental Document. In a letter dated April 21, 2014, The SHPO concurred with Caltrans's findings on the properties eligible for the NRHP. (See Appendix H)

Results of Consultation with Native American Groups and Individuals

A Native American consultation included contact with the Native American Heritage Commission (NAHC) (March 14, 2013) and Native American Tribes and individuals likely to have knowledge of sites of religious or cultural significance to them in the project area (April, May 2013). No such properties were identified in NAHC files. A list of interested Native American parties and individuals was requested from the NAHC and each party on the list was contacted.

4(f) Resources

Archaeological and historic sites were analyzed within the Section 106 Area of Potential Effects to determine whether there were protected Section 4(f) resources and if there would be a use of these resources.

The Howard-Ralston Eucalyptus Tree Rows and 1615 Floribunda Avenue are Section 4(f) historic sites. Caltrans had concluded that the SR 82 and Floribunda Avenue Intersection Safety Improvement Project would have No Adverse Effect on both historically eligible properties under Section 106 under NHPA. Pending completion of the Finding of Effect and SHPO concurrence, there will be a *De minimis* finding for both properties.

2.7.4 Avoidance, Minimization, and/or Mitigation Measures

Contributor trees to the Howard-Ralston Eucalyptus Tree Rows

Caltrans will make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees, where space is available, within the Howard-Ralston Eucalyptus Tree Rows on SR 82. Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety.

Caltrans may remove and replace the last Sweetgum (*Liquidamber styraciflua*), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species, to help maintain the integrity of the landscape/visual character of the tree rows.

There are several constraints that will determine where and how many new contributing trees may be planted including:

Physical space: Caltrans encroachment permit guidelines for tree planting on conventional highways states that trees shall not be approved for planting where their growth causes interference, obstruction, damage or injury either directly or indirectly to the use of a highway, sidewalk, overhead utilities, or State ROW. For example, new planted trees shall be planted no less than 2 ft. behind the curb and 10 ft. away from driveways, utility poles, fire plug or to the rear of any highway sign.²²

Utilities: Where PG&E has overhead utilities their guidelines for new tree plantings require that utilities be undergrounded if the tree heights will interfere with existing overhead utilities. If there are no plans for undergrounding at the tree planting location, then PG&E recommends that the trees chosen for replanting remain below 25 feet in height and at least 10 feet away from power lines. Consideration must be given to space for trees both above and below ground.²³

PG&E will be consulted to determine if there are any plans for undergrounding utilities within the project area. Where there are no overhead utilities and no sidewalk, there may be greater flexibility for new tree planting. In addition, the location of existing underground utilities (water, communication, and sewer) may affect where new trees can be planted.

Funding: There is funding in the proposed project for tree replanting and monitoring of tree roots of nearby existing trees during project construction. However, depending on the constraints encountered during project construction, funding may be a constraint if extensive utility undergrounding, relocation or modification of driveways and sidewalks is needed to plant new trees.

²² Caltrans Encroachment Permit Manual, Section 500 Specific Encroachment Permits, Table 5.15 Trees on Conventional Highways.

²³ PG&E, Right Tree Right Place. Retrieved from <http://www.pge.com/myhome/customerservice/other/treetrimming/customerresources/righttree/index.shtml> on 9/2/14.

2.8 HYDROLOGY AND FLOODPLAIN

2.8.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

2.8.2 Affected Environment

The following Hydrology and Floodplain technical reports were completed for this project on April 30, 2013: Location Hydraulic and Floodplain Study Reports, Technical Information for Location of Hydraulic Study and the Flood Insurance Rate Map (FIRM), prepared by the Federal Emergency Management Agency (FEMA).

The FIRMs for San Mateo County indicate that the study area is not located in a FEMA-designated floodplain; therefore the proposed project would not impact hydrology and floodplain values.

2.8.3 Environmental Consequences

According to the Location Hydraulic Study, the assessed level of risk for the project is low and there is no longitudinal encroachment or incompatible Floodplain development. The proposed Build Alternative would have no longitudinal encroachment or significant encroachment, and would not support any incompatible Floodplain development.

No Build: There would be no change to the hydrology under No Build conditions.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures would be required.

2.9 WATER QUALITY and STORM WATER RUNOFF

2.9.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source²⁴ unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the USACE’s Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with United States Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines

²⁴ A point source is any discrete conveyance such as a pipe or a man-made ditch.

(Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent²⁵ standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

²⁵ The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The SWRCB issued a new Caltrans NPDES Permit (Order No. 2012-0011-DWQ²) on September 19, 2012, which became effective until July 1, 2013. The permit has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);
2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement

sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the Clean Water Act (CWA), any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board (RWQCB), dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.9.2 Environmental Consequences

Caltrans staff prepared a Water Quality and Storm Water Runoff Study on May 14, 2013 for this project. This water quality study describes storm water regulations affecting the project, receiving water bodies listed in Section 303(d) of the Clean Water Act (CWA) and their beneficial uses, existing water quality, project-related storm water discharges and quality, and potential storm water impacts to water quality of receiving waters.

The project is located within the San Francisco (SF) Bay RWQCB jurisdiction (Region 2), which is responsible for implementation of State and Federal laws and regulations for water quality protection.

1) Section 401 of the Clean Water Act (CWA)

The project would not have any impacts to the jurisdictional state waters or wetlands of the state or waters of the US, therefore the project will not require an 404 permit from the US Army Corps of Engineers or a 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board (RWQCB).

2) Section 402 of the CWA

According to the Caltrans Permit and the Construction General Permit (CGP), best management practices (BMPs) will be incorporated into this project to reduce the discharge of pollutants during and after construction to the maximum extent practicable (MEP). Since the project will involve less than one acre of disturbed soil area (DSA), this project is not subject to the CGP, but will require a Waste Discharge Permit and Water Pollution Control Plan (WPCP) for temporary construction impacts.

In general, BMPs fall into three main categories: (i) Design Pollution Prevention BMPs, (ii) Temporary Construction Site BMPs, and (iii) Permanent Treatment BMPs.

(i) Design Pollution Prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilize disturbed soil areas, and maximize vegetated surfaces. Design Pollution Prevention BMPs for mostly disturbed slopes are expected to be required for this project.

(ii) Temporary Construction Site BMPs are applied during construction activities to reduce the pollutants in the storm water discharges throughout construction. Typical Construction Site BMPs include soil stabilization, sediment control, tracking control, wind erosion control, non-storm water management, and waste management and materials pollution control.

(iii) Treatment BMPs are permanent water quality controls used to remove pollutants from storm water runoff prior to being discharged from Caltrans right-of-way. Since this project will create less than 1 acre new impervious area (less than 0.1 acres), no Treatment BMPs are expected to be required for this project.

2.9.3 Affected Environment

There would be temporary construction impacts and the project would create a Disturbed Soil Area (DSA) of approximately 0.51 acre. Also, the project will create a new impervious area of about 0.1 acre. Since most of impacts would be incurred during construction, the project does not have the potential to create any adverse permanent water quality impacts.

2.9.4 Avoidance, Minimization, or Mitigation

Besides, the compliance measures described above, no avoidance, minimization or mitigation measures are required.

2.10 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

2.10.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act (CEQA).

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans's Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. Structures are designed using Caltrans's Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and

structural capabilities, For more information, please see the Department's Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

2.10.2 Affected Environment

Caltrans would implement the following Geologic reports and activities for this project:

- Geologic Hazards Review
- Value Analysis
- District Preliminary Geotechnical Report
- Structure Preliminary Geotechnical Report
- PEAR
- PID Review
- Permits for drilling
- Erosion Control Specification Review
- Seepage Rate Calculations
- Site Preparation for Subsurface Exploration

The Office of Geotechnical Design completed a Preliminary Geotechnical Report for the project and concluded that there are no significant unmitigatable geotechnical conditions and the project probably can be constructed as proposed. However, there are some geologic constraints that may require special consideration, such as seismic risks. These constraints will be discussed below, in the Avoidance, Minimization, and/or Mitigation Measures section.

Pertinent Reports and Investigations

There is no existing Log of Test Borings for this project location. However, the surrounding area has numerous environmental borings that were advanced during the removal and cleanup of underground storage tanks.

Regional Geologic Setting

The project site is located within the California Coast Ranges geomorphic province. Extensive folding has created a series of northwest trending ranges and valleys, one of which is the San Francisco Bay. The deposits below SR 82 and Floribunda Avenue are Pleistocene alluvial fan and fluvial deposits. These deposits are typically brown dense gravely and clayey sand or clayey gravel that fines upward to sandy clay. These deposits display variable sorting and are located along most stream channels in the county. The project is located on the edge of the eastern side of the Santa Cruz Mountain, on the flat land of the alluvial planes of the San Francisco Bay. The site is approximately one mile south of the San Francisco Bay, and 2.5 miles east of the San Andreas Fault zone. Approximately 2,600 ft. northwest of the site is Sanchez Creek which drains north to the San Francisco Bay.

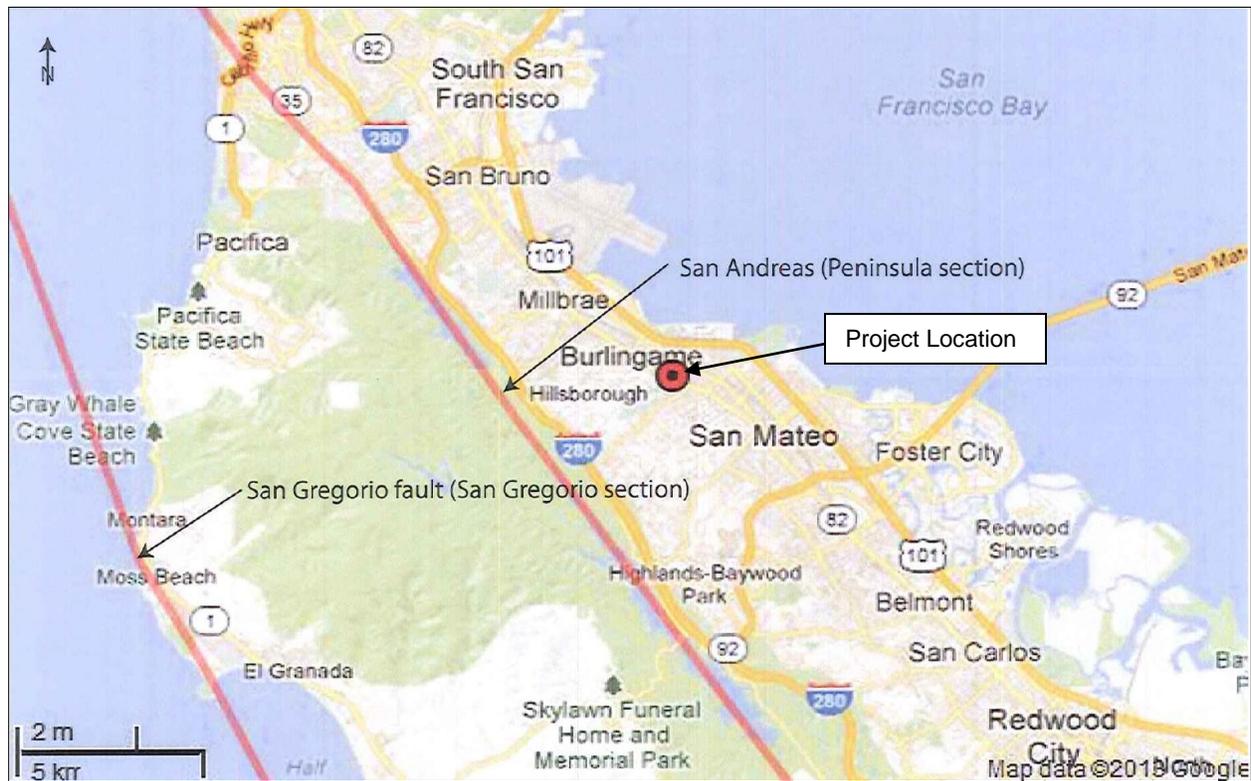
Regional Seismic Setting and Seismicity

The San Francisco Bay Area is within the most tectonically active area of the North American continent. This is where the North American Plate and the Pacific Plate grind past one another along the San Andreas Fault, a right lateral strike slip fault. This has created a series of semi-parallel faults that cover the Bay Area: e.g. Hayward Fault and San Gregorio Fault. The controlling fault for the project is the San Andreas (Peninsula Section). There are three faults listed on Caltrans Fault database for this project site, they are presented in Table 14, and fault locations presented on Figure 10. According to the Alquist-Priolo Earthquake Fault Zone Maps the project site is not located within the active fault zone.

Table 14 - Geologic Fault Data

Fault Name	Distance: Miles	Fault ID:	Fault Type:	Maximum Magnitude (MMax):
San Andreas (Peninsula section)	2.5	134	Right Lateral Strike Slip	8.0
San Gregorio fault (San Gregorio section)	9.4	127	Right Lateral Strike Slip	7.4
San Andreas (North Coast section)	21.2	80	Right Lateral Strike Slip	8.0

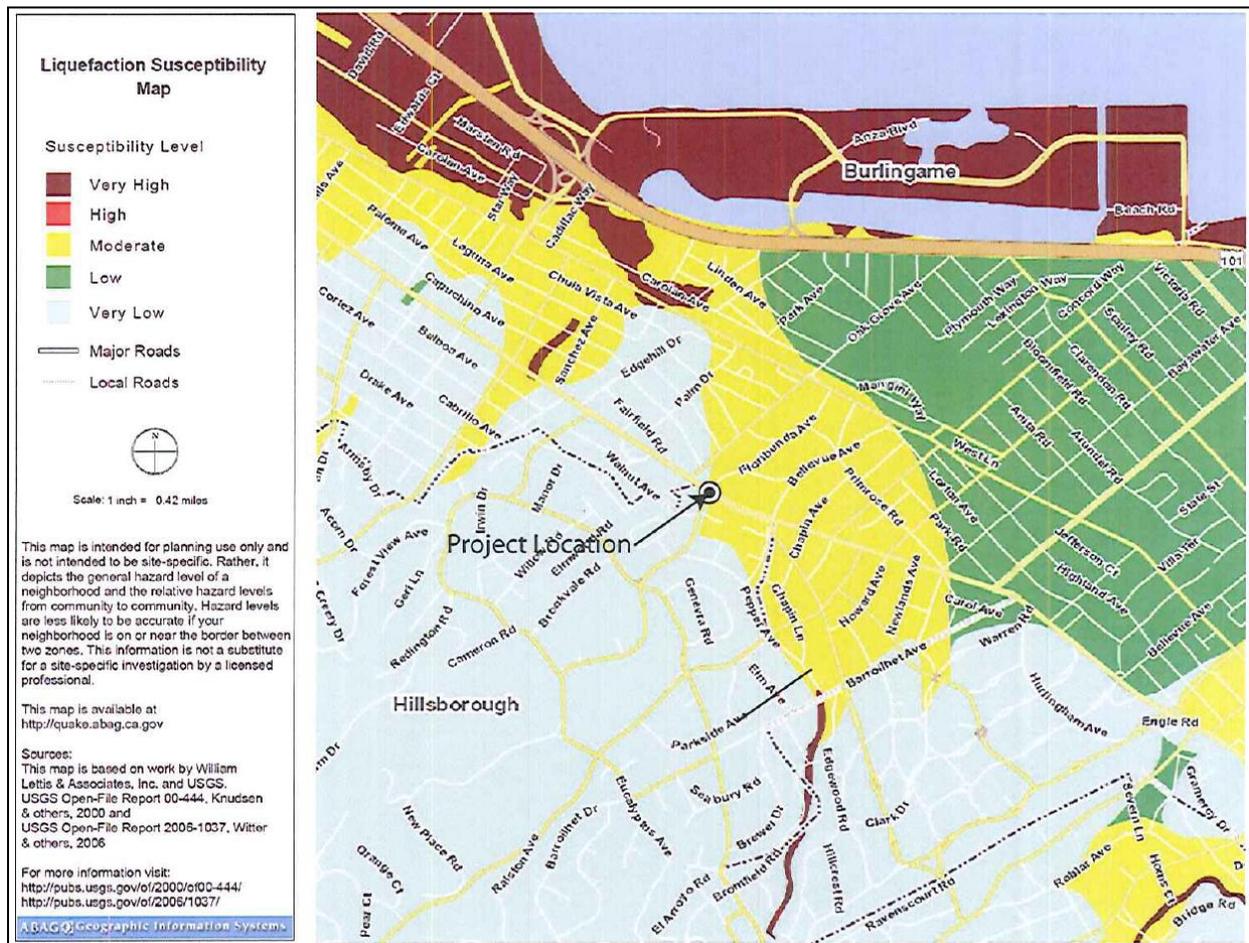
Figure 13 - Geologic Fault Locations



The United States Geologic Survey (USGS) website describes the two most important historic seismic events in the area: The April 19, 1906 Great San Francisco Earthquake, magnitude 7.8 earthquake produced strong shaking at the project site. Chimneys were toppled, and buildings thrown from their foundations. Landslides and soil settlement occurred in nearby Saratoga. The Loma Prieta Earthquake in August 1989 had a magnitude of 6.9 in the Santa Cruz Mountains, the epicenter was located about 10 miles northeast of Santa Cruz and about 4.5 miles south of the Loma Prieta Mountains, California. This major earthquake caused 63 deaths, 3,757 injuries and an estimated \$6 billion in property damage in the SF Bay Area.

The liquefaction susceptibility for the location of the proposed Build Alternative SR 82 at Floribunda Avenue Intersection Safety Improvement Project is moderate. (see Figure 11 next on next page).

Figure 14 - Liquefaction Susceptibility



Geology and Geotechnical Conditions in the Project Area

SOILS AND TOPOGRAPHY

The majority of the project is underlain by soil classified as urban land and orthents, cut and fill Urban land complex, these soils are classified as Hydraulic Soil A and D, respectively. Group A soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission. Group D – Soils in this group have high runoff potential when thoroughly wet. Since the soil is classified as Urban Land, many classifications, such as shrink swell and erodibility, have not been rates. (The USDA, NRCS, Custom Soil Resource Report for San Mateo County, California, 2012, can be supplied upon request.) Groundwater has not been monitored at this location. This area is located on relatively flat land, therefore landslides and the susceptibility of a soil to sheet and rill erosion by water is not an issue. Soil properties will be evaluated during geotechnical investigations during Plans, Specifications and Estimates (PS&E) of the project.

2.10.3 Environmental Consequences

For the proposed Build Alternative excavation, trenching and possible deep foundation work for light signals would be required during construction. Environmental borings show mostly silts, clays and silty sands surrounding the site. A geotechnical investigation would be performed during project plans, specification and estimates phase to determine stability of excavations and if shoring will be needed. Soil properties would be evaluated during geotechnical investigation.

No Build Alternative: There would be no impact to geology and geotechnical conditions under the No Build Alternative.

2.10.4 Avoidance, Minimization, and/or Mitigation Measures

Exploration and Investigations

Field and subsurface exploration, laboratory tests and analysis shall be performed to evaluate foundation designs, and if necessary slope ratios, and to determine soil strengths and mitigation.

For each traffic signal location a geotechnical boring should be completed in advance to determine groundwater levels, soil types and strengths, and structural conditions in rock if encountered. Several investigative methods may be used, including but no limited to: soil borings, rock coring, Cone Penetrometer Tests (CPTs), and geophysical studies. Laboratory testing may be required to determine soil strength, permeability, moisture content, and grain size.

Groundwater

Groundwater levels can be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels. CPTs may be used to determine groundwater depth, and subsurface soil types. It may also be useful in locating or characterizing thick, potentially expansive clays.

Dewatering

The exploratory drilling during the Geotechnical Design Report phase will discover any areas that will require dewatering.

Corrosion

Corrosivity tests shall be conducted where appropriate as part of the drilling program for the any proposed retaining walls.

2.11 PALEONTOLOGY

The following Paleontology reports and activities, (to be completed during the plans, specifications and estimates phase) may be needed for this project:

- Paleontological Evaluation Report (PER)
- Paleontological Mitigation Plan (PMP)

2.11.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

16 United States Code (USC) 431-433 (the "Antiquities Act") prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered "objects of antiquity" by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

16 United States Code (USC) 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 United States Code (USC) 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.

23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

2.11.2 Affected Environment

A Paleontological Identification Report (PIR) for this project was completed on April 29, 2013. The research included a literature and map review, and a fossil locality search. The research identified the geologic units, previous paleontological studies, fossil localities, and types of fossil in geologic units that may be within or adjacent to the project area. A fossil locality search was performed on February 25, 2013 using the Berkeley Natural History Museum (BNHM) and University of California Museum of Paleontology (UCMP), specimen and locality search browsers. The paleontological study area encompasses a 900 ft. stretch of SR 82 (SR 82) and Floribunda Avenue. A Professional Geologist conducted a field survey of the project site on Feb. 25, 2013. No paleontological resources were observed during the survey.

Geologic Setting

The project is located in the San Mateo County on the western alluvial plains of the San Francisco Bay. The deposits are Pleistocene alluvial fan and fluvial deposits. These deposits display variable sorting and are located along most stream channels in the county. All of these deposits can be related to modern stream courses, and locally contain fresh water mollusks and extinct late Pleistocene vertebrate fossils. The project is located on Pleistocene alluvial fan deposits.

2.11.3 Environmental Consequences

Construction activities can impact paleontologically sensitive geologic units when vehicles or other work equipment impact previously undisturbed sediments by excavating, grading, or crushing bedrock exposed in or underlying a project. This can result in significant impacts to fossils by destroying them or otherwise altering them in such a way that their scientific value is lost. Paleontological resources include fossil plants and animals and other evidence of past life such as preserved animal tracks and burrows. Determination of the “significance” of a fossil can only occur after a fossil has been found and identified by a qualified paleontologist.

The most useful designation for paleontological resources in an EIR document is the “sensitivity” of a particular geologic unit. Sensitivity refers to the likelihood of finding significant fossils within a geologic unit. The paleontological sensitivity of a geologic unit is determined by its potential to contain paleontological resources (SVP, 1995). The Society of Vertebrate Paleontology (SVP) uses a three part scale to determine paleontological sensitivity: High Potential, Undetermined Potential and Low Potential. The paleontological sensitivity of a geologic unit classified by Caltrans uses a similar scale: High Potential, Undetermined Potential, Low Potential and No Potential. Caltrans defines High Potential as geological units which, based on previous studies, contain or are likely to contain significant vertebrate, significant invertebrate, or significant plant fossils.

The alluvial fan and fluvial deposits beneath the project site were deposited in the Pleistocene epoch. The UCMP indicated fourteen fossils can be found within these alluvial deposits within San Mateo County. Therefore, this project area is identified with geologic units with high paleontological sensitivity and having a high potential to contain fossils. Under the proposed Build Alternative, planned ground-disturbing activities within the project footprint could potentially impact paleontological resources.

Build Alternative: Foundations for the 4 traffic signal poles are 12 ft. deep by 3.5 ft. wide, with an estimated soil disturbance of 1,200 cubic ft. Utility trenching will be 400 ft. long; with the maximum depth of planned trenching excavation 3 ft. for utilities and 1 ft. wide, with an estimated soil disturbance of 1,900 cubic ft. The total amount of soil to be excavated across the entire site is 3,100 ft³. Table 2.2 presents the estimated quantities of disturbances of the undivided alluvial fan deposits.

Table 15 - Estimated Quantities of Disturbed Soil

Excavation Location	Depth ft	Length ft	Width ft	Total ft ³
Utilities Trenching	3	400	1	1,200
Foundation 4 Signal Lights	12	NA	3.5	1,900
Total estimated cubic ft.				3,100

No Build Alternative: Under the No Build Alternative there would be no impacts to Paleontological resources within the project study area.

2.11.4 Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measures for paleontological resources are recommended and in accordance to Caltrans' Standard Environmental Reference Guidelines (Caltrans, 2007). It is recommended that Caltrans implement the following measures:

- Caltrans may prepare a Paleontological Evaluation Report (PER) prior to construction to define actual locations and determine if monitoring will be necessary based upon the project design. For budgeting, the PER will provide enough information about the level of effort needed. For the proposed project, it is anticipated that no monitoring will be required because the construction will be in previously disturbed soil.
- Based on the findings from the PER, a Paleontological Mitigation Plan (PMP) may be recommended to define the specific mitigation measures and methods that will be implemented.
- These recommendations may include:
 - h. A qualified paleontologist could be present to consult with grading and excavation contractors at pre-grading meetings.
 - i. The Principal Paleontologist could also have an environmental meeting to train grading and excavation contractors in the identification of fossils.
 - j. When fossils are discovered, the paleontologist (or paleontological monitor) will be called to recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner.
 - k. Fossil remains collected during the monitoring and salvage portion of the mitigation program will be cleaned, stabilized, sorted, and cataloged.
 - l. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will then be deposited in a scientific institution with paleontological collections.
 - m. A final report will be completed that outlines the results of the mitigation program.

2.12 HAZARDOUS WASTE/MATERIALS

2.12.1 Regulatory Setting

Hazardous materials including hazardous substances and wastes are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)

- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA and Safety Code and is also authorized by the federal government to implement RCRA in the state. California laws that affect hazardous waste are specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean-up of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is encountered, disturbed during, or generated during project construction.

2.12.2 Affected Environment

An environmental regulatory database search did not reveal any known hazardous waste sites that could negatively impact the project.

The shallow soils to be excavated within the unpaved areas adjacent to the roadway likely contain elevated levels of aerially deposited lead (ADL) from historic vehicle emissions.

2.12.3 Environmental Consequences

The build alternative will require excavation in unpaved areas where lead likely is present and will expose workers to lead if no mitigation measures are implemented during construction. Any surplus soil containing hazardous-waste levels of lead will require disposal in a class 1 landfill.

No Build Alternative: The no build alternative would have no impacts on hazardous waste or materials.

2.12.3 Avoidance, Minimization, and/or Mitigation Measures

A site investigation that ascertains the presence and concentrations of metals, particularly lead, in soils will be conducted during the project's PS&E phase. The findings of the site investigation will be used to prepare the appropriate standard special provisions that address the proper soil handling requirements and worker health and safety concerns.

Construction

The shallow soils to be excavated within the unpaved areas adjacent to the roadway likely contain elevated levels of aerially deposited lead (ADL) from historic vehicle emissions. A site investigation that ascertains the presence and concentrations of metals, particularly lead, in

solid will be conducted during the project's PS&E phase. The findings of the site investigation will be used to prepare the appropriate standard special provisions that address the proper soil handling requirements and worker health and safety concerns.

2.13 AIR QUALITY

2.13.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended in 1990, is the federal law that governs air quality while the California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns. The criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), broken down for regulatory purposes into particles of 10 micrometers or smaller—(PM₁₀) and particles of 2.5 micrometers and smaller—(PM_{2.5}), lead (Pb), and sulfur dioxide (SO₂). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at a level that protects public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics). Some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Federal and state air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). In addition to this type of environmental analysis, a parallel "Conformity" requirement under the FCAA also applies.

The Federal Clean Air Act Section 176(c) prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs or projects that are not first found to conform to State Implementation Plan (SIP) for achieving the goals of Clean Air Act requirements related to the NAAQS. "Transportation Conformity" takes place on two levels: the regional—or, planning and programming level—and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and in some areas sulfur dioxide (SO₂). California has attainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO₂, and also has a nonattainment area for lead (Pb). However, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (TIPs) that include all of the transportation projects planned for a region over a period of at least 20 years (for the RTP), and 4 years (for the TIP). RTP and TIP conformity is based on use of travel demand and air quality models to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), FHWA, and Federal Transit Administration (FTA), make the

determinations that the RTP and TIP are in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP and/or TIP must be modified until conformity is attained. If the design concept, scope, and “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and the TIP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter (PM₁₀ or PM_{2.5}). A region is “nonattainment” if one or more of the monitoring stations in the region measures violation of the relevant standard, and U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by U.S. EPA, and are then called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a “hot spot” analysis. In general, projects must not cause the “hot spot” related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

2.13.3 Affected Environment

This project is included in the Transportation Improvement Program (TIP) as ID# VAR110004. Projects funded under this TIP ID are exempt from the requirement of air quality conformity determination under 40 CFR 93.126. An air quality study is not required. No further actions required

2.13.4 Environmental Consequences

This project is exempt from regional (40 CFR 93.126) conformity requirements. Separate listing of the project in the Regional Transportation Plan and Transportation Improvement Program, and their regional conformity analyses, is not necessary. The project will not interfere with timely implementation of Transportation Control Measures (TCM) identified in the applicable SIP and regional conformity analysis.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other activities related to construction. Emissions from construction equipment also are anticipated and would include carbon monoxide (CO), nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly-emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM₁₀, PM_{2.5}, and small amounts of CO, SO₂, NO_x, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of

construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the U.S. EPA to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans' Standard Specifications (Section 14-9.02) pertaining to dust minimization requirements requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM₁₀ emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM₁₀ and PM_{2.5}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site. [Consider specifying areas within 500' of ARB-defined sensitive land uses as no-idle areas where material storage/transfer and equipment maintenance activities are not to occur. If this is done, mention it here as a control measure for equipment emissions related to diesel exhaust.]

SO₂ is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting federal standards can contain up to 5,000 parts per million (ppm) or more of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and ARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm), so SO₂-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

No Build Alternative: The no build alternative would have no impacts on air quality.

2.13.5 Avoidance, Minimization, and/or Mitigation Measures

Construction

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. Implementation of the following measures, some of which may also be required for other purposes such as storm water pollution control will reduce any air quality impacts resulting from construction activities:

- The construction contractor shall comply with Caltrans' Standard Specifications in Section 14 (2010).
- Section 14-9-01 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
- Section 14-9.02 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.
- Apply water or dust palliative to the site and equipment as frequently as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible

dust” criterion either at the point of emission or at the right-of-way line depending on local regulations.

- Spread soil binder on any unpaved roads used for construction purposes, and all project construction parking areas.
- Wash off trucks as they leave the right-of-way as necessary to control fugitive dust emissions.
- Properly tune and maintain construction equipment and vehicles. Use low-sulfur fuel in all construction equipment as provided in CA Code of Regulations Title 17, Section 93114.
- Develop a dust control plan documenting sprinkling, temporary paving, speed limits, and expedited revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Locate equipment and materials storage sites as far away from residential and park uses as practical. Keep construction areas clean and orderly.
- Near sensitive air receptors, establish Environmentally Sensitive Areas (ESAs) or their equivalent within which construction activities involving the extended idling of diesel equipment would be prohibited, to the extent feasible.
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- Cover all transported loads of soils and wet materials prior to transport, or provide adequate freeboard (space from the top of the material to the top of the truck) to minimize emission of dust (particulate matter) during transportation.
- Promptly and regularly remove dust and mud that are deposited on paved, public roads due to construction activity and traffic to decrease particulate matter.
- Route and schedule construction traffic to avoid peak travel times as much as possible, to reduce congestion and related air quality impacts caused by idling vehicles along local roads.
- Install mulch or plant vegetation as soon as practical after grading to reduce windblown particulate in the area. Be aware that certain methods of mulch placement, such as straw blowing, may themselves cause dust and visible emission issues and may need to use controls such as dampened straw.

Climate Change

Climate change is analyzed in Chapter 3. Neither the United States Environmental Protection Agency (U.S. EPA) nor Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA’s climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many

planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this environmental document and may be used to inform the National Environmental Policy Act (NEPA) decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

2.14 NOISE

2.14.1 Regulatory Setting

The National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

The CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible. The rest of this section will focus on the NEPA-23 Code of Federal Regulations (CFR) 772 noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with the FHWA (and Caltrans, as assigned) involvement, the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations [CFR] 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 16 lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis. Figure 12 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

Table 16 - Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq(h)	Description of activity category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 15 - Noise Levels of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

In accordance with the *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance and the cost per benefited residence.

2.14.2 Affected Environment

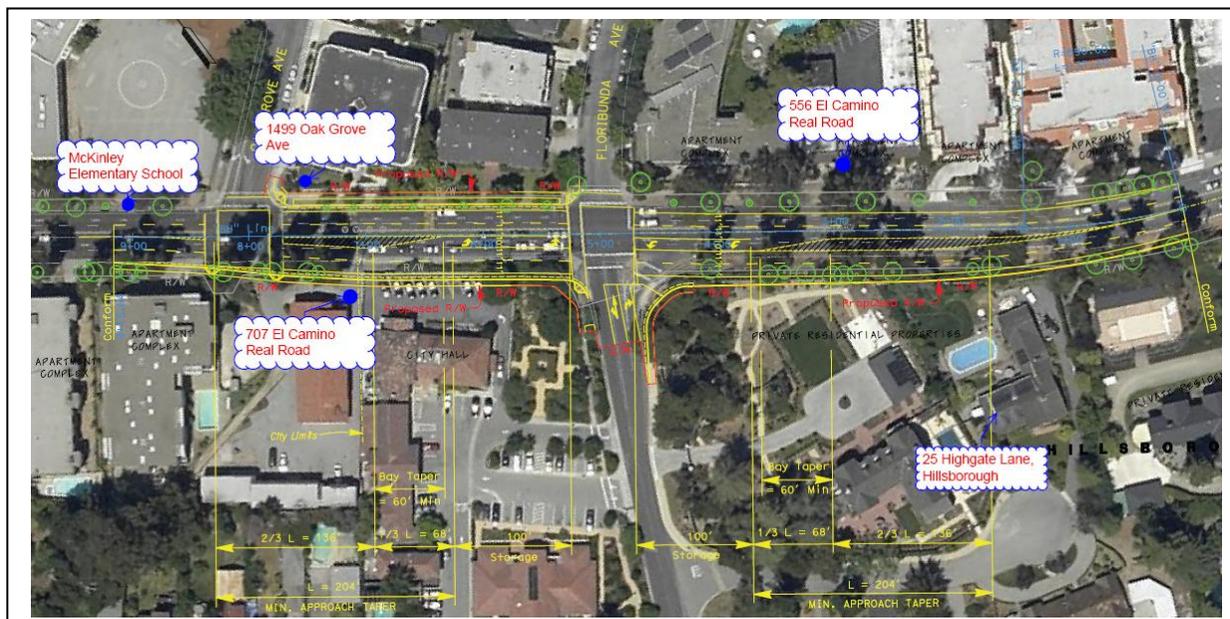
The Caltrans Air/Noise Branch completed a Noise Analysis of the proposed project on May 29, 2013. The report determined that the project has federal funding therefore the code of federal regulations 23 CFR 772 is applied for determination of traffic noise impacts.

The area surrounding the project site at SR 82 and Floribunda Avenue consists of residential housing, Hillsborough City and Police Department, a church, apartment complexes and an elementary school yard. While there are many apartment buildings in the area, not all had outdoor use areas that have exposure to traffic noise. The following locations have outdoor use areas with exposure to traffic noise. Short-term (15 to 20 minutes) were taken at representative locations for these addresses.

Table 17 - Noise Analysis Locations

Addresses	Measured Noise Level
707 El Camino Real, Burlingame	67.0 dBA Leq (h)
McKinley Elementary School, Burlingame	69.2 dBA Leq (h)
1499 Oak Grove Ave., Burlingame	65.7 dBA Leq (h)
556 El Camino Real, Burlingame	68.2 dBA Leq (h)

Figure 16 - Locations of properties analyzed for noise abatement



2.14.3 Environmental Consequences

Build Alternative: Under the regulations and the Caltrans Traffic Noise Analysis Protocol (TNAP, 2011) the project would be considered a “type 1” project because traffic lanes are being moved.

The TNAP requires noise impacts to be analyzed at areas of frequent human use. A residential yard, a porch, or a playground would be considered an area of frequent human use. A parking lot, sidewalk, or bicycle path would not.

The noise abatement criteria for residences and playgrounds is that the noise level must approach within 1 dBA of 67 dBA. The noise analysis study of properties adjacent to the project sites demonstrated that the criteria was met or exceeded at three properties: 707 El Camino Real (SR 82), McKinley Elementary School, and 556 El Camino Real (SR 82). This indicates that these locations have an existing traffic noise impact. Caltrans considered noise abatement at these locations but determined that abatement was not reasonable and feasible due to the lack of physical space to build an effective sound wall and the need to maintain public access to sidewalks, driveways and entrances to residential properties. The project area is located in an urban environment with existing noise levels that cannot be abated with sound walls.

Noise Impact Results Summary

Receptor # and Location	Existing Noise Level (dBA)	Noise Abatement Considered ?	Noise Abatement Reasonable and Feasible
1. 707 El Camino Real	67	Yes	No
2. McKinley Elementary School	69.2	Yes	No
3. 556 El Camino Real	68.2	Yes	No

Caltrans analysis also considered the potential of increased noise from removal of trees. There would be no impact to noise from SR 82 traffic to the 1615 Floribunda Avenue property from the

removal of the eucalyptus trees. According to Caltrans Technical Noise Supplements, for a vegetative strip to have a noticeable effect on noise levels, it must be dense and wide. A stand of trees with a height that extends at least 16 ft. above the line of sight between sources and receiver must be at least 100 ft. wide and dense enough to completely obstruct a visual path to the source to reduce traffic noise by 5 dBA. At the location on SR 82 behind the 1615 Floribunda Property, the two eucalyptus trees that would be removed are over 50 ft. tall with a narrow, upright form. There is existing vegetation covering the height of the wooden fence surrounding the 1615 Floribunda Avenue property backyard.

No Build Alternative: The no build alternative would not impact noise within the study area.

2.14.4 Avoidance, Minimization, and/or Abatement Measures

The intersection of SR 82 and Floribunda Avenue are city streets with driveways and pedestrian walkways. Soundwalls were deemed not feasible due to the following:

556 SR 82: Soundwall not feasible because it is not constructible, no physical space and would block driveways to apartment complex tenant parking.

707 SR 82: Soundwall not feasible because it is not constructible, no physical space, and would block a driveway and entrances to the Seventh-Day Adventist Church.

McKinley Elementary School: A soundwall is not feasible because it is not constructible, no physical space and would need to run outside the project limits on both SR 82 and on Oak Grove Avenue.

25 Highgate Lane: The outdoor use area for the residence at 25 Highgate Lane was not accessible because it is surrounded by an existing wall. If any new soundwall were proposed it would need to provide the required 5 dBA reduction in noise beyond what the current wall is providing. This is generally not possible where there are existing walls. No additional noise abatement is recommended.

In addition to the reasons discussed, soundwalls placed at intersection corners, such as at the addresses above, have the potential for restricting vehicle sight distance which would be a traffic safety issue.

The federal noise abatement criteria was met or exceeded at the aforementioned outdoor use areas of frequent human use. Though this is deemed a traffic noise impact there is no abatement that can be considered that will satisfy the federal criteria for feasibility. Since there are no feasible soundwalls possible, the reasonableness criteria is not applied. No noise abatement is recommended for these locations.

The proposed Build Alternative does not add vehicle capacity to the state highway. Noise levels are not expected to increase above the existing, or baseline, levels.

Construction

Construction activities would generate noise on a temporary basis, but impacts are not expected to be significant. Due to close proximity to residential homes, construction activities that generate significant temporary noise levels would be evaluated and be considered to be performed during daytime non-peak hours. Measures to minimize impacts will be included in the Construction Contract Specifications and Standard Special Provisions, such as construction phasing/schedule/work hours in a manner to avoid or reduce impacts to the community.

2.15 ENERGY

2.15.1 Regulatory Setting

The NEPA (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The CEQA Guidelines, Appendix F, Energy Conservation, state that Environmental Impact Reports (EIR) are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

The project involves no planned use of natural resource beyond fuel and energy needed during construction activities, thus the project would not result in an increase of fuel or energy use in large amounts or in a wasteful manner, an increase in the rate of use of any natural resource or in the substantial depletion of any nonrenewable natural resource. Therefore, the project will not have an effect on energy resources.

2.16 BIOLOGICAL ENVIRONMENT

The proposed project is receiving Federal funding through the FHWA and Caltrans has assumed FHWA's responsibilities under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq) in accordance with 23 U.S.C. 327, as described in the Memorandum of Understanding between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Project Delivery Program Pursuant to 23 U.S.C. 327 effective October 1, 2012 and codified in 23 U.S.C. 327 (a)(2)(A).

Under this authority, Caltrans is required to make effects determinations which may include *no effect; may affect, not likely to adversely affect or may affect; likely to adversely affect*; the species or designated critical habitat under provisions of the Federal Endangered Species Act (16 USC Section 1531, et Seq.)

The project area for this proposed project contains no habitat for listed species. There are sufficient barriers to any species within dispersal range of known occurrences. The project activities are relatively minor and likely short duration. Therefore the project will have **no effect** on federal listed species. Accordingly, the Natural Environment Study approved by Caltrans biologists in May, 2014, concludes that there will be **no effect** to any of the federal threatened or endangered species with potential to occur within the vicinity of the project sites due to the rationale presented for each species discussed in this report. Please see Appendix I for a list of specific species within the project site quadrants and no effect determination.

2.16.1 NATURAL COMMUNITIES

The Natural Communities section is summarized from the Natural Environment Study (Caltrans) prepared for this project, which was completed in May, 2014.

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed in the Threatened and Endangered Species section (Section 2.20). Wetlands and other waters are discussed in Section 2.17.

2.16.2 Affected Environment

A biological study area (BSA) was established to evaluate the effects of the proposed project on natural communities and other biological resources. The foot print for each of the project alternatives contains all areas within the Caltrans Right-of-way (ROW) that encompass the SR82/Floribunda Ave. intersection. The project BSA was defined as the same area as the project foot print and includes both the existing and proposed roadways, TCEs and PCEs within the project area because these are areas to be impacted by the project.

The BSA is highly urbanized, surrounded by primarily residential development with paved roadways and sidewalks. Ruderal grassland and ornamental landscaping exists within the unpaved areas and on the property parcels adjacent to the project foot print.

The biological resources in the immediate vicinity of the BSA are very limited except for a small number of trees and some landscaping in the vicinity of the intersection. Most of the BSA is developed and has paved surfaces including roads, curbs and sidewalks. The paved areas are mostly devoid of vegetation because the pavement and road surfaces support only hardy weeds that commonly grow in sidewalk and asphalt cracks. Caltrans biologists identified three habitat or land use types in or adjacent to the BSA: developed, non-native ruderal grassland, and ornamental landscaping.

The developed areas in the BSA are of limited use to wildlife species because of the frequent human disturbance, the high likelihood of injury or mortality from vehicular traffic, and a lack of cover or food due to a lack of vegetation. The developed areas in the BSA may be used as movement corridors by non-native mammalian species such as the non-native domestic cat (*Felis catus*) and the domestic dog (*Canis lupus familiaris*), which prey on smaller wildlife species. Native mammals that can persist in highly urbanized settings, such as striped skunks (*Mephitis mephitis*), raccoons (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*) may also traverse the developed areas of the BSA. Native avian species such as Brewer's blackbird (*Euphagus cyanocephalus*) and mourning dove (*Zenaida macroura*), as well as non-native species such as the rock pigeon (*Columbia livia*), often forage and roost within developed habitats.

2.16.3 Environmental Consequences

Build Alternative: The primary biological resources of concern with the potential to occur in the vicinity of the project site are migratory birds, which are protected by the Migratory Bird Treaty Act and California Fish and Game Code.

Caltrans Biologists completed field and literature reviews of the project area. These reviews concluded that the developed suburban nature of the project site BSA is of limited suitability for sensitive plant and wildlife species due to frequent human disturbance, high likelihood of injury or mortality from vehicular traffic, and lack of specialized cover or food due to a lack of native vegetation. No connecting wildlife travel corridors were observed within the proposed project footprint. It is highly unlikely that any species of special concern or with state or federal threatened and endangered species protection will be present within the project site during project implementation. Because all staging and construction work will be confined to the existing ROW, there will be no impacts to sensitive biological resources, and work will be

confined to the existing paved roadway and shoulders, no state or federal permits or specific avoidance and minimization measures will be required.

No Build Alternative: The No Build Alternative would not impact natural communities within the study area.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

Use of standard best management practices to survey for, and avoid active nests of, migratory birds will be utilized. Accordingly, the NES concludes that there will be **no effect** to any of the state or federal threatened or endangered species with potential to occur within the vicinity of the project site due to the rationale presented for each species discussed in the report.

2.17 WETLANDS AND OTHER WATERS

2.17.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344) is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

USACE issues two types of 404 permits: General Standard permits.

There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less impact. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the Federal Highway Administration (FHWA) and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Wildlife (CDFW), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission, Bay Conservation and Development Commission, or the Tahoe Regional Planning Agency may also be involved. Sections 1600-1607 of the California Fish and Game Code

require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA. Please see the [Water Quality section](#) for additional details.

2.17.2 Affected Environment

The proposed project is located in the San Francisco Bay Regional Water Quality Board (RWQCB) jurisdiction. The project site is located in an undefined hydrologic sub-area within San Mateo Bayside Hydrologic Area and within the MS4 area of San Mateo County. This project is not expected to affect any change in hydraulic capacity or change in grade line. The project site is located between the limits of the 100-year flood and 500-year flood zone according to the Flood Insurance Rate Maps for the City of Burlingame and is not expected to change the flood elevation.

No wetlands were identified within the boundaries of the preferred build alternative. A channelized and concrete-lined drainage exists within proximity of the northern limits of the BSA. This channel conveys surface flows from the Hillside residential neighborhoods to the west of the BSA, runs under SR 82 in a concrete box culvert and is confined to mostly culverts and canals between the project site and the San Francisco Bay. This drainage is referred to as 'Terrace Creek' in the Caltrans Project Study Report (PSR), and the City of Burlingame has plans to construct a pump station at the drainage outlet due to flooding in the low-lying Hillside neighborhoods. The Calfish database (CalFish 2013) does not list Terrace Creek as currently or historically supporting fish migration and the proposed pump station would create a blockage at the outlet to the Bay. For these reasons and because Terrace Creek lacks connectivity to other streams, lakes, ponds, or other water bodies, fish passage is not a concern to the proposed project and existing culvert facilities are not anticipated to require modifications for fish passage.

2.17.3 Environmental Consequences

Build Alternative: No wetlands or other waters would be impacted by the proposed Build Alternative.

The City of Burlingame water line on the east side of SR 82 is in conflict and relocating the water line within the State right-of-way is anticipated. Several existing utility boxes and manholes need to be relocated or adjusted to the finished grade. Potholing will be required to identify the underground utilities and detailed utility verification will be done during the Plans, Specifications and Estimates (PS&E) phase.

No Build Alternative: No wetlands or other waters would be impacted in the project study area.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required for wetlands or other waters as no there would be no impacts by the proposed Build Alternative

2.18 PLANT SPECIES

2.18.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.20 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFG species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, CA Public Resources Code, Sections 2100-21177.

2.18.2 Affected Environment

The USFWS notes five plant species listed as threatened or endangered under state or federal authority and potentially present in the San Mateo, San Francisco South, Hunters Point, and Montara Mountain topographic quads and these species are addressed in Table 1. The CNPS identifies 48 special-status plant species, not listed as threatened or endangered by state or federal authority, as potentially occurring in the nine topographic quads surrounding the project site (Appendix C). Forty of these plant species are listed by the CNDDDB with known occurrences in the San Mateo, San Francisco South, Hunters Point, and Montara Mountain topographic quads. The CNDDDB documents 21 of these special-status plant species as occurring within 5 miles of the Biological Study Area (*Natural Environment Study*, Figure 4, CDFW 2013).

Assessment of potential for the Biological Study Area (BSA) to support any of the special-status plants (listed in Appendix C) is based on factors such as the species’ preferred habitat characteristics, proximity to existing populations, and ecological condition of the habitats present within the BSA. Each of these species are considered highly unlikely to occur in the BSA for one or more of the following reasons: (1) presence influenced by the soil, such as whether serpentine or alkaline soils are absent; (2) the elevation range of the species is outside the range within the BSA; (3) habitats such as low, wet swales, and riparian areas are not present in

the BSA. Therefore, the project site is unlikely to represent potential habitat for any of the 53 special-status plants with potential to occur within the 9 topo quads surrounding the project site.

The ground cover vegetation in the BSA along the roadway shoulders in the project area consists of ruderal and lawn grasses with much of the area between the sidewalk and roadway on the eastern side south of the intersection consisting of bare ground. Low-growing annual and perennial vegetation including Canary ivy (*Hedera canariensis*), English ivy (*H. helix*), and ornamental flowers including Agapanthus (*Agapanthus* spp.), avens (*Geum* spp.), daylilies (*Hemrocallis* spp.), lavender (*Lavandula* spp.), oleander (*Nerium oleander*), and rose (*Rosa* spp.) are used as landscaping for the properties surrounding the intersection. A variety of ornamental non-native and non-naturalized shrubs including California lilac (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.) and cotoneaster (*Cotoneaster* spp.) are also present. Tree species in the vicinity of the intersection include golden wattle (*Acacia* spp.), eucalyptus, Monterey cypress (*Hesperocyparis macrocarpa*), sweetgum (*Liquidambar styraciflua*), magnolia (*Magnolia* spp.), olive (*Olea europea*), and native coast live oak (*Quercus agrifolia*). None of these plant species possess any legal designation by any state or federal regulatory agency.

Although no special-status plant species were anticipated in the BSA, Caltrans Biologists surveyed the BSA on June 28, 2013 and re-surveyed the BSA on January 9, 2014 to characterize existing vegetation. During both visits biologists found the BSA to be dominated by ornamental non-naturalized shrubs, trees, and herbaceous vegetation typical of suburban landscaping. No federal or state-listed plant species or special-status plant species were identified within the BSA during either of the surveys.

2.18.3 Environmental Consequences

Build Alternative: Potential impacts from this project range from none to complete removal of non-special status plants and habitat features used by non-special status wildlife. No special-status habitat types, riparian areas, or wetlands are present within the BSA, and therefore no impacts to these resources will result from the proposed project. No potential impacts from this project are anticipated to the special-status species that are discussed in this report. It is unlikely that any species of special concern or state and/or federally threatened and endangered species will be present within the project site during implementation of the proposed project. Removal of trees will impact non-special status nesting birds by removing their nesting structures. Therefore, the project will have minimal and temporary impacts to biological resources.

The proposed project will not affect any sensitive vegetation communities or habitat types because these resources have been determined to be absent from the BSA. Although there are invasive, non-native plants in the BSA, there is a low potential for the project to cause these species to spread by aerial dissemination of seeds and spores to nearby natural habitats because the area is highly disturbed and developed with no substantial connectivity to native habitats. Therefore, the spread of non-native plants is anticipated to be insubstantial.

The proposed project will result in the removal of up to 14 non-native tree species (eucalyptus Accolade® elms and sweetgum (*Liquidambar styraciflua*)). The number of removed trees is not expected to have a substantial biological effect on the area's urban forest or on the populations of animal species that use the trees because of the low habitat quality provided by sparsely scattered trees in this heavily urbanized area.

No Build Alternative: No plant species would be impacted by the no build alternative.

2.18.4 Avoidance, Minimization, and/or Mitigation Measures

Because no sensitive habitats or listed species occur within the Caltrans ROW and no impact to areas other than slivers of property adjacent to the existing Caltrans ROW is anticipated, no mitigation will be required. All staging and construction work will be confined to the existing Caltrans ROW and there will be no impacts to sensitive biological resources. State or federal permits are not anticipated.

Adherence to the following standard Caltrans Best Management Practices (BMPs) will be required and will be sufficient to protect the limited biological resources that occur or may occur in the vicinity of the project site:

- Contractors will utilize Caltrans standard BMPs as provided in the current version of the Caltrans Construction Manual (2014).
- If vegetation removal occurs during the winter wet season, all trees and shrubs will be cut above the ground and their stumps left in place to prevent soil disturbance, erosion, and discharge into any creeks.
- Any additional ground disturbance beyond initial clearing and grubbing will also occur in the summer dry season and will require additional nesting bird surveys every 3 days during this work period.
- Any waste materials or products (e.g., pavement grindings) will be disposed of at an approved facility or certified landfill.
- All staging will occur within existing paved or gravel turnout areas. Any staging in vegetated areas (grass and low-growing vegetation) or off-pavement will require additional assessments by a Caltrans biologist.

2.19 ANIMAL SPECIES

2.19.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.20 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern. Endangered Species Act (ESA) candidate species are discussed with listed species in Section 2.20.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code

2.19.2 Affected Environment

Caltrans Biologists evaluated the special-status wildlife species occurring in the region based on the USFWS and CDFW threatened and endangered species list in the Natural Environment Study (NES) and CNDDDB (CDFW 2013) records (Figures 4 and 5, Appendix B). Ruderal grasslands and urban forest mix are not preferred habitats for any of the 34 animal species that are listed in Section 2.20, threatened and endangered species within the San Mateo, San Francisco South, Hunters Point, and Montara Mountain topo quads (Table 1) or the 11 animal species of concern not listed as federal or state threatened or endangered that have known occurrences within 5 miles of the project site (*Natural Environment Study*, Figure 4, CDFW 2013).

CNDDDB occurrence records, species habitat requirements, and an evaluation of habitat connectivity were used to determine the potential for species of special concern within the San Mateo, San Francisco South, Hunters Point, and Montara Mountain topo quads to occur in the project site vicinity. The species are all considered highly unlikely to be encountered in the project area due to a lack of suitable habitat and will therefore **not be affected** by the proposed project.

Because the project site consists of an intersection between a busy four-lane state route and a residential avenue in a highly urbanized area, non-volant terrestrial animals are most likely discouraged from seeking forage, cover or other habitat requirements within the project area. There are no surface water features present within the project area, making the site unsuitable for aquatic species, species that have aquatic stages, and terrestrial species seeking to ingest water.

Although some bird species may be expected to use the site, the high level of continual disturbance from motor vehicles is likely to cause the number of birds nesting within the project site to be low. No nesting activity was observed in the vicinity of the project site during the ground-level surveys on June 28, 2013, but these observations do not preclude potential nesting activity prior to or during construction.

The primary biological resources of concern with the potential to occur in the vicinity of the project site are migratory birds, which are protected by the MBTA and California Fish and Wildlife Code Sections 3503 and 3503.5. The nesting season for birds is anticipated to run from February 15 to September 1.

2.19.3 Environmental Consequences

Build Alternative: No special-status animal species are present within the BSA, and therefore no impacts to these resources will result from the proposed project. No potential impacts from this project are anticipated to the special-status species that are discussed in this report. It is unlikely that any species of special concern will be present within the project site during implementation of the proposed project.

Project implementation could result in the destruction of active nests if present in vegetation when clearing or tree removal occurs. The project could also result in the abandonment of eggs or young if project activities occur near active nests, disturbing adult birds to the point of nest abandonment. Because of the relatively low number of pairs that could be affected by the project, the regional abundance of any given bird species that would nest in the BSA, and project compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503 and 3503.5, including the presence of a biological monitor onsite during construction, the project will not have a long-term substantial effect on regional populations of any species.

No Build Alternative: There would be no impacts to animal species under the no build alternative.

2.19.4 Avoidance, Minimization, and/or Mitigation Measures

California Fish and Game Code sections 3503 and 3503.5 mandate protection of birds' nests and the Migratory Bird Treaty Act of 1918 as amended (MBTA) (16 U.S.C. §§ 703–711) protects migratory birds from unlawful activities. Any work within the project limits during the nesting season will require protection for migratory nesting birds.

No native migratory birds were observed nesting during the ground-level surveys, but the potential exists for migratory birds to nest in trees or shrubs or on the ground within the BSA.

Because no sensitive habitats or species of concern occur within the Caltrans right of way and no impact to areas other than slivers of property adjacent to the existing Caltrans right of way is anticipated, no mitigation other than that associated with replanting removed trees, where space is available within the biological study area, will be required.

Construction

Most of the staging will occur within Caltrans right of way, except for some minor work at (specific points).

Adherence to the following standard and bird-specific Caltrans Best Management Practices (BMPs) will be required and will be sufficient to protect the limited biological resources that occur or may occur in the vicinity of the project site:

- Contractors will utilize Caltrans standard BMPs as provided in the current version of the Caltrans Construction Manual (2014).
- If vegetation removal occurs during the winter wet season, all trees and shrubs will be cut above the ground and their stumps left in place to prevent soil disturbance, erosion, and discharge into any creeks.
- Any clearing and grubbing will occur in the summer dry season and will require pre-construction nesting bird surveys every 3 days during this work period.
- Any additional ground disturbance beyond initial clearing and grubbing will also occur in the summer dry season and will require additional nesting bird surveys every 3 days during this work period.
- Any waste materials or products (e.g., pavement grindings) will be disposed of at an approved facility or certified landfill.
- All staging will occur within existing paved or gravel turnout areas. Any staging in vegetated areas (grass and low-growing vegetation) or off-pavement will require additional assessments by a Caltrans biologist.

If construction occurs between February 15 and September 1, a Caltrans qualified biologist(s) will conduct nesting bird surveys to comply with the California Fish and Game Code and MBTA. The biologist(s) will receive a two-week notice prior to project implementation to schedule nesting bird surveys. The surveys will be conducted within 48 hours before any ground-disturbing activities occur, including vegetation removal, and will be valid for 3 days, after which new surveys will be conducted. This survey schedule will allow the biologist(s) to remove nests that are started between surveys, prior to the start of egg-laying. Ground-disturbing activities will not begin until the biological monitor has given clearance. If evidence of bird nesting is discovered, the Contractor shall not disturb the nesting birds until the young have left the nest. If active nests are discovered after beginning work, the Contractor shall immediately stop working within a 50-ft. radius of the discovery and notify the Resident Engineer.

It is Caltrans' opinion that compliance with the above-mentioned measures will avoid effects to any listed species from the proposed project.

2.20 THREATENED AND ENDANGERED SPECIES

2.20.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a no effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2081 of the Fish and Wildlife Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising

(A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.20.2 Affected Environment

The project area contains no habitat for listed species. The project activities are relatively minor and likely of short duration. Therefore the project will have **no impact** on federal and California listed species. Accordingly, Caltrans biologists have concluded that there will be no impact to any of the federal threatened or endangered species with potential to occur within the vicinity of the project sites due to the rationale presented for each species discussed in this report. Please see Appendix I for no effect determination for listed species under FESA.

2.20.3 Environmental Consequences

Build Alternative: No special-status animal species are present within the BSA, and therefore no impacts to these resources will result from the proposed project. No potential impacts from this project are anticipated to the special-status species that are discussed in this report. It is unlikely that any species of special concern or state and/or federally threatened and endangered species will be present within the project site during implementation of the proposed project.

No Build Alternative: There would be no impacts to threatened and endangered species under the no build alternative.

2.20.4 Avoidance, Minimization, and/or Mitigation Measures

If construction occurs between February 15 and September 1, a qualified biologist(s) will conduct nesting bird surveys to comply with the California Fish and Wildlife Code and MBTA. The biologist(s) will receive a two-week notice prior to project implementation to schedule nesting bird surveys. The surveys will be conducted within 48 hours before any ground-disturbing activities occur, including vegetation removal, and will be valid for 3 days, after which new surveys will be conducted. This survey schedule will allow the biologist(s) to remove nests that are started between surveys, prior to the start of egg-laying. Ground-disturbing activities will not begin until the biological monitor has given clearance. If evidence of bird nesting is discovered, the Contractor shall not disturb the nesting birds until the young have left the nest. If active nests are discovered after beginning work, the Contractor shall immediately stop working within a 50-ft. radius of the discovery and notify the Resident Engineer.

Adherence to the following standard Caltrans BMPs for migratory bird protection will be required and will be sufficient to protect the limited biological resources that occur or may occur in the vicinity of the project site:

- Any clearing and grubbing will occur in the summer dry season and will require pre-construction nesting bird surveys every 3 days during this work period.

It is Caltrans' opinion that compliance with the above-mentioned measure will avoid effects to any migratory bird species from the proposed project.

Pursuant to FESA and CESA there are no listed species present within them BSA thus the project will avoid any impact to listed species under FESA and CESA.

2.21 INVASIVE SPECIES

2.21.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.21.2 Affected Environment

Caltrans prepared an NES that was completed on May 13, 2014. Caltrans biologists identified three habitat or land use types in or adjacent to the BSA: developed, non-native ruderal grassland, and ornamental landscaping. Most of the BSA is developed and has paved surfaces including roads, curbs and sidewalks.

2.21.3 Environmental Consequences

Build Alternative: During construction all equipment and materials will be inspected for the presence of invasive species. New plantings shall use plant species recommended by Caltrans Landscape and Biology technical offices. None of the species on the California list of invasive species is currently used by Caltrans for erosion control or landscaping in San Mateo County. Trees used to replace contributors to the Howard-Ralston Eucalyptus Tree Rows, shall be approved Accolade® elm trees only. Sweetgum (*Liquidamber styraciflua*) and other trees removed will be replaced with Accolade® elm trees or similar approved species, where space is available within the Howard-Ralston Eucalyptus Tree Rows.

No Build Alternative: There would be no potential impacts to native species from invasive species under the no build alternative.

2.21.4 Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

2.23 CUMULATIVE IMPACT ASSESSMENT

2.23.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

2.23.2 Affected Environment

The California Environmental Quality Act (CEQA) Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under the National Environmental Policy Act (NEPA), can be found in 40 Code of Federal Regulations (CFR) Section 1508.7 of the CEQ Regulations.

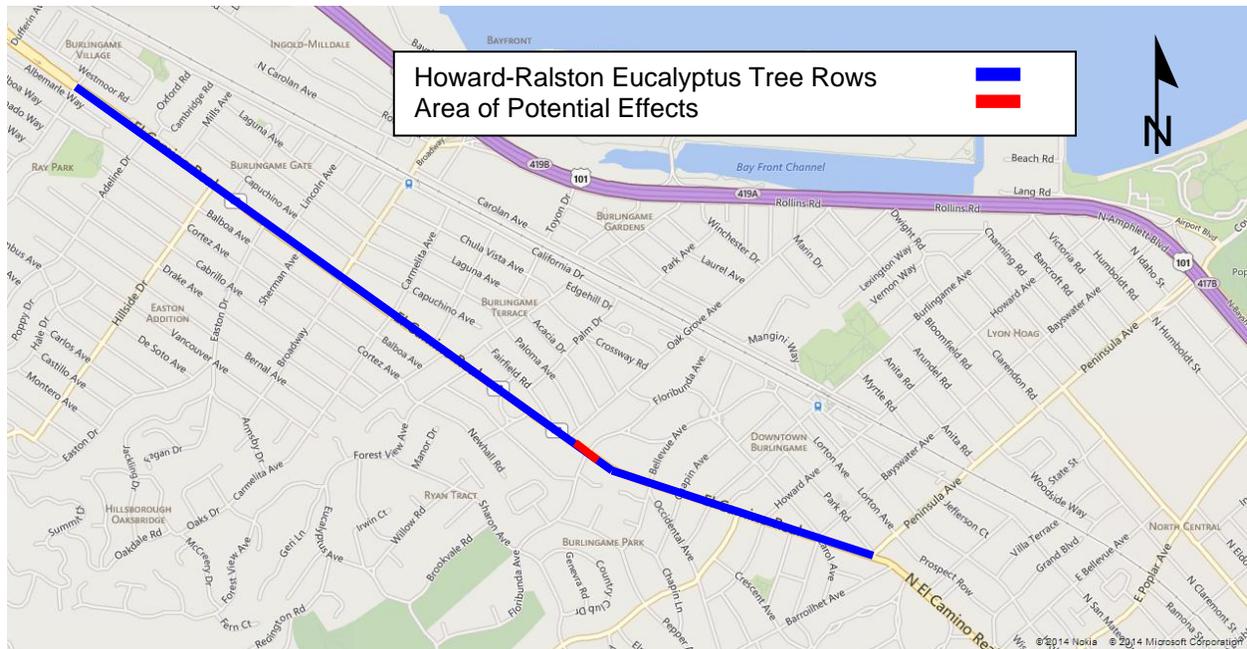
Data for this cumulative impacts analysis were obtained from San Mateo County, environmental documents for local projects archived by Caltrans, and from the State Clearinghouse's online database, CEQAnet.

This Cumulative Impact Assessment will focus on visual and historic resources only, as no past or foreseeable future projects in the study area are anticipated to cause additional or incremental impacts to the balance of resources discusses in this DEIR/EA.

2.23.3 Resource Study Area

The resource study area to address cumulative impacts for the cultural and visual resources is the Howard-Ralston Eucalyptus Tree Rows, which include 356 contributing trees, bordered on both sides of SR 82 through the cities of Burlingame and Hillsborough, in the northern portion of the former Rancho San Mateo and the southern portion of Rancho Buri Buri. Once 4 miles in length, the resource area is 2.2 miles long, bounded by Peninsula Avenue on the southeast end of the highway and Ray Drive/Rosedale Avenue on the northwest end. (See map below.) The focused Area of Potential Effects is the area where Caltrans technical studies were completed for the proposed project.

Figure 18 - Howard-Ralston Eucalyptus Tree Rows Boundary and APE



Source: Microsoft Bing Maps, 8/2014.

2.23.4 State of the Resources

The Howard-Ralston Eucalyptus Tree Rows were planted by John McLaren, between 1873 and 1876, and were comprised of elms, interspersed with eucalyptus, which were planted to nurse the elms by protecting them from the winds. The original design intent of John McLaren was to beautify and protect from wind the portion of the County Highway leading to the grand estates of several San Francisco Peninsula property owners. Under McLaren's instruction the eucalyptus trees were to be removed after the elms had become established. However, this was not done because local residents wanted all the trees to be kept. The resource consists of two rows of trees, one row planted on either side of SR 82 within the Caltrans 60 to 66-ft. right-of-way. There is a history of protection of the tree row dating back to 1908. Notably, the city of Burlingame designated the portion of the tree row within their city limits as a "Heritage Grove" in 1975, and the San Mateo Sites Committee has designated the tree row within Burlingame as a "Point of Historic Significance."

The Howard-Ralston Eucalyptus Tree Rows contains 557 total trees within the boundaries of the Tree Rows. Based on the 2012 Howard-Ralston Eucalyptus Tree Rows National Register Nomination and adjusted numbers reflecting the trees removed and replaced, (for health and safety reasons), the following is a breakdown of the number of trees contained in the Tree Rows:

- 557 trees contained within the boundaries of the Tree Rows; of these:
- 356 are considered contributing trees
- 245 are contributing mature eucalyptus from the original planting
- 25 are contributing mature elms from the original planting
- 86 are new elms planted as contributing replacements

Of the total 557 trees on SR 82 contained within the boundaries of Ray Drive/Rosedale Avenue and Peninsula Avenue, 356 are considered contributing²⁶ trees to the Howard-Ralston Eucalyptus Tree Rows. The majority of these, 245 (approximately 70%) are mature blue and manna gums from the original planting, reaching over 100 ft. in height and 5 ft. in diameter at breast height. Also contributing to the resource are 25 mature elms, as well as 86 new elms comprised mainly of plantings from Caltrans in 2006 and 2008 and from a grant to City of Burlingame from Cal Fire, planted on Arbor Day, March 7, 2011. There are 201 non-contributing trees within the resource which include orange gum (*E.bancrofti*), desert box gum (*E. microtheca*), flowering gum (*E.ficifolia*), Nichol's willow-leaf peppermint, swamp mahogany (*E. robusta*), swamp gum (*E. rudis*), silver dollar gum, pink iron bark (*E. sideroxylon 'Rosea'*), and acacia, as well as redwood, sycamore, horse chestnut and sweet gum trees.

Health and Trends

Although the eucalyptus trees have become the established primary trees, disease-tolerant accolade and Frontier ® elm trees have been planted beginning in 2006, according to McLaren's original design. As trees have had to be replaced, elm trees have been planted and would continue to be planted in the future. Since 2006, Caltrans has planted 44 contributing elm saplings to rehabilitate the resources. Burlingame Planning Commission requirements led to the planting of 5 more elms in 2009-10. Cal Fire has planted 33 additional contributing elm samplings in March 2011. Of the 82 total, 5 have died, leaving 77 new contributing elms. New elm trees are considered to be contributing elements of the resources and continue to strengthen the integrity of the Tree Rows as they carry out McLaren's original design of a landscaped, shaded avenue.

When the Howard-Ralston Eucalyptus Tree Rows were assessed in 2008, ten Dutch elm disease afflicted elms and three blue gum eucalyptus trees were removed from within the resource area. Enough heritage trees remain in the section running through the City of Burlingame and Town of Hillsborough, however, to create the visual coherence of the Tree Rows when driving on SR 82.²⁷

According to the 2012 National Register Nomination for the Howard-Ralston Eucalyptus Tree Rows, Caltrans initially replaced unhealthy older trees with eucalyptus of other varieties, including orange gum planted in 1985 and desert box planted in the late 1990s. Both of these species are smaller than the original gums selected by McLaren, as such, they do not contribute to the tree rows and have not been planted since that period.

2.23.5 Past, Present and Foreseeable Future Projects

The SR 82 highway corridor has had several projects completed in the past including tree maintenance, drainage repair and maintenance, and safety projects. A brief summary of each project is provided below:

²⁶ Contributing trees are tree species that are considered to be contributing elements of the resource and continue to strengthen the integrity of the Howard-Ralston Eucalyptus Tree Rows as they carry out McLaren's original design of a landscaped, shaded avenue. These contributing trees include the mature eucalyptus and mature elm trees planted originally between 1873 and 1876. Elms planted as replacements are also considered contributors. Non-contributing trees are trees that do not contribute to the Howard-Ralston Eucalyptus Tree Rows. There are 201 non-contributing trees within the resource which include orange gum (*E.bancrofti*), desert box gum (*E. microtheca*), flowering gum (*E.ficifolia*), Nichol's willow-leaf peppermint, swamp mahogany (*E. robusta*), swamp gum (*E. rudis*), silver dollar gum, pink iron bark (*E. sideroxylon 'Rosea'*), and acacia, as well as redwood, sycamore, horse chestnut and sweet gum trees.

²⁷ Review of Existing Integrity of the Howard-Ralston Eucalyptus Tree Rows. National Park Service, National Register of Historic Places Registration Form.

Past Projects

- *SR 82 Highway Maintenance*
Since the 2012 National Register Nomination Caltrans records indicate that 2 mature eucalyptus trees and 7 mature elm trees were removed from the Howard-Ralston Eucalyptus Tree Rows. All 7 elm trees and 1 of the eucalyptus trees were taken down by Caltrans maintenance because they were safety hazards. 1 of the eucalyptus trees fell down in a storm. All 9 trees were replaced with young elms.²⁸

Since 2006, Caltrans has planted 44 contributing elm saplings to rehabilitate the resources. New elm trees are considered to be contributing elements of the resources and continue to strengthen the integrity of the Tree Rows as they carry out McLaren's original design of a landscaped, shaded avenue.

When the Howard-Ralston Eucalyptus Tree Rows were assessed in 2008, ten Dutch elm disease afflicted elms and three blue gum eucalyptus trees were removed from within the resource area. Enough heritage trees remain in the section running through the City of Burlingame and Town of Hillsborough, however, to create the visual coherence of the Tree Rows when driving on SR 82.

In 2012, one Sweet gum (*Liquidambar styraciflua*) was removed during construction of a Caltrans signalization project, which installed a traffic signal on the NE corner of the intersection of SR 82 and Floribunda Avenue and removed the pork chop islands on the diagonal corner.

- *SMART Corridor Project*
The San Mateo SMART Corridor project, begun in the summer of 2011, installed equipment on various State Routes and local arterials in San Mateo County to reduce congestion and improve traffic operations. The project included installation of camera and optical fiber cables and conduits along SR 82, including the intersection with Floribunda Avenue.

Present Projects

- *SR 82 and Floribunda Avenue Intersection Safety Improvements*
The proposed Build Alternative would maintain two through lanes and construct new left-turn pockets in the north and southbound directions on SR 82 at Floribunda Avenue. Existing pedestrian curb ramps and sidewalk within the project boundaries would be upgraded and new left-turn signals would be installed with traffic intersection lighting. There would be removal of 5 out of 356 contributing trees from the Howard-Ralston Eucalyptus Tree Rows, which is listed on the National Register of Historic Places.

Future Projects

- *ADA Sidewalk Improvements*
This Caltrans project proposes to reconstruct a total of 82 new American with Disability Act (ADA)-compliant curb ramps at 20 intersections and reconstruct sidewalks and driveways on SR 82 in San Mateo County. The project extends from Burlingame Avenue

²⁸ Caltrans Office of Cultural Resource Studies email correspondence on maintenance history of trees within the Howard-Ralston Eucalyptus Tree Rows, 6/24/14. There is no formal agreement between Caltrans and SHPO, however Caltrans has consulted with SHPO, City of Burlingame and Burlingame Historical Society on tree monitoring and health of trees in the Howard-Ralston Eucalyptus Tree Rows.

in the city of Burlingame to Hillside Drive in the town of Hillsborough (Post Miles 13.3 – 14.7). The project would require relocation or grade adjustments to existing utility box covers, as well as relocation of signals, lighting, utility cabinets, poles, and fire hydrants. In addition, the project would install pedestrian push button posts and push buttons, re-stripe pedestrian crosswalks, and relocate and install drainage inlets.

The proposed reconstruction of sidewalks would require removal of some eucalyptus trees and/or right-of-way easements. The Howard-Ralston Eucalyptus Tree Rows, which include 356 contributing trees, border both sides of SR 82 and are listed in the National Register of Historic Places. Within the project limits there are 220 contributing trees. Based on currently available information, five of the 356 trees that contribute to the Tree Rows, or 1.4 percent, would likely have to be removed. To avoid removing additional contributing trees, this project would require permanent easements beyond the existing right of way. These easements would provide space to realign the sidewalks around the trees. Due to physical barriers or elevation differences between the sidewalk and the adjacent properties, easements are not an option to avoid the five trees that would likely have to be removed. Trees that are removed would be replaced with Accolade ® elms or a similar approved variety.

- *Crosswalk Enhancements*

Caltrans proposes to enhance safety at unsignalized intersections on Routes 1, 82, 84, and 29 in San Mateo and Solano Counties by installation of pedestrian hybrid beacons, safety lightings, pavement markings, and warning and regulatory signs to encourage drivers yielding to pedestrians. At selected locations curb extensions and pedestrian refuge islands will be implemented based on existing conditions and requirements at specific intersections. ADA curb ramps affected by this project would be upgraded to current standards. No trees, roots, limbs, tree trimming or trees would be removed on SR 82 for this project.

2.23.6 Environmental Consequences

Since 2004, Caltrans has consulted informally with SHPO, City of Burlingame and the Burlingame Historical Society regarding monitoring the health and condition of the trees to maintain the integrity of the Howard-Ralston Eucalyptus Tree Rows. The SR 82 and Floribunda Intersection Safety Improvement and ADA Sidewalk Improvement Projects would each remove 5 historic trees for the Howard-Ralston Eucalyptus Tree Rows representing a cumulative effect of removal of 10 historic trees out of 356 contributing historic trees in the Tree Rows. This represents the removal of 2.8 percent of contributing historic trees (mature eucalyptus and elm trees) from the Howard-Ralston Eucalyptus Tree Rows. When project excavation for construction begins there may be indirect effects to existing tree roots. Caltrans will contract a qualified, professional arborist to monitor project excavation to avoid/minimize effects to tree roots.

2.23.7 Cultural Resources

The cultural resource that would be impacted in the resource study area is the Howard-Ralston Eucalyptus Tree Rows, a property listed in the National Register of Historic Places.

Caltrans Highway Maintenance

Past Caltrans highway maintenance projects include tree work as a byproduct of highway maintenance activities. Caltrans has performed highway maintenance on SR 82 that includes working within the Howard-Ralston Eucalyptus Tree Rows boundary on tree removal of diseased trees and replanting contributing trees with Accolade ® elms or similar approved

variety. Caltrans has determined that there was “no adverse effect” under the NHPA from past maintenance projects.

Caltrans does not have a formal agreement with SHPO, City of Burlingame or Town of Hillsborough about tree monitoring or maintenance. However, Caltrans has consulted informally with SHPO, the Burlingame Historical Society and the City of Burlingame on monitoring tree health and the condition of trees on a regular basis. In addition, consultation occurred under PRC 5024.

The mature eucalyptus trees and the young replacement elm trees are both contributors to the Howard-Ralston Eucalyptus Tree Rows and are regularly monitored for safety and health and if they need to be removed they are replaced with Accolade ® elms, the designated tree species for a contributing tree to the Howard-Ralston Eucalyptus Tree Rows.

SR 82 at Floribunda Ave Intersection Safety Improvement Project

The current proposed SR 82 at Floribunda Avenue Intersection Safety Improvement Project Build Alternative has one eligible historic private residence, 1615 Floribunda Avenue, within the Area of Potential Effect, adjacent to the proposed project, but this property would not be impacted by the project. There would be five (5) out of 356 contributor trees to the Howard-Ralston Eucalyptus Tree Rows removed under the proposed Build Alternative. The removal of 5 out of 356 contributor trees to the historic tree rows represents 1.4 percent of the Tree Rows. There would be no indirect impacts to the historic resource by the proposed project.

As trees have had to be removed due to maintenance, health, safety, age, and storm damage; Caltrans has replaced trees within the Howard-Ralston Eucalyptus Tree Rows with designated approved elm tree or similar approved, disease resistant varieties.²⁹ The health monitoring and maintenance of the Tree Rows and replanting with approved elms and similar varieties improve and strengthen the integrity of the Tree Rows and meet McLaren’s original design vision of a landscaped, shaded avenue.

Future foreseeable projects within the resource study area include an ADA Sidewalk Improvement and a Crosswalk Enhancement Projects, discussed below.

ADA Sidewalk Project

The ADA sidewalk project would require relocation or grade adjustments to existing utility box covers, as well as relocation of signals, lighting, utility cabinets, poles, and fire hydrants. In addition, the project would install pedestrian push button posts and push buttons, re-stripe pedestrian cross walks, and relocate and install drainage inlets. The proposed reconstruction of sidewalks would require removal of some eucalyptus trees and/or right-of-way easements. There are 28 trees within the project footprint that contribute to the Howard-Ralston Eucalyptus Tree Rows, which is listed on the National Register of Historic Places. However, Caltrans plans to avoid 23 of these trees by purchasing permanent easements and reconstructing the sidewalk around them. The other five trees have physical barriers, such as retaining walls, that limit the ability to go around them. Therefore, the current estimated number of trees that would be removed is five (5) out of the 356 contributing historic trees to the Tree Rows or 1.4 percent.

Crosswalk Enhancement Project

The Crosswalk Enhancement project would not remove any trees within the Howard-Ralston Eucalyptus Tree Rows. There are no direct, indirect or cumulative impacts to cultural resources from this project.

²⁹ Since 2004, Caltrans has had an ongoing agreement with SHPO regarding removals and replacements of trees within the Resource Area. (National Register of Historic Places Registration Form, U.S. Department of Interior, National Park Service, July 31, 2011.)

The cumulative impact from past, present and future foreseeable projects would be 2.8 percent of contributing historic trees removed from the Tree Rows. Caltrans has concluded that the cumulative impact to the Howard-Ralston Eucalyptus Tree Rows would meet a no adverse effect determination under the NHPA. Caltrans would plant Accolade ® elm or other approved varieties to replace the historic trees that would be removed due to present or future foreseeable projects discussed in this DEIR/EA.

2.23.8 Visual/Aesthetics

Past Highway Maintenance

Past highway maintenance projects within the study resource area have included removal of contributing trees to the Howard-Ralston Eucalyptus Trees as necessary for health and safety reasons. Caltrans has worked closely with SHPO, the Burlingame Historical Society, the City of Burlingame and Town of Hillsborough with a tree monitoring and maintenance program to preserve the health and integrity of the Tree Rows, which includes replanting trees with approved Accolade ® elms or similar disease resistant varieties to maintain the visual characteristics of the Tree Rows. While removal of taller eucalyptus trees may remove shade to residences adjacent to the Tree Rows, there is greater sunlight penetration and the visual character would be minimized with the planting of new trees that over time would provide shade.

SR 82 at Floribunda Intersection Safety Improvement Project

The current SR 82 at Floribunda Intersection Safety Improvement Project proposed Build Alternative would widen SR 82 within existing Caltrans right-of-way, would remove (15) fifteen trees including (5) five contributor trees to the Howard-Ralston Eucalyptus Tree Rows; (4) four mature eucalyptus trees and one (1) contributing elm tree, located on SR 82, south of Floribunda Avenue. Three contributor trees to the Howard-Ralston Eucalyptus Tree Rows would be removed on the southeast side and two contributor trees on the southwest side of SR 82, south of Floribunda Avenue would be removed. Removal of the tall, crowned contributing historic eucalyptus trees on the southeast side would remove shade that is provided to the apartment complexes on the east side of SR 82 and would affect the visual and aesthetic character of the properties fronting SR 82. However, the impact on local residence of the tree removal is subjective as some residence would welcome greater sunlight. In 2003, an informal agreement was established among the city of Burlingame, the Historical Society, and Caltrans to replace any unavoidable removed historical Eucalyptus trees with Accolade ® elm trees or other specific suitable varieties to maintain the visual integrity of the tree rows.

Future ADA Sidewalk Improvement and Crosswalk Enhancement Project

Future projects include an ADA Sidewalk Improvement and Crosswalk Enhancement project. Impacts to visual resources are limited to the proposed removal of trees. Within the project limits, 220 trees contribute to the Howard-Ralston Eucalyptus Tree Rows. Based on currently available information, five contributing trees would likely have to be removed. To avoid removing 23 additional contributing trees, this project would require permanent easements beyond the existing right of way. These easements would provide space to realign the sidewalks around the 23 trees. Due to physical barriers or elevation differences between the sidewalk and the adjacent property, easements are not an option to avoid the five trees that would likely have to be removed.

2.23.9 Avoidance, Minimization and Mitigation Measures

In past, present and future projects on SR 82 within the resource study area Caltrans has consulted informally with SHPO, the Burlingame Historical Society, the City of Burlingame and Town of Hillsborough to avoid, minimize and mitigate the removal of trees along SR 82. Caltrans regularly monitors the health of the contributing trees to the Howard-Ralston Eucalyptus Tree Rows and any trees that need to be removed are replaced in the Tree Rows,

with approved Accolade® elm or similar, disease resistant varieties, to maintain the integrity of the Tree Rows resource. The impact of removal of 10 contributing trees (from the two Caltrans projects) in the Tree Rows would be 2.8% of contributing trees removed out of 356 historic trees within the Howard-Ralston Eucalyptus Tree Rows. These trees would be replaced with Accolade® elm or similar approved variety. They would be planted where space is available, in the Howard-Ralston Eucalyptus Tree Rows on SR 82. Caltrans will have a qualified, professional arborist monitor any indirect effects to tree roots during construction excavation to avoid/minimize effects to existing trees with the project area.

All projects in the SR 82 resource study area corridor run a high risk of removing trees due to the narrow, physically confined dimensions of the SR 82 roadway and proximity to adjacent trees. In some areas SR 82 does not have roadway shoulders, and is characterized by large eucalyptus tree trunks protruding into the roadway and roots which are cracking the sidewalks, creating uneven sidewalk surfaces for pedestrians and damaging underground utilities. In addition, the health of 100 year old eucalyptus trees must be closely monitored to ensure the safety to pedestrians and vehicles travelling on SR 82. Caltrans will continue to be a steward of this resource and work within the constraints of the function and environmental setting of the trees while striving to provide a safe transportation system for mobility including vehicle, transit and pedestrians.

CHAPTER 3 – CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION

3.1 Determining Significance under CEQA

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 Discussion of Significance of Impacts

3.3 Less-than-Significant Effects of the Proposed Project

For a description of the proposed Build Alternative and environmental effects please see Chapter 2 of this document. The removal of 5 contributing trees from the Howard-Ralston Eucalyptus Tree Rows is an impact considered "Less Than Significant."

3.4 Significant Environmental Effects of the Proposed Project

There are no significant impacts under the proposed project.

3.5 Unavoidable Significant Environmental Effects

There would be no significant environmental effects from the proposed project Build Alternative.

3.6 Climate Change and Greenhouse Gas Emissions

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988, has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles) make up the largest source second to electricity generation of GHG emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)³⁰.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing the growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued cooperatively.³¹ The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

3.6.1 Regulatory Setting

State: With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June

³⁰ http://climatechange.transportation.org/ghg_mitigation/

³¹ http://www.fhwa.dot.gov/environment/climate_change/mitigation/

2009, the United States Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order S-3-05 (EO): (signed on June 1, 2005, by former Governor Arnold Schwarzenegger) the goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB 32, the Global Warming Solutions Act of 2006 Núñez and Pavley: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan, (which includes market mechanisms) and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by California's Climate Action Team.

Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger) set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by the year 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007: required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans's stewardship goal to preserve and enhance California's resources and assets.

Federal: Although climate change and GHG reduction is a concern at the federal level; currently there are , no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA’s *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009³². On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.³³

The final combined USEPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile (the equivalent to 35.5 miles per gallon [MPG]) if the automobile industry were to meet this CO₂ level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

³² <http://www.epa.gov/oms/climate/regulations.htm#1-1>

³³ <http://epa.gov/otaq/climate/regulations.htm>

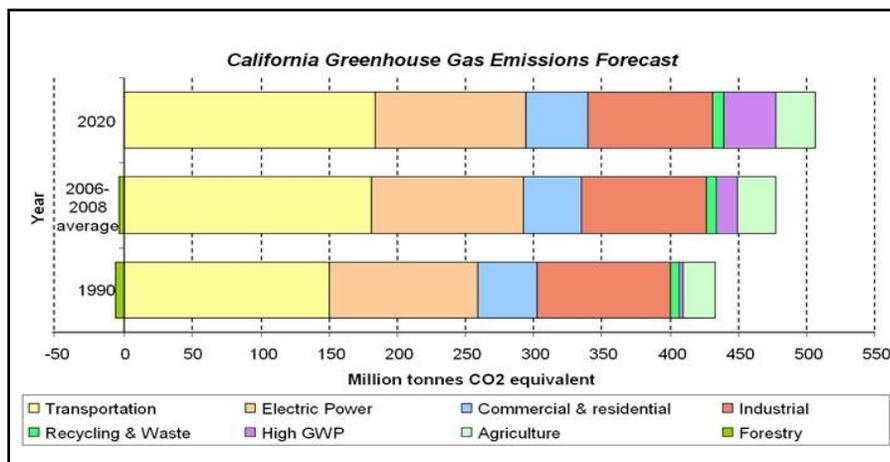
On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

3.6.2 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.³⁴ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 19 - California Greenhouse Gas Forecast



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.³⁵

³⁴ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

3.6.3 Operational Emissions

The purpose of this project is to improve safety for an approximate 500 ft. section of SR 82 that includes the SR 82 north and southbound approaches and intersection of Floribunda Avenue. Construction of left-turn lanes and other intersection safety improvements are expected to reduce left-turn traffic collisions. In addition, pedestrian curb ramps would be upgraded and intersection lighting would be added. The project would not increase vehicle capacity, so GHG emissions are not expected to increase for this project.

The proposed project would not conflict with the Town of Hillsborough and City of Burlingame's Climate Action Plans strategies to reduce GHG emissions from the transportation sector.³⁶ The proposed Build alternative would not conflict with the current Metropolitan Transportation Commission (MTC) Regional Transportation Plan (Bay Area Plan)³⁷. Plan Bay Area's goal is to reduce per capita emissions by 7 percent per capita reduction by 2020 and a 15 percent per capita reduction by 2035; and the project is not expected to result in an increase in GHG emissions. The Final EIR of the MTP anticipates lower CO₂ emissions from vehicles in future years. Regarding the Plan Bay Area document, the Final EIR states:

While total vehicle miles traveled are expected to increase by 20 percent from existing conditions to 2040 as a result of the Plan, this is less than the overall population growth of 30 percent over the same period. This is attributable in part to the proposed Plan investments in transit operations and expansion.

As discussed below, construction emissions would be unavoidable, but there would likely be long-term GHG benefits associated with the project including improved traffic circulation (reduced queuing and congestion) operations by implementation of improvements for left-turn movements from SR 82 to Floribunda Avenue.³⁸

3.6.4 Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

3.6.5 CEQA Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans determination that in the absence of further regulatory or scientific information

³⁶ Town of Hillsborough Climate Action Plan, 2010. <http://www.hillsborough.net/civica/filebank/blobdload.asp?BlobID=4121>. City of Burlingame Climate Action Plan, 2009. <http://www.burlingame.org/Modules/ShowDocument.aspx?documentid=5458>.

³⁷ MTC Bay Area Plan. Retrieved on May 14, 2014. http://www.mtc.ca.gov/planning/plan_bay_area/

³⁸ Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010)<<http://onlinepubs.trb.org/onlinepubs/trnews/trnews268.pdf>>

related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.6.6 Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions.

The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 19: The Mobility Pyramid.

Figure 20 - The Mobility Pyramid



Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans also assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB.

Table 18 (see next page) summarizes Caltrans and statewide efforts to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006)

Table 18 - Climate Change/Carbon Reduction Strategies

Climate Change/Carbon Reduction Strategies						
Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS commonly consists of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
2. In addition, the San Mateo Transportation Authority (SamTrans) maintains bus route SR 82 (ECR) line which provides public bus transit service along SR 82 (SR 82) through the project site. This bus route helps to manage the growth in demand for SR 82 highway capacity and encourages a reduction of GHG emissions by providing an alternative to single occupancy vehicles. SamTrans is conducting a 16-month study of the potential for BRT service along SR 82 corridor from Daly City to the Palo Alto Transit Center. The purpose of the study is to develop a phasing plan that will identify how existing bus operations in the corridor can be enhanced to incorporate Rapid- and BRT-type amenities over time, commensurate with population and employment densities and ridership demand. A major goal of the study is to identify enhancements in the short-term and long-term that could improve the passenger experience for existing riders and attract new riders. Other goals of the study include promoting livability and commercial viability while also maintaining cost effective operations and minimizing traffic and parking impacts.³⁹
3. According to Caltrans Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's (APCD) rules, ordinances, and regulations regarding air quality restrictions.

³⁹ SamTrans El Camino Real Corridor Bus Rapid Transit Phasing Study.
http://www.samtrans.com/Planning/Planning_and_Research/BRT.html. Retrieved on 11/13/13.

3.6.7 Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how federal agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The Progress Report of the Interagency Climate Change Adaptation Task Force recommends that the federal government implement actions to expand and strengthen the nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California’s vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state, and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)⁴⁰, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and Caltrans of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

⁴⁰ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010⁴¹ to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation (NOP) as of the date of the EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

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Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

According to the Hydraulic and Floodplain Study for this project, the Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Management Agency (FEMA) for San Mateo County indicated that the study area is not located in FEMA-designated floodplains. In addition, the project site is not located within the coastal zone and would not be subject to sea level rise impacts, according to the San Francisco Bay Conservation and Development Commission Sea Level Rise maps for 16 inch sea level rise by 2050 and 55 inch sea level rise by 2100.⁴² See Sea Level Rise map on next page.

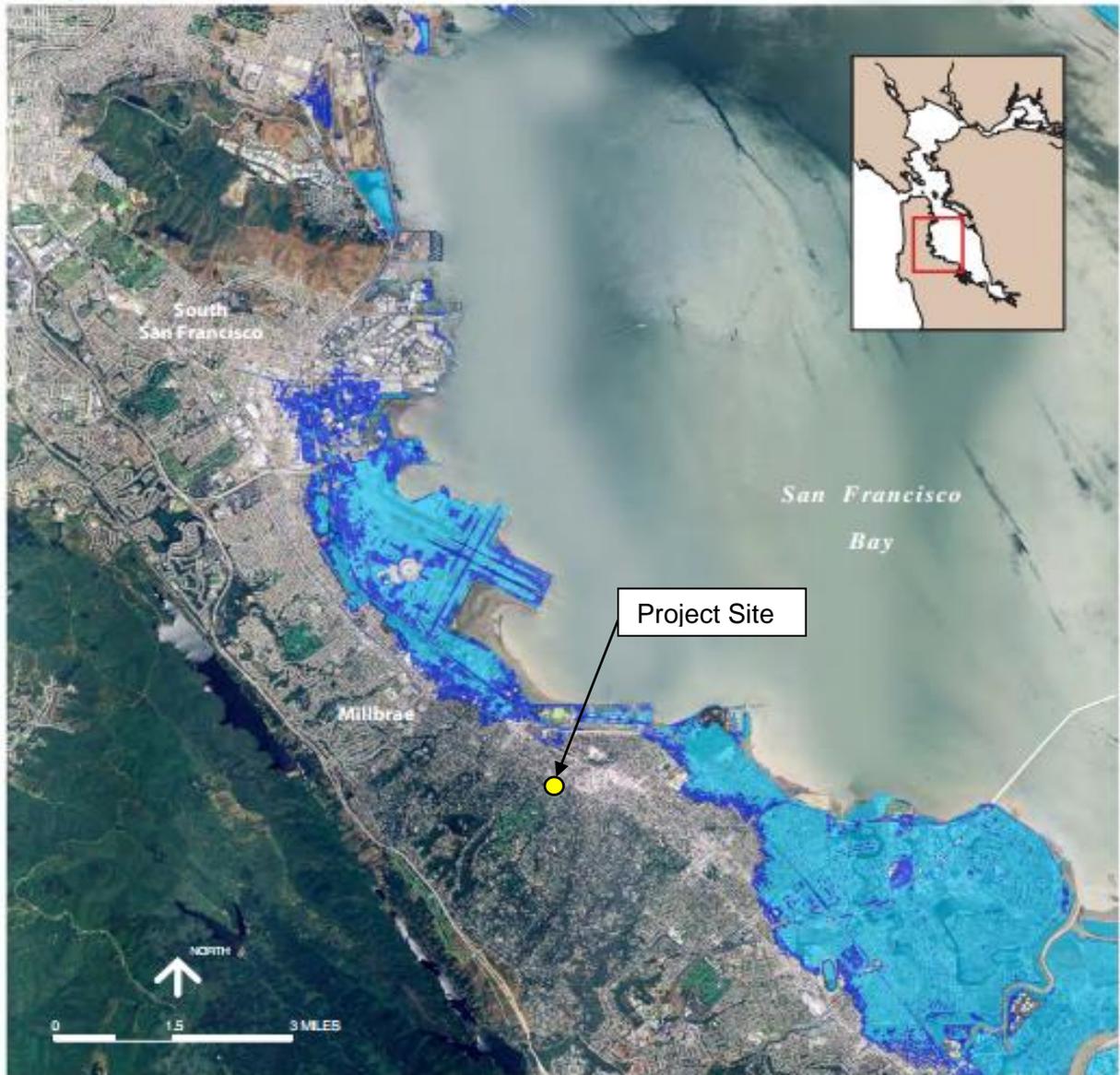
⁴² SF Bay Conservation Development Commission, San Francisco Bay Scenarios for Sea Level Rise Index Map. Retrieved on 4/3/14 from http://www.bcdc.ca.gov/planning/climate_change/index_map.shtml

Figure 21 - Projected Sea Level Rise



SHORELINE AREAS POTENTIALLY EXPOSED TO SEA LEVEL RISE CENTRAL BAY WEST SHORE

DISCLAIMER: The inundation data used in these maps do not account for shoreline protection or wave activity. These maps are for informational purposes only. Users agree to hold harmless and blameless the State of California and its representatives and its agents for any liability associated with the use of the maps. The maps and data shall not be used to assess actual coastal hazards, insurance requirements, or property values or be used in lieu of Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA).



SOURCE: Knowles, N. 2008. Siegel, S.W. and P. A. M. Bachand, 2002.

Sea level rise data provided by:
 USGS
science for a changing world

3.7 Mitigation Measures for Significant Impacts under CEQA

There will be removal of (5) five contributor trees to the Howard-Ralston Eucalyptus Tree Rows, south of the Floribunda Avenue intersection. In addition, 9 non-contributor trees to the Howard-Ralston Eucalyptus Tree Rows would be removed. The following is being proposed due to the removal of the contributors and non-contributor trees to the Howard-Ralston Eucalyptus Tree Rows:

Cultural Resources: For the proposed Build Alternative, 5 trees would be removed, including 4 historic eucalyptus trees, 1 contributing Accolade® elm. 9 non-historic sweet gum (*Liquidambar styraciflua*) trees located on the northeast side of the intersection would also be removed. To minimize the effects of the project, tree planting would occur within the Howard-Ralston Eucalyptus Tree Rows, where space is available, to offset the loss of the trees.

The trees would be Accolade® elm or similar approved variety and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the elm trees would grow to 40-60 ft. in height and have a 35-40 wide crown.⁴³

For more detailed information on mitigation measures for significance under CEQA please refer to the Permits, Approvals, and Mitigation (PAM) or Mitigation Monitoring and Reporting Record (MMRR) in Appendix E.

⁴³ Ibid. pg.63.

CHAPTER 4 - COMMENTS AND COORDINATION

This chapter describes the public outreach and agency coordination activities undertaken for the SR 82 (SR 82) at Floribunda Intersection Safety Improvement Project EIR/EA. The preparation of this Draft EIR/EA includes consultation and coordination with federal, state, and local agencies. Comment letters and responses from the public scoping meeting held on November 19, 2013 are included.

4.1 Coordination Plan

Collaborative efforts have taken place throughout the planning process with key agency representatives from as early as 2011 when initial conceptual alternatives were developed until recently when the alternatives were further refined. The Town of Hillsborough and City of Burlingame were project development team (PDT) members and provided their input on the analysis of initial project alternatives considered but withdrawn and the development of the proposed build alternative. The State Historic Preservation Officer was consulted on the proposed project.

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods including: PDT meetings, interagency coordination meetings, consultation with city staff from the Town of Hillsborough and City of Burlingame, consultation with the State Historic Preservation Officer (SHPO), and Native American Heritage Commission was informed of the proposed project.

Outreach to community organizations and a public community workshop and scoping meeting was held on November 19, 2013. This chapter summarizes the results of Caltrans's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

Coordination for this project included:

- i. Notice of Preparation - Caltrans filed a Notice of Preparation (NOP) with the California State Clearinghouse, on November 6, 2013, to prepare an Environmental Impact Report/Environmental Assessment (EIR/EA) for the SR 82 (SR 82) and Floribunda Avenue Intersection Safety Improvement Project in San Mateo County. The full NOP distribution list is provided in Chapter 6.

- ii. Public Scoping Meeting - A public scoping meeting was announced for November 19, 2013 to provide the interested public an opportunity to view the scope of the project and provide comments on potential relevant environmental issues that should be considered during the preparation of the Draft EIR/EA. The scoping meeting was announced in an advertisement in the San Mateo Daily Journal, and known stakeholders, local residents, and known interested citizens- were invited through letter notifications mailed to them. The event was also posted on the calendar of the Burlingame Patch and flyers sent to City of Burlingame and Town of Hillsborough city halls and local libraries. A press release was also submitted to local media outlets the week before the meeting.

<u>PUBLIC NOTICE</u>	
NOTICE OF PUBLIC SCOPING MEETING FOR THE STATE ROUTE 82 (EL CAMINO REAL) AT FLORIBUNDA AVENUE INTERSECTION SAFETY IMPROVEMENT PROJECT IN SAN MATEO COUNTY	
 <p style="text-align: center;">PROJECT LOCATION EL CAMINO REAL @ FLORIBUNDA AVE</p>	
WHAT'S BEING PLANNED	Caltrans (California Department of Transportation) is proposing to improve safety at the intersection of State Route 82 (El Camino Real) at Floribunda Avenue in the City of Burlingame and Town of Hillsborough, in San Mateo County.
WHY THIS AD	Caltrans has filed a Notice of Preparation with the California State Clearinghouse to prepare an Environmental Impact Report/Environmental Assessment (EIR/EA), for the State Route at Floribunda Avenue Intersection Safety Improvement Project in San Mateo County. A meeting will be held to provide the public an opportunity to view the scope of the Project and provide comments on potential relevant environmental issues that should be considered during the preparation of the EIR/EA.
WHAT YOU ARE BEING INVITED TO	PUBLIC MEETING/OPEN HOUSE Date: Tuesday, November 19, 2013 Time: 6:30 pm to 8:30 pm Place: Burlingame Main Library Lane Community Room 480 Primrose Road Burlingame, CA 94010
OTHER WAYS YOU CAN PARTICIPATE	If you cannot attend the meeting, written comments on the scope and content of the EIR/EA will be accepted until December 21, 2013. Please send comments to:  Caltrans, District 4 Office of Environmental Analysis Attn: Yolanda Rivas, District Branch Chief 111 Grand Avenue, Mail Station 8B Oakland, CA 94612
CONTACT	For more information, please contact the Project Manager, Richelle Perez, at (510) 286-4998.

iii. Process for inviting participating agencies – In November, 2013 Caltrans sent out letters inviting key stakeholders agencies and local interest groups to become cooperating or participating agencies in the SR 82 and Floribunda Avenue Intersection Safety Improvement Project environmental review process. The agencies invited to participate included:

- California Transportation Commission
- Regional Water Quality Control Board San Francisco Bay Region
- California Department of Conservation
- California Department of Fish and Wildlife
- California Highway Patrol, Golden Gate Division
- California Department of Parks and Recreation
- California Department of Toxic Substances Control
- San Mateo County Transportation Authority
- Association of Bay Area Governments
- Natural Resources Agency
- Native American Heritage Commission
- California State Clearinghouse
- California Environmental Protection Agency
- U.S. Army Corps of Engineers
- Burlingame Historical Society
- California Air Resources Board
- California State Office of Historic Preservation
- City of Burlingame
- Town of Hillsborough

iv. There are no permits that would be required for this project. Under Section 106, consultation is required with the State Historic Preservation Officer. In addition, an individual Section 4(f) evaluation is required for this project; therefore consultation with the Department of Interior is required. A Water Pollution Control Plan is required from the U.S. EPA and would be completed before project construction. Permits and approvals required for project may include:

Table 19 - Permits and Approvals

Agency	Permit/Approval	Status
California State Historic Preservation Officer (SHPO)	Section 106 National Historic Preservation Act and under CEQA PRC 5024.5	SHPO concurrence on the National Register of Historic Places eligibility of historic properties within the Area of Potential Effects was received on April 21, 2014. SHPO consultation and concurrence regarding the Finding of Effect will be completed by the Final Environmental Document.
Town of Hillsborough	Encroachment Permit	During PS&E Caltrans will request permit.

4.2 Public Scoping Meeting

A public scoping meeting for the project took place on November 19, 2013 from 6:30 to 8:30pm, at the Main Branch of the City of Burlingame Public Library, located at 480 Primrose Road in Burlingame. For more efficient community outreach, private consultants were the presenters at

the scoping meeting and Caltrans staff were available to answer specific questions from public. City Representatives that were involved in planning the meeting included Paul Willis and Daniel Gonzales from the Town of Hillsborough and Augustine Chou from the City of Burlingame.

At the meeting posters describing “typical options” for intersection safety improvements were on display and available for attendees to examine. A short presentation was conducted by David Reel and Yanna Badet of AECOM, which included an overview of the proposed project location, typical options for left-turn safety improvements, and videos of collisions recorded at the intersection of SR 82 and Floribunda Avenue. Attendees were then organized into three break-out groups, where their comments were recorded by AECOM group facilitators David Reel, Pete Choi, and Allie Herson. Attendees were then reorganized back into a large group and the comments were summarized from each break-out group. The meeting concluded with a final comment session and the main points from the comments were recorded by Yanna Badet. Attendees were asked to provide their comments in writing at the sign-in table, or to mail them at a later date to Caltrans. Verbal and written comments were recorded at the public scoping meeting. The major categories of comments received from the public scoping meeting attendees and where the comments are discussed in the DEIR document is documented in the following table:

Table 20 - Public Scoping Meeting Comments Addressed in DEIR

Public Comments	Where Discussed In DEIR
General Comments	
Intersection Safety	Chapter 1, Description of Project, Purpose and Need
Pedestrians safety	Chapter 1, Description of Project
Project Cost	Summary
Speed Limits/Traffic Control	Table 1.3
Requests for more information (collision and safety data)	Chapter 1, Purpose and Need
Environmental and Cultural Concerns	
Cultural Resources	Chapter 1,
Stormwater drainage	Summary, Related Plans and Projects and Chapter 1
Typical Traffic Improvement Options	
Signal Timing Adjustments	Chapter 1
Left-turn Prohibition	Chapter 1
Other Comments	
SMART Project	Table 1.3
Improve street lighting	Table 1.3
Project site comparison with other intersections	Summary, Purpose and Need Chapter 1, Introduction

According to the sign in sheet provided upon entry to the meeting, 65 local resident and stakeholders, in addition the presenters listed above, were in attendance at the meeting. Organizations represented and notable attendees included the following:

Elected Officials and City Representatives:

Jay Benton, Mayor, Town of Hillsborough
 Marie Chuang, Councilmember, Town of Hillsborough
 Randy Schwartz, City Manager, Town of Hillsborough

Christine Krolik, Former Mayor, Town of Hillsborough
Mark O'Connor, Chief of Police, Town of Hillsborough
Kevin Fehr, Associate Civil Engineer, Town of Hillsborough
Ann Keighran, Mayor, City of Burlingame
Terry Nagel, Vice-Mayor, City of Burlingame
Jerry Deal, Councilmember, City of Burlingame
Michael Brownrigg, Councilmember, City of Burlingame
Cathy Baylock, Former Mayor, City of Burlingame
Michael Gaul, Planning Commissioner, City of Burlingame
Jeff Londer, Traffic Safety and Parking Commissioner, City of Burlingame
Karen Dittman, Beautification Commissioner, City of Burlingame
Jill Lauden, Former Beautification Commissioner, City of Burlingame
Mary Hunt, Beautification Commissioner, City of Burlingame
Syed Murtaza, Public Works Director, City of Burlingame
Jeff Demartini, Planning Commissioner, City of Burlingame
Ben Cohn, Field Representative, Office of Assembly Member Kevin Mullin, District 22

Organizations Represented:

Burlingame Beautification Commission
Burlingame Historical Society
Burlingame Planning Commission
Caltrans
City of Burlingame
Hillsborough Police Department
Oak Grove HOA
Office of Assembly Member Kevin Mullin, District 22
Sunrise Condos HOA
SamTrans
Town of Hillsborough

Media:

San Mateo Daily Journal

4.3 Consultation and Coordination with Public Agencies

Caltrans invited the following local, state and federal public agencies to review and comment on the Notice of Preparation of the Draft EIR/EA. Caltrans received comments from the SHPO and the Burlingame Historical Society on the proposed project after the November 19, 2013 scoping meeting was held. After the Draft EIR/EA is released local, state and federal public agencies will have an opportunity to comment on the environmental document.

TOWN OF HILLSBOROUGH

- Meetings with Caltrans Project Development Team to discuss coordination plan and community outreach for project. The results of the coordination were that Hillsborough agreed to have the public scoping meeting on November, 19, 2013. Hillsborough did not take an official position on the proposed project. Hillsborough will comment on the DEIR/EA after its release.

CITY OF BURLINGAME

- Meetings with Caltrans Project Development Team to discuss coordination plan and community outreach for project. The results of the coordination were that Burlingame agreed to have the public scoping meeting on November, 19, 2013. Burlingame did not

take an official position on the proposed project. Burlingame will comment on the DEIR/EA after its release.

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER (SHPO)

- Section 106 consultation and concurrence on eligibility of historic properties and project finding of effect.
- Consultation regarding PRC 5024.5.

U.S. ENVIRONMENTAL PROTECTION AGENCY

- National Pollutant Discharge Elimination System (NPDES) Permit. A Water Pollution Control Plan is required for this project. To be obtained during construction phase.

NATIVE AMERICAN HERITAGE COMMISSION

- Requested a list of interested Native American parties and individuals.

4.4 Public Scoping Meeting: Comment Letters and Responses

The following comment letters were received during the 30 day public comment period after the release of the Notice of Preparation of the Draft EIR/EA and the public scoping held on November 19, 2013. The Caltrans Office of Cultural Resource Studies responded to cultural resource concerns under Section 106 (concerns relating to trees) and Caltrans Office of Environmental Analysis responded to all other concerns.

Table 21 - Public Scoping Meeting Comments Response Record

Name & Address	Date	Communication Received	Caltrans Response
Ms. Julie Baird and Ms. Laurie Simonson 908 Bayswater Avenue Burlingame, CA 94010	12/18/13	letter	mailed 12/30/13
Ms. Julia Bath 786 Elm St Apt 10 San Carlos, CA 94070	12/16/13	letter	mailed 12/24/13
Mr. Bernie Borok 1475 Lincoln Ave., Apt 9 Burlingame, CA 94010 bborok@comcast.net	11/19/13	letter	mailed 12/24/13
Ms. Pamela Buckley Burlingame, CA buckley.pam@gmail.com	11/22/13	email	emailed 12/23/13
Ms. Alison Cant 400 Pepper Avenue Hillsborough, CA 94010	12/15/13	letter	mailed 12/24/13
Ms. Theresa Chartz 25 Highgate Lane Hillsborough, CA 94010	12/16/13	letter	mailed 12/24/13
Ms. Katherine M. Dains Burlingame, CA kmdains@comcast.net	12/19/13	email	emailed 12/23/13
Mr. David Eger	11/22/13	email	mailed 12/24/13

Name & Address	Date	Communication Received	Caltrans Response
760 Walnut Ave. Burlingame, CA 94010 david.eger@gmail.com			
Ms. Ann Marie Flores 1436 Bernal Avenue Burlingame, CA 94010	n.d.	letter	mailed 01/03/14
Ms. Joanne Garrison 2905 Adeline Drive Burlingame, CA 94010	11/27/13	letter, email	mailed 12/24/13
Mr. & Mrs. Larry & Donna Gorrell 1499 Oak Grove Ave., # 102 Burlingame, CA 94010	11/19/13	letter	mailed 12/24/13
Mr. David Harris letter, 600 Howard Avenue Burlingame, CA 94010	11/17/13	email	mailed 12/24/13
Ms. Karlene Harvey letter, 920 Linden Ave Burlingame, CA 94010	11/22/13	email	mailed 12/24/13
Ms. Farris C. Horak. 1332 Edgehill Drive Burlingame, CA 94010	n.d	letter	mailed 12/24/13
Mr. Rudolph T. Horak 1332 Edgehill Drive Burlingame, CA 94010	12/5/13	letter	mailed 12/24/13
Mr. Tom Hornblower Burlingame, CA tjhornblower@gmail.com	12/19/13	email	emailed 12/23/13
Ms. Lynn Israelit 1560 Columbus Avenue Burlingame, CA 94010 lisraelit@att.net	12/19/13	email	mailed 12/24/13
Ms. Pearl Karrer Palo Alto, CA pearlk@covad.net	11/25/13	email	emailed 12/23/13
Mr. Stephen A. Kaufman 1499 Oak Grove Apt 404 Burlingame, CA 94010	11/29/13	letter	mailed 12/24/13
Mr. Richard Kirchner AIA 1412 Bernal Avenue Burlingame, CA 94010	12/13/13	letter	mailed 12/24/13
Ms. Susie Lahey Burlingame, CA slahey@sbcglobal.net	12/19/13	email	emailed 12/23/13
Mr. Joseph Y. Liu 1499 Oak Grove Avenue, # 203 Burlingame, CA 94010	11/19/13	letter	mailed 12/24/13
Ms. Evelyn Lockton Hillsborough, CA evelynlockton@me.com	12/18/13	email	emailed 12/23/13
Ms. Martha Rosman May	12/3/13	letter	mailed 12/24/13

Name & Address	Date	Communication Received	Caltrans Response
215 Burlingame Avenue Burlingame, CA 94010			
Ms. Betsy McGinn 1556 Carol Ave Burlingame, CA 94010	12/2/13	Email, letter	mailed 12/24/13
Ms. JoAnne Nagler Burlingame, CA with Project Manager anartistrygirl@yahoo.com	11/14/13	email and meeting	emailed 12/24/13
Ms. Mary Packard 1445 Bernal Avenue Burlingame, CA 94010	12/3/13	letter	mailed 12/24/13
Ms. Jennifer Pfaff, President Burlingame Historical Society PO Box 144 Burlingame, CA 94011 jjpf@pacbell.net	11/12/13	email, letter, and meeting	mailed 12/23/13
Chris Rippey Christopher.rippy@gmail.com	11/28/13	email	Email, 1/8/14
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Mr. Bill Schmid 1901 Adeline Drive Burlingame, CA 94010 bill72240@aol.com	12/19/13	email	mailed 01/03/14
Mr. James Wald 207 Anita Road Burlingame, CA 94010 jimwald@mac.com	12/1/13	email	mailed 12/24/13
Dr. Steven & Mary Lou Wald 925 Hillsborough Blvd Hillsborough, CA 94010 stevenwald@mac.com	12/2/13	email	mailed 12/24/13
Ms. Donna Zaffuto, HOA Secretary Oak Grove Condominium 1499 Oak Grove Ave., Apt 401 Burlingame, CA 94010	11/20/13	letter	mailed 12/24/13
Mr. Paul Zei Burlingame, CA paulzei@stanford.edu	11/21/13	email	emailed 12/23/13
Martin & Carol Harband 575 Pepper Avenue Hillsborough, CA mharband@gmail.com	11/20/13	Email	Letter, 1/14/14

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Name & Address	Date	Communication Received	Caltrans Response (type, date)
Mr. Jeffrey Londer, Commissioner Traffic Safety and Parking Commission Burlingame City Hall 501 Primrose Road Burlingame, CA 94010	12/9/13	email/ letter to SM Journal11/26/13	mailed 12/24/13
Mayor Michael Brownrigg Ms. Lisa Goldman City of Burlingame 501 Primrose Road Burlingame, CA 94010 lgoldman@burlingame.org	12/16/13	letter, email	emailed 12/23/13, mailed 12/24/13
Ms. Anne Hinkle, Chair Burlingame Beautification Commission Burlingame City Hall 501 Primrose Road Burlingame, CA 94010	12/18/13	letter	mailed 01/03/14
Mayor Jess E. Benton Town of Hillsborough 1600 Floribunda Avenue Hillsborough, CA 94010	12/16/13	Letter	Letter 1/8/14

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Office of Right-of-way

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APPENDIX A. CEQA CHECKLIST

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment (EIR/EA). Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 2 and 3.

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This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial impacts on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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II. AGRICULTURE AND FOREST

RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial impacts, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial impacts on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Have a substantial impacts on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial impacts, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VII. GREENHOUSE GAS EMISSIONS:

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS:

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. HYDROLOGY AND WATER QUALITY:				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVII. UTILITIES AND SERVICE SYSTEMS:

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial impacts on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

APPENDIX B. SECTION 4(F) DE MINIMUS FINDING

San Mateo County, California

**SR 82 at Floribunda Avenue Intersection
Safety Improvement Project**
San Mateo County, California

04-SM-82-PM 13.69

EA-04-1G020 / PN#0400002011

SECTION 4(f) *DE MINIMUS* FINDING

**For Historic Properties eligible for or listed in the National Register of
Historic Places**

July 2014

The following technical reports were used in the gathering of information in order to complete 4(f) evaluation: Finding of Effect, Historic Property Survey Report and Visual Assessment.

Introduction

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

Section 4(f) of Caltrans of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project....requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Section 4(f) *De Minimis* Impact Evaluation Requirements

Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act; A Legacy for Users (SAFETEA-LU) amended existing 4(f) legislation to allow the U.S. Department of Transportation (DOT) to determine that certain uses of 4(f) land will have no adverse effect (or “*De minimis* impact”) on the protected resource, under the National Historic Preservation Act (NHPA). Caltrans, as delegated under the FHWA, must conduct the evaluation of potential Section 4(f) impacts of the proposed project.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not adversely affect the activities, features, and attributes of the 4(f) resource. *De minimis* impacts on historic sites are defined as the determination of either “no adverse effect” or “no historic properties impacted” in compliance with Section 106 regulations of the NHPA.

When Caltrans determines that a transportation use of a Section 4(f) property - after consideration of any impact avoidance, minimization, and mitigation or enhancement measures - results in a *De minimis* impact on that property, the requirements of Section 4(f) are satisfied and no further Section 4(f) evaluation is required.

Project Description

The proposed Build Alternative would widen SR 82 at Floribunda Avenue to create a left-turn channel in the median for both the northbound and southbound directions and modify the signal timing/phasing for left-turns. The project length would be approximately 500 ft. along SR 82, including the north and southbound approaches to Floribunda Avenue. The northbound left-turn channel would be 75 ft. long and the southbound left-turn channel would be 50 ft. long.

The signalized intersection of SR 82 and Floribunda Avenue would be widened on both sides of SR 82 to construct left-turn channelization along both northbound and southbound of SR 82. A center left-turn lane, including approach tapers would be added, as well 1.5 ft. shoulders in both directions of SR 82 for the majority of the project limits. Currently, there is no roadway shoulder at the SR 82 and Floribunda intersection. The proposed roadway cross-section would maintain both existing travel lanes in each direction as well as existing sidewalks. Also, no staging areas would be needed and travel lanes would be 11 ft. wide.

The majority of work would occur within the state right-of-way, except for some minor work at (specific points). Partial acquisition of right-of-way on three properties at northeast (APN 029100330) and southeast (APN 029111010) intersection quadrants would be required for construction of American Disability Act (ADA) compliant curb ramps. Permit to Enter and Construct (PEC) will be secured from the Town of Hillsborough (APN 028141090) and local streets. This includes a small landscaped portion on the east side of Hillsborough's municipal site known as Centennial Park. Temporary Construction Easements (TCEs) would be required on 4 parcels (APNs 028141080, 029100330, 029111010 & 029111260) for the grading and construction of driveways.

Description of the Section 4(f) Resources

There were several Caltrans cultural resource studies completed for the Area of Potential Effects (APE) for this project including: Historic Property Survey Report (HPSR) Historic Resources Evaluation Report, (HRER) and Archeological Survey Report (HSR). These reports were completed and submitted to the State Historic Preservation Officer in February of 2014 for review and concurrence on the national Register of Historic Places eligibility of properties identified within the Area of Potential Effects. Concurrence on Caltrans determination of eligibility from the State Historic Preservation Officer (SHPO) was received on April 21, 2014.

The HPSR identified two National Register of Historic Places eligible/listed historic properties within the Area of Potential Effects:

1. The Howard-Ralston Eucalyptus Tree Rows and
2. 1615 Floribunda Avenue, Hillsborough, APN 029-090-320 (Sharon Estate Speculative House/A. Page Brown Cottage/Newlands Estate).

Each historic resource must have its own Section 4(f) evaluation. A *De minimis* determination is anticipated for the Howard-Ralston Eucalyptus Tree Rows and for 1615 Floribunda Avenue. *De minimis* impacts on historic sites are defined as the determination of either "no adverse effect" or "no historic properties affected" in compliance with Section 106 regulations of the NHPA. A *De minimis* determination includes written concurrence from the State Historic Preservation Officer (SHPO).

The project would have no adverse effect on the Howard-Ralston Eucalyptus Tree Rows and the 1615 Floribunda Avenue property.

Howard-Ralston Eucalyptus Tree Rows

The Howard-Ralston Eucalyptus Tree Rows contains 557 total trees within its boundaries of the Tree Rows. Based on the 2012 Howard-Ralston Eucalyptus Tree Rows National Register Nomination and adjusted numbers reflecting the trees removed and replaced, (for health and safety reasons), the following is a breakdown of the number of trees contained in the Tree Rows:

- 557 tree contained within the boundaries; of these
- 356 are considered contributing trees
- 245 are contributing mature eucalyptus from the original planting
- 25 are contributing mature elms from the original planting
- 86 are new elms planted as contributing replacements

The Build Alternative would require that five (5) trees be removed that are contributors to the Howard-Ralston Eucalyptus Tree Rows, listed on the National Register of Historic Places. The removal of 5 out of 356 contributing trees represents a 1.4 percent impact to the Howard-Ralston Eucalyptus Tree Rows. The effect of the five (5) contributing trees removed would be minimized by replanting with new Accolade ® elm trees or a similar approved tree variety.

1615 Floribunda Avenue property

There will be no direct effects on the property and only potential indirect visual/aesthetic changes resulting from the tree removal. The Finding of No Adverse Effect will also cover this property.

Finding of “No Adverse Effect”

Caltrans anticipates that there will be a finding of “No Adverse Effect” on the Section 4(f) Resources for this project. Concurrence from SHPO on a Finding of Effect and on the Section 4(f) *De minimus* finding will be including in the Final Environmental Document.

In addition, the Cumulative Impact Assessment section of the DEIR identified a future ADA Sidewalk Improvement project that would require the removal of (5) five historic eucalyptus from the Howard-Ralston Eucalyptus Tree Rows. Caltrans anticipates that the removal of these five trees for the ADA Sidewalk project in addition to the five trees (10 total contributing trees) to be removed for the SR 82 at Floribunda Intersection Safety Improvement project, would have “No Adverse Effect” on the Howard-Ralston Eucalyptus Tree Rows. The cumulative effect of removing 10 out of 356 contributing trees from the Tree Rows represents 2.8 percent of the historic tree rows.

Caltrans anticipates obtaining a letter of concurrence on a Finding of No Adverse Effect under Section 106 of the NHPA and on the 4(f) *De minimus* from SHPO for the SR 82 at Floribunda Avenue Intersection Safety Improvement project.

Avoidance, Minimization and Mitigation Measures

The proposed Build Alternative would minimize the impact of removing five (5) contributing trees from the Howard-Ralston Eucalyptus Tree Rows (a 4(f) resource) by replanting five Accolade ® elms or similar, approved variety, where space is available in the Howard-Ralston Eucalyptus Tree Rows adjacent to SR 82.

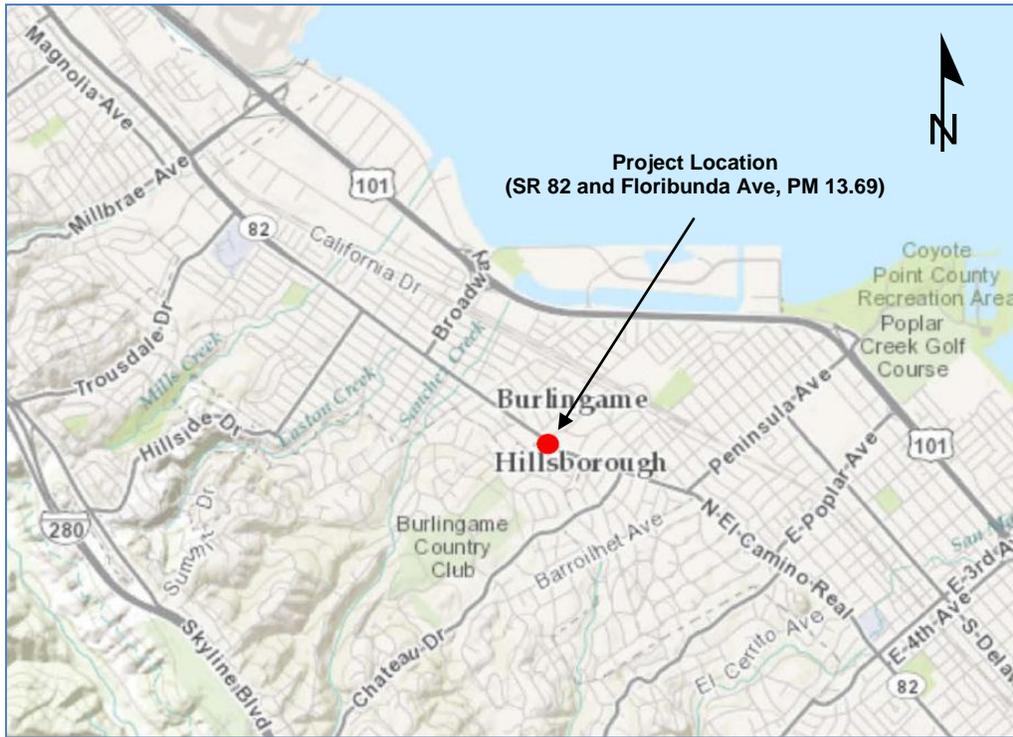
Discussion of Coordination Activities

Section 4(f) *de minimus* requires this project to undergo consultation and concurrence with the California State Historic Preservation Officer (SHPO). In addition, the Town of Hillsborough and

City of Burlingame have participated in project development team meetings and provided project review and feedback. In addition, community stakeholders and members of the public had the opportunity to provide comments on the proposed project at a public scoping meeting held in November, 2013, for a period of 30 days after the public scoping meeting. Caltrans received over 40 comments from the public during the 30 day public comment period. The public will again have an opportunity to comment on the Draft EIR/EA and Section 4(f) *de minimus* during the 45 day period after release of the environmental document, scheduled for October, 2014. All comments received during this comment period will be documented and addressed in the final document.

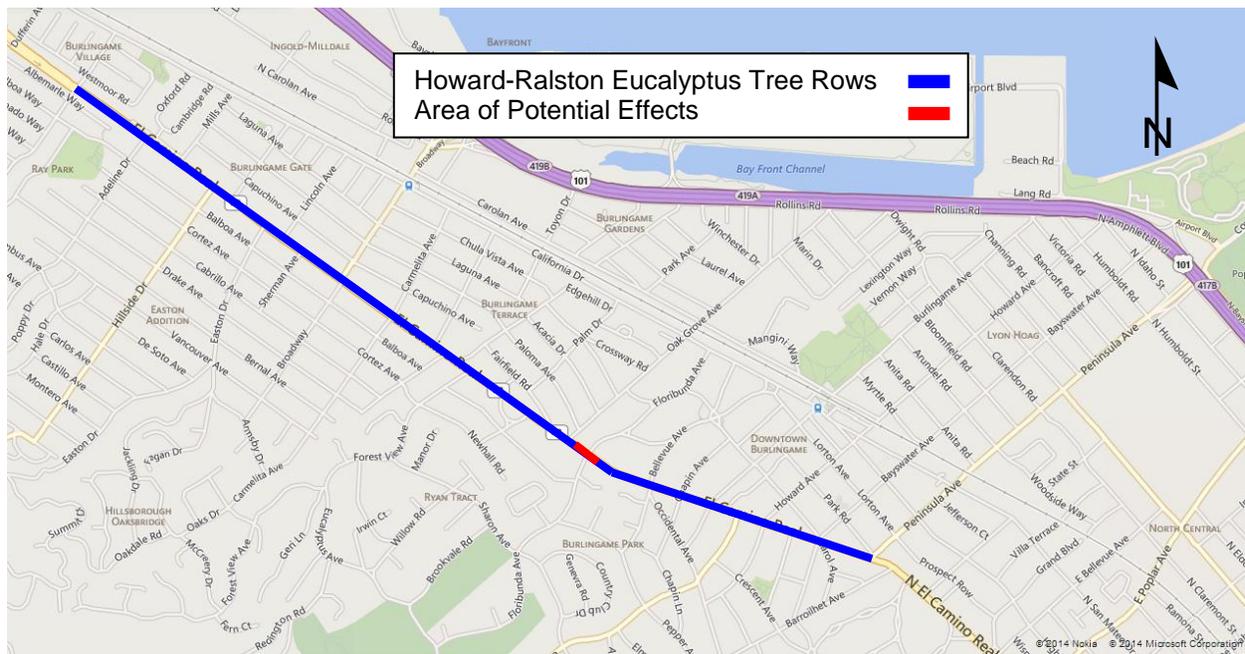
When the Draft Environmental Document is released there will be another public meeting to receive feedback and comments from the public before the final environmental document is released. The Draft EIR/EA is scheduled for October, 2014. There will be 45-day public comment period upon release of the Draft EIR/EA.

Figure 1. Project Vicinity Map



Source: Googlemaps. 8/2014.

Figure 2. Howard-Ralston Eucalyptus Tree Rows and Focused Area of Potential Effects



Source: Microsoft Bing Maps, 8/2014.

Figure 3. 4(f) Resources within project Area of Potential Effect



APPENDIX C. CALIFORNIA NATURAL DIVERSITY DATABASE (CNDDDB)

California Natural Diversity Database Species Occurrences within the Nine USGS 7.5-minute Topographic Quadrangles around the Project Site (San Francisco South, Hunters Point, San Leandro, Montara Mountain, San Mateo, Redwood Point, Half Moon Bay, Woodside, and Palo Alto).

Animals		
Species Name	Common Name	Status
<i>Accipter cooperii</i>	Cooper's hawk	SR3
<i>Adela oplerella</i>	Opler's longhorn moth	SR2/3
<i>Ambystoma californiense</i>	California tiger salamander	FT, ST
<i>Antrozous pallidus</i>	pallid bat	SSC
<i>Ardea herodias</i>	great blue heron	CDF_S
<i>Asio flammeus</i>	short-eared owl	SSC
<i>Athene cunicularia</i>	burrowing owl	SSC
<i>Banksula incredula</i>	incredible harvestman	SR1
<i>Caecidotea tomalensis</i>	Tomales isopod	SR2
<i>Calcina minor</i>	Edgewood blind harvestman	SR1
<i>Callophrys mossii bayensis</i>	San Bruno elfin butterfly	FE
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT, SSC
<i>Cicindela hirticollis gravaida</i>	sandy beach tiger beetle	SR1
<i>Circus cyaneus</i>	northern harrier	SSC
<i>Danaus plexippus</i>	monarch butterfly	SR3
<i>Dipodomys venustus venustus</i>	Santa Cruz kangaroo rat	SR1
<i>Dufourea stagei</i>	Stage's dufourine bee	SR1?
<i>Elanus leucurus</i>	white-tailed kite	CFP
<i>Emys marmorata</i>	western pond turtle	SSC
<i>Eucyclogobius newberryi</i>	tidewater goby	FE, SSC
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	FT
<i>Falco columbaris</i>	merlin	SWL
<i>Falco pregrinus anatum</i>	American peregrine falcon	SFP
<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	SSC
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	SR1/SR2
<i>Hydroporus leechi</i>	Leech's skyline diving beetle	SR1?
<i>Ischnura gemina</i>	San Francisco forktail damselfly	SR2
<i>Lasiurus cinereus</i>	hoary bat	SR4
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST, SFP
<i>Lichnanthe ursina</i>	Bumblebee scarab beetle	SR2

Appendix C (cont.)

Animals (cont.)		
Species Name	Common Name	Status
<i>Melospiza melodia pusillula</i>	Alameda song sparrow	SSC
<i>Microcina edgewoodensis</i>	Edgewood Park micro-blind harvestman	SR1
<i>Mylopharodon conocephalus</i>	hardhead	SSC
<i>Myotis thysanodes</i>	fringed myotis	SR4
<i>Neotoma fuscipes annectens</i>	San Francisco dusky-footed woodrat	SSC
<i>Nycticorax nycticorax</i>	black-crowned night heron	SR3
<i>Nyctinomops macrotis</i>	big free-tailed bat	SSC
<i>Oncorhynchus mykiss irideus</i>	steelhead, central California coast distinct population segment	FT
<i>Phalacrocorax auritus</i>	double-crested cormorant	SR3
<i>Plebejus icariodes missionensis</i>	Mission blue butterfly	FE
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE, SE
<i>Rana draytonii</i>	California red-legged frog	FT, SSC
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	FE, SE, CFP
<i>Riparia riparia</i>	bank swallow	ST
<i>Rynchops niger</i>	black skimmer	SSC
<i>Scapanus latimanus parvus</i>	Alameda Island mole	SSC
<i>Sorex vagrans halicoetes</i>	salt-marsh wandering shrew	SSC
<i>Speyeria callippe callippe</i>	Callippe silverspot butterfly	FE
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot	FE
<i>Sternula antillarum browni</i>	California least tern	FE, SE
<i>Taxidea taxus</i>	American badger	SSC
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco garter snake	FE, SE, CFP
<i>Trachusa gummifera</i>	San Francisco Bay Area leaf-cutter bee	SR1
<i>Tryonia imitator</i>	mimic tryonia (= California brackishwater snail)	SR2/SR3
Plants		
Species Name	Common Name	Status
<i>Acanthomintha duttonii</i>	San Mateo thornmint	FE, SE, CNPS
<i>Allium peninsulare</i> var. <i>franciscanum</i>	Franciscan onion	CNPS
<i>Amsinckia lunaris</i>	Bent-flowered fiddleneck	CNPS
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	CNPS
<i>Arctostaphylos franciscana</i>	Franciscan manzanita	CNPS
<i>Arctostaphylos imbricata</i>	San Bruno Mountain manzanita	SE, CNPS
<i>Arctostaphylos montana</i> ssp. <i>ravenii</i>	Presidio (= Raven's) manzanita	FE, SE, CNPS

Appendix C (cont.)

Plants (cont.)		
Species Name	Common Name	Status
<i>Arctostaphylos montaraensis</i>	Montara manzanita	CNPS
<i>Arctostaphylos pacifica</i>	Pacific manzanita	SE, CNPS
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita	CNPS
<i>Astragalus pycnostacyus</i> var. <i>pycnostachyus</i>	Coastal marsh milk-vetch	CNPS
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	CNPS
<i>Carex comosa</i>	Bristly sedge	CNPS
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	CNPS
<i>Centromadia parryi</i> ssp. <i>parryi</i>	pappose tarplant	CNPS
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak	CNPS
<i>Chorizanthe cuspidate</i> var. <i>cuspidata</i>	San Francisco Bay spineflower	CNPS
<i>Chorizanthe robusta</i> var. <i>robusta</i>	Robust spineflower	FE, CNPS
<i>Cirsium andrewsii</i>	Franciscan thistle	CNPS
<i>Cirsium fontinale</i> var. <i>fontinale</i>	fountain thistle	FE, SE, CNPS
<i>Cirsium occidentale</i> var. <i>compactum</i>	compact cobwebby thistle	CNPS
<i>Cirsium praeteriens</i>	lost thistle	CNPS
<i>Collinsia multicolor</i>	San Francisco collinsia	CNPS
<i>Dirca occidentalis</i>	western leatherwood	CNPS
<i>Eriophyllum latilobum</i>	San Mateo woolly sunflower	FE, SE, CNPS
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery	CNPS
<i>Fritillaria biflora</i> var. <i>ineziana</i>	Hillsborough chocolate lily	CNPS
<i>Fritillaria liliacea</i>	fragrant fritillary	CNPS
<i>Gilia capitata</i> ssp. <i>chmissonis</i>	blue coast gilia	CNPS
<i>Grindella hirsutula</i> var. <i>maritima</i>	San Francisco gumplant	CNPS
<i>Helianthella castanea</i>	Diablo helianthella	CNPS
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	white seaside tarplant	CNPS
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	CNPS
<i>Hesperolinon congestum</i>	Marin western flax	FT, ST, CNPS
<i>Heteranthera dubia</i>	Water star-grass	CNPS
<i>Hoita strobilina</i>	Loma Prieta Hoita	CNPS
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellog's horkelia	CNPS
<i>Horkelia marinensis</i>	Point Reyes horkelia	CNPS
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, CNPS

Appendix C (cont.)

Plants (cont.)		
Species Name	Common Name	Status
<i>Layia camosa</i>	beach layia	FE, SE, CNPS
<i>Leptosiphon croceus</i>	Coast yellow leptosiphon	CNPS
<i>Leptosiphon rosaceus</i>	Rose leptosiphon	CNPS
<i>Lessingia arachnoidea</i>	Crystal Springs lessingia	CNPS
<i>Lessingia germanorum</i>	San Francisco lessingia	FE, SE, CNPS
<i>Limnathnes douglasii</i> ssp. <i>omduffi</i>	Ornduff's meadowfoam	CNPS
<i>Malacothamnus aboriginum</i>	Indian Valley bush-mallow	CNPS
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	CNPS
<i>Malacothamnus davidsonii</i>	Davidson's bush-mallow	CNPS
<i>Malacothamnus hallii</i>	Hall's bush-mallow	CNPS
<i>Monolopia gracilens</i>	woodland woollythreads	CNPS
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	FE, SE, CNPS
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	CNPS
<i>Polemonium cameum</i>	Oregon polemonium	CNPS
<i>Polygonum marinense</i>	Marin knotweed	CNPS
<i>Potentilla hickmanii</i>	Hickman's cinquefoil	FE, SE, CNPS
<i>Sanicula martima</i>	adobe sanicle	SR, CNPS
<i>Silene verecunda</i> ssp. <i>verecunda</i>	San Francisco champion	CNPS
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	Most beautiful jewel-flower	CNPS
<i>Stuckenia filiformis</i>	slender-leaved pondweed	CNPS
<i>Suaeda californica</i>	California seablite	FE, CNPS
<i>Trifolium amoenum</i>	showy rancheria clover	FE, CNPS
<i>Trifolium hydrophilum</i>	saline clover	CNPS
<i>Triphysaria floribunda</i>	San Francisco owl's-clover	CNPS
<i>Triquetrella californica</i>	coastal triquetrella	CNPS
<i>Usnea longissima</i>	long-beard lichen	CNPS

Appendix C (cont.)

Habitats	
Common Name	Status
Critical Habitat – Franciscan manzanita (<i>Arctostaphylos franciscana</i>)	Proposed
Northern Coastal Salt Marsh	CNPS
Northern Maritime Chaparral	CNPS
Serpentine Bunchgrass	CNPS
Valley Needlegrass Grassland	CNPS
Valley Oak Woodland	CNPS

CDF_S = California Division of Forestry Sensitive

CFP = California state fully protected

CNPS = California Native Plant Society listed rare

Designated = Critical Habitat Designation

FE = federally endangered

FSC = federal species of concern

FT = federally threatened

NL = not listed

Proposed = Proposed to be listed/designated

SCE = California state candidate endangered

SE = California state endangered

SSC = California state species of special concern

ST = California state threatened

SR = California state rare

SR1 - 4 = State Ranked 1 - 4

SWL = state watch list

APPENDIX D. TITLE VI POLICY STATEMENT

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
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A handwritten signature in blue ink that reads "Malcolm Dougherty".

MALCOLM DOUGHERTY
Director

APPENDIX E. MINIMIZATION AND/OR MITIGATION SUMMARY

Table H-1 Summary of Minimization and/or Mitigation Measures

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
Land Use			
<p>Replanting historic eucalyptus trees with designated replacement Accolade® elm trees. They would be replaced along the Howard-Ralston Historic Tree Row on SR 82 where space is available.</p> <p>Replacing existing walls that need to be removed in the temporary construction easement areas along both west and east sides of SR 82 with the same height and width upon completion of construction of the project.</p> <p>Relocation of utilities and some drainage facilities as required.</p> <p>Minimization measures to reduce construction impacts to landscaping, biological resources and water quality.</p>	2.1.5	Caltrans, Construction Contractor	Construction
Utilities and Emergency Services			
<p><i>Utilities</i> Utilities would be relocated as needed.</p> <p><i>Emergency Services</i> A Transportation Management Plan (TMP) will be developed as part of the project to address traffic impacts from staged construction, detours, and specific traffic handling concerns such as emergency access during project construction.</p> <p>Access will be maintained for emergency response vehicles, and no disruption to existing emergency service access is expected.</p>	2.4.9	Caltrans	PS&E
Traffic and Transportation/Pedestrian and Bicycle Facilities			
<p>Develop a Transportation Management Plan (TMP) to address impacts to motor vehicle, transit, bicycle, and pedestrian access during project construction.</p> <p>The TMP for the project would be developed and refined during the Project Scope and Engineering phase and supported by detailed traffic studies to evaluate traffic operations.</p> <p>The need for necessary lane closures during off-peak hours or at night, or short-term detour routes would be identified, as required. The TMP would coordinate with the Town of Hillsborough, the City of Burlingame and public transit agencies (SamTrans).</p> <p>The TMP would also include press releases to notify and inform motorists, public transit, businesses, community groups, local entities, and emergency services of upcoming closures or detours.</p>	2.5.4	Department, Town of Hillsborough and City of Burlingame	Final Design

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
<p>Various TMP elements such as portable Changeable Message Signs and CHIP Construction Zone Enhance Enforcement Program (COZEEP) may be utilized to alleviate and minimize delay to the traveling public.</p> <p><i>Construction Impacts:</i> Construction activities would result in temporary traffic detours and possibly single lanes. These impacts would be minimized through coordination with the Town of Hillsborough, City of Burlingame and emergency providers. Efforts would be made to concentrate the majority of road closures and construction activity during off-peak hours to reduce traffic impacts. Traffic would be diverted to one side of SR 82 and traffic would be controlled by flaggers stationed at both ends of the closure.</p> <p>Mitigation would include: A Transportation Management Plan (TMP), Construction Zone Enhance Enforcement Program (COZEEP), Portable changeable message signs and notification of impacted groups (public transit, bicyclists, pedestrians).</p> <p><i>Pedestrian/Bicycle Facilities:</i> New pedestrian curb ramps would be installed at the intersection corners. Traffic street lighting would be installed with the new traffic signals according to Caltrans standards. No changes are proposed to existing bicycle facilities. Floribunda Avenue is a designated bicycle route.</p>			
Visual/Aesthetics			
<p>Minimization would occur within the Howard-Ralston Eucalyptus Tree Rows, where space is available, on SR 82 (El Camino Real), to offset the loss of (5) five contributing trees from the Howard-Ralston Eucalyptus Tree Rows. The five contributing trees from the Howard-Ralston Eucalyptus Tree Rows include four eucalyptus trees and one elm tree. The Accolade ® elm or other approved elm variety would be used to replace (5) five historic trees. The replacement trees would be 24" box size (6-8 feet tall and 1.5"-2" caliper trunk).</p>	2.6.4		
Cultural Resources			
<p>Caltrans would minimize the effect of the removal of five (5) contributing trees from the Howard-Ralston Eucalyptus Tree Rows by planting five (5) new contributing Accolade ® elm trees or other approved elm variety where space is available within the Howard Ralston Eucalyptus Tree Rows.</p>	2.7.6		Plans, Specifications, and Estimates (PS&E) project phase.
Water Quality and Storm Water Runoff			
<p><i>Section 402 of the Clean Water Act</i></p> <p>According to the Caltrans Permit and the Construction General Permit (CGP), best management practices (BMPs) will be incorporated into this project to reduce the discharge of pollutants during and after construction to the maximum extent practicable (MEP). Since the project will involve less than one acre of disturbed soil area (DSA), this project is not subject to the CGP, but will require a WPCP.</p>	2.9.4	Caltrans, Construction Contractor	Final Design

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
<p>In general, BMPs fall into three main categories: (i) Design Pollution Prevention BMPs, (ii) Temporary Construction Site BMPs, and (iii) Permanent Treatment BMPs.</p> <p>(iv) Design Pollution Prevention BMPs are permanent measures to improve storm water quality by reducing erosion, stabilize disturbed soil areas, and maximize vegetated surfaces. Design Pollution Prevention BMPs for mostly disturbed slopes are expected to be required for this project.</p> <p>(v) Temporary Construction Site BMPs are applied during construction activities to reduce the pollutants in the storm water discharges throughout construction. Typical Construction Site BMPs include soil stabilization, sediment control, tracking control, wind erosion control, non-storm water management, and waste management and materials pollution control.</p> <p>(vi) Treatment BMPs are permanent water quality controls used to remove pollutants from storm water runoff prior to being discharged from Caltrans right-of-way. Since this project will create minor additional impervious area (less than 0.01 ac), no Treatment BMP is expected to be required for this project.</p>			
<i>Geology/Soils/Seismic/Topography</i>			
<p>For the Build Alternative, excavation, trenching and possible deep foundation work for light signals would be required during construction. Environmental borings show mostly silts, clays and silty sands surrounding the site. A geotechnical investigation should be performed to determine stability of excavations and if shoring will be needed. To our knowledge there is no hazardous waste within the project site. Soil properties will be evaluated during geotechnical investigation.</p> <p><i>Exploration and Investigations:</i> Field and subsurface exploration, laboratory tests and analysis shall be performed to evaluate foundation designs, and if necessary slope ratios, and to determine soil strengths and mitigation.</p> <p>For each traffic signal location a geotechnical boring should be completed in advance to determine groundwater levels, soil types and strengths, and structural conditions in rock if encountered. Several investigative methods may be used, including but not limited to: soil borings, rock coring, Cone Penetrometer Tests (CPTs), and geophysical studies. Laboratory testing may be required to determine soil strength, permeability, moisture content, and grain size.</p> <p><i>Groundwater:</i> Groundwater levels can be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels. CPTs may be used to determine groundwater depth, and subsurface soil types. It may also be useful in locating or characterizing thick, potentially expansive clays.</p> <p><i>Dewatering:</i> The exploratory drilling during the</p>	2.10.4	Caltrans	Final Design

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
<p>Geotechnical Design Report phase will discover any areas that will require dewatering.</p> <p><i>Corrosion:</i> Corrosivity tests shall be conducted where appropriate as part of the drilling program for the any proposed retaining walls.</p>			
Paleontology			
<p>Under the proposed Build Alternative, planned ground-disturbing activities within the project footprint could potentially impact paleontological resources. Foundations for the 4 traffic signal poles are 12 ft. deep by 3.5 ft. wide, with an estimated soil disturbance of 1,200 cubic ft. Utility trenching will be 400 ft. long; with the maximum depth of planned trenching excavation 3 ft. for utilities and 1 ft. wide, with an estimated soil disturbance of 1,900 cubic ft. The total amount of soil to be excavated across the entire site is 3,100 ft³.</p> <p>In general, avoidance and minimization are not feasible with regard to addressing impacts on paleontological resources. Geologic formations are usually extensive, and project design cannot be adjusted sufficiently to effectively avoid or minimize paleontological impacts. As a result, mitigation is the approach generally taken to address paleontological impacts.</p> <p>The following mitigation measures for paleontological resources are recommended and in accordance to Caltrans' Standard Environmental Reference Guidelines (Caltrans, 2007). It is recommended that Caltrans implement the following measures:</p> <ul style="list-style-type: none"> • It is recommended that a Paleontological Evaluation Report (PER) be prepared prior to construction to define actual locations where monitoring will be necessary based upon the project design. For budgeting, the PER will provide enough information about the level of effort needed. • Based on the findings from the PER, a Paleontological Mitigation Plan (PMP) may be recommended to define the specific mitigation measures and methods that will be implemented. <p>These recommendations may include:</p> <ul style="list-style-type: none"> • A qualified paleontologist could be present to consult with grading and excavation contractors at pre-grading meetings. • The Principal Paleontologist could also have an environmental meeting to train grading and excavation contractors in the identification of fossils. • When fossils are discovered, the paleontologist (or paleontological monitor) will be called to recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner. • Fossil remains collected during the monitoring 	2.11.4	Caltrans	PS&E

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
<p>and salvage portion of the mitigation program will be cleaned, stabilized, sorted, and cataloged.</p> <ul style="list-style-type: none"> Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will then be deposited in a scientific institution with paleontological collections. A final report will be completed that outlines the results of the mitigation program 			
Hazardous Waste and Materials			
<p>An environmental regulatory database research did not reveal any known hazardous waste sites that could negatively impact the project.</p> <p>The shallow soils to be excavated within the unpaved areas adjacent to the roadway likely contain elevated levels of aerially deposited lead (ADL) from historic vehicle emissions.</p> <p>A site investigation that ascertains the presence and concentrations of metals, particularly lead, in soils will be conducted during the project's PS&E phase. The findings of the site investigation will be used to prepare the appropriate standard special provisions that address the proper soil handling requirements and worker health and safety concerns.</p>	2.12.4	Caltrans	PS&E
Noise			
<p>Construction noise abatement would be implemented as required by the Caltrans' Standard Specification 14-8.02, "Noise Control".</p>	2.14.4	Caltrans	Construction
Natural Communities			
<p>Prior to beginning construction activities, a qualified biologist shall conduct focused surveys for animal species, threatened and endangered species identified in Chapter 3 – Biological Environment. In addition, all avoidance, minimization, and compensatory measures outlined in Chapter 3 and/or included in permits and regulatory concurrence letters would be implemented.</p>	2.16.4	Caltrans	PS&E
Wetlands and Other Waters of the U.S.			
	2.17.4		
Plant Species			
<p>Adherence to the following standard and bird-specific Caltrans BMPs will be required and will be sufficient to protect the limited biological resources that occur or may occur in the vicinity of the project site:</p> <ul style="list-style-type: none"> Contractors will utilize Caltrans standard Best Management Practices (BMPs) as provided in the current version of the Caltrans Construction Manual (2014). If vegetation removal occurs during the winter wet season, all trees and shrubs will be cut 	2.18.4	Caltrans, Construction Contractor	Construction

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
<p>above the ground and their stumps left in place to prevent soil disturbance, erosion, and discharge into any creeks.</p> <ul style="list-style-type: none"> • Any clearing and grubbing will occur in the summer dry season and will require pre-construction nesting bird surveys every 3 days during this work period. • Any additional ground disturbance beyond initial clearing and grubbing will also occur in the summer dry season and will require additional nesting bird surveys every 3 days during this work period. • Any waste materials or products (e.g., pavement grindings) will be disposed of at an approved facility or certified landfill. • All staging will occur within existing paved or gravel turnout areas. Any staging in vegetated areas (grass and low-growing vegetation) or off-pavement will require additional assessments by a Caltrans biologist. 			
Animal Species			
<p>Adherence to Caltrans Best Management Practices (BMPs) will be sufficient to protect the limited biological resources that occur in the vicinity of the project site. The primary biological resources of concern with the potential to occur in the vicinity of the project site are migratory birds, which are protected by the MBTA and California Fish and Wildlife Code Sections 3503 and 3503.5. The nesting season for birds is anticipated to run from February 15 to September 1.</p> <p>If construction occurs between February 15 and September 1, a Caltrans qualified biologist(s) will conduct nesting bird surveys to comply with the California Fish and Game Code and MBTA. The biologist(s) will receive a two-week notice prior to project implementation to schedule nesting bird surveys. The surveys will be conducted within 48 hours before any ground-disturbing activities occur, including vegetation removal, and will be valid for 3 days, after which new surveys will be conducted. This survey schedule will allow the biologist(s) to remove nests that are started between surveys, prior to the start of egg-laying. Ground-disturbing activities will not begin until the biological monitor has given clearance. If evidence of bird nesting is discovered, the Contractor shall not disturb the nesting birds until the young have left the nest. If active nests are discovered after beginning work, the Contractor shall immediately stop working within a 50-ft. radius of the discovery and notify the Resident Engineer.</p> <p>It is Caltrans' opinion that compliance with the above-mentioned measures will avoid effects to any listed</p>	2.18.4	Caltrans, Construction Contractor	Construction

Minimization and/or Mitigation Measure	Section #	Responsible Party	Timing
species from the proposed project.			
<i>Invasive Species</i>			
In compliance with the Executive Order on Invasive Species, EO 13112, and subsequent guidance from the Federal Highway Administration (FHWA), the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.	2.21.4	Caltrans	Construction

APPENDIX F. LIST OF ACRONYMS

ADL	Aerial Deposited Lead
APE	Area of Potential Effects
ASR	Archaeological Survey Report
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
COZEEP	Construction Zone Enhance Enforcement Program
DSA	Disturbed Soil Area
ECR	SR 82 Boulevard, SR 82
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	Greenhouse Gases
GRDs	Gross Solids Removal Devices
HPSR	Historic Property Survey Report
HRER	Historic Resource Evaluation Report
ISA	Initial Site Assessment
MBTA	the Migratory Bird Treaty Act
MCTT	Multi-Chamber Treatment Trains
MEP	Maximum Extent Practicable
MMRR	Mitigation Monitoring and Reporting Record
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NOAA	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
PAED	Preliminary Analysis and Environmental Document
PEC	Permit to Enter and Construct
PS&E	Plans, Specifications and Estimates
PSR	Project Study Report
ROW, ROW	Right-of-way
RWQCD	San Francisco Bay Regional Water Quality Board
SHPO	State Historic Preservation Officer
SHOPP	State Highway Operation and Protection Program
SSPs	Standard Special Provisions
SWPPP	Storm Water Pollution Prevention Plan
TASAS	Traffic Accident Surveillance and Analysis System
TCE	Temporary Construction Eastment
TMP	Transportation Management Plan
USFWS	United States Fish and Wildlife Service
VIA	Visual Impact Assessment
WPCP	Water Pollution Control Program

APPENDIX G. GLOSSARY OF TECHNICAL TERMS

This appendix briefly explains the technical terms and names used in this EIR/EA. Appendix I provides a list of acronyms.

Area of Potential Effect: the area, or areas, within which an undertaking may cause changes in the character or use of historic properties, should any be present.

Best Management Practice (BMP): Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.

Cultural Resource: any tangible or observable evidence of past human activity, regardless of significance, found in direct association with a geographic location, including tangible properties possessing intangible traditional cultural values.

Cumulative effects: Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.

Decibel: A numerical expression of the relative loudness of sound.

EA: Environmental Assessment

EIR: Environmental Impact Report

Encroachment (floodplain): Construction, placement of fill, or similar alteration of topography in the floodplain that reduces the area available to convey floodwaters. FHWA definition: An action within the limits of the base floodplain.

Federal Highway Administration (FHWA): The Federal agency within the U.S. Department of Transportation responsible for administering the Federal-aid Highway Program and the Motor Carrier Safety Program. Under a memorandum of understanding with FHWA signed Oct. 1, 2012, Caltrans has NEPA Assignment, which means that Caltrans assumes FHWA responsibilities under NEPA and other federal environmental laws for the environmental review process for transportation projects.

Federal Register: The *Federal Register* is the official daily publication for agency rules, proposed rules, and notices of federal agencies and organizations, as well as for Executive Orders and other presidential documents.

Floodplain (100-year): The number of years that takes place before the recurrence of a flood of the same magnitude. (10-year flood, 50-year flood, 100-year flood, etc.)

Habitat: Place where a plant or animal lives.

Initial Site Assessment (ISA): The ISA identifies potential or known hazardous materials, hazardous waste, and contamination in the project area as well as the party(ies) responsible, or potentially responsible, for hazardous waste and contamination. This information is used to evaluate alternatives, make decisions about project design, cost, scope and schedule, and used as a baseline against future claims.

L_{eq}: A unit used for evaluation of sound impacts, L_{eq} is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).

Lead Agency (CEQA): “Lead Agency” means the public agency which has primary responsibility for carrying out or approving a project which may have a significant effect on the environment and preparing the environmental document.

Lead Agency (NEPA): The agency or agencies preparing or having taken primary responsibility for preparing the environmental impact statement.

Level of Service (LOS): A measure describing operational conditions within a traffic stream. It measures such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The six defined levels of services use letter designations from A to F, with Level of Service A representing the best operating conditions and Level of Service F representing the worst. Each Level of Service represents a range of operating conditions.

Mitigation: Practices to minimize and reduce project environmental impacts.

National Environmental Policy Act (NEPA): Enacted in 1969, NEPA requires all federal agencies to consider environmental factors through a systematic interdisciplinary approach before committing to a course of action. The NEPA process is an overall framework for the environmental evaluation of federal actions.

Notice of Availability (NOA): “Notice of Availability” means a formal public notice under NEPA announcing the availability of a completed EA, DEIS, or FEIS. For EISs, publication of such notice in the Federal Register is required.

Notice of Completion (NOC): The CEQA notice submitted to the State Clearinghouse when an EIR, MND, or ND is completed.

Notice of Preparation (NOP): "Notice of Preparation" is the CEQA notice that an EIR will be prepared for a project.

Notice of Decision (NOD): A “Notice of Determination” is a formal written notice under CEQA filed by a lead state agency when approving any project subject to the preparation of an EIR, MND, or ND.

Participating Agency: Under 23 USC 139, a participating agency is any federal or non-federal agency (state, tribal, regional, or local government agency) that may have an interest in the project. Nongovernmental organizations and private entities cannot serve as participating agencies

Practicable: The term *practicable* means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Project (CEQA): California Public Resources Code §21065 defines a “project” as an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

- A. An activity directly undertaken by any public agency.
- B. An activity undertaken by a person which is supported, in whole or in part, throughout contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- C. An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Receptors: Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.

Regulatory Agency: An agency that has jurisdiction by law.

Responsible Agency: A “public agency, other than the lead agency which has responsibility for carrying out or approving a project” (PRC 21069). The CEQA Guidelines further explains the statutory definition by stating that a “responsible agency” includes “all public agencies other than the Lead Agency which have discretionary approval power over the project” (14 CCR 15381). State and local public agencies that have discretionary authority to issue permits, for example, fall into this category.

Right-of-way: A general term denoting land, property, or interest therein, usually in a strip acquired for or devoted to transportation purposes.

Riparian: Randomly placed rock or concrete used to strengthen an embankment or protect it from erosion.

Record of Decision (ROD): The “Record of Decision” is a formal written statement, required under NEPA, wherein a federal lead agency must present the basis for its decision to approve a selected project alternative, summarize mitigation measures incorporated into the project, and document any required Section 4(f) approval.

Regional Transportation Plan (RTP): A federal and state mandated planning document prepared by MPOs and RTPAs. The plan describes existing and projected transportation needs, conditions, and financing affecting all modes within a 20-year horizon.

Scoping: NEPA defines scoping as an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). Under CEQA, scoping is designed to examine a proposed project early in the EIR environmental analysis/review process, and is intended to identify the range of issues pertinent to the proposed project and feasible alternatives or mitigation measures to avoid potentially significant environmental effects.

Section 106: the section of the National Historic Preservation Act which requires that federal agencies take into account the effect of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. Regulations implementing Section 106 are found at 36 Code of Federal Regulations (CFR) Part 800.

Special-status species: Plant or animal species that are either (1) federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species protected under the federal Migratory Bird Treaty Act; (3) protected under state endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; or (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).

State Highway Operations and Protection Program (SHOPP): A legislatively created program to maintain the integrity of the State Highway System. It is tapped for safety and rehabilitation projects. SHOPP is a multi-year program of projects approved by the Legislature and Governor. It is separate from the STIP.

State Transportation Improvement Program (STIP): A statewide or bundled prioritized list of transportation projects covering a period of four years that is consistent with the long-range

statewide transportation plan, MTPs, and FTIPs, and required for projects to be eligible for funding under Title 23 USC and title 49 USC. Chapter 53.

Storm Water Pollution Prevention Plan (SWPPP): A SWPPP is prepared to evaluate sources of discharges and activities that may affect storm water runoff, and implement measures or practices to reduce or prevent such discharges.

Traffic Accident Surveillance and Analysis System (TASAS): A system that provides a detailed list and/or summary of accidents that have occurred on highways, ramps, or intersections that are part of the State Highway System. Accidents can be selected by location, highway characteristics, accident data codes, and combinations of the above.

Threatened: A species that is likely to become endangered in the foreseeable future in the absence of special protection.

Transportation Demand Management (TDM): “Demand-based” techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of the peak hours.

Visual Resources: The natural and artificial features of a landscape that characterize its form, line, texture, and color.

Waters of the United States: As defined by the United States Army Corps of Engineers (USACE) in 33 CFR 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundment of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs 1-4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

APPENDIX H. CORRESPONDENCE

This appendix includes the following correspondence regarding the proposed project.

1. Determination of eligibility for the proposed Floribunda Avenue Intersection Safety Improvement Project along SR 82 (State Route 83), San Mateo County, CA. Carol Roland-Nawi, State Historic Preservation Officer, April 21, 2014.
2. Email correspondence between Caltrans and SHPO clarifying that the Burlingame Railroad Station is not located within the project APE.

**OFFICE OF HISTORIC PRESERVATION
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April 21, 2014

Reply To: FHWA_2014_0303_001

Elizabeth McKee
Chief, Office of Cultural Resource Studies
Caltrans District 5
PO Box 23660 MS 8A
Oakland, CA 94623-0660

Re: Determinations of Eligibility for the Proposed Floribunda Avenue Intersection Safety Improvement Project along El Camino Real (State Route 82), San Mateo County, CA

Dear Ms. McKee:

Thank you for consulting with me about the subject undertaking in accordance with the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA).

Caltrans District 4 proposes to construct left turn lanes on State Route 82 (SR 82), a segment of El Camino Real, at Floribunda Avenue in the city of Burlingame and the town of Hillsborough in San Mateo County. The project includes:

- Signalized intersection of El Camino Real and Floribunda Avenue would be widened on both sides of El Camino Real to construct dedicated left-turn lanes in both the northbound and southbound directions.
- A center left-turn lane, including approach tapers, would be added.
- Shoulders (1.5 feet) will be added in both directions of El Camino Real for the majority of the project limits.
- Up to fifteen trees would be removed; four of them are mature historic Eucalyptus trees in the Howard-Ralston Eucalyptus Tree Rows and one is a young replacement Elm tree that is a contributor to the Howard-Ralston Eucalyptus Tree Rows. The remaining ten are not historic and do not contribute to the Howard-Ralston Eucalyptus Tree Rows.
- Overhead utilities along the west side of El Camino Real in the project area will be relocated. Burying the utilities within the state (Caltrans) right-of-way is anticipated.
- Existing utility boxes, manholes, and drainage facilities will need to be relocated or adjusted to the finished grade.
- Caltrans signal poles will also be relocated, to involve drilling to a maximum depth of 13 feet for 3½-foot diameter, cast-in-drilled-hole support piles.

The area of potential effect (APE) encompasses all locations where construction and ground-disturbing activities will take place. This includes grading, utilities trenching, temporary construction easements, staging areas, tree removal and replacement, and new right-of-way acquisition. The APE is approximately 595 feet in length from northwest to southeast along SR 82 and ranges in width from 50 feet to 100 feet at widest. The intersection of Floribunda Avenue and SR 82 occurs roughly in the center of the APE. The vertical APE is from the ground surface to a depth of 13 feet, the maximum drill depth for Caltrans signal poles.

Archival research of the project and ½ mile surrounding radius included a records search at the Northwest Information Center on March 19, 2013. Four previously recorded resources lie within the Area of Potential Effects (APE) for the project:

- P-41-000165: the Burlingame Railroad Station;
- P-41-001920: the Newland's Estate;
- P-41-002191: the Howard-Ralston Eucalyptus Tree Row; and
- P-41-002192: the stretch of El Camino Real contained in SR 82.

A pedestrian survey of the APE was conducted on July 16, 2013 but was limited to exposed native ground due to the urban modifications obscuring visibility. A small historic refuse scatter was located in the unpaved walkway along southbound SR 82. This refuse scatter meets the criteria for "Properties Exempt from Evaluation" under the PA.

Native American consultation included contact with the Native American Heritage Commission (NAHC) (March 14, 2013) and Native American tribes and individuals likely to have knowledge of sites of religious or cultural significance to them in the project area (April, May 2013). No such properties were identified in NAHC files. Native American consultation revealed that burials and artifacts have been uncovered in the project vicinity and requested all field crews receive training in cultural sensitivity of the area and artifact recognition. Native American and archaeological monitors were requested for ground disturbing activities.

With regards to archeology I agree identification efforts are sufficient under the constraints of an urban environment. I also have no objection to the delineation of the APE. In addition, I have the following recommendations:

1. Caltrans has stated, "*The existing utility locations will be determined during the Plans, Specifications, and Estimates (PS&E) phase*" of the project. Please note these relocations must occur within the approved APE provided to me during consultation. If relocation plans lie outside the APE, then consultation on the APE and effects will need to be conducted.
2. Coring conducted "*in the project area*" by Byrd in 2012 was negative for archaeological resources; no coring was conducted in the APE. Two previous archaeological surveys in the area were negative. Due to these reasons, Caltrans has made the determination there is moderate potential for buried sites in the area and no need for archaeological monitoring. I do not agree. The archaeological surveys mentioned were completed in 2009 and 2012 when the urban environment was already in place obscuring much of the ground surface. As per your document, "*Hamilton's efforts served to characterize the region as one of intensive prehistoric activity*" and "*Historically, several creeks and their peripheral branches flowed through the greater vicinity of the current project; ... The main branches of Terrace Creek to*

the west of the project area and Ralston Creek to the east remain essentially in their historic courses.” The immediate project area contains Holocene soils and although Caltrans has characterized the nearest watercourse as “*more than 50 meters away,*” the project is clearly within a fluvial depositional environment. Native American consulting parties state there were burials discovered in the vicinity, the project lies along the El Camino Real and although exempt under the PA, a historic (1950s) trash scatter still exists in the unpaved walkway adjacent to the roadbed. It has been demonstrated to this office repeatedly that an urban environment is not indicative of destruction of subsurface archaeological resources. Based on all these reasons, I recommend an archaeological and Native American monitor be present for ground disturbing activities.

With regards to the built environment Caltrans has determined that the following properties are not eligible for the National Register of Historic Places (NRHP):

- 600 El Camino Real, Burlingame, CA
- 1545 Floribunda Avenue, Burlingame, CA
- 556 El Camino Real, Burlingame, CA
- 25 Highgate Lane, Hillsborough, CA (Caltrans had limited access to site)
- 1600 Floribunda Avenue, Hillsborough, CA
- El Camino Real, from Ray Drive to Peninsula Avenue

In addition Caltrans has determined that the Sharon Estate Speculative House/A. Page Brown Cottage is eligible for the NRHP under Criteria A and C. Under Criterion A the house is significant at a local level for its association with the planning and development of Hillsborough and Burlingame. The house is also eligible under Criterion C at the local level as a work of a master, A. Page Brown.

Based upon my review of the submitted documentation, I concur with the foregoing determinations.

Thank you for seeking my comments and considering historic properties as part of your project planning. I look forward to continuing consultation on this undertaking. Be advised that under certain circumstances, such as unanticipated discovery, a change in project description, or additional information becoming available as access is gained to properties, Caltrans may have additional future responsibilities with regards to identification of historic properties for this undertaking under 36 CFR Part 800. If you have any questions or concerns regarding archaeological resources, please contact Associate State Archaeologist, Kim Tanksley at (916) 445-7035 or by email at kim.tanksley@parks.ca.gov. For questions regarding the built environment, please contact State Historian, Natalie Lindquist at (916)445-7014 or by email at natalie.lindquist@parks.ca.gov.

Sincerely,



Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

From: [Greene, Elizabeth@DOT](mailto:Greene,Elizabeth@DOT)
To: Tanksley, Kim@Parks; Lindquist, Natalie@Parks;
cc: Rushing, Brett@DOT; Blake, Jennifer@DOT; Clementino, Lauren@DOT; Hobbs, Kelly J@DOT;
Subject: Clarification re: SM-
82 Proposed Floribunda Avenue Intersection Safety Improvement Project (1g020) FHWA_2014_0303_001
Date: Wednesday, May 07, 2014 11:02:13 AM

Greetings Kim and Natalie,

Thank you for your letter dated April 21, 2014 regarding Determinations of Eligibility for the Proposed Floribunda Avenue Intersection Safety Improvement Project along El Camino Real (State Route 82), San Mateo County, CA (FHWA_2014_0303_001).

Your letter identified the Burlingame Railroad Station (P-41-000165) as being within the Area of Potential Effects (APE) of this project. We would like to clarify that the Burlingame Railroad Station is outside of the APE of this project. The Burlingame Railroad Station was identified during the record search conducted for the Archaeological Survey Report (ASR) because it was incorrectly mapped by a previous investigation. Research conducted for the current ASR concluded that the Burlingame Railroad Station is located at 290 California Drive (over a 1/2 mile outside of the APE) and that no cultural resources exist or did exist at the location erroneously mapped as the Burlingame Railroad Station.

We apologize for any confusion. If you have any questions or comments, please contact me at the number below or Brett Rushing at brett.rushing@dot.ca.gov at (510) 286-6336.

Elizabeth Krase Greene

Branch Chief, Architectural History/Built Resources
Office of Cultural Resource Studies- Environmental
Caltrans District 4
(510 286-5612

APPENDIX I. LISTED SPECIES NO EFFECT DETERMINATION

Table 1. Federal and State-Listed Threatened and Endangered Species and Habitats within the San Mateo, Montara Mountain, San Francisco South, and Hunters Point USGS 7.5-minute Quadrangles, San Mateo County, California.

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Invertebrates					
<i>Callophrys mossii bayensis</i>	San Bruno elfin butterfly	FE	A	A/No Effect	San Bruno elfin butterfly larvae require a specific host plant, (<i>Sedum spathulifolium</i>), not present at the project site. CNDDDB shows one occurrence approximately 4.4 miles west of the project site.
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	FT	A	A/No Effect	Bay checkerspot butterfly larvae require specific host plants (<i>Plantago erecta</i> , <i>Castilleja densiflorus</i> , or <i>C. exserta</i>) in the larval stage, and these plants require serpentine soils. Serpentine soils are not present in or near the project area, and the site assessment indicated that these plants are not present in the project site. CNDDDB shows two historic, extirpated occurrences of Bay checkerspot butterfly approximately 3.1 miles south of the project site.
	Critical habitat, Bay checkerspot butterfly	—			
<i>Haliotes cracherodii</i>	black abalone	FE	A	A/No Effect	The black abalone is an aquatic invertebrate invertebrate with no suitable habitat within the project site. CNDDDB shows no occurrence of black abalone within 5 miles of the project site.
<i>Haliotes sorenseni</i>	white abalone	FE	A	A/No Effect	The white abalone is an aquatic invertebrate with no suitable habitat within the project site. CNDDDB shows no occurrence of white abalone within 5 miles of the project site.
<i>Icaricia icarioides missionensis</i>	mission blue butterfly	FE	A	A/No Effect	Mission blue butterfly larvae require specific host plants (<i>Lupinus albifrons</i> , <i>L. formosus</i> , and <i>L. variicolor</i>) that are not present in the project site. CNDDDB shows one occurrence approximately 2.7 miles west of the project site at the southern limit of their distribution.
<i>Speyeria callippe callippe</i>	callippe silverspot butterfly	FE	A	A/No Effect	Callippe silverspot butterfly larvae require a specific host plant, <i>Viola pedunculata</i> , not present at the project site. CNDDDB shows no occurrence within 5 miles of the project site.

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot butterfly	FE	A	A/No Effect	Myrtle's silverspot butterfly larvae require the specific coastal prairie/coastal dune host plant (<i>Viola adunca</i>); the site assessment indicated that these plants are not present in the project site. CNDDDB shows 1 occurrence approximately 1.1 miles southeast of the project site with no other occurrence information available; the butterfly is possibly extirpated from San Mateo County.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SCE	A	A/No Effect	Townsend's big-eared bats roost in caves, mines, tree hollows and buildings. CNDDDB shows no occurrence within 5 miles of the project site.
<i>Spirinchus thaleichthys</i>	Longfin smelt	FCT, ST	A	A/No Effect	Longfin smelt inhabit California's by, estuary, and nearshore coastal environments from San Francisco Bay north to Lake Earl, near the Oregon border. These habitat types do not occur within the project site. CNDDDB shows the nearest occurrence approximately 0.9 miles east of the project site, in the San Francisco Bay.

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Fish					
<i>Acipenser medirostris</i>	green sturgeon	FT	A	A/No Effect	There are no streams in or near the project area that support green sturgeon. CNDDDB shows no occurrence of green sturgeon within 5 miles of the project site.
<i>Eucyclobius newberryi</i>	tidewater goby	FE	A	A/No Effect	There are no streams in or near the project area that support tidewater goby. CNDDDB shows no occurrence of tidewater goby within 5 miles of the project site.
<i>Hypomesus transpacificus</i>	delta smelt	FT, SE	A	A/No Effect	Delta smelt inhabit primarily the freshwater-saltwater mixing estuary zone. CNDDDB shows no occurrence of delta smelt within 5 miles of the project site, which is outside of the species range.
<i>Oncorhynchus kisutch</i>	coho salmon, Central California coast	FE, SE	A	A/No Effect	There are no streams in or near the project area that support Central California Coastal Coho salmon. CNDDDB shows no occurrences of coho salmon within 5 miles of the project site.

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
<i>Oncorhynchus mykiss</i>	Central California coastal steelhead	FT	A	A/No Effect	There are no streams in or near the project area that support Central California coastal steelhead or Central Valley steelhead. CNDDDB shows no occurrences of steelhead within 5 miles of the project site. Designated Critical Habitat for Central California coastal steelhead occurs within the north and south forks of San Pedro Creek, approximately 5.7 miles west of the project site.
	Central Valley steelhead	FT			
	Critical Habitat, Central California coastal steelhead	—			
<i>Oncorhynchus tshawytscha</i>	Central Valley spring-run Chinook salmon	FT, ST	A	A/No Effect	There are no streams in or near the project area that support Central Valley spring- or winter-run Chinook salmon. CNDDDB shows no occurrence of Central Valley spring- or winter-run Chinook salmon within 5 miles of the project site.
	winter-run Chinook salmon, Sacramento River	FE, SE	A	A/No Effect	

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Amphibians					
<i>Rana draytonii</i>	California red-legged frog	FT	A	A/No Effect	CNDDDB shows 21 occurrences of the California red-legged frog associated with habitat in the vicinity of the Crystal Springs Reservoir between 2.4 and 5 miles northwest, west, southwest, and south of the project site, but no habitat connectivity to the project site is apparent based on aerial photos and ground reconnaissance of the area.
Reptiles					

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
<i>Caretta caretta</i>	loggerhead turtle	FT	A	A/No Effect	Loggerhead turtles inhabit the open ocean and shallow coastal waters. They rarely come ashore, with the exception of the females' brief visits to construct nests and deposit eggs. There are no water bodies in or near the project area that support loggerhead turtles. CNDDDB shows no occurrence of loggerhead turtle within 5 miles of the project site.
<i>Chelonia mydas</i> (incl. <i>agassizi</i>)	green turtle	FT	A	A/No Effect	Green turtles spend most of their time in shallow, coastal waters with lush seagrass beds. Adults frequent inshore bays, lagoons and shoals with lush seagrass meadows. There are no water bodies in or near the project area that support green turtles. CNDDDB shows no occurrence of green turtle within 5 miles of the project site.
<i>Dermochelys coriacea</i>	leatherback turtle	FE	A	A/No Effect	Leatherback turtles are found primarily in the open ocean, following their jellyfish (<i>Phylum: Cnidaria</i>) prey to deep waters during the day and shallow waters at night. There are no water bodies in or near the project area that support leatherback turtles and the CNDDDB shows no occurrence of leatherback turtle within 5 miles of the project site.
<i>Lepidochelys olivacea</i>	olive (= Pacific) ridley sea turtle	FT	A	A/No Effect	Olive ridley sea turtles inhabit the open ocean and shallow coastal waters and rarely come ashore, with the exception of the females' synchronized mass nesting, termed 'arribadas'. There are no water bodies in or near the project area that support olive ridley sea turtles. CNDDDB shows no occurrence of olive ridley sea turtle within 5 miles of the project site.
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco garter snake	FE, SE, SFP	A	A/No Effect	CNDDDB shows 8 occurrences of the San Francisco garter snake associated with habitat in the vicinity of the Crystal Springs Reservoir between 2.3 and 5 miles northwest, west, southwest, and south of the project site, but no habitat connectivity to the project site is apparent based on aerial photos and ground reconnaissance of the area.

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Birds					
<i>Brachyramphus marmoratus</i>	marbled murrelet	FT, SE	A	A/No Effect	CNDDDB shows no occurrence of the marbled murrelet within 5 miles of the project site, and their preferred nesting habitat of old-growth coastal redwood and Douglas-fir forests with large trees, multiple canopy layers, and moderate-to-high canopy closure is not present near the project area. Designated critical habitat for the marbled murrelet exists approximately 3.8 miles southwest of the project site.
	Critical Habitat marbled murrelet	—			
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	A	A/No Effect	Western snowy plover preferred nesting habitat includes beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. These habitat types are not present closer than 1 mile from the project site. CNDDDB shows no occurrence of western snowy plover within 5 miles of the project site.
<i>Diomedea albatrus</i>	short-tailed albatross	FE	A	A/No Effect	The short-tailed albatross nests on offshore islands, a habitat not present near the project site. CNDDDB shows no occurrence of short-tailed albatross within 5 miles of the project site.
<i>Pelecanus occidentalis californicus</i>	California brown pelican	FE, SFP	A	A/No Effect	The California brown pelican nests on offshore islands, a habitat not present near the project site. CNDDDB shows no occurrence of California brown pelican within 5 miles of the project site.
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE, SE, SFP	A	A/No Effect	CNDDDB shows 5 occurrences of California clapper rail in several marshes and sloughs associated with San Francisco Bay between 1 and 5 miles north and east of the project site. Their typical habitat of salt marshes dominated by pickleweed (<i>Salicornia virginica</i>) and cordgrass (<i>Spartina</i> spp.), are habitats that are not present near the project site.
<i>Sternula antillarum</i> (=Sterna, =albifrons) browni	California least tern	FE, SE, SFP	A	A/No Effect	The California least tern requires expansive stretches of shoreline near abundant supplies of prey and this habitat type is not present near the project site. CNDDDB shows no occurrence of California least tern within 5 miles of the project site.

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Mammals					
<i>Arctocephalus townsendi</i>	Guadalupe fur seal	FT	A	A/No Effect	The Guadalupe fur seal is an aquatic mammal that will not occur within the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Balaenoptera borealis</i>	sei whale	FE	A	A/No Effect	The sei whale is an aquatic mammal that will not occur within the vicinity of the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Balaenoptera musculus</i>	blue whale	FE	A	A/No Effect	The blue whale is an aquatic mammal that will not occur within the vicinity of the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Balaenoptera physalus</i>	finback whale	FE	A	A/No Effect	The finback whale is an aquatic mammal that will not occur within the vicinity of the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Enhydra lutris nereis</i>	southern sea otter	FT	A	A/No Effect	The southern sea otter is an aquatic mammal that will not occur within the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Eubalaena</i> (= <i>Balaena</i>) <i>glacialis</i>	right whale	FE	A	A/No Effect	The right whale is an aquatic mammal that will not occur within the vicinity of the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.
<i>Eumetopias jubatus</i>	Stellar (= northern) sea-lion, eastern distinct population segment	FT	A	A/No Effect	Stellar sea lions prefer the colder temperate to sub-arctic waters of the North Pacific Ocean. Haul outs and rookeries usually consist of beaches (gravel, rocky, or sand), ledges, and rocky reefs. These habitat types are not present near the project site. CNDDDB shows no occurrence of Stellar sea lion within 5 miles of the project site.
<i>Physeter catodon</i> (= <i>macrocephalus</i>)	sperm whale	FE	A	A/No Effect	The sperm whale is an aquatic mammal that will not occur within the vicinity of the project site due to a complete lack of suitable habitat; CNDDDB shows no occurrence within 5 miles of the project site.

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Mammals Cont.)					
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	FE, SE, SFP	A	A/No Effect	The salt-marsh harvest mouse prefers salt and brackish marsh habitats with dense pickleweed (<i>Salicornia</i>) cover which are not present closer than 5 miles from the project site. CNDDDB shows no occurrences of salt-marsh harvest mouse within 5 miles of the project site.
Plants					
<i>Acanthomintha duttonii</i>	San Mateo thornmint	FE, SE, CNPS	A	A/No Effect	CNDDDB shows 2 occurrences of San Mateo thornmint near the Crystal Springs Reservoir, between 4.1 and 5 miles south of the project site. This species only occurs on grassy slopes on serpentine soils, a habitat type that is not present in the area of the project site.
<i>Arctostaphylos franciscana</i>	Franciscan manzanita	FE, CNPS	A	A/No Effect	Franciscan manzanita occurs on serpentine soils, which are not present near the project site. CNDDDB shows no occurrence of the Franciscan Manzanita within 5 miles of the project site. The only known wild specimen is on the grounds of the Presidio in northwestern San Francisco. The proposed Critical Habitat for Franciscan Manzanita consists of just over 300 acres, about two-thirds of which are lands managed by the San Francisco Department of Parks and Recreation's Natural Areas Program, in 7 locations around San Francisco between 9.5 and 15.8 miles from the project site.
	Critical Habitat, Franciscan manzanita	PCH			
<i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	Presidio (= Raven's) manzanita	FE, SE, CNPS	A	A/No Effect	Presidio manzanita occurs on serpentine soils, which are not present near the project site. CNDDDB shows no occurrence of Presidio manzanita within 5 miles of the project site. The only known wild specimen is on the grounds of the Presidio in northwestern San Francisco, approximately 15.8 miles from the project site.
<i>Cirsium fontinale</i> var. <i>fontinale</i>	fountain thistle	FE, SE, CNPS	A	A/No Effect	CNDDDB shows one occurrence of fountain thistle near the Crystal Springs Reservoir, approximately 4.5 miles south of the project site. This species is restricted to serpentine seeps, a habitat type not present near the project site.
<i>Eriophyllum latilobum</i>	San Mateo woolly sunflower	FE, SE, CNPS	A	A/No Effect	CNDDDB shows 2 occurrences of San Mateo woolly sunflower between 2.1 and 3.1 miles south of the project site. This species is occurs primarily in shaded moist positions on steep grassy or sparsely wooded slopes of serpentine soil, a habitat type not present near the project site.

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² /Determination ³	Rationale
Plants (Cont.).					
<i>Hesperolinon congestum</i>	Marin dwarf-flax (= western flax)	FT, ST, CNPS	A	A/No Effect	CNDDDB shows 7 occurrences of Marin dwarf-flax between 2.2 and 5 miles south of the project site. This species occurs in serpentine chaparral or bunchgrass, habitat types that are not present near the project site.
<i>Layia carnosa</i>	beach layia	FE, SE, CNPS	A	A/No Effect	CNDDDB shows no occurrence of beach layia within 5 miles of the project site. This species occurs on coastal dunes, habitat types that are not present near the project site.
<i>Lessingia germanorum</i>	San Francisco lessingia	FE, SE, CNPS	A	A/No Effect	CNDDDB shows no occurrence of San Francisco lessingia within 5 miles of the project site. This species is known from 4 populations on the grounds of the Presidio in northwestern San Francisco and 1 occurrence on San Bruno Mountain south of San Francisco, approximately 8 miles north of the project site. San Francisco lessingia occurs on beach sand dunes and scrub and similar sandy habitat; these habitat types are not present near the project site.
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	FE, SE, CNPS	A	A/No Effect	CNDDDB shows 2 occurrences of white-rayed pentachaeta within 5 miles of the project site. One of these is considered extirpated; the other is mapped as a large non-specific polygon surrounding the Crystal Springs Reservoir between 2.2 and > 5 miles south-southwest of the project site. This species is endemic to the San Francisco Bay Area, occurs only at altitudes less than 2,000 ft., and is found chiefly on rocky, grassy areas, a habitat type that is not present near the project site.
<i>Potentilla hickmanii</i>	Hickman's potentilla (= cinquefoil)	FE, SE, CNPS	A	A/No Effect	CNDDDB shows no occurrence of Hickman's potentilla within 5 miles of the project site. This species occurs in native grassland meadow openings in pine forests, coastal bluff native perennial grasslands, and under pine trees in duff. The key to the habitat for this species is the decomposed granite substrate that lies directly under the very fine-grained grassland topsoil. These habitat types are not present in the vicinity of the project site.

Table 1 (cont.)

Scientific Name	Common Name	Status ¹	Specific Habitat Present/Absent	Species Presence/Absence ² / Determination ³	Rationale
Plants (cont.)					
<i>Suaeda californica</i>	California sea blite	FE	A	A/No Effect	CNDDDB shows no occurrence of California sea blite within 5 miles of the project site. This species grows in a restricted area within the intertidal zone of salt marshes, a habitat type that is not present closer than 3.4 miles from the project site.
<i>Trifolium amoenum</i>	showy rancheria clover	FE	A	A/No Effect	CNDDDB shows no occurrence of showy rancheria clover within 5 miles of the project site. This species occurs on coastal bluff scrub, ultramafic valley and foothill grassland, habitat types that are not present near the project site.

Notes: Table information from (California Natural Diversity Database, CDFW 2013).

¹Status

CDF_S = California Division of Forestry sensitive
 CNPS = California Native Plant Society listed rare
 1A = Presumed extirpated in California and either rare or extinct elsewhere
 1B = Rare, threatened, or endangered in California and elsewhere
 2A = Presumed extirpated in California but more common elsewhere
 2B = Presumed rare, threatened, or endangered in California but more common elsewhere
 3 = More information needed, a review list
 4 = Limited distribution, a watch list
 CNPS California Threat Ranks: x.1 = Seriously; x.2 = Moderately, x.3 = Not very

²Presence/Absence:

A	Absent	IA	Inferred Absent
P	Present—general habitat is present	IP	Inferred Present

FE = federally endangered
 FSC = federal species of concern
 FT = federally threatened
 SCE = California state candidate endangered
 SE = California state endangered
 SFP = California state fully protected
 SSC = California state species of special concern
 ST = California state threatened
 SR1 - 4 = State Ranked 1 - 4
 SWL = state watch list
 Designated = Critical Habitat Designation
 PCH = Proposed Critical Habitat
 NL = not listed

³ Caltrans is required to make effects determinations which may include **no effect; may affect, not likely to adversely affect or may affect; likely to adversely affect**; regarding the species or designated critical habitat under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq) in accordance with 23 U.S.C. 327, as described in the Memorandum of Understanding between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Project Delivery Program Pursuant to 23 U.S.C. 327 effective October 1, 2012 and codified in 23 U.S.C. 327 (a)(2)(A).

LIST OF TECHNICAL STUDIES

California Department of Transportation (Caltrans), April, 2013. Paleontological Identification Report. Matthew Gaffney, Office of Geotechnical Design – West, Geotechnical Services, Divisions of Engineering Services.

Caltrans, June, 2013. District Preliminary Geotechnical Report. Matthew Gaffney, Office of Geotechnical Design-West, Geotechnical Services, Division of Engineering Services.

Caltrans, April, 2013. Location Hydraulic and Floodplain Study Report. Dixon Lau, Office of Hydraulics.

Caltrans, May, 2014. Natural Environment Study Minimal Impacts (No Effects). Michael D. Baker, Office of Biological Sciences and Permits.

Caltrans, May, 2013. Air/Noise/Energy Branch (Glenn Kinoshita) and Hazardous Waste Branch (Chris Wilson) Memorandum.

Caltrans, May, 2013. Noise Analysis Study. Office of Air/Noise Studies. Glenn Kinoshita.

Caltrans, May, 2013. Water Quality and Storm Water Runoff Study. Angela Kwan, Office of Water Quality.

Caltrans, November, 2013. Visual Impact Assessment. Connie Yip, Office of Landscape Architecture.

Caltrans, April, 2013. SR 82 at Floribunda Avenue Left-turn Channelization Traffic Operational Analysis. Lance Hall, Office of Highway Operations.

Caltrans, February 2014. Archaeological Survey Report for the Proposed Floribunda Avenue Intersection Safety Improvement Project, San Mateo County, California. Jennifer Blake, Office of Cultural Resource Studies.

Caltrans, February 2014. Historic Property Survey Report for the Floribunda Avenue Intersection Safety Improvement Project Along El Camino Real (State Route 82) in San Mateo County. Jennifer Blake and Lauren Clementino, Office of Cultural Resource Studies.

Caltrans, February 2014. Historical Resources Evaluation Report for the Floribunda Avenue Intersection Safety Improvement Project Along El Camino Real (State Route 82) in San Mateo County. Lauren Clementino, Office of Cultural Resource Studies.

Tree Risk Assessment-Howard Ralston Tree Row and Other, Burlingame, CA. December 26, 2013. Prepared for: URS Corporation. Prepared by: HortScience, Inc.