

Preliminary Planning Study for
HIGHWAY 1 CONGESTION & SAFETY IMPROVEMENT PROJECT



SAN MATEO COUNTY
**Transportation
Authority**



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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADL	aerially deposited lead
ASR	Archaeological Survey Report
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
Corps	U.S. Army Corps of Engineers
County	San Mateo County
CTMP	Comprehensive Transportation Management Plan
EDR	Environmental Data Resources, Inc.
FHWA	Federal Highway Administration
GGNRA	Golden Gate National Recreation Area
HDM	Highway Design Manual
HPSR	Historic Properties Survey Report
IRRS	Interregional Road System
LCP	Local Coastal Program
mph	mile(s) per hour
MSE	mechanically stabilized embankment
MUTCD	Manual for Uniform Traffic Control Devices
MWSD	Montara Water and Sanitary District
N/A	not applicable
NACTO	National Association of City Transportation Officials
NES	Natural Environment Study
NHS	National Highway System
NWIC	Northwest Information Center
PA&ED	Project Approval and Environmental Document
PDPM	Project Development Procedures Manual
PEAR	Preliminary Environmental Analysis Report
PEER	Permit Engineering Evaluation Report
PG&E	Pacific Gas and Electric Company
PID	Project Initiation Document
PM	post mile
PPS	Preliminary Planning Study



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PS&E	Plans, Specifications, and Estimates
PSR	Project Study Report
RRFB	Rectangular Rapid Flash Beacon
Sponsor	San Mateo County Department of Planning and Building
TASAS-TSN	Traffic Accident Surveillance and Analysis System–Traffic System Network
USFWS	U.S. Fish and Wildlife Service
vph	vehicle(s) per hour

Executive Summary

The San Mateo County Transportation Authority (SMCTA), as the Implementing Agency, has prepared this Final Preliminary Planning Study (PPS) to evaluate the feasibility of projects and alternatives identified in the Highway 1 Safety and Mobility Improvement Study to relieve congestion, improve throughput, and enhance safety for motorists, bicyclists, and pedestrians along a 7-mile-stretch of Highway 1 in San Mateo County, CA. SMCTA has prepared this Final PPS in collaboration with the San Mateo County Department of Planning and Building (Sponsor). The projects covered by the Final PPS are located in unincorporated San Mateo County in the Midcoast area, which stretches from Devil’s Slide south to Mirada Road in Miramar, CA (see Attachment A). The types of improvements proposed for this section of Highway 1 include designated pedestrian crossings, left-turn lanes, acceleration lanes, and raised medians.

The improvements were grouped into five general locations (from south to north): (1) Mirada Road in Miramar; (2) S. Etheldore Street to Vallemar Street in Moss Beach, CA; (3) 16th Street in Montara, CA; (4) 1st Street through 9th Street in Montara; and (5) Gray Whale Cove. The Moss Beach location includes the proposed improvements at Cypress Avenue. The improvements at each location could be implemented independently of one another as individual projects, combined into a single project, or grouped into multiple projects depending on feasibility, public acceptance, and the availability of funds.

Generally, two alternatives were evaluated for each location. The two alternatives consist of the minimum and the maximum improvements in terms of costs and impacts. A third alternative was developed for two locations—1st Street through 9th Street in Montara and S. Etheldore Street to Vallemar Street in Moss Beach—in response to feedback from the public at the third public workshop, which was held on March 11, 2015.

The alternative evaluation screening criteria for the PPS were capital costs, support costs, anticipated implementation time frame, environmental impacts, and impacts to utility facilities. The evaluation results are summarized in Table ES-1.

Table ES-1-1: Highway 1 Preliminary Planning Study Alternatives Matrix

Location	Alternative	Estimated Capital Cost ¹	Estimated Support Cost	Estimated Construction Completion ²	Environmental Impact ³	Utility Impact ⁴
Mirada Road, Miramar	1	\$371,000	\$138,000	2018	Low	None
	2	\$4,122,000	\$1,526,000	2020	Med	Low
Moss Beach	1A	\$680,000	\$252,000	2018	Low	None
	1B	\$577,000	\$214,000	2018	Low	None
	2	\$7,405,000	\$2,740,000	2020	Med	Low
	3	\$2,947,000	\$1,091,000	2019	Low	None
16th Street, Montara	1	\$377,000	\$140,000	2018	Low	None
	2	\$3,325,000	\$1,231,000	2020	Med	Med
1st Street – 9th Street, Montara	1	\$517,000	\$191,000	2018	Low	None
	2	\$7,246,000	\$2,681,000	2020	Med	High
	3	\$4,106,000	\$1,519,000	2019	Low	Med
Gray Whale Cove	1	\$951,000	\$351,000	2020	Med	Med
	2	\$1,050,000	\$388,000	2020	Med	Med

Notes:

1. Project capital outlay cost (construction cost) refer to Attachment C.
2. Refer to schedule assumptions.
3. Low = minimizes impacts; Med = some impacts or potential mitigation.
4. Low > \$50K > Med > \$150K < High

Executive Summary

Each of the factors in Table ES-1 plays a key role in the feasibility of the project(s) moving forward. Depending on the implementation strategy, the California Department of Transportation (Caltrans) project delivery process may include the development of a Project Initiation Document (PID), a Project Approval and Environmental Document (PA&ED), and separate Plans, Specifications, and Estimates (PS&E). Delivery of individual sites may qualify for a Permit Engineering Evaluation Report (PEER), which is an abbreviated process. The alternatives and implementation strategies have been discussed with Caltrans District 4 staff.

1. INTRODUCTION

The San Mateo County Transportation Authority (SMCTA), as the Implementing Agency, has prepared this Final Preliminary Planning Study (PPS) to evaluate the feasibility of projects and alternatives identified in the Highway 1 Safety and Mobility Improvement Study to relieve congestion, improve throughput, and enhance safety for motorists, bicyclists, and pedestrians along a 7-mile-stretch of Highway 1 in San Mateo County, CA. SMCTA has prepared this Final PPS in collaboration with the San Mateo County Department of Planning and Building (Sponsor). The projects covered by the Final PPS are located in unincorporated San Mateo County in the Midcoast area, which stretches from Devil’s Slide south to Mirada Road in Miramar, CA (see Attachment A). The types of improvements proposed for this section of Highway 1 include designated pedestrian crossings, left-turn lanes, acceleration lanes, and raised medians. This study has been conducted to:

- Evaluate the selected short-term vehicular, pedestrian, and bicyclist mobility and safety improvements proposed for Highway 1 in Phase 1 and Phase 2 of the Highway 1 Safety and Mobility Improvement Study, which was adopted by the San Mateo County Board of Supervisors in 2010 and 2012, respectively, for feasibility and consistency with the purpose and need for the project.
- Determine if another feasible option exists that satisfies the intent of a proposed improvement and can be substituted in the event that a previously identified improvement is deemed infeasible.
- Identify what design exceptions (if any) are required for each alternative and the probability of obtaining approval from the California Department of Transportation (Caltrans).
- Perform cost-benefit analysis for the feasible improvements.

This study is funded through San Mateo County Transportation Authority Measure A funds.

The improvements were grouped into five general locations, which are (from south to north): (1) Mirada Road in Miramar; (2) S. Etheldore Street to Vallemar Street in Moss Beach, CA; (3) 16th Street in Montara, CA; (4) 1st Street through 9th Street in Montara; and (5) Gray Whale Cove. The Moss Beach location includes the proposed improvements at Cypress Avenue. The improvements at each location could be implemented independently of one another as individual projects, combined into a single project, or grouped into multiple projects depending on feasibility, public acceptance, and the availability of funds.

Generally, two alternatives were evaluated for each location. The two alternatives consist of the minimum and maximum improvements in terms of cost and impacts. A third alternative was developed for two locations—1st Street through 9th Street in Montara and S. Etheldore Street to Vallemar Street in Moss Beach—in response to feedback from the public at the third public workshop, which was held on March 11, 2015.

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2. BACKGROUND

2.1 PRIOR STUDY: HIGHWAY 1 SAFETY AND MOBILITY IMPROVEMENT STUDY PHASE 1

The Highway 1 Safety and Mobility Improvement Study: Phase 1 (completed in 2010) focused on transportation improvements along the Highway 1 corridor from the Half Moon Bay Airport south to Frenchmans Creek Road on the San Mateo County Midcoast, encompassing the Midcoast communities of Princeton, El Granada, and Miramar. The study conducted several community workshops, which engaged citizens in developing conceptual short- and long-term vehicular, pedestrian, and bicyclist mobility and safety improvement strategies.

The Phase 1 study recommended developing a consistent roadway edge through each context zone (rural areas, transitional areas, and village areas), improving intersection visibility, adding community entry treatments and roundabouts, managing access, and adding walkways and bikeways. The study was limited to studying the Highway 1 corridor and issues through field observations and community outreach.

2.2 PRIOR STUDY: HIGHWAY 1 SAFETY AND MOBILITY IMPROVEMENT STUDY PHASE 2

Phase 2 of the Highway 1 Safety and Mobility Improvement Study (completed in 2012) focused on vehicle, pedestrian, and bicycle safety and mobility challenges and solutions for the Highway 1 corridor between Half Moon Bay Airport and Devil's Slide. The recommended improvements included raised medians in community areas, designated pedestrian and bicycle crossings in high-demand areas, consideration of roundabouts and pedestrian and bicycle trails parallel to Highway 1, and parking re-configurations for beach and trail access. In November 2012, the San Mateo County Board of Supervisors adopted the study.

2.3 EXISTING FACILITY

Highway 1 is a north-south highway that runs along most of the Pacific coastline; it begins near Dana Point in Orange County and runs north to Legget in Mendocino County. Highway 1 is part of the California Freeway and Expressway System and is maintained and operated by Caltrans. The section of Highway 1 covered in this study is often referred to as the Cabrillo Highway. For this study, the study area is bounded by Half Moon Bay to the south and Devil's Slide to the north. Highway 1 was constructed as a two-lane road in the early 1950s. As population and traffic demands have increased, the highway has been routinely widened and left-turn pockets have been added. Current speed limits range from 45 to 55 miles per hour (mph), and the condition of the roadway differs throughout the corridor. Rural areas between town centers have higher speed limits and free-flowing movement, whereas town centers have slightly lower speed limits, and driveways, street parking, and local intersections are present.

The highway, which follows the coastline for the most part, crosses multiple creeks within the project limits. On the southern end of El Granada, Highway 1 crosses Arroyo de en Medio Creek, and on the northern end of El Granada, Highway 1 crosses both Deer Creek and Denniston Creek. In the vicinity of Moss Beach, just south of Marine Boulevard, San Vicente Creek crosses under the highway. Within the town limits of Montara, Montara Creek passes beneath the highway just north of 16th Street, and Martini Creek crosses beneath the highway just north of the town center and discharges at Montara State Beach.

Major recreational destinations within the project limits include the Half Moon Bay Airport, Pillar Point Bluff, Pillar Point Harbor, Point Montara, Montara State Beach, the Fitzgerald Marine Reserve, McNee Ranch State Park, Rancho Coral de Tierra, and Gray Whale Cove State Beach. Due to the recreational nature of the area, peak travel demands often occur on weekends.

Figure 1 shows the project vicinity.



Figure 1: Project Vicinity Map

The Devil’s Slide Trail, just north of the project limits, was opened in 2014. The trail provides pedestrian, bicycle, and equestrian connectivity from Montara to Pacifica via the old Highway 1 alignment. In early 2014, the County of San Mateo (County) redesignated the old roadway as a scenic area and a hiking/biking trail. This redesignation has attracted additional recreational users to the area.

Within the project limits, Highway 1 has seen very few pedestrian upgrades or improvements. Currently, the only pedestrian crossings on this stretch of highway are at the two signalized intersections in El Granada (Coronado Street and Capistrano Road). There are currently no pedestrian crossings to provide access from the east side of Highway 1 to the west side for residents of, and visitors to, the communities of Moss Beach, Montara, and Miramar. Figure 2 shows pedestrians crossing Highway 1 at Gray Whale Cove.



Figure 2: Pedestrians Crossing Highway 1 at Gray Whale Cove

Highway 1 in San Mateo County is functionally classified by Caltrans as a rural “Other Principal Arterial” roadway and is considered a Federal-Aid route in the National Highway System (NHS). Highway 1 is also listed as an Interregional Road System (IRRS) route, which is defined as a state highway route outside of urban areas that provides access to and a link between the state’s economic centers, major recreational areas, and urban and rural regions.¹

The project area is entirely within the 2010 Urban Area defined by the Federal Highway Administration (FHWA). The Urban Area is identified by the United States Census Bureau every 10 years. The route is designated as part of the California Legal Truck Network, which allows California Legal Trucks with a maximum length of 65 feet to use the route.

Highway 1 within the project limits is an Eligible State Scenic Highway, but it has not been officially designated as a scenic highway. It is not classified as a Landscaped Freeway.

2.4.2.4 DEFICIENCIES

Safety

Mirada Road, Miramar

At Mirada Road, residents and visitors cross Highway 1 to access Miramar Beach and the California Coastal Trail, providing the only off-highway pedestrian and bicyclist access to Half Moon Bay. There is an existing bus stop adjacent to the intersection of Highway 1 and Mirada Road. Motorists traveling at high speeds (45 mph is the posted speed limit) through this area and infrequent gaps in traffic makes crossing the highway challenging for visitors, residents, and transit users.

¹ Streets and Highway Code, Section 164.10–164.20.

Moss Beach

Throughout Moss Beach, there are closely spaced intersections with shops, restaurants, parks, residential roads, and driveways on, or adjacent to, Highway 1. Motorists traveling in the northbound direction enter the town of Moss Beach at high speeds (50 mph is the posted speed limit). No traffic-calming features alert drivers to changing context zones. Traffic-calming features consist of a combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.² Destinations such as the Fitzgerald Marine Reserve, and Pillar Point Bluffs are on the west side of Highway 1, with no designated pedestrian crossings for those accessing from the residential neighborhoods on the east side of the highway.

At Cypress Avenue in Moss Beach, visitors and residents cross the highway to access the Seal Cove neighborhood, the Pillar Ridge Manufactured Home Community, Pillar Point Bluffs, and Fitzgerald Marine Reserve. The users of the bus stop on Cypress Avenue west of Highway 1 also need to cross the highway to access the neighborhoods on the east side of Highway 1.

At Virginia and California Streets, pedestrians cross Highway 1 to access the Fitzgerald Marine Reserve, the shops and restaurants on both sides of Highway 1, and Moss Beach Park, which is on the east side of Highway 1. The speeds of motorists pose a challenge for vehicles accessing the highway from side streets and driveways and for pedestrians and bicyclists throughout Moss Beach.

Montara

At 16th Street in Montara, residential neighborhoods are east of Highway 1. An unpaved path that runs parallel to the highway northbound lane is the only bicycle and pedestrian path connecting Montara and Moss Beach. On the west side of the highway, there is an existing bus stop just south of the intersection of Highway 1 and 16th Street. The Montara Water and Sanitary District and the Montara Lighthouse Hostel are on the west side of Highway 1 at 16th Street. Transit users cross the highway to access the residential neighborhood. Historically, a relatively high number of rear-end collisions have occurred near the 16th Street intersection with Highway 1; the collisions are likely caused by speeding.

The Montara town center, which is between 7th Street and 10th Street, has numerous shops, including a gas station on the east side of the highway. Closely spaced intersections and driveway openings exist in this area creating many conflict points for vehicular movements. The communities on the east side of the highway do not have a safe access point to the coastal bluffs on the west side of Highway 1.

Near 1st and 2nd Streets, pedestrians cross the highway to access Montara State Beach and La Costanera on the west side of Highway 1. The east side of the highway is mostly residential, with an existing bus stop on 2nd Street between Main Street and Highway 1. Visitors park along the shoulders of Highway 1 in this area and cross the highway, where motorists travel at observed high speeds (the posted speed limit is 50 mph). Currently, no roadway traffic-calming features define the town center for motorists approaching from the rural area north of Montara; therefore, many vehicles enter Montara exceeding the speed limit.

Gray Whale Cove

At Gray Whale Cove, visitors park at the lot on the east side of Highway 1 and access nearby trails or cross Highway 1 to access the beach at Gray Whale Cove. Motorists traveling northbound and southbound along the highway approaching Gray Whale Cove have poor visibility and are traveling at high speeds (posted speed limit of 45 mph). These conditions pose a safety concern for pedestrians crossing the highway and southbound vehicles accessing the parking lot. Pedestrians attempting to cross at this location have poor views of the approaching vehicles due to the natural topography and overgrown vegetation along the highway.

²Institute of Transportation Engineers, *Traffic Calming*, <http://www.ite.org/traffic/index.asp>.

Accident Analysis

The Caltrans Traffic Accident Surveillance and Analysis System—Traffic System Network (TASAS-TSN) identifies accident data for Highway 1 through the study corridor between post miles 30.0 and 38.31 for the 3-year period between April 1, 2009, and March 31, 2012. The data is summarized in Table 2-1. The

2.4.2 forementioned post miles represent, respectively, the southern and northern extents of the study area for this project. A total of 161 accidents were reported on Highway 1 during the 3-year period, 78 of which occurred in the northbound direction and 83 in the southbound direction. Table 2-1 illustrates the accident rate in accidents per million vehicle miles, showing that fatality rates were slightly higher than the statewide average for similar facilities and the combined total accident rate was slightly lower.

Table 2-1: Caltrans 3-Year Accident History for Highway 1 from April 1, 2009, to March 31, 2012

Accident History for Highway 1									
Facility	Number of accidents			Accident Rate (accidents/million vehicle miles)					
	Total	Fatal	Injury	Accident Rate			State Average		
				Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
NB & SB Highway 1 Mainline from SM PM 30.0 to 38.31	161	3	78	0.017	0.44	0.95	0.012	0.46	1.13

Note: Shading denotes locations that exceed the statewide average.

Source: Caltrans, District 4 TASAS data between April 1, 2009, and March 31, 2012.

NB = northbound

PM = post mile(s)

SB = southbound

SM = San Mateo County

From the total reported accidents in both directions, 42.2% were caused by speeding, 16.1% were caused by improper turning, 6.2% were alcohol related, 3.7% were due to following too close, 11.8% were due to failure to yield, and 20.0% were caused by other factors. As shown in Table 2-2, 43% of the recorded accidents were rear-end collisions, which are typically associated with congested conditions.

Table 2-2: Type of Collision: Northbound and Southbound Highway 1

Collision Type	No.	Percent
Head-on	12	7%
Sideswipe	18	11%
Rear-end	73	43%
Broadside	28	17%
Hit object	19	11%
Auto-pedestrian	7	4%
Other	11	7%
Total	168	100%

Accident concentrations by location were evaluated to determine areas of concern. Accident data by post mile (PM) and type of collision are summarized in Table 2-3.

Table 2-3: Type of Collision by Location

Type of Collision by Location																		
Project Location	Begin PM	End PM	Head-On		Sideswipe		Rear-End		Broadside		Hit Object		Auto-Ped.		Other		Total	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Mirada Road	31.10	31.25	0	0%	0	0%	0	0%	1	33%	1	33%	0	0%	1	33%	3	100%
Moss Beach	34.55	35.45	0	0%	1	6%	2	11%	10	56%	2	11%	2	11%	1	6%	18	100%
16th St., Montara	35.70	36.02	0	0%	0	0%	5	56%	1	11%	2	22%	1	11%	0	0%	9	100%
1st St.–9th St., Montara	36.16	36.70	0	0%	1	9%	1	9%	5	45%	2	18%	1	9%	1	9%	11	100%
Gray Whale Cove	37.85	38.02	0	0%	1	14%	4	57%	0	0%	0	0%	0	0%	2	29%	7	100%

At Mirada Road, 3 accidents were recorded over the study period, all of which occurred in the absence of daylight. In Moss Beach, 18 accidents were recorded over the study period, the majority of which (56%) were broadside accidents. There were 2 recorded auto-pedestrian conflicts in Moss Beach, both of which occurred in the absence of daylight.

At 16th Street in Montara, a greatest number of rear-end collisions occurred; all 5 of them were due to speeding. One auto-pedestrian conflict was recorded at the intersection. Between 1st Street and 9th Street in Montara, 5 broadside collisions were recorded. At the northern limits of Montara, between 1st Street and 4th Street, 4 of the 6 accidents there occurred in the absence of daylight. At Gray Whale Cove, the majority of the collisions occurred on the weekends. The majority (57%) of the accidents were rear-end collisions due to speeding; 3 of these accidents occurred in the southbound direction and 1 accident occurred in the northbound direction.

2.4.3

Speed

Vehicles traveling at high speeds take longer to stop for objects in the roadway or crossing pedestrians. The visibility of both motorists and crossing pedestrians is important for the safety of all users. Highway lighting promotes visibility and is required at pedestrian crossings, together with other design features, such as advance warning signs and raised medians. Speed limits also dictate the types of design features considered for this project.

Statistical sampling methods are employed to study the feasibility of adjusting vehicular speed limits.

“Studies of the effects of establishing, raising and lowering speed limits include federal studies FHWA-RD-92-084 and FHWA-RD-98-154. These studies demonstrate that the most effective attribute in establishing the speed limit is to determine the 85th percentile speed and set the posted speed close to that value. The empirical data in these studies demonstrates that setting the speed limit too high or too low can increase collisions. Speed limits that are set near the 85th percentile speed of free-flowing traffic are safer and produce less variance in vehicle speeds. Because of the results of

these studies, the 85th percentile is used to establish the upper limit of operating speeds that are considered reasonable and prudent.”³

Enforceable speed limits are set based on a formal procedure in accordance with FHWA and Caltrans standards. These surveys are valid for 5 years and based on the 85th percentile of traffic speeds.⁴ Typically, speed surveys are conducted on state highways every 5 to 10 years. The last conducted speed survey on Highway 1 in the project area was out of date, as it was based on data collected in 2008; this survey also covered only a portion of the project area. Before that, the most recent speed survey in the project area was conducted in 2000. Thus, San Mateo County, along with the California Highway Patrol, requested a speed survey in late 2014. In response, Caltrans conducted a speed survey between Moss Beach and Montara. The study recommended that the existing speed limits be maintained. A copy of the Caltrans speed survey is provided in Attachment E. Figure 3 shows the existing speed limits within the project limits.

Established speed limits influence the design speed of a facility. Design speed is defined as “a speed selected to establish specific minimum geometric design elements for a particular section of highway.” These design elements include vertical and horizontal alignment of the roadway and sight distance.⁵ The selected design speed should be high enough so that an appropriate regulatory speed limit will be less than or equal to it.⁶ The use of curbs is discouraged for design speeds greater than 40 mph. The project assumes that a Caltrans Type B-4 or Type D (sloped face) curb, is appropriate for facilities with design speeds greater than 50 mph and would be used for all proposed raised medians.

³Caltrans, *2014 California Manual for Setting Speed Limits*, Division of Traffic Operations (Sacramento, CA: Caltrans, May 9, 2014), p. 13, <http://www.dot.ca.gov/hq/traffops/engineering/mutcd/pdf/california-manual-for-setting-speed-limits.pdf>

⁴Caltrans, *2014 California Manual for Setting Speed Limits*, <http://www.dot.ca.gov/hq/traffops/engineering/mutcd/pdf/california-manual-for-setting-speed-limits.pdf> (Sacramento, CA: Caltrans, 2014).

⁵Caltrans, *Highway Design Manual* (Sacramento, CA: Caltrans, 2014), <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

⁶FHWA, “Mitigation Strategies for Design Exceptions,” Chapter 3, Design Speed (Washington, DC: FHWA, 2014), http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_designspeed.cfm.

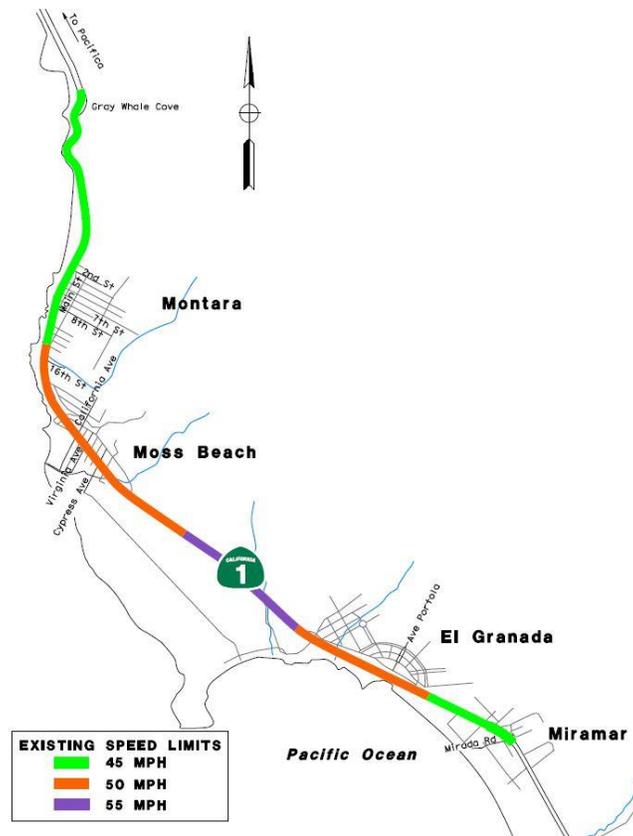


Figure 3: Existing Speed Limits within Project Limits

2.4.4

Congestion and Travel Demand

In Moss Beach, motorists turning from eastbound Cypress Avenue onto northbound Highway 1 experience delay due to high traffic volumes and speeds on Highway 1. An acceleration lane at this location would eliminate the southbound left-turn pocket to Cypress Avenue but would alleviate congestion on Cypress Avenue.

At Gray Whale Cove, the existing facility currently has no left-turn pocket for motorists entering the parking lot from the southbound direction or acceleration lane for motorists exiting the parking lot in the southbound direction. Because there is no left-turn pocket, motorists queue in the travel lane, which often causes delay for the southbound through movement and increases the risk of rear-end collisions.

2.4.5

Complete Streets

The Complete Streets Act (Assembly Bill 1358) was signed into law in September 2008. It requires cities and counties to account for the needs of all roadway users, including bicyclists and pedestrians, when updating their general plans. Caltrans released Deputy Directive 64, originally signed in October 2008 and renewed in October 2014, which embraces Complete Streets as a policy for all phases of highway projects. The policy states that projects shall provide for the needs of travelers of all ages and abilities in planning, programming, design, construction, and operations and maintenance activities on the State Highway System. Considerations include accessibility, safety, mobility, land use, and community needs.

In 2012, Caltrans updated its Highway Design Manual (HDM) to facilitate the design of Complete Streets. In 2013, Caltrans published *Main Street California: A Guide for Improving Community and Transportation Vitality*, which

provided interim guidance and help in navigating the various policies and standards, including the *Manual for Uniform Traffic Control Devices* (MUTCD), HDM, and the *Project Development Procedures Manual* (PDPM). Caltrans released the *Complete Streets Implementation Action Plan* in November 2014; this plan provides 109 action items to further integrate Complete Streets into all Caltrans functions and processes. In April 2014, Caltrans endorsed the National Association of City Transportation Officials (NACTO) guidelines for innovative transportation solutions to better suit community needs. Examples of innovative features include buffered bike lanes, bike boxes, and sidewalk design.

2.5 OTHER PLANNED PROJECTS WITHIN THE PROJECT LIMITS

Several other projects are planned for the Highway 1 corridor within the project limits. The proposed project will not preclude implementation of these planned improvements. Below are brief descriptions of the planned projects:

Plan Princeton: Plan Princeton is a study being conducted by San Mateo County to update the land use plan, development polices, and zoning regulations for the Princeton area. The project is being funded by the San Mateo County Board of Supervisors. In 2013, the Board approved a contract to conduct the study. An Existing Conditions Report was released in May 2014, and Project Alternatives were released for public review in September 2014. In March 2015, the Preferred Plan and Policy Framework was released, with the intent to identify the preferred alternative in the near future. The study is expected to be completed in early 2016. The goal of the project is to update the land use policies, plans, and regulations for the area to:

- Enhance coastal access, recreation, research, and education opportunities;
- Support and expand coastal-dependent and coastal-related uses;
- Provide facilities needed by the commercial fishing industry and recreational boaters;
- Promote economic development;
- Abate neighborhood blight and zoning violations;
- Address parking, circulation, and infrastructure needs;
- Identify and evaluate potential solutions to shoreline erosion problems;
- Protect and restore water quality and sensitive habitats; and
- Maintain compliance with the California Coastal Act and state airport compatibility requirements.

Connect the Coastside: The San Mateo County's Midcoast Update to the Local Coastal Program (LCP) mandates that a Comprehensive Transportation Management Plan (CTMP) be prepared to evaluate the impacts that residential and non-residential development in the region has had—and will have—on roadway capacity. Connect the Coastside is the process of developing the CTMP. The San Mateo County Board of Supervisors have appropriated nearly \$700,000 to conduct this study. The study will assess current and future sources and levels of congestion on Highway 1, Highway 92, and other arterial routes. The study will also identify policies, programs, and projects that will mitigate existing and future congestion levels based on development and traffic data, forecasts, and a development forecast analysis. The limits of the study are from Highway 1 just south of Devil's Slide Tunnel to the southerly city limits of Half Moon Bay and Highway 92 east of Highway 1 to lower Skyline. Connect the Coastside is anticipated to be completed at the end of 2016.

Big Wave: Big Wave is a private development project that consists of housing for developmentally disabled adults and commercial office buildings. It is located off of Airport Boulevard in Moss Beach adjacent to the Pillar Ridge Manufactured Home Community. The project's traffic impact analysis forecasts increased congestion at the intersections of Cypress Avenue and Highway 1 and Capistrano Road and Highway 1. Big Wave is privately funded. Big Wave was approved by the San Mateo County Board of Supervisors on May 19, 2015. The California Coastal Commission upheld this decision after a subsequent appeal was denied in June 2015.

San Mateo County Coastside Access Study: The San Mateo County Coastside Access Study is being conducted by a consultant through a partnership between San Mateo County, the Golden Gate National Recreation Area (GGNRA), and California State Parks. The goal of the study is to identify all current parking facilities in the Midcoast serving beach visitors and recreation destinations. The study will also look at how the County, GGNRA, and California State Parks can collectively improve parking and coastal access to serve all populations by sharing existing facilities and identifying potential sites for future lots, if needed.

Surfer's Beach Shoreline Protection Device Project: The Surfer's Beach Shoreline Protection Device Project will provide interim protection of Highway 1's embankment at Surfer's Beach in Half Moon Bay adjacent to El Granada. The project scope consists of constructing a rock slope protection retaining wall, a 400-foot-long segment of the California Coastal Trail, and a staircase to provide safe pedestrian access to the beach. The project is funded through various sources, including the County of San Mateo, City of Half Moon Bay, the California Coastal Commission, Caltrans, and grant funds from the Cosco Busan Oil Spill Settlement Fund (through the National Fish and Wildlife Foundation). The project started the planning process in 2014, and it is anticipated that construction will be complete by the end of 2015.

U.S. Army Corps of Engineers CAP111 Study: The CAP111 Study is a federally funded study looking at what role Pillar Point Harbor's outer breakwater, constructed by the U.S. Army Corps of Engineers (Corps) in the 1960s, has played in the increased rate of coastal erosion at adjacent Surfer's Beach and the proximate shoreline to the south. If it is determined that the Corps' project has a direct impact on the increased rate of erosion, and the federal government has a financial benefit to fixing the problem, the federal government will appropriate funds to conduct a project. The project currently being considered is dredging sediment deposited into Pillar Point Harbor and relocating it to adjacent Surfer's Beach. It is expected to be 3 to 5 years before any project is conducted.

The Parallel Trail: The Parallel Trail is a multi-modal bicycle and pedestrian trail that will run parallel to Highway 1 throughout the Midcoast. The first segment that has received funding is between Alto Avenue in Miramar and Coronado Street in El Granada. The SMCTA awarded Measure A funds in early 2014, with a matching County contribution. As of July 2015, San Mateo County has commenced planning, permitting, and design of the project. This project was derived from the Highway 1 Safety and Mobility Improvement Study: Phase 1.

The Green Valley Trail: The Green Valley Trail is a recreational trail that will connect the Gray Whale Cove parking lot and the Devil's Slide Trail. It is a critical piece in improving parking and access to the Devil's Slide Park. Currently, in the absence of the trail, people park at the Gray Whale Cove parking lot and walk on the highway shoulder. Trail design and permitting are under way, with public meetings conducted in May 2015 and more meetings planned for summer 2015. After planning, design, and permitting, construction is anticipated in summer or fall 2016. The project is jointly funded by the County and the California Coastal Conservancy.

Caltrans pavement projects: Caltrans currently has an approved Capital Preventive Maintenance Project (EA #4H210K) programmed on Highway 1 just north of the study area. The extent of the pavement rehabilitation and maintenance included within the approved Project Scope Summary Report is from just north of Gray Whale Cove in Pacifica to the Interstate 280 connectors in Daly City.

3. PURPOSE AND NEED

3.1 PURPOSE

The purpose of the project is to:

- Provide safer access to the beaches, coastal areas, and local communities along Highway 1 between Gray Whale Cove and Mirada Road in Miramar for vehicles, pedestrians, and bicyclists;
- Alleviate traffic congestions along Highway 1; and
- Improve pedestrian and bicycle crossings for the residents and visitors along Highway 1.

3.2 NEED

Motorists traveling along Highway 1 are traveling at high speeds (the posted speed limits are from 45 to 55 mph) through the town limits, in part because there are currently no traffic-calming devices or features that define the context of the town centers. Typical vehicle speeds at the locations in the study area present challenging conditions for the residents and visitors.

Residents and visitors frequently cross Highway 1 on foot to access beaches, neighborhoods, and other destinations along the highway. There is a need to provide more designated pedestrian crossings because pedestrian crossings are limited throughout the corridor.

Historically, a high number of pedestrian-vehicle and vehicle-to-vehicle conflicts have occurred in this corridor due to high motorist speeds, poor visibility, and lack of traffic-calming features.

Deficiencies have been identified (see Section 2.4, Deficiencies) that create a need for the proposed improvements discussed in Section 4, Alternatives.

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4. ALTERNATIVES

The areas of consideration for improvements (Attachment B) are Mirada Road in Miramar; Cypress Avenue, Virginia Avenue, and California Avenue in Moss Beach; 16th Street, 7th Street, and 2nd Street in Montara; and Gray Whale Cove, just north of Montara. Early investigation and alternatives were developed for Surfer's Beach in El Granada, but it was later determined that the improvements would be better suited to be a separate project due to issues with access and parking.

The proposed improvements vary by location and scope, depending on the need identified in previous studies, public input, and traffic and accident data. Improvements may simply include the installation of warning flashing beacons, highway lighting, and pavement striping, which could be considered as early-implementation alternatives due to their low capital cost and minimal impacts to the natural environment. The early implementation alternatives, sometimes referred to as the "low-hanging fruit" projects in the public workshops, can be implemented within a few years of completion of this study.

Alternatives involving pavement widening, drainage improvements, and utility relocations will require additional environmental studies and cost substantially more to construct. Implementation of these projects would take several years due to the environmental documentation, permitting and obtaining adequate construction funds. The general improvements included in this study are described below.

Pavement resurfacing: It is recommended that a smooth pavement surface (i.e., slurry and crack seal or other method) be provided for all alternatives to improve the visibility of the new striping. This type of improvement will also promote the longevity of the existing roadway surface and alert drivers to the upgraded condition and changed environment in the area.

Drainage improvements: Drainage improvements are required where pavement widening is proposed. Median improvements on horizontal curves would affect sheet flow and may require inside-shoulder drainage treatments such as edge drains and/or drainage inlets.

Raised Medians: Due to the history of accidents in the project area, raised medians are proposed where feasible as a traffic-calming measure, to consolidate turning movements within town centers, and to slow vehicle speeds. The medians are proposed to be hardscape with pavers or architecturally treated concrete, which is a low-maintenance option for the project. Landscaped medians are not currently being considered because of the maintenance they would entail. The feasibility of architecturally treated and/or landscaped medians will be further evaluated through the preliminary engineering of the project. The project has considered the Caltrans Type B-4 or D curbs (see Figure 4), which are appropriate for facilities with posted speeds of greater than or equal to 45 mph per Table 303.1 in the HDM (B-4 curbs are not applicable in center medians).

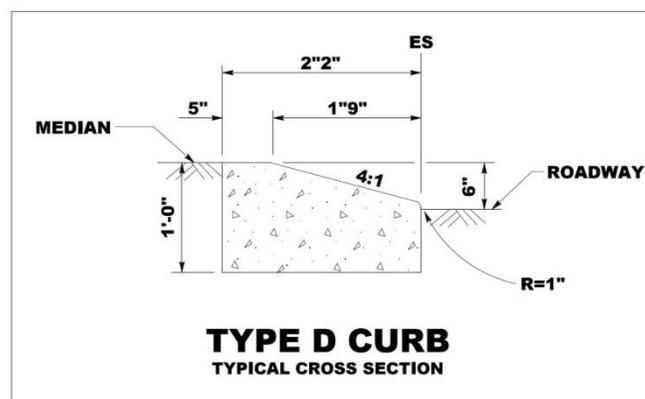


Figure 4: Type D Curb Detail

Pedestrian refuge: Where feasible, the project proposes pedestrian refuge islands in the median to enhance safety for pedestrians crossing the highway. The benefits of refuge islands are summarized as follows:

“Providing raised medians or pedestrian refuge areas at pedestrian crossings at marked crosswalks has demonstrated a 46 percent reduction in pedestrian crashes. At unmarked crosswalk locations, pedestrian crashes have been reduced by 39 percent. Installing raised pedestrian refuge islands on the approaches to unsignalized intersections has had the most impact reducing pedestrian crashes.”⁷

The Caltrans HDM mandates that the minimum median width used for pedestrian refuges is 6 feet (HDM Section 405.4[3]), which will require roadway widening in most locations to achieve standard widths. For example, pavement widening will be required at village entrances where raised medians are proposed to accommodate standard inside and outside highway shoulder widths.

Highway lighting: The absence of highway lighting poses a safety concern for motorists and crossing pedestrians throughout the corridor during non-daylight hours. The addition of highway lighting can reduce nighttime crashes by 52% according to the FHWA. The project proposes to add highway lighting at pedestrian crossings to improve safety and visibility. Highway lighting will also need to be provided at any proposed raised medians for driver safety (to improve the visibility of these objects within the roadway).

Pavement markings: Reflective thermoplastic pavement markings are proposed for all alternatives. Advance pavement warning markings and yield markings are proposed at each pedestrian crossing (Figure 5). New lane delineation will be included to upgrade the project areas and create consistency throughout the corridor.



Figure 5: Advance Yield Markings at a Pedestrian Crossing

Signage: Proposed signage concepts



Figure 6: Pedestrian Crossing Signage with RRFB (Signs W11-2 and W16-7P)

follow MUTCD standards for all alternatives. The existing warning signs in this corridor were recently upgraded to fluorescent yellow green. The proposed warning signs in this corridor will also be reflective yellow green to maintain uniformity of the signs. The proposed signs will consist of pedestrian signs (sign designation W11-2 from California MUTCD), as shown on Figure 6, accompanied by a downward arrow (sign designation W16-7P from California MUTCD). Advance warning signs will also be included with an “Ahead” plaque (sign designation W16-9P-2 from California MUTCD) fixed to the sign post. “Yield Here” signs will accompany the pavement markings to better alert drivers and create a recognizable crossing. Where raised medians are proposed, “Keep Right” signs (sign designation R4-7 from California MUTCD) will be installed at the nose of the median to improve the visibility of the raised object. Rectangular Rapid Flash Beacons (RRFBs), as shown in Figure 6, are proposed in all Alternative 1 scenarios. “RRFBs are a lower cost alternative to traffic signals and hybrid signals and are shown to increase driver yielding behavior at crosswalks significantly when supplementing standard pedestrian crossing warning signs and markings.”⁸

⁷ FHWA, “Safety Benefits of Raised Medians and Pedestrian Refuge Areas”, FHWA Safety Program, http://safety.fhwa.dot.gov/PED_BIKE/tools_solve/medians_brochure/ (Washington, DC: FHWA, 2014).February 1, 2013).

⁸ FHWA, “Rectangular Rapid Flash Beacon”, <http://safety.fhwa.dot.gov/intersection/resources/techsum/fhwas09009/> (Washington, DC: FHWA, 2009).May, 2009).

At each location, a minimum of two alternatives were evaluated for this study. In general, Alternative 1 consists of features that have minimal impacts to the natural environment and a low capital cost, allowing early implementation. Alternative 2 consists of features that would involve pavement widening and a higher capital cost (than the cost of Alternative 1), potential for utility relocations, and environmental impacts. An Alternative 3 was added for the Moss Beach and Montara locations in response to comments from the third public meeting; in each case, Alternative 3 represents an alternative in between the features and costs of Alternative 1 and Alternative 2. At Gray Whale Cove, both Alternatives 1 and 2 have equal pavement widening and impacts. All project alternatives are discussed in detail below.

4.1 MIRADA ROAD, MIRAMAR

An at-grade pedestrian crossing is proposed at the intersection of Mirada Road and Highway 1 to enhance pedestrian connectivity and improve safety. Traffic-calming measures such as enhanced pavement markings and signage are recommended at this location, as are visibility improvements for both motorists and crossing pedestrians. Highway lighting will be installed at the pedestrian crossing. Figure 7 shows the Mirada Road/Highway 1 intersection looking northeast.



Figure 7: Mirada Road Intersection, Looking Northeast

Alternative 1 Mirada Road (Attachment B – Mirada Road Alternative 1): Alternative 1 proposes to install RRFBs at the proposed at-grade pedestrian crossing. Highway lighting is proposed to improve visibility at the intersection and meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to warn motorists of the approaching pedestrian crossing. This alternative would not require any pavement widening, drainage improvements, or utility relocations.

Alternative 2 Mirada Road (Attachment B – Mirada Road Alternative 2): Alternative 2 proposes a new at-grade pedestrian crossing at the intersection, with raised medians and a pedestrian refuge in the median of Highway 1. Highway lighting is proposed to improve visibility at the intersection and at proposed raised medians per the Caltrans standard. Advance yield markings and typical pedestrian crossing signage would be added to warn motorists of the approaching pedestrian crossing.

Alternative 2 would require pavement widening to accommodate the new raised median and inside shoulders. Improvements would include the extension of a 60-inch drainage culvert, reconstruction of the drainage headwall, and installation of a new median drainage system at the super-elevated section of the roadway. Potential utility relocations include an underground communications line and an extension of the casing of a distribution gas line. Four bus stops would need to be relocated to accommodate the widening.

4.2 MOSS BEACH

A median is proposed in southern Moss Beach as a traffic-calming measure to slow down motorists entering the village center. This location would be between S. Etheldore Street and Marine Boulevard to alert northbound motorists that the context of the corridor is changing from rural to village center. An at-grade pedestrian crossing is proposed at Cypress Avenue, Virginia Avenue, and/or California Avenue to enhance pedestrian connectivity and safety in the village center. The project also proposes a new acceleration lane on Highway 1 for motorists traveling eastbound on Cypress Avenue and then turning onto northbound Highway 1. Figure 8 shows the California Avenue intersection with Highway 1, looking north.



Figure 8: California Avenue Intersection, Looking North on Highway 1

Alternative 1 Cypress Avenue (Attachment B – Etheldore-Cypress Ave Alternative 1): This alternative proposes a high-visibility painted median between Etheldore Street and Marine Boulevard as a traffic-calming measure. RRFBs are proposed for the at-grade pedestrian crossing at Cypress Avenue. This alternative would convert the existing southbound left-turn pocket on Highway 1 (to access eastbound Cypress Avenue) into an acceleration lane for motorists traveling eastbound on Cypress Avenue that turn northbound onto Highway 1. Highway lighting is also proposed to improve visibility at the Cypress Avenue intersection and meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossing. This alternative would not require any pavement widening, drainage improvements, or utility relocations.

Alternative 1A California Avenue and Virginia Avenue (Attachment B – California Ave Alternative 1A): This alternative proposes at-grade pedestrian crossings with RRFBs at both Virginia Avenue and California Avenue. Highway lighting is proposed to improve visibility at the intersections and meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be

added to alert motorists to the approaching pedestrian crossings. This alternative would not require any pavement widening, drainage improvements, or utility relocations.

Alternative 1B California Avenue and Virginia Avenue (Attachment B – California Ave Alternative 1B): This alternative proposes an at-grade pedestrian crossing with RRFBs at California Avenue. This alternative also proposes to convert the eastbound and westbound Virginia Avenue intersection to a “right-in/right-out” intersection and lengthen south- and northbound left-turn pockets to access westbound California Avenue and eastbound Vermont Avenue. Eliminating the left-turn movement from Virginia Avenue to Highway 1 would reduce turning movements and vehicular conflicts, enhancing vehicular safety. It also requires left-turning traffic to be re-routed to California Avenue or Vermont Avenue. This rerouting would improve left-turn storage (i.e., turning vehicle queue) for both intersections.

Highway lighting is proposed to improve visibility. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossing. This alternative would not require any pavement widening, drainage improvements, or utility relocations.

Alternative 2 Cypress Avenue, Virginia Avenue, and California Avenue (Attachment B – Etheldore-Cypress & California Alternative 2): This alternative proposes a raised median beginning south of S. Etheldore Street as a traffic-calming measure and to inform motorists that the context of the corridor is changing. The raised median would continue through the village of Moss Beach to north of the Vallemar Street intersection. The raised median would restrict turning movements at Virginia Avenue, creating a “Right-in, Right-out” intersection with no through traffic. The alternative would convert the existing left-turn pocket from southbound Highway 1 to eastbound Cypress Avenue to an acceleration lane for motorists traveling eastbound on Cypress Avenue and turning onto northbound Highway 1. An at-grade pedestrian crossing is proposed at Virginia Avenue with a pedestrian refuge in the raised median. No crossing is proposed at Cypress Avenue in this alternative.

Alternative 2 would require pavement widening to accommodate the new median and inside shoulders. Improvements would include the extension of two 48-inch box culverts at San Vicente Creek, modifications to cross culverts, and installation of a new median drainage system at the super-elevated section⁹. A sanitary sewer line would potentially need to be relocated. Highway lighting is proposed to improve visibility and meet the Caltrans standard for lighting requirements.

Alternative 2 is aimed at improving the motorist and pedestrian safety in Moss Beach by consolidating the left-turn movements while providing a designated pedestrian crossing and reducing vehicular speed. Reducing the number of movements across Highway 1 is expected to help address the high number of broadside accidents recorded during the collision study period. Providing a designated pedestrian crossing with advance typical pedestrian crossing signage should enhance safety for crossing pedestrians. The addition of street lighting would improve visibility for both motorists and crossing pedestrians.

Alternative 3 Cypress Avenue, Virginia Avenue, and California Avenue (Attachment B – Etheldore-Cypress & California Alternative 3): Alternative 3 proposes a combination of Alternative 1 and Alternative 2 and is intended to provide traffic calming, reduce turning movements and vehicular speed, and increase pedestrian safety for users crossing Highway 1 throughout Moss Beach. Specifically, Alternative 3 features raised medians at the entrances or “gateways” to Moss Beach. The locations of the proposed raised medians are from north of S. Etheldore Street to Marine Boulevard and just north of Vallemar Street. An acceleration lane is proposed at Cypress Avenue for left-turning traffic onto northbound Highway 1. A pedestrian crossing is introduced at Virginia Avenue, with a raised median and pedestrian refuge that utilizes the existing median width and requires no additional widening for crossing.

⁹ Superelevation (also “cant”) refers to the angle of the roadway edge relative to the horizontal curve of the roadway itself.

Pavement widening will be required at town entrances, or “gateways”, where raised medians are proposed in order to accommodate standard inside and outside shoulder widths. Improvements due to widening would include the extension of two 48-inch box culverts at San Vicente Creek. Turning movements at Virginia Avenue would be restricted due to the proposed pedestrian crossing, creating a “Right-in, Right-out” intersection with no through traffic. Highway lighting is proposed at pedestrian crossings and raised medians to improve nighttime visibility and to meet the Caltrans standard for lighting requirements. Alternative 3 is intended to provide traffic calming and to reduce turning movements.

4.3 16TH STREET, MONTARA

An at-grade pedestrian crossing is proposed at the intersection of 16th Street and Highway 1 to enhance pedestrian connectivity and improve safety. The pedestrian crossing would be on a curved section of the roadway, and RRFBs are proposed to alert motorists and enhance pedestrian safety. Highway lighting would be installed at the pedestrian crossing. Both alternatives address speeding and visibility issues by providing advance typical pedestrian crossing signage. Both alternatives also address pedestrian safety and visibility for motorists and crossing pedestrians by providing RRFBs and highway lighting. Figure 9 shows the 16th Street intersection with Highway 1 looking south along Highway 1.



Figure 9: 16th Street Intersection, Looking South on Highway 1

Alternative 1 16th Street (Attachment B – 16th Street Alternative 1): Alternative 1 proposes to install RRFBs at the proposed at-grade pedestrian crossing. Highway lighting is proposed at the intersection to meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossing. This alternative would not require any pavement widening, drainage improvements, or utility relocations. There would be no impact to the existing pedestrian path.

Alternative 2 16th Street (Attachment B – 16th Street Alternative 2): Alternative 2 proposes the same improvements as Alternative 1 except a raised median island with a pedestrian refuge for traffic calming and enhanced pedestrian safety is proposed on Highway 1.

Alternative 2 would require pavement widening to accommodate the new median and inside shoulders, which could potentially eliminate the existing informal pedestrian path on the east side of Highway 1. Improvements would include modifications to the drainage system and construction of a new retaining wall on the southbound edge of Highway 1. A sanitary sewer line and a gas line would potentially need to be relocated.

4.4 1ST STREET THROUGH 9TH STREET, MONTARA

Different traffic-calming measures are proposed through Montara to slow down motorists. At-grade pedestrian crossings are proposed at 2nd Street and 7th Street to enhance pedestrian connectivity and safety in the village center. Figure 10 shows the intersection of 7th Street and Highway 1, looking north on Highway 1.



Figure 10: 7th Street Intersection, Looking North on Highway 1

Alternative 1 7th Street and 2nd Street (Attachment B – 7th Street & 2nd Street Alternative 1): This alternative proposes at-grade pedestrian crossings with RRFBs at both 2nd Street and 7th Street. Additional highway lighting is proposed at both crossings to improve visibility at the intersections and meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossings. High-visibility painted medians are proposed where motorists enter the village center: south of 9th Street, north of 6th Street, south of 2nd Street, and north of 1st Street.

Alternative 2 7th Street and 2nd Street (Attachment B – 7th Street & 2nd Street Alternative 2): This alternative proposes raised medians through Montara to notify drivers of the change in context at the “gateways”, slow vehicular traffic, and restrict turning movements. Pedestrian refuges are proposed at the at-grade pedestrian crossings at the 2nd Street and 7th Street intersections. Highway lighting is proposed to improve visibility at the intersections and at the raised medians to meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossing. This alternative would physically consolidate turning movements and calm traffic by installing the raised median and eliminating the two-way left-turn lane in the median between 8th Street and 9th Street. A designated left-turn lane would be created at 8th Street for southbound traffic turning east and

an acceleration lane for vehicles turning onto southbound Highway 1 from 8th Street. A new acceleration lane is proposed for motorists turning onto northbound Highway 1 from the La Costanera Restaurant parking lot at the 1st Street intersection.

Alternative 2 would require pavement widening to accommodate the new median and inside shoulders. Improvements would include reconstruction of and modifications to the drainage system and construction of three retaining walls. Potential utility relocations would include a distribution gas line, an overhead electric line, and a sanitary sewer line. Alternative 2 would improve motorist and pedestrian safety by consolidating the left-turn movements and providing designated pedestrian crossings. Reducing the number of movements across Highway 1 would help address the high number of broadside accidents recorded during the study period. Also, providing advance typical pedestrian crossing signage would enhance safety for crossing pedestrians. Adding street lighting would improve visibility for both motorists and crossing pedestrians.

Alternative 3 7th Street and 2nd Street (Attachment B – 7th Street & 2nd Street Alternative 3): This alternative is a combination of Alternative 1 and Alternative 2. It contains raised medians at the entrances, or “gateways” to the village center at 1st Street and 4th Street and at 7th Street, 9th Street, and 10th Street for traffic calming. The raised median between 9th street and 10th Street would physically prevent southbound traffic from turning onto 9th Street and traffic from 9th Street turning south onto Highway 1. Proposed pedestrian crossings at both 2nd Street and 7th Street would provide amenities that improve nighttime visibility, alert drivers, and help protect pedestrians. Highway lighting is proposed at the crossings and the raised medians to meet the Caltrans standard for lighting requirements. Advance yield markings and typical pedestrian crossing signage would be added to alert motorists to the approaching pedestrian crossing.

Pavement widening would be required in areas where raised medians are proposed to accommodate standard inside and outside highway shoulder widths. Improvements would also include reconstruction of and modifications to the drainage system and construction of three retaining walls. Potential utility relocations would include a distribution gas line, an overhead electric line, and a sanitary sewer line.

4.5 GRAY WHALE COVE

The proposed improvements at Gray Whale Cove include a new left-turn lane for motorists traveling southbound on Highway 1 that are turning into the parking lot. A new acceleration lane is proposed for both alternatives for motorists exiting the parking lot to turn left onto southbound Highway 1. Pavement widening would be required for both proposed alternatives to accommodate the additional width needed to provide the left-turn lane and the acceleration lane. Some pavement widening, grading, and drainage improvements would also be required within the existing parking lot. This work would require coordination with California State Parks and Caltrans. One underground electric vault would potentially need to be relocated.

A new at-grade pedestrian crossing is proposed near the north side of the parking lot to enhance pedestrian connectivity to Gray Whale Cove State Beach and improve safety. Highway lighting is proposed at the pedestrian crossings to meet the Caltrans standard for lighting requirements. The location of the at-grade crossing was chosen to maximize the sight distance in both directions for both motorists and pedestrians. An advance warning overhead sign with flashing beacons is proposed for southbound traffic to provide adequate warning where sight distance is limited. Figure 11 shows Highway 1 at Gray Whale Cove, looking north.



Figure 11: Gray Whale Cove, Looking North on Highway 1

Traffic-calming measures are recommended at this location because motorists travel at high speeds and because such measures would improve visibility for both motorists and crossing pedestrians. Highway lighting would be installed at the pedestrian crossing to enhance motorist awareness and pedestrian visibility at the intersection.

Alternative 1 Gray Whale Cove (Attachment B – Gray Whale Cove Alternative 1): This alternative proposes RRFBs for the proposed at-grade crossing.

Alternative 2 Gray Whale Cove (Attachment B – Gray Whale Cove Alternative 2): This alternative is identical to Alternative 1 except that a Pedestrian Hybrid Beacon (see Exhibit B in Attachment B) is proposed instead of the RRFBs. The Pedestrian Hybrid Beacon mandates that oncoming traffic stop and provides increased driver compliance and pedestrian safety. Pedestrian Hybrid Beacons are widely used for mid-block designated pedestrian crossings.

4.6 DESIGN EXCEPTIONS

The Caltrans HDM establishes uniform policies and procedures for geometric design on the State Highway System. The proposed projects will meet the Caltrans mandatory and advisory design standards outlined in the Caltrans HDM,¹⁰ with the exceptions listed below. Early engagement with Caltrans District 4 and Headquarters Division of Design has assisted in developing the general assumptions for the design, such as design speeds, shoulder widths, and lane widths.

Exceptions to design standards will be sought as part of the Caltrans project approval through the preparation and approval of Fact Sheets. This section lists the anticipated exceptions to the Caltrans design standards.

¹⁰ The Caltrans *Highway Design Manual* is available at: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

Mirada Road, Miramar

The anticipated exceptions to the Caltrans design standards at the Mirada Road location are listed in Table 4-1.

4.6.1 Table 4-1: Design Exceptions at Mirada Road, Miramar

Design Standard	Alternative 1	Alternative 2
405.2.2d Deceleration Length Standard: 50 mph design speed = 435 feet	Existing: Varies from 255 to 345 feet Proposed: Varies from 255 to 345 feet	Existing: Varies from 255 to 345 feet Proposed: Varies from 255 to 345 feet
302.1 Shoulder Width Standard: 8-foot shoulder	Existing: Varies from 4 to 8 feet Proposed: Varies from 4 to 8 feet	Not applicable (N/A)

See the Caltrans HDM for details: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

Moss Beach

4.6.2 The anticipated exceptions to the Caltrans design standards at the Moss Beach location are listed in Table 4-2.

Table 4-2: Design Exceptions at Moss Beach

Design Standard	Alternative 1A	Alternative 1B	Alternative 2	Alternative 3
405.2.2d Deceleration Length Standard: 50 mph design speed = 435 feet	Existing: Varies from 150 to 350 feet Proposed: Varies from 150 to 350 feet	Existing: Varies from 150 to 350 feet Proposed: Varies from 150 to 350 feet	Existing: Varies from 150 to 350 feet Proposed: Varies from 150 to 350 feet	Existing: Varies from 150 to 350 feet Proposed: Varies from 150 to 350 feet

See the Caltrans HDM for details: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

4.6.3

16th Street, Montara

The anticipated exceptions to the Caltrans design standards at the 16th Street, Montara, location are listed in Table 4-3.

Table 4-3: Design Exceptions at 16th Street, Montara

Design Standard	Alternative 1	Alternative 2
302.1 Shoulder Width Standard: 8-foot shoulder	Existing: Varies from 4 to 8 feet Proposed: Varies from 4 to 8 feet	Existing: Varies from 4 to 8 feet Proposed: Varies from 4 to 8 feet

See the Caltrans HDM for details: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

1st Street through 9th Street, Montara

The anticipated exceptions to the Caltrans design standards at the 1st Street through 9th Street, Montara, location are listed in Table 4-4.

4.6.4 Table 4-4: Design Exceptions at 1st Street through 9th Street, Montara

Design Standard	Alternative 1	Alternative 2	Alternative 3
405.2.2a Left Turn Lane Width Standard: 12 feet	Existing (2nd Street and Highway 1 southbound): 11 feet Proposed: 11 feet	N/A	N/A
405.2.2d Deceleration Length Standard: 50 mph design speed = 435 feet	Existing: Varies from 130 to 175 feet Proposed: Varies from 130 to 175 feet	Existing: Varies from 130 to 175 feet Proposed: Varies from 130 to 175 feet	Existing: Varies from 130 to 175 feet Proposed: Varies from 130 to 175 feet
302.1 Shoulder Width Standard: 8-foot shoulder	Existing: Varies from 2 to 8 feet Proposed: Varies from 2 to 8 feet	Existing: Varies from 2 to 8 feet Proposed: Varies from 6 to 8 feet	Existing: Varies from 2 to 8 feet Proposed: Varies from 6 to 8 feet

See the Caltrans HDM for details: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>.

4.6.5 Gray Whale Cove

The anticipated exceptions to the Caltrans design standards at the Gray Whale Cove location are listed in Table 4-5.

Table 4-5: Design Exceptions at Gray Whale Cove

Design Standard	Alternative 1	Alternative 2
405.2.2d Non Standard Deceleration Length Standard: 50 mph design speed = 435 feet	Existing: N/A Proposed: 170 feet	Existing: N/A Proposed: 170 feet
203.2 Non Standard Curve Radius Standard: 50 mph design speed = 850 feet	Existing: 715 feet Proposed: 715 feet	Existing: 715 feet Proposed: 715 feet
302.1 Non Standard Shoulder Width Standard: 8-foot shoulder	Existing: Varies from 2 to 8 feet Proposed: Varies from 2 to 8 feet	Existing: Varies from 2 to 8 feet Proposed: Varies from 2 to 8 feet

4.6.6 See the Caltrans HDM for details: <http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm>

Coordination Efforts

Caltrans District 4 Traffic Safety and Headquarters Design provided feedback on the design in meetings on May 16, 2014, and October 29, 2014. Caltrans comments have been incorporated into the project design. Coordination with Caltrans will continue throughout this study and in future phases of the project.

4.7 TRAFFIC ANALYSIS

A Traffic Analysis Methodology Memorandum (Attachment F) was prepared and approved by San Mateo County and the SMCTA. The memo outlines the procedure that was used to analyze traffic operations within

the project corridor. Traffic analysis was completed to assess the feasibility of various alternatives or variations per location for the proposed pedestrian crossings, left-turn lanes, acceleration lanes, and raised median treatments.

The traffic analysis was based on existing traffic and pedestrian counts obtained from the County of San Mateo and Caltrans. The preliminary traffic study was conducted for existing conditions only (2014) and was structured to assess the operational deficiencies and the benefits of the alternatives (variants) for comparative purposes.

Pedestrian Crossings

4.7.1 Only weekday pedestrian counts are available, and the pedestrian volumes are low as compared to the (anecdotally reported) higher pedestrian traffic on weekends. Due to the recreational attractions in the project area, pedestrian traffic is expected to be significantly higher on the weekends. *It is recommended that pedestrian counts be conducted on weekends during further analysis in the next phase.* Adding pedestrian crossings is expected to improve safety for both pedestrians and vehicles by creating awareness of pedestrians throughout the corridor and limiting pedestrian-vehicle conflicts, which can generate large delays. In this project, eight pedestrian crossings are proposed based on the Highway 1 Safety and Mobility Improvement Study and community input. The eight pedestrian crossings are:

- Highway 1/Mirada Road
- Highway 1/Cypress Avenue
- Highway 1/Virginia Avenue
- Highway 1/California Ave
- Highway 1/ 16th Street
- Highway 1/ 7th Street
- Highway 1/ 2nd Street
- Highway 1/Gray Whale Cove

4.7.2

Raised Medians and Left-Turn Pockets

Raised medians are proposed at various locations for each alternative, and traffic redistributions are needed at locations where direct access to and from Highway 1 is eliminated. Redistributions help to better understand rerouted vehicle behaviors to ensure adequate left-turn pocket lengths. Left-turn pockets are proposed/modified or removed at five locations:

- Southbound Highway 1/Vermont Avenue – Alternatives 2 and 3 (modified)
- Northbound Highway 1/California Avenue – Alternatives 2 and 3 (modified)
- Northbound and Southbound Highway 1/Virginia Avenue – Alternatives 1B, 2 and 3 (removed)
- Southbound Highway 1/8th Street – Alternatives 2 and 3 (modified)
- Southbound Highway 1/Gray Whale Cove – Alternatives 1 and 2 (proposed)

Analysis to determine the required length of the left-turn lanes at the un-signalized intersections of two-lane roadways was conducted based on the gap acceptance theory and American Association of State Highway and Transportation Officials (AASHTO) standards.

The left-turn length requirement based on gap acceptance theory was derived from “Lengths of Left-Turn Lanes at Un-signalized Intersections.”¹¹ A critical gap of 7.0 seconds (the minimum time headway – or

¹¹Transportation Research Record, *Geometric Design, Roadside Safety Features, Roadside Hardware Monitoring and Scenic Loop Tours Issue #1500*, (Washington, DC: Transportation Research Record, 1995).

[spacing between vehicles, measured in seconds -] in the opposing vehicle flow that is required for a driver to complete a left-turn maneuver) and a length of 30 feet per vehicle were used to estimate the required storage length.

AASHTO suggests the following procedure to calculate the left-turn storage length: “the storage length may be based on the number of turning vehicles likely to arrive in an average 2-minute period within the peak hour.” Table 4-6 summarizes the storage requirement for the left-turn lane based on both methods.

Table 4-6: Adequate Left-Turn Length at Un-Signalized Intersections (in feet)

Left-Turn Volumes (vph)	Gap Theory- Critical Gap 7.0 second										AASHTO (feet)
	Opposing Volumes (vph)										
	100	160	220	280	340	400	460	520	580	640	
40	0 ^a	60	60	60	60	60	60	60	60	60	40
80	60	60	60	60	60	60	90	90	90	120	80
120	60	60	60	60	90	90	120	120	150	150	120
160	60	60	60	90	90	120	150	150	180	210	160
200	60	60	90	90	120	150	180	180	210	270	200
240	60	90	90	120	150	180	210	240	270	330	240
280	60	90	120	150	180	210	240	270	330	420	280
320	60	120	120	150	180	240	270	330	420	540	320
360	90	120	150	180	210	270	330	420	540	750	360
400	90	150	150	210	240	300	390	480	690	750	400

^a A zero lane length indicates that a left-turn lane is not warranted.

Source: Transportation Research Record 1500.

vph = vehicles per hour

4.7.3

Acceleration Lanes

Acceleration lanes are proposed at the following five locations:

- Northbound Highway 1/ Cypress Avenue – Alternatives 1, 2, and 3
- Southbound Highway 1/8th Street – Alternatives 2 and 3
- Northbound Highway 1/7th Street – Alternative 2
- Northbound Highway 1/1st Street – Alternatives 2 and 3

4.7.4

- Southbound Highway 1/ Gray Whale Cove – Alternatives 1 and 2

Study Intersections

The following is the list of the study intersections, including proposed variations, analysis, and benefits for each location:

Highway 1/Cypress Avenue (Alternative 1): A pedestrian crossing would be added at Cypress Avenue at the Moss Beach location to improve pedestrian safety. Also, the southbound left-turn pocket would be removed and an acceleration lane would be added for eastbound traffic turning left onto northbound Highway 1. The eastbound left-turn traffic is 64 vph in the a.m. peak and 48 vph in the p.m. peak. Due to heavy through traffic on Highway 1, motorists find it challenging to turn northbound onto Highway 1. The southbound left-turn traffic in the p.m. peak shows only 9 vph. Therefore, it is not anticipated that the southbound through traffic would experience delay with the removal of the left-turn pocket.

Highway 1/Cypress Avenue (Alternatives 2 and 3): The southbound left-turn pocket would be removed and an acceleration lane would be added for eastbound traffic turning left onto northbound Highway 1. The eastbound left-turn traffic is 64 vph in the a.m. peak and 48 vph in the p.m. peak. Due to heavy through traffic on Highway 1, motorists find it challenging to turn northbound onto Highway 1. The southbound left-turn traffic in the p.m. peak shows only 9 vph. Therefore, it is not anticipated that the southbound through traffic will experience delay with the removal of the left-turn pocket.

Highway 1/Virginia Avenue (Alternatives 1B, 2 & 3): A pedestrian crossing would be added at California Avenue in Alternative 1B and a crossing would be added at Virginia Avenue in Alternative 2 and 3. Vehicular access to and from Virginia Avenue would be restricted in both of these alternatives. As a result, this traffic would be redistributed to California Avenue and Vermont Avenue. Traffic volumes before and after redistribution at these intersections are shown on Figure 12. The p.m. peak hour is more critical because of higher left-turn and opposing traffic volumes: the northbound left-turn total volume at Vermont Avenue is 30 vph and the opposing Highway 1 southbound traffic at Vermont Avenue is 687 vph. From Table 4-6, the required storage length is 60 feet which will be met in all alternatives.

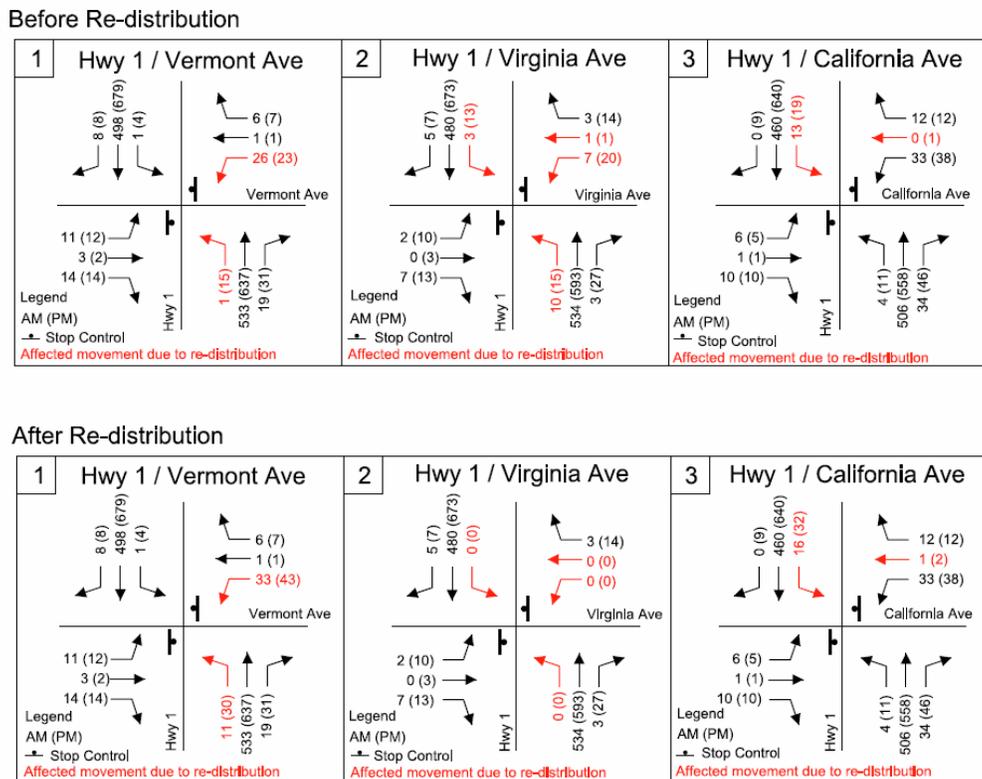


Figure 12: Traffic Volumes before and after Distribution at Virginia Avenue

Highway 1/7th Street (Alternative 2): Raised medians would be added from 10th Street to 8th Street and from 8th Street to 7th Street, which would physically eliminate the left-turn movements onto 9th Street from southbound Highway 1. The southbound turn onto 9th Street traffic would be redistributed to use 8th Street. Peak-hour southbound left-turn traffic at 8th Street is 15 vph during the p.m. peak hour, and the opposing northbound traffic is 464 vph. According to the AASHTO table, the required length of the left-turn pocket is 60 feet. The current left-turn lane storage available is approximately 65 feet. Because the required length is 60 feet, the addition of redistributed traffic is not anticipated to cause any impact in level of service for the intersection. It is recommended the traffic counts be conducted in the next phase for further analysis at the intersection of Highway 1/9th Street. The acceleration lanes provided for southbound Highway 1 at 8th

Street and northbound Highway 1 at 7th Street are expected to reduce the delay for southbound and northbound through movements.

Highway 1/7th Street (Alternative 3): Raised medians would be added from 10th Street to 9th Street and restriping of the median lanes would physically eliminate the left-turn movements onto 9th Street from southbound Highway 1. The southbound turn onto 9th Street traffic would be redistributed to use 8th Street. Peak-hour southbound left-turn traffic at 8th Street is 15 vph during the p.m. peak hour, and the opposing northbound traffic is 464 vph. According to the AASHTO table, the required length of the left-turn pocket is 60 feet. The current left-turn lane storage available is approximately 65 feet. Because the required length is 60 feet, the addition of redistributed traffic is not anticipated to cause any impact in level of service for the intersection. It is recommended the traffic counts be conducted in the next phase for further analysis at the intersection of Highway 1/9th Street. The acceleration lanes provided for southbound Highway 1 at 8th Street and northbound Highway 1 at 7th Street are expected to reduce the delay for southbound and northbound through movements.

Highway 1/Gray Whale Cove (Alternatives 1 and 2): An additional southbound left-turn pocket to access the parking lot would be added, along with an acceleration lane for entering southbound traffic. No traffic counts are available for this intersection. *It is recommended that traffic counts be conducted in the next phase for further analysis.* Providing a left-turn pocket and an acceleration lane are expected to reduce the delay for southbound through movement.

4.8 BRIDGE/STRUCTURE WORK

Several locations will require earth retention structures to accommodate the widening of Highway 1 associated with the proposed improvements for Alternatives 2 and 3. Generally, the east side of the highway will require walls to retain slopes that are cut into (cut walls), and the west side will require walls to retain additional roadway fill (fill walls).

The stretch of Highway 1 in the project limits is characterized by a broad, gently west-sloping marine terrace underlain by silt, sand, and gravel derived from the highly fractured and weathered granite rock of Montara Mountain, which is part of the Santa Cruz Mountain Range. The project site is in a high-seismic area between the active San Andreas Fault to the east of the site and the San Gregorio Fault to the west (offshore). Because of the gentle slope at low elevation, there is very low potential for the formation of slumps, translational slides, or earth flow that could damage a wall in a seismic event.

In general, soil nail walls to support the cuts should be feasible. However, site-specific data will be needed for the design of these walls. For the fill walls, Caltrans' standard plan walls (typical retaining walls with concrete footing) appear feasible provided adequate room is available for constructing the footings; otherwise, mechanically stabilized embankment (MSE) walls built from the ground up may prove more practical. Both the cut slopes and fill walls will need to be properly drained, as evidence of seepage can be observed, with the current existing slope faces being well vegetated.

Preliminary investigation has revealed the following considerations at each location, along with the anticipated wall type. The proposed retaining walls are presented from north to south.

2nd Street (Montara)

Alternative 2: Retaining Wall #1

This wall would retain cuts into existing slopes for approximately 1,200 feet along the east side of Highway 1. Wall heights would vary from about 5 to 10 feet. A soil nail wall would be a reasonable choice. The relatively short nail lengths would remain within the state right-of-way, and the concrete surface could be textured to provide some aesthetic interest. The height of the wall would warrant a cable railing at the top for maintenance personnel or others to protect against falls.

Alternative 3: Retaining Wall #2

This wall would retain cuts into existing slopes for approximately 350 feet along the east side of Highway 1. Wall heights would vary from about 3 to 5 feet. A standard concrete cantilevered wall would be the best choice at this location; the use of a soil nail wall may not prove to be cost-effective for such a low-height structure, and there appears to be room to build a standard cantilevered wall foundation.

7th Street (Montara)

Alternative 2: Retaining Wall #3

This wall would retain the new fill needed for the widening of Highway 1 along the west (coastal) side of the highway for about 850 feet. The wall height would vary to about 10 feet and would need to accommodate two driveways to residences along this stretch. A standard cast-in-place concrete, cantilevered retaining wall would be an appropriate choice. Further investigation may reveal limited space for the excavation of the standard wall footings or concerns about damage to the roots of adjacent cypress trees. These issues may warrant the use of an MSE wall or a soldier pile wall system that requires minimal footing excavation. Either wall type would require a vehicular barrier or guard railing at the top of the wall (edge of shoulder).

Alternative 2: Retaining Wall #4

This wall would retain the cut slope required for the highway widening to add a northbound dedicated turn lane at 9th Street. The wall would be about 4 feet high and extend for about 240 feet. A standard concrete cantilevered wall would be the best choice at this location given that the use of a soil nail wall may not prove to be cost-effective for such a low-height wall, and there appears to be room to build a standard cantilevered wall foundation.

Alternative 3: Retaining Wall #5

This wall would retain the cut slope required for the highway widening. The wall would be about 4 feet high and extend for about 240 feet. A standard concrete cantilevered wall would be the best choice at this location; the use of a soil nail wall may not prove to be cost-effective for such a low-height structure, and there appears to be room to build a standard cantilevered wall foundation.

Alternative 3: Retaining Wall #6

This wall would retain the new fill needed for the widening of Highway 1 along the west (coastal) side of the highway for about 800 feet. The wall height would vary to about 6 feet and would need to accommodate two driveways to residences along this stretch. A standard cast-in-place concrete, cantilevered retaining wall would be an appropriate choice. Further investigation may reveal limited space for the excavation of the standard wall footings or concerns about damage to the roots of adjacent cypress trees. These issues may warrant the use of an MSE wall or a soldier pile wall system that requires minimal footing excavation. Either wall type would require a vehicular barrier or guard railing at the top of the wall (edge of shoulder).

Alternative 3: Retaining Wall #7

This wall would retain cuts into existing slopes for approximately 450 feet along the east side of Highway 1. Wall heights would vary from about 3 to 10 feet. A soil nail wall would be a reasonable choice. The relatively short nail lengths would remain within the state right-of-way, and the concrete surface could be textured to provide some aesthetic interest. The height of the wall would warrant a cable railing at the top for maintenance personnel or others to protect against falls.

16th Street (Montara)

Alternative 2: Retaining Wall #8

This fill wall would reach about 10 feet in height and extend almost 500 feet along the southbound side of the highway. Although the existing slope is steep, it appears that there is adequate room for most of the wall to

be constructed as a standard cast-in-place concrete cantilevered wall. It is possible that further investigation may reveal the need to shore the existing slope during footing excavation and/or the potential for impacts to protected trees. If a fill wall becomes prohibitive; a soldier pile system with less excavation may be more appropriate. A combination of wall types along the length may also be prudent. A vehicular barrier will be required atop the wall.

Moss Beach

Alternative 2: Retaining Wall #9

This wall would retain cuts into existing slopes for approximately 675 feet along the east side of Highway 1 just north of Vallemar Street. Wall heights would vary from about 3 to 10 feet. A soil nail wall would be a reasonable choice. The relatively short nail lengths would remain within the state right-of-way, and the concrete surface could be textured to provide some aesthetic interest. The height of the wall would warrant a cable railing at the top for maintenance personnel or others to protect against falls.

Alternative 3: Retaining Wall #10

This wall would be identical to Retaining Wall #9, above.

4.9 RIGHT-OF-WAY AND UTILITY IMPACTS

The proposed project is not expected to require permanent right-of-way acquisition. However, temporary construction easements may be required.

The project area contains overhead electric and communications lines and underground electric, gas, sanitary sewer, water, reclaimed water, communications, and fiber optic lines. Utilities in the project area were identified through site visits and reviews of utility plans obtained from Caltrans, utility providers, and local municipalities. Utility providers in the project area are listed by owner in Table 4-7.

Table 4-7: Utility Owners within Project Limits

Utility Owner	Type of Facility
AT&T	Underground and overhead fiber optics
Coastside County Water District	Water
Comcast	Underground and overhead fiber optics
County of San Mateo	Drainage and lighting
Granada Community Services District	Sewer
Montara Water and Sanitary District (MWSD)	Water and sanitary sewer
Pacific Gas and Electric Company (PG&E)	Gas and electricity
Sewer Authority Mid-Coast	Sewer

Utility relocations will be necessary where there is a conflict with the proposed improvements. Every effort will be made to minimize utility conflicts and relocations.

A number of utilities are within the Caltrans right-of-way. The majority of these utilities are not in conflict with the proposed improvements and do not adversely affect highway safety and traffic operations. Thus, the project proposes to maintain existing conditions.

Verifications of utilities will be performed in the next phase. The need for positive locating (potholing), as prescribed in the Caltrans Policy on High and Low Risk Underground Facilities within Highway Rights of Way (January 1997),¹² is recognized. Table 4-8 shows the anticipated utility relocations for the project.

Table 4-8: Anticipated Utility Relocations Construction Costs

Location	Impacted Alternative	Facility	Owner	Estimated Relocation Cost
Mirada Road, Miramar	2	6-inch distribution gas in 8-inch casing (extend casing) Relocate 2,000 feet of existing communication lines	PG&E Comcast	\$20,000 \$24,000
Moss Beach	2	Relocate 400 feet of sanitary sewer line and manhole	MWSD	\$30,000
16th Street, Montara	2	Relocate existing 500 feet of sewer line and manhole Relocate existing 200 feet of gas distribution line	MWSD PG&E	\$102,500 \$30,000
1st Street–9th Street, Montara	2	Relocate existing PG&E electrical pole Relocate existing 200 feet of gas distribution line Relocate existing 800 feet of sewer line and manhole	PG&E PG&E MWSD	\$200,000 \$30,000 \$80,000
Gray Whale Cove	1&2	Relocate underground electrical lines and vault	PG&E	\$115,000

4.10 ENVIRONMENTAL

A Preliminary Environmental Analysis Report (PEAR) checklist has been prepared for this project to evaluate the potential impacts to the environment and to identify the technical studies required to obtain environmental clearance. This checklist for all alternatives is included in Attachment D.

All alternatives are in unincorporated areas of San Mateo County or in the State of California's Coastal Zone. The County has adopted an LCP that has been approved by the California Coastal Commission as being consistent with the California Coastal Act. If the County determines that a project is consistent with its LCP, normally that project also meets the requirements of the Coastal Act. The proposed improvements along Highway 1 fall within the County's LCP Midcoast planning area. If federal funds, permits, and/or approvals are required, a Federal Consistency Certification review is likely necessary and therefore early assessment of project consistency with the policies in Chapter 3 of the Coastal Act is warranted. Concurrence in a Federal Consistency Certification should be completed before approval of the Final Environmental Document.

4.10.1 The project improvements are consistent with the California Coastal Act and LCP because they would continue to provide coastal access and recreational opportunities with added safety benefits for pedestrians, while minimizing impacts to sensitive natural and biological resources and minimizing impacts to runoff and water quality.

Human Environment

Land Use

The project would enhance safe access to coastal resources and residential neighborhoods and recreational resources east and west of Highway 1. Therefore, no direct or indirect changes to land uses would result from the project. The project would not change or conflict with existing land use designations or parkland.

¹² This policy can be found in the Project Development Procedures Manual at: <http://www.dot.ca.gov/hq/oppd/pdpm/pdpmn.htm> in Appendix LL.

Coastal resources potentially affected under each Alternative 1 include Transportation and Traffic, Visual/Aesthetics, and the Biological Environment. Coastal resources potentially affected under each Alternative 2 and 3 include Transportation and Traffic, Visual/Aesthetics, Cultural Resources, the Biological Environment, Hydrology and Floodplain, and Water Quality and Storm Water Runoff. Also, the project is intended to provide safety improvements for pedestrians crossing Highway 1, including at and near state beaches such as Gray Whale Cove State Beach and Montara State Beach. Section 4(f) of the Federal Department of Transportation Act of 1966 requires consideration of alternatives and avoidance if public parks, recreation areas, wildlife and waterfowl refuges, and historic sites are affected. A state beach would be considered a Section 4(f) property, as would a defined public recreational trail. Alternative 1 is not likely to have any Section 4(f) property involvement with the exception of Gray Whale Cove. If federal funding is used to complete the project, a review of potential Section 4(f) properties would be required to determine if there are impacts to Section 4(f) resources. A preliminary review identified the following potential Section 4(f) properties with respect to the proposed work areas:

- Montara State Beach, Montara: This State Beach (a Section 4(f) property) includes a parking lot across from 2nd Street. The adjacent restaurant property and parking lot have maintained public parking and beach access as a long-time coastal development permit requirement, but the ownership is private and applications have been made to modify this public use requirement; this situation should be further reviewed regarding applicable Section 4(f) criteria when the alternatives are finalized.
- Gray Whale Cove State Beach: This State Beach is a Section 4(f) property, including the parking area, which provides necessary access to the beach.
- Three Section 4(f) properties would not be affected, but are accessed from Highway 1:
 - Mirada Road, Miramar: Mirada Road is signed on Highway 1 for public coastal access to the Half Moon Bay Coastal Trail and State Beach, about 1/3 mile from Highway 1. This residential road would have to remain open during construction.
 - California Avenue, Moss Beach: California Avenue is a residential street that also provides access from Highway 1 to the James V. Fitzgerald Marine Reserve (maintained by the San Mateo County Parks Department). California Avenue is about 1/3 mile from Highway 1 and would have to remain open during construction.
 - 16th Street, Montara: Just west of Highway 1, the Point Montara Light House is owned by the U.S. Coast Guard, maintained by State Parks, and used as a hostel. There would be no direct effects on the light house, and it would have to remain accessible during construction.

Farmlands and Timberlands

Prime farmland and farmland of local importance are adjacent to the east side of Highway 1 at the Half Moon Bay Airport and on the east and west sides of Highway 1 between El Granada and Half Moon Bay. However, the project locations are not adjacent to these areas. Work is proposed within the existing State right-of-way, which is not used or available for farm or agricultural use.

Community Impacts

No alternative is expected to result in permanent/long term negative impacts to the economy, displace or relocate any residents, change existing community boundaries, physically divide an established community, or create a new barrier to mobility within the project corridor. The project would introduce new signs and, depending on the alternative, reconfigure segments of the highway to accommodate turning lanes, acceleration lanes, and medians. Community concerns have been raised at initial public meetings regarding the extent of some of the changes, and their visibility.

Under Alternative 1, all project-related activities would take place within the existing right-of-way, and acquisition or relocation of residences, businesses, or other land uses would not be required.

However, under all alternatives, temporary construction easements may be required. Construction activities could result in temporary impacts to the local community and economy associated with traffic delays and possibly some disruption of roadside parking. Access to properties during construction would normally be maintained, except for brief periods of the day. Construction of Alternative 3 is anticipated to require few construction easements due to the nature of the work (i.e., retaining walls and raised medians). Construction of Alternative 2 is anticipated to require a larger number of construction easements due to its larger footprint. Alternative 2 could potentially affect parking or access from Highway 1 at approximately 10 businesses and 15 residences. Alternatives 1 and 3 are less likely to restrict access to businesses and residences because the re-striping and signage installation would mainly occur within the existing paved area, allowing vehicle access around construction crews and equipment. The degree to which these locations are temporarily affected would depend on the length of construction time.

Utilities and Emergency Services

Alternatives 2 and 3 could result in utility relocations where there is a conflict with the proposed improvements (see Section 4.9, Right-of-Way and Utility Impacts, for details). The proposed improvements would not permanently affect emergency services. Although reduced traffic speeds could be expected around the proposed pedestrian crossings, impacts to emergency vehicle travel times are not expected. Emergency vehicles are normally provided full access through construction zones and are not delayed; temporary delays would only result to emergency services if they are constrained by construction-related traffic congestion. This potential impact would be addressed during environmental review; each alternative would have similar potential for this effect.

Traffic and Transportation/Pedestrian and Bicycle Facilities

All three alternatives are anticipated to reduce traffic within the project area.

All alternatives are designed to improve pedestrian safety and mobility throughout the project area. Pedestrian and bicycle facilities may be temporarily impacted during construction, but would be restored to pre-construction conditions, and no long-term impacts are anticipated.

During construction of Alternative 2, a bus stop near Mirada Road in El Granada would be temporarily relocated.

Visual/Aesthetics

Highway 1 is listed by the State of California as an “eligible” scenic highway between San Luis Obispo and near State Route 35 in Daly City, which includes the project limits. An eligible scenic highway is defined by its natural landscape and the quality of the landscape and views. Highway 1 within the project limits has high visual quality. The San Mateo General Plan states,

“The Cabrillo Highway is along the ocean's edge, providing dramatic sea and coastal views to the traveler, as well as access to State and County beaches. A wide range of marine life, ecological systems, geological features, and historical and architectural landmarks are visible from the roadway. This is one of the most interesting roads in the County and is included in the State Master Plan for Scenic Highways”¹³

Highway 1 within the project corridor is bordered by cliffs, rolling hills, and grasslands to the east and the Pacific Ocean to the west. Development is present in Montara, Moss Beach, and Miramar on both the east side and the west side of the highway; development in El Granada is primarily restricted to the east side. Travelers on the highway within the project limits have views of the ocean and coastal areas interspersed with

¹³ The 1986 San Mateo General Plan can be found at: <https://planning.smcgov.org/sites/planning.smcgov.org/files/SMC-GP%201986.pdf>.

occasional development, overhead transmission lines, street lights and roadway signage. There is existing overhead street lighting along the highway, including at the intersections of 7th, 8th, and 9th Streets in Montara, Vallemar Street and Marine Boulevard in Moss Beach, and Mirada Road in Miramar. The installation of additional signage and lighting, crosswalks, raised medians, roadway widening, and left-turn pockets could result in a moderate or possibly higher level of change to the existing visual setting. Due to the location of Highway 1, this project may generate a heightened level of concern from local citizens with respect to visual impacts. A Visual Impact Assessment would be required to evaluate viewer sensitivity and impacts to the visual setting. A discussion of the aesthetic difference in the alternatives are as follows:

1. Alternative 1

Alternative 1 mainly consists of re-stripping, upgrading painted medians, paving the parking lot at Gray Whale Cove, and installing RRFBs, lighting, advance warning signs, and median markers. These changes would impact the appearance of the highway. Increased lighting and flashing beacons could have a minor to moderate change in the nighttime appearance along Highway 1 and add lighting to existing views from nearby properties.

2. Alternative 2

Alternative 2 includes all the project elements of Alternative 1, plus the addition of roadway widening, retaining walls, and median installation. Fewer RRFBs but a greater number of highway lights are associated with Alternative 2, indicating that the impacts to the nighttime viewshed would be slightly greater under Alternative 2 than under Alternative 1. The changes to the daytime visual environment associated with Alternative 2 would also be greater than those proposed under Alternative 1, indicating that the intensity of the daytime visual impacts of Alternative 2 would be greater than the intensity of the impacts for Alternative 1. Alternative 2 would also involve the removal of approximately 90 roadside trees to accommodate widening, which would pose an obvious change to the visual environment.

3. Alternative 3

Alternative 3 includes all the project elements of Alternative 1, plus the addition of some of the elements of Alternative 2 (widening, retaining walls, and median installation at gateway locations). Alternative 3 would have no RRFBs but would result in more highway lighting than Alternative 1 but less than Alternative 2. The impacts to the nighttime view shed and daytime visual environment would be slightly more than for Alternative 1 and less than for Alternative 2.

Cultural Resources

A preliminary review was conducted at the Northwest Information Center (NWIC) at Sonoma State University to determine the presence of previously recorded cultural resources in the vicinity of the project corridor. The preliminary review indicated that previously recorded and evaluated sites are present within and adjacent to the Highway 1 project corridor. Previously recorded sites include shell middens and habitation materials, including several sites considered eligible for listing on the National Register of Historic Places.

The project would require subsurface disturbance for the installation of signage, lighting, and widening. These proposed activities would require evaluation for their potential to impact buried cultural resources.

The risk of encountering buried cultural resources is generally similar for all three alternatives, though the least risk is for Alternative 1, with the risk increasing incrementally for Alternatives 3 and 2 as the work area expands. If work is required in an area of a known site, such as one of the shell midden deposits, an investigation of the work area and its surroundings would have to be conducted, and at that time the differences in construction area and the requirements for subsurface disturbance might have a bearing on whether one of the alternatives could avoid impacts better than the others. Before gaining further site-specific information through record review (or, potentially, field studies) and defining construction requirements with respect to any known site boundaries, the differences in alternatives is relatively speculative.

An Archaeological Survey Report (ASR) and a Historic Properties Survey Report (HPSR) will be necessary during environmental review to evaluate impacts to cultural resources along the project corridor. A more thorough records search should also be conducted at the NWIC, and consultation with Native Americans is recommended.

Physical Environment

Hydrology and Floodplain

4.10.2 Several creeks and drainages cross Highway 1 within the project corridor, and portions of the project are within the 100-year floodplain. Any impacts to hydrology and floodplains created by Alternative 1 are likely to be incidental due to the minor increase of impervious area at Gray Whale Cove compared to the watershed area. The impacts to hydrology and floodplain created by Alternative 2 are anticipated to be the highest; Alternative 2 proposes approximately 300,000 square feet of additional impervious area within the project footprint. Alternatives 1 and 3 would add less impervious area. All three alternatives add relatively incidental increases in impervious area when compared with the watershed area.

A Location Hydraulic Study, Floodplain Encroachment Report Summary, and/or a Floodplain Evaluation Report are recommended to evaluate the impacts to hydrology and floodplain along the project corridor.

Water Quality and Storm-Water Runoff

Alternatives 1 and 3 would result in less than 1 acre of ground disturbance, and coverage under the statewide permit would not be necessary. Alternative 2 would result in the greatest area of ground disturbance, roughly 6 acres, necessitating coverage under the statewide permit and a Clean Water Act Section 401 permit. Alternative 2 would require design measures in the project to reduce or treat runoff flow. The extent of acreage of new impervious area (and “reworked area”) for Alternative 2 may be considered hydromodification (changes in flow resulting from the project) and require treatment of runoff, which would have to be incorporated into the design.

Air Quality (All Alternatives)

This project is not expected to result in air quality impacts. The project is not anticipated to have a significant effect on vehicular volumes or levels of service; thus, the project would not impact air quality. An evaluation of construction-related emissions may be necessary for the build alternatives. If the project receives federal funding, it will be necessary to demonstrate compliance or exemption from federal conformity analysis requirements per 40 Code of Federal Regulations (CFR) 93.126. Given that the project would not add capacity and is a safety measure, it can likely be shown that it is exempt, but would require that determination from the Bay Area Air Quality Task Force and Caltrans/FHWA. An Air Quality Impact Assessment would not be required.

Hazardous Materials

A preliminary review of the Envirostor database indicates that one previously contaminated site is adjacent to the project corridor. Vehicle tire and brake wear, oil, grease, and exhaust from vehicular traffic on Highway 1 have the potential to contaminate roadside soils in the immediate vicinity with aerially deposited lead (ADL) and other heavy metals. Also, some of the soils and/or groundwater encountered during construction might require special handling. A review of the Environmental Data Resources, Inc. (EDR) database and available files from the Envirostor and Geotracker databases may be necessary to obtain additional information on sites within or adjacent to the project corridor. The preparation of an Initial Site Assessment is recommended.

Noise

The project is not expected to result in significant noise impacts. Construction noise would be temporary, limited in duration, and generally at or below the existing highway noise levels. The project does not appear to affect the existing noise environment by substantially changing the horizontal or vertical alignment of Highway 1 with respect to sensitive receptors (e.g., residences) and likely would not be a “Type 1” project (a project that substantially changes the vertical or horizontal alignment of the road); therefore, a Noise Study Report addressing noise abatement (barriers) should not be required, and noise barriers would likely not be acceptable along this section of the highway due to adverse visual impacts.

Biological Environment

U.S. Fish and Wildlife Service (USFWS) species occurrence information and the California Natural Diversity Database (CNDDDB) indicate the potential presence of endangered or listed species in the vicinity of the project corridor. Federally and state-listed species with the potential to occur within the project limits include the California red-legged frog (*Rana draytonii*) and the California garter snake (*thamnophis sirtalis tetrataenia*).

Compared with Alternatives 1 and 3 (both would result in less than 1 acre of construction disturbance), Alternative 2 would involve greater widening (more than 6 acres of construction disturbance). Both Alternatives 2 and 3 would require construction of retaining walls, which may encroach on potential habitat areas. The construction associated with Alternative 2 would be more intense than that associated with the other alternatives. All three alternatives would require avoidance measures to minimize effects to biological habitat during construction, but Alternative 2 may require more off-setting mitigation because of its greater area of effect. This area would be defined during the environmental review, when alternatives can be compared with identified and mapped habitats.

Roughly 90 trees would be removed under Alternative 2 to accommodate the proposed road widening. Alternative 1 would involve very little widening with minimal tree removal. Alternative 3 may impact up to an estimated 10 roadside trees, primarily in the Montara area.

A Natural Environment Study (NES) is recommended to evaluate impacts to special-status species and habitats as a result of the project. Depending on the outcome of the NES, an Endangered Species Act Section 7 consultation with the USFWS and California Fish and Wildlife Code Section 1600 coordination with the California Department of Fish and Wildlife may be needed.

There are two riparian areas that border Highway 1 that could be affected by one or more of the alternatives. At Arroyo de en Medio [Creek], adjacent to Miramar Drive in El Granada, Alternative 2 would have widening and culvert work required. At San Vicente Creek, south of Marine Boulevard in Moss Beach, Alternatives 2 and 3 would require widening near the creek. Alternative 1 in both locations would not have any effect. Other creeks would be crossed by the proposed highway alignments but only at areas on Highway 1 where there are wide shoulders that may adequately accommodate construction work. Depending on the results of further evaluation during environmental review of habitat and resources, a California Department of Fish and Wildlife Streambed Alteration Agreement may be required where work would impact the aforementioned waterways and habitats.

4.10.3 A potential wetland is also near the 1st Street section of the project corridor, in Montara. The widening at this location proposed under Alternatives 2 and 3 could encroach on this wetland, and a U.S. Army Corps of Engineers Section 404 permit would be required. Also, a Section 401 Water Quality Certification would be required.

Summary of Potential Impacts to the Environment

The potential impacts of the project to the environment and the permits potentially needed to obtain environmental clearance are summarized in Table 4-9.

Table 4-9: Environmental Impact Comparison Chart

Resource	Alternative 1 Impacts	Alternative 2 Impacts	Alternative 3 Impacts	Anticipated Permits
Land Use	Consultation with the California Coastal Commission for impacts to coastal resources			California Coastal Act Federal Consistency Certification
Community Impacts	Fewer temporary construction easements, construction time impacts	More temporary construction easements, construction time impacts	More temporary construction easements, construction time impacts	None
Utilities and Emergency Services	Smaller project footprint = fewer impacts to utilities Fewer project features = shorter impacts to emergency vehicles	Larger project footprint = more impacts to utilities More project features = longer impacts to emergency vehicles	Medium project footprint = some impacts to utilities Medium project features = medium impacts to emergency vehicles	None
Traffic	Low			None
Transit	None	Temporary relocation of one bus stop	None	None
Pedestrian/Bicycle Facilities	Increased pedestrian safety Temporary construction impacts			None
Visual/Aesthetics	Less overall impact Greater nighttime impacts Fewer than 10 trees to be removed	More overall impact Greater daytime impact Approximately 90 trees to be removed	Medium overall impact Medium daytime & nighttime impacts Fewer than 10 trees to be removed	None
Cultural Resources	Smaller project footprint = fewer impacts to historic resources Smaller disturbed soil area = fewer impacts to archaeological resources	Larger project footprint = more impacts to historic resources Larger disturbed soil area = more impacts to archaeological resources	Larger project footprint = more impacts to historic resources Larger disturbed soil area = more impacts to archaeological resources	Alternative 1 & 3: Section 106 consultation unlikely Alternative 2: Section 106 consultation likely
Hydrology and Floodplain	Roughly 22,000 square feet of impervious area = lower potential to alter	Roughly 300,000 square feet of impervious area = higher potential to alter	Roughly 42,000 square feet of impervious area = medium potential to alter	None
Water Quality and Storm-Water Runoff	Less than 1 acre of ground disturbance	More than 6 acres of ground disturbance	Less than 1 acre of ground disturbance	Alternative 1: none Alternative 2: Section 401 permit Alternative 3: none
Air Quality	No effect			None
Hazardous Materials	Smaller disturbed soil area = lower potential to encounter	Larger disturbed soil area = higher potential to encounter	Medium disturbed soil area = medium potential to encounter	None
Noise	No effect			None
Biological Resources	All alternatives would have to include construction avoidance and minimization measures. Smallest disturbed soil area = lower potential to disturb protected habitat or take endangered species	Largest disturbed soil area = higher potential to disturb protected habitat or take endangered species Likely to encroach on a wetland near 1st Street, Montara.	Relatively small disturbed soil area, similar to Alternative 1 but includes more widening at Montara and Moss Beach. Could encroach on a wetland near 1st Street, Montara.	Section 7 consultation Section 1600 consultation Alternative 2: Section 404 permit

4.11 COST ESTIMATES

A summary of the estimated **construction** costs (escalated to construction year mid-point) and the support costs of the proposed alternatives is presented in Table 4-10 and Table 4-11, respectively.

Table 4-10: Construction Cost Estimates (Capital Costs)

Location	Alternative 1 (1A/1B)	Alternative 2	Alternative 3
Mirada Road, Miramar	\$371,000	\$4,122,000	—
Moss Beach*	\$680,000/\$577,000	\$7,405,000	\$2,947,000
16th Street, Montara	\$377,000	\$3,325,000	—
1st Street–9th Street, Montara	\$517,000	\$7,246,000	\$4,106,000
Gray Whale Cove	\$951,000	\$1,050,000	—

Notes:

Detailed cost estimates for each location are provided in Attachment C.

*Moss Beach location includes proposed improvements at Cypress Avenue.

Table 4-11: Support Cost Estimates

Location	Alternative 1 (1A/1B)	Alternative 2	Alternative 3
Mirada Road, Miramar	\$138,000	\$1,526,000	—
Moss Beach*	\$252,000/\$214,000	\$2,740,000	\$1,091,000
16th Street, Montara	\$140,000	\$1,231,000	—
1st Street–9th Street, Montara	\$191,000	\$2,681,000	\$1,519,000
Gray Whale Cove	\$351,000	\$388,000	—

Notes: Support Cost includes Environmental, Design and Construction Administration costs. Detailed cost estimates for each location are provided in Attachment C.

*Moss Beach location includes proposed improvements at Cypress Avenue.

4.12 SCHEDULE

Table 4-12 shows the estimated project milestone schedule for each alternative. This schedule is subject to change based on environmental impacts, cost, and funding availability.

Table 4-12: Project Milestone Schedule

Project Milestones	Alternative 1	Alternative 2	Alternative 3
Highway 1 Study Phase 1	2010	2010	2010
Highway 1 Study Phase 2	2012	2012	2012
Congestion & Safety Improvement Project Feasibility Study (Preliminary Planning Study)	2015	2015	2015
Caltrans PID	2016	2016	2016
Environmental Document	2016	2017	2017
Final Design	2017	2018	2018
Construction	2018	2020	2019

Note: Shown in year of completion (time frames indicated after 2015 are estimates).

Projects requiring pavement widening (primarily Alternative 2 and Alternative 3), require additional environmental and engineering studies.

5. PUBLIC OUTREACH

Public input has been a very important factor for this project. As part of this study, the SMCTA and San Mateo County held four public meetings/workshops. Comments and questions received from these workshops have been included with this report and can be found in Attachment G.

The first two public meetings, held on **Wednesday, June 18, 2014**, at **Farallone View Elementary School** in **Montara** and **Thursday, July 31, 2014**, at **Cypress Meadows** in **Moss Beach**, presented alternatives for all locations, provided community members an opportunity to voice preferences, and facilitated a question-and-answer style workshop to help the design team understand the communities' desires. The majority of the comments received at the first two public meetings/workshops fell into six main categories: medians for pedestrian refuge, acceleration lanes, lighting concerns, traffic concerns, speed issues, and schedule concerns.

The third public meeting, which was held on **Wednesday, March 11, 2015**, at **Cypress Meadows** in **Moss Beach**, followed the circulation of the first draft Preliminary Planning Report. The meeting gave the public another opportunity to provide input on the study and help prioritize the improvements. The public comment period was left open for a month following the third public meeting. Comments were received primarily through the San Mateo County's MindMixer website and via email to project staff. This subsequent comment period provided the project team with additional community input on the six main categories and, more specifically, on the locations at the Montara and Moss Beach village centers. The general consensus heard from the public meeting was that the range of alternatives was too broad. Alternative 3 was developed after the third public meeting to address the public's concerns and helped narrow down the range of alternatives to facilitate a middle ground of proposed improvements. As discussed above, Alternative 3 combines features of Alternative 1 and Alternative 2 (e.g., raised medians) while minimizing resulting widening and earth retention structure work. Comments from the public have been incorporated into the project alternatives, and a detailed output of gathered comments has been included in Attachment G.

The fourth public meeting was held on **Tuesday, June 23, 2015**, at the **Half Moon Bay Yacht Club** in **El Granada** following the circulation of the second draft Preliminary Planning Report and revised alternatives. Alternative 3 was presented to mixed reviews. After collecting all comments from the community meeting and subsequent public comment period, the community provided clearest direction on the alternatives at Mirada Road in Miramar, Cypress Avenue in Moss Beach, 16th Street and 2nd Street in Montara, and Gray Whale Cove.

Public participation will continue through the future phases of the project.

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6. PROJECT DELIVERY RECOMMENDATIONS

6.1 PROJECT DELIVERY OPTIONS

Highway 1 is a state highway, so project delivery of any of the improvements will need to follow the Caltrans project development guideline as outlined in the Caltrans Project Development Procedures Manual. The project delivery options were developed in consultation with Caltrans, SMCTA, and San Mateo County. The options can be approached with two different methods or tracks, as detailed below:

First Track: Combine all project locations:

- 1) PID: Develop a Project Study Report (PSR)–Project Development Support
- 2) Project Approval: Prepare a PA&ED
- 3) Final Design: Prepare PS&E

Second Track: Individual project locations

- 1) Project Initiation Document and Approval: Prepare a PEER
- 2) Final Design: PS&E

The pros and cons associated with the two tracks for project delivery are summarized in Table 6-1.

Table 6-1: Project Delivery Options

Track	Pros	Cons
First Track: PSR → PA&ED → PS&E (Combined project)	<ul style="list-style-type: none"> • Clears every location for construction • Potential cost savings as projects could be implemented under one contract 	<ul style="list-style-type: none"> • Lengthy process - alternatives with controversy could hold up projects with general community support. • Environmental impacts have an accumulative total which has potential to trigger more extensive permitting and approval • Caltrans Cooperative Agreement Needed
Second Track: PEER → PS&E (Individual projects)	<ul style="list-style-type: none"> • Can sequence locations and clear locations individually • Implementation of alternatives as funding becomes available • No need for Caltrans Cooperative Agreement • Projects with community support can be constructed while more complex projects are undergoing further study 	<ul style="list-style-type: none"> • Potential for higher cost as each project is constructed separately • Individual project cost must be less than \$3M. • Need Caltrans Encroachment Permit

6.2 IMPLEMENTATION RECOMMENDATIONS

The recommendation for implementations of non-controversial alternatives is through the Caltrans Encroachment Permit (i.e., PEER) Process. The identified recommended alternatives are under the \$3 million threshold and will qualify for the PEER process. This approach would allow the less-complex improvements to be implemented in the shortest time and as funding becomes available. However, this process does not eliminate the need for permitting.

6.3 ALTERNATIVE RECOMMENDATIONS

The alternative recommendations are developed based on public safety, feasibility of implementation, and community input and support. The locations where clear direction and support emerged for specific alternatives during the public process are identified below.

- Mirada Road, Miramar – Future consideration
- Cypress Avenue, Moss Beach – Limit to restriping of acceleration lane for northbound Highway 1 traffic
- 16th Street, Montara – Alternative 1
- Gray Whale Cove – Alternative 1

Due to strong community support for a project at California Avenue/Virginia Avenue in Moss Beach and 2nd Street in Montara, it is determined that SMCTA should proceed with Alternative 3 at each location as the preferred alternative. Significant community support was expressed for traffic-calming features that would reduce vehicle speeds, support a pedestrian refuge, and enhance vehicular and pedestrian safety. The community also expressed a strong desire to minimize light pollution at these locations. It is determined that the Alternative 3 projects best meet these needs. Each project should be implemented separately from each other according to funding availability.

No individual alternative at 7th Street in Montara was identified during the process. If a project is desired at this location, further evaluation should be conducted. General recommendations and action items for future studies at 7th Street in Montara include:

- Conduct traffic and pedestrian counts throughout the project limits;
- Determine the optimal locations for the pedestrian crossings based on pedestrian counts (It is recommended that pedestrian counts be conducted during the weekend, when the highest recreational pedestrian volumes are present.);
- Determine the locations where consolidating left-turn movements would be warranted to improve traffic flow and safety through town centers; and
- Continue coordination with other pedestrian trail projects within the corridor to provide optimal pedestrian connectivity.

7. PROJECT REVIEWS

The project improvements were reviewed by the SMCTA, the County of San Mateo, Caltrans, the public, and the Midcoast Community Council.

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**Attachment A:
Project Location and Vicinity Map**

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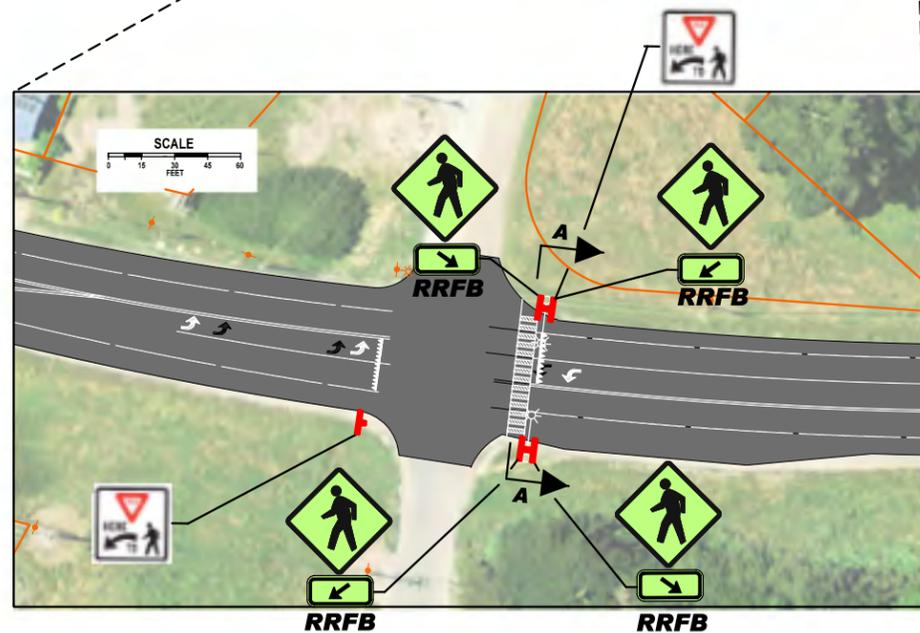
PROJECT LOCATION

LOCATION MAP

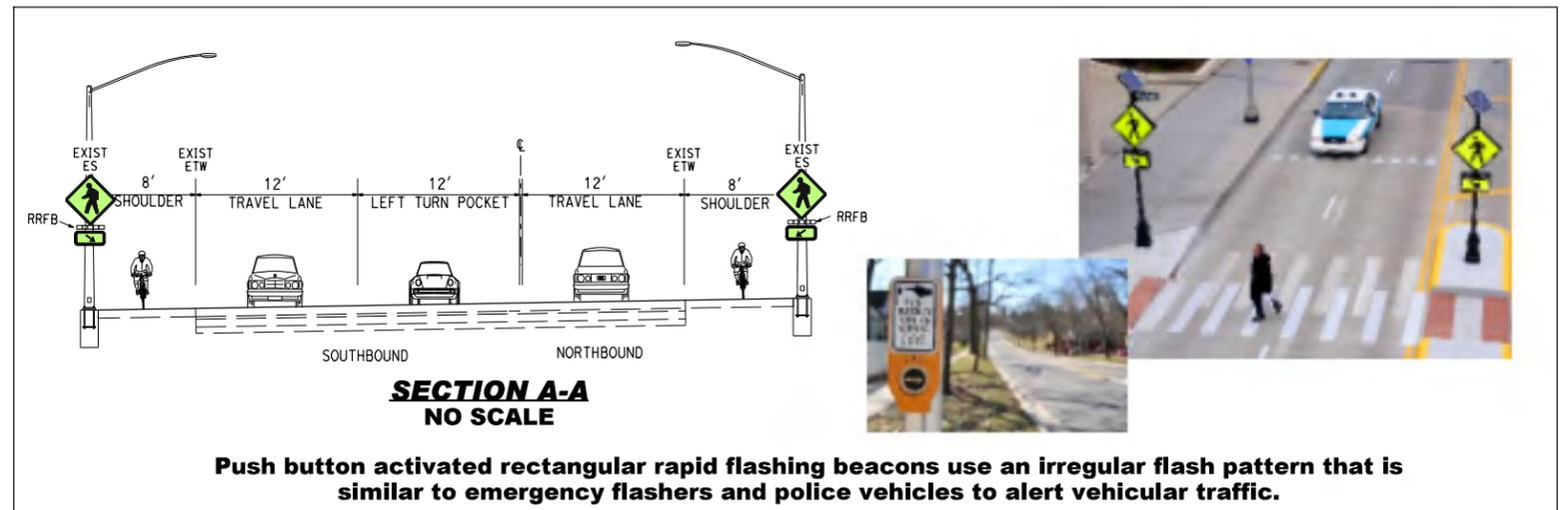
**Attachment B:
Alternative Exhibits**

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DESIGNATED PEDESTRIAN CROSSING MIRADA ROAD - ALTERNATIVE 1



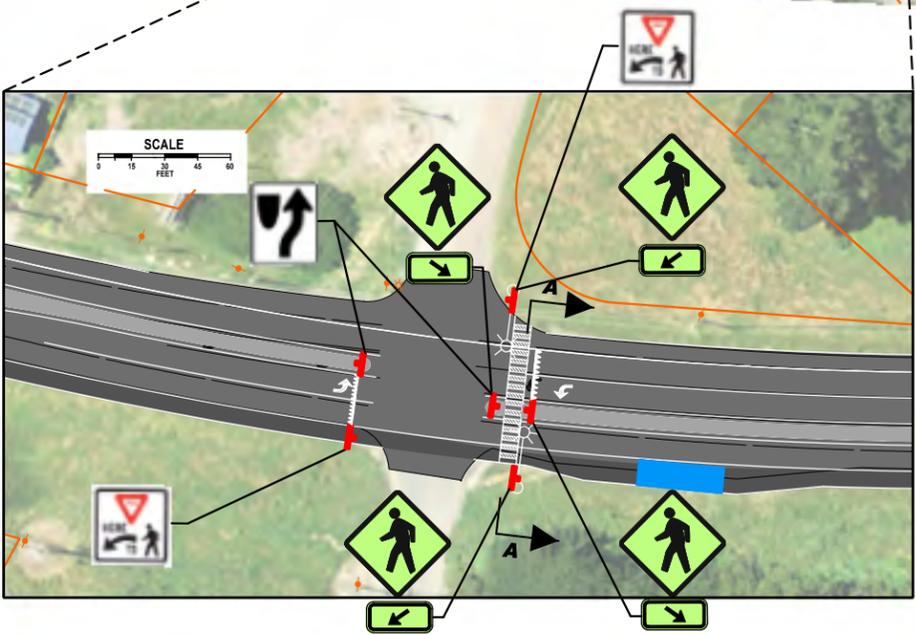
RAPID RECTANGULAR FLASHING BEACON



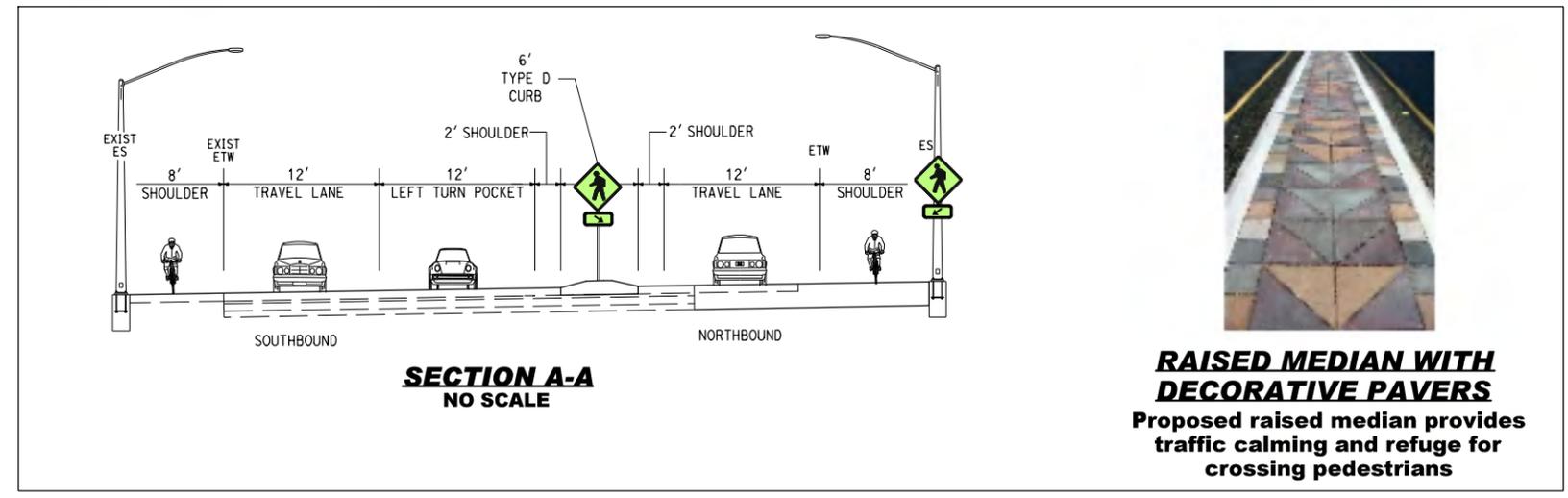
LEGEND:

- PROPOSED SIGNAGE**
- PROPOSED STRIPING**
- EXISTING BUS STOP**
- EXISTING ROADWAY**
- EXISTING STRIPING**

DESIGNATED PEDESTRIAN CROSSING MIRADA ROAD - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB

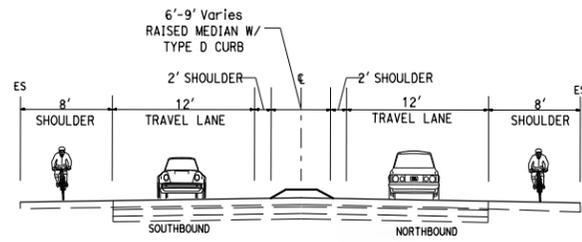


LEGEND:

- PROPOSED WIDENING
- PROPOSED STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- EXISTING ROADWAY
- EXISTING STRIPING
- PROPOSED SIGNAGE

RAISED MEDIAN ACCELERATION LANE CYPRESS AVE - ALTERNATIVE 3

RAISED MEDIAN



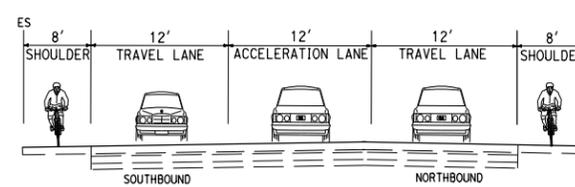
**TYPICAL SECTION
NO SCALE**



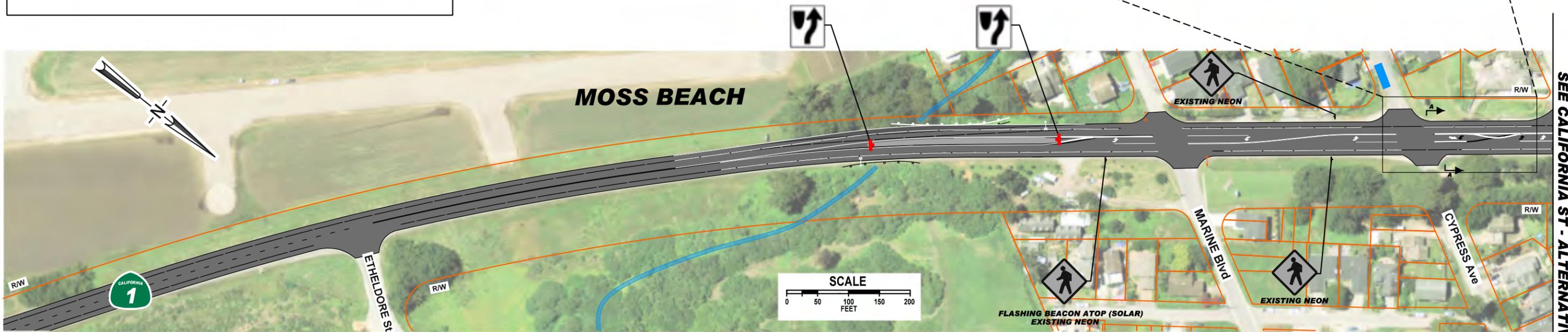
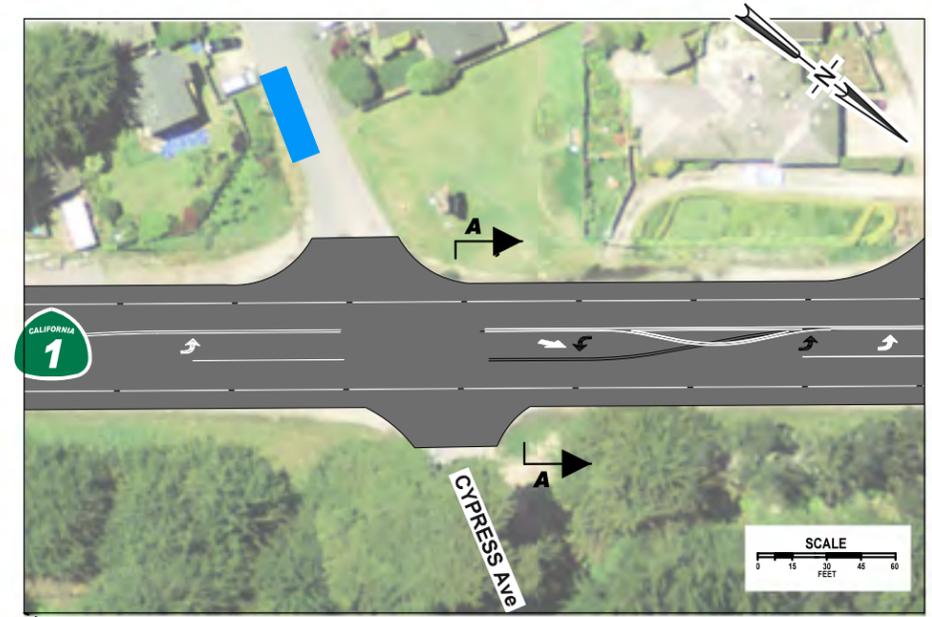
**RAISED MEDIAN WITH
DECORATIVE PAVERS**

Proposed raised median provides traffic calming.

ACCELERATION LANE



**SECTION A-A
NO SCALE**



LEGEND:

- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE

SEE CALIFORNIA ST - ALTERNATIVE 3



ETHELDORE ST - CYPRESS AVE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

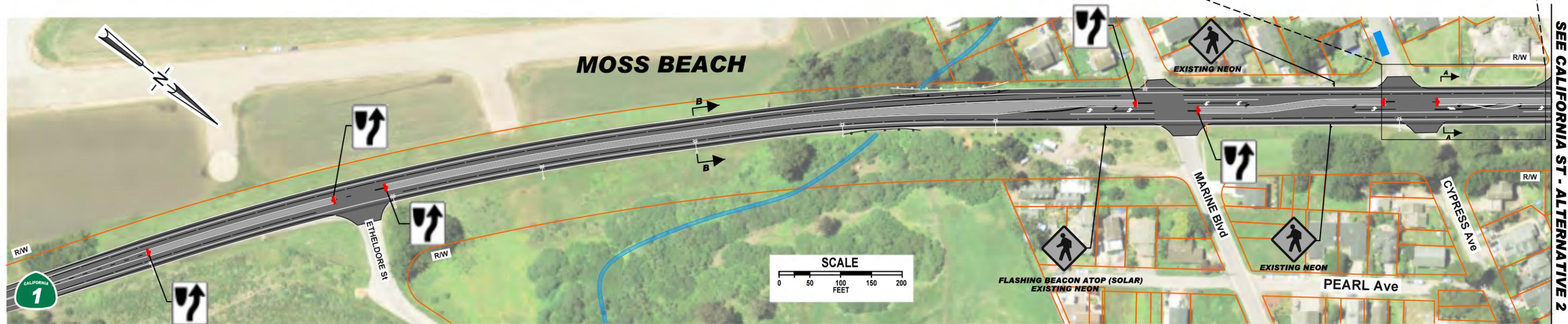
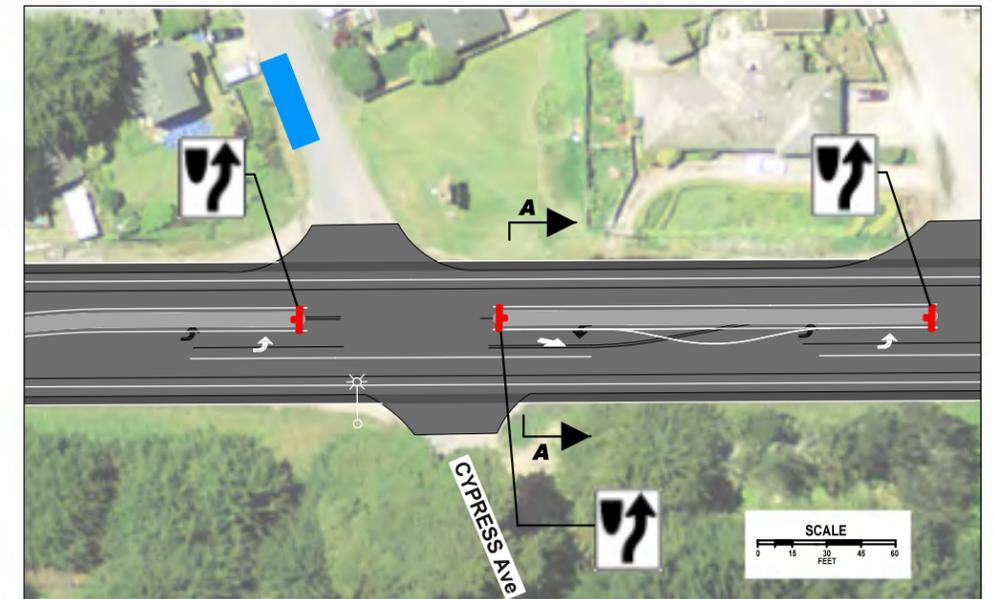
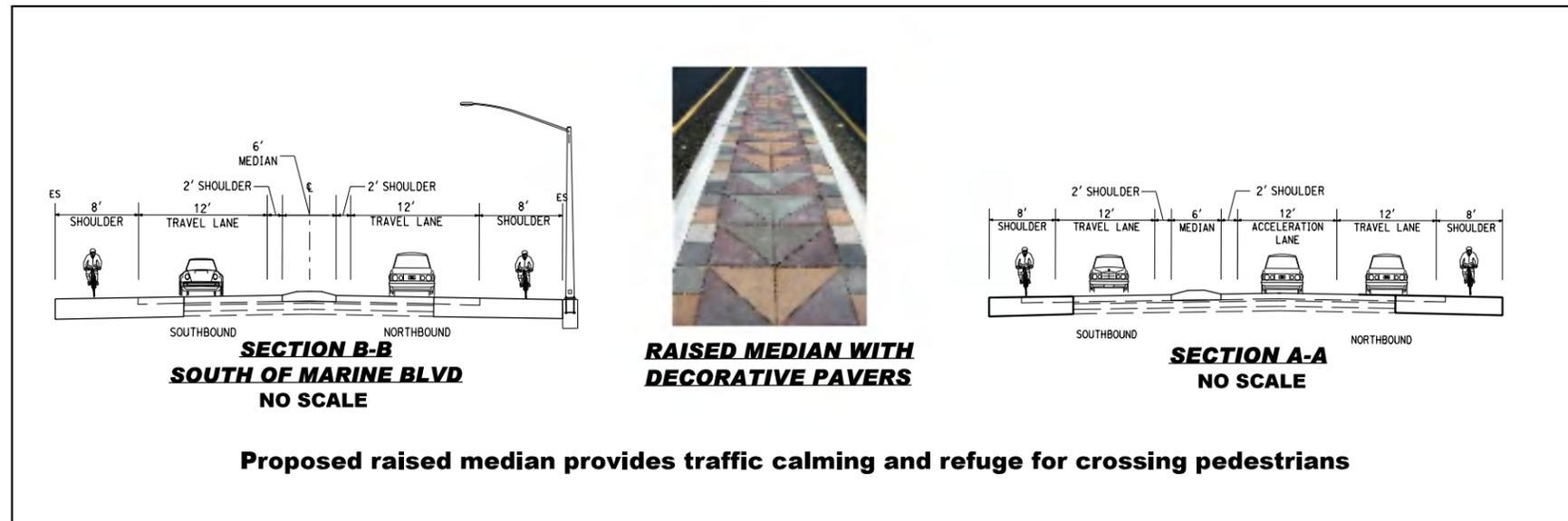
ALTERNATIVE

3

JUNE 2015

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN CYPRESS AVE - ALTERNATIVE 2

RAISED MEDIAN WITH TYPE D CURB



LEGEND:

- PROPOSED WIDENING**
- EXISTING ROADWAY**
- PROPOSED STRIPING**
- EXISTING STRIPING**
- PROPOSED RAISED MEDIAN**
- PROPOSED SIGNAGE**
- EXISTING BUS STOP**
- EXISTING SIGNAGE**



**ETHELDORE ST - CYPRESS AVE, MOSS BEACH
HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)**

ALTERNATIVE

2

JUNE 2015

SEE CALIFORNIA ST - ALTERNATIVE 2

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN CYPRESS AVE - ALTERNATIVE 1

HIGH VISIBILITY PAINTED MEDIAN

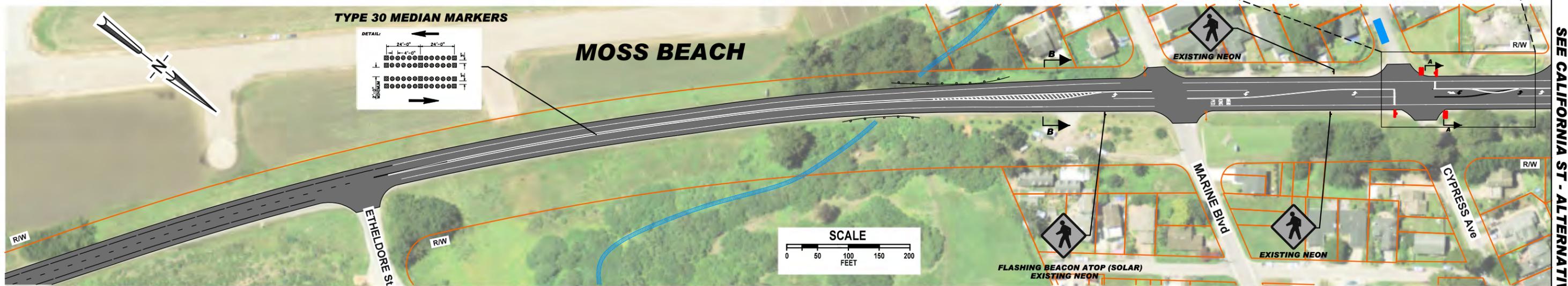
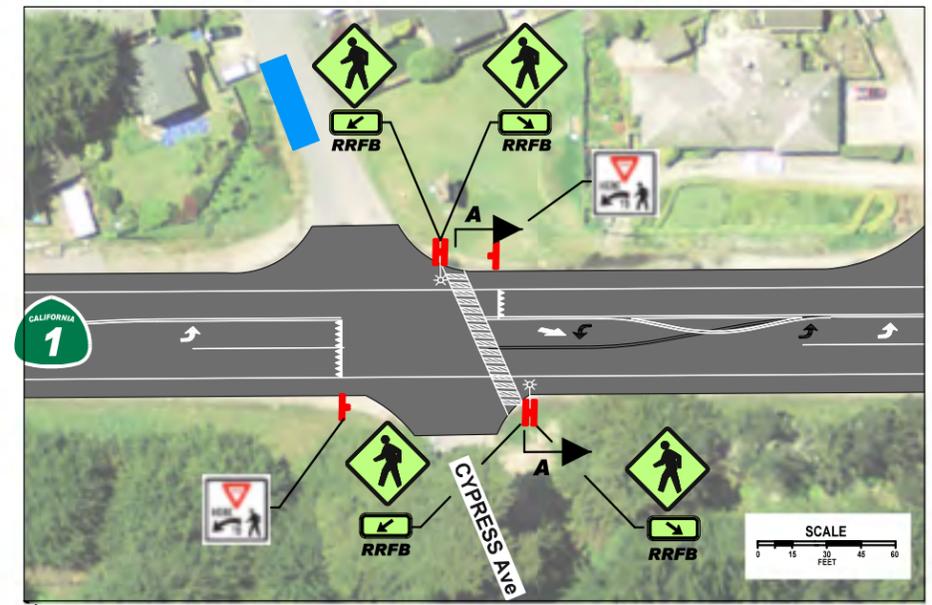
**SECTION B-B
NO SCALE**

Painting existing median helps to provide traffic calming

RECTANGULAR RAPID FLASHING BEACON

**SECTION A-A
NO SCALE**

Push button activated rectangular rapid flashing beacons use an irregular flash pattern that is similar to emergency flashers and police vehicles to alert vehicular traffic.



LEGEND:

- PROPOSED STRIPING
- EXISTING BUS STOP
- EXISTING ROADWAY
- EXISTING STRIPING
- EXISTING SIGNAGE
- PROPOSED SIGNAGE

SEE CALIFORNIA ST - ALTERNATIVE 1



ETHELDORE ST - CYPRESS AVE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

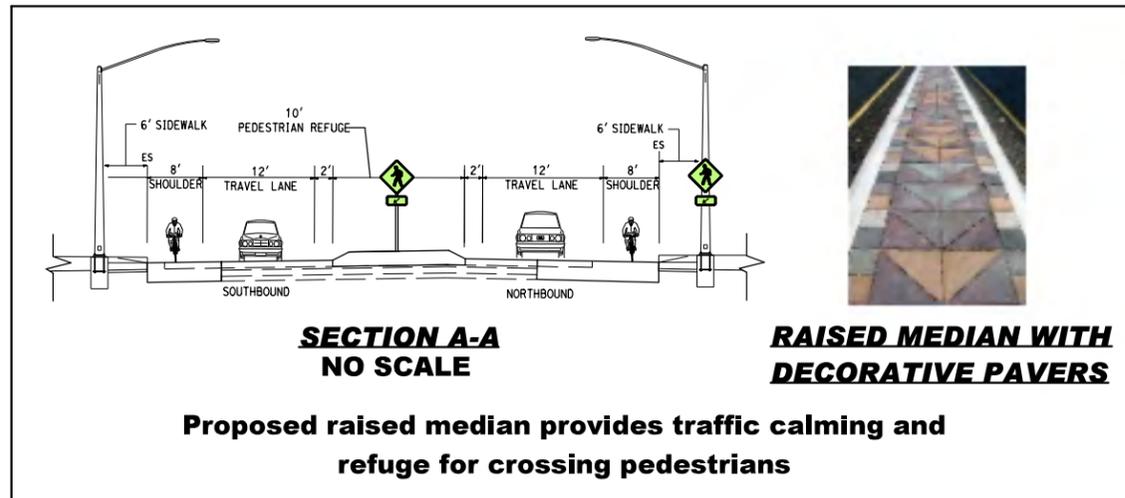
ALTERNATIVE

1

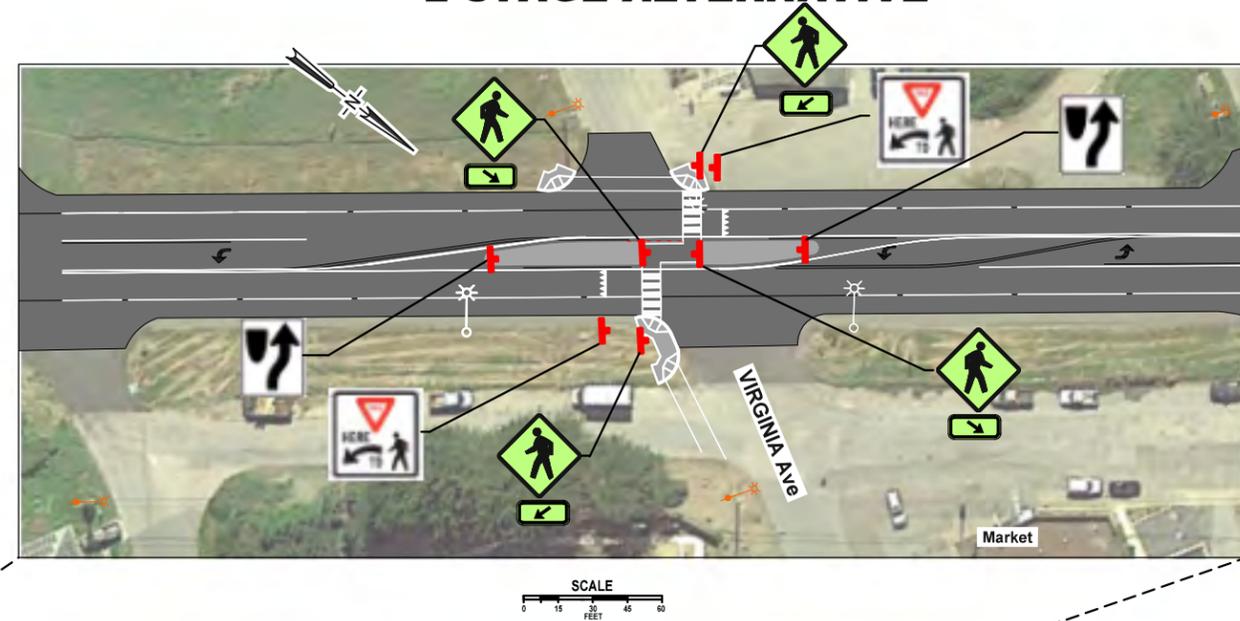
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING | RAISED MEDIAN VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 3

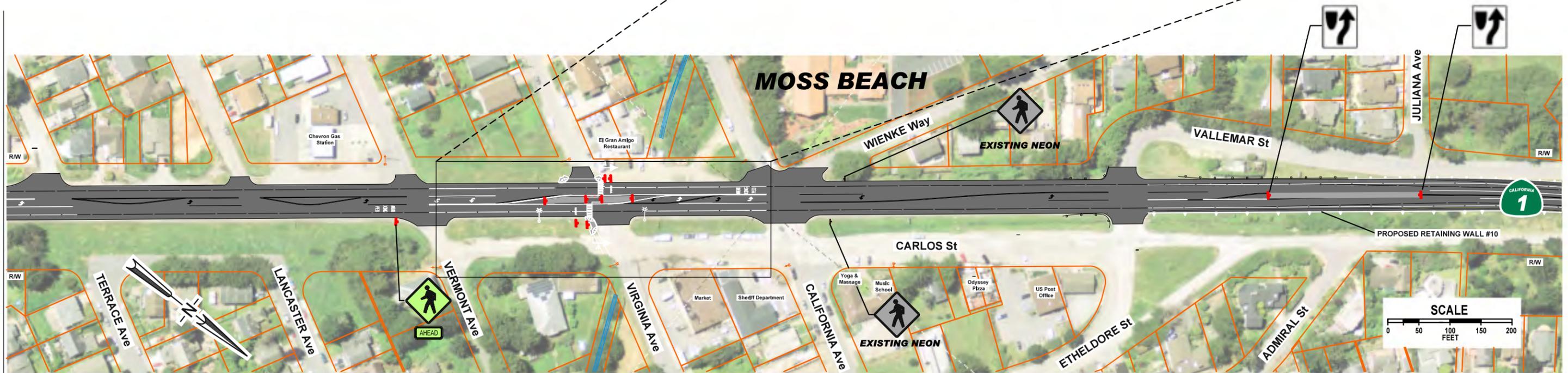
RAISED MEDIAN WITH TYPE D CURB



2 STAGE ALTERNATIVE



SEE CYPRESS AVE - ALTERNATIVE 3



LEGEND:

- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING SIGNAGE



CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

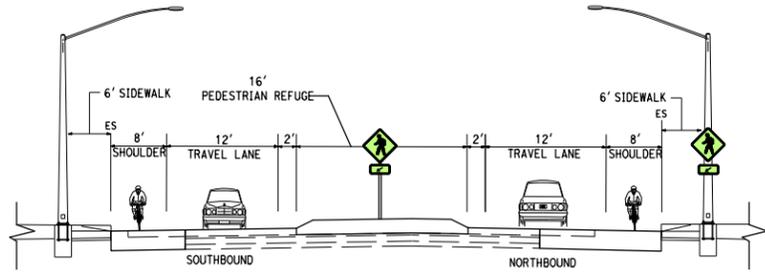
ALTERNATIVE

3

JUNE 2015

DESIGNATED PEDESTRIAN CROSSINGS VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 2

RAISED MEDIAN WITH TYPE D CURB

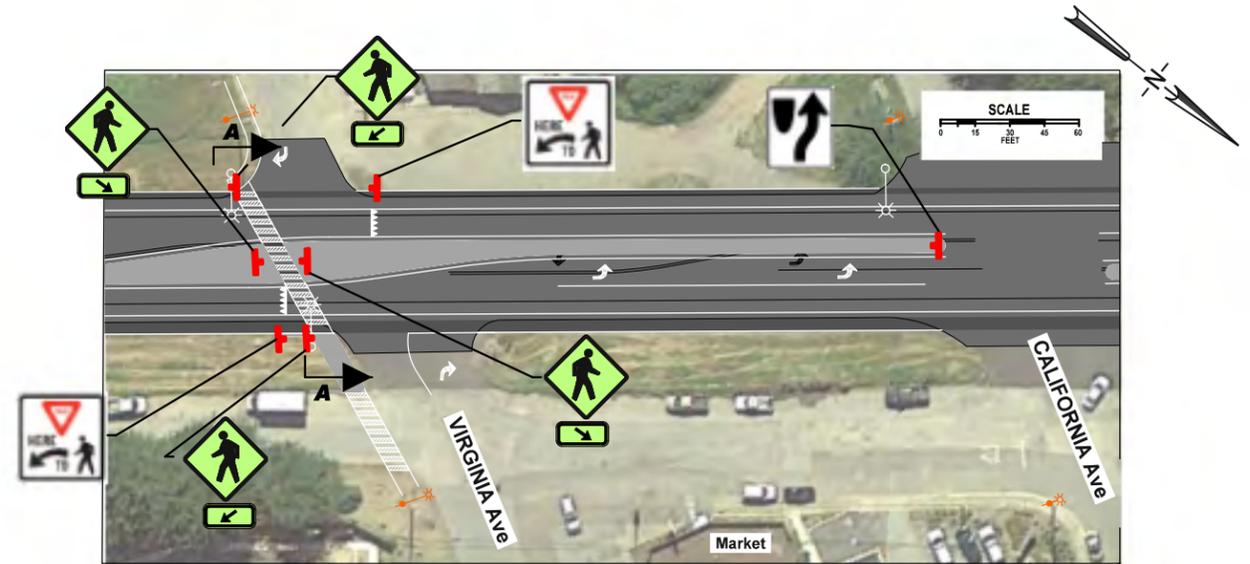


**SECTION A-A
NO SCALE**



**RAISED MEDIAN WITH
DECORATIVE PAVERS**

Proposed raised median provides traffic calming and refuge for crossing pedestrians



SEE CYPRESS AVE - ALTERNATIVE 2



LEGEND:

- | | | | |
|--------------------------|--------------------------|-------------------------------|-------------------------|
| PROPOSED WIDENING | PROPOSED STRIPING | PROPOSED RAISED MEDIAN | PROPOSED SIGNAGE |
| EXISTING ROADWAY | EXISTING STRIPING | EXISTING SIGNAGE | EXISTING SIGNAGE |



CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

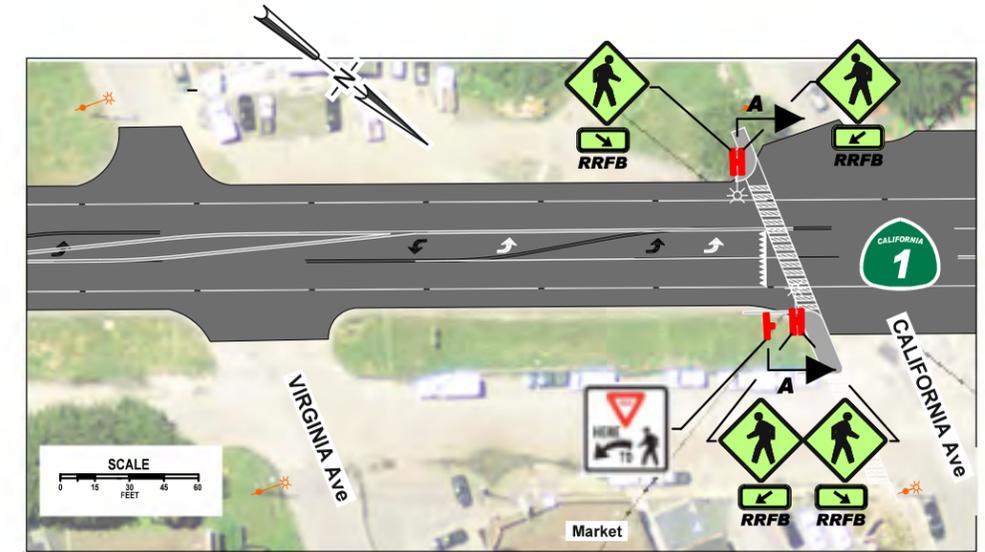
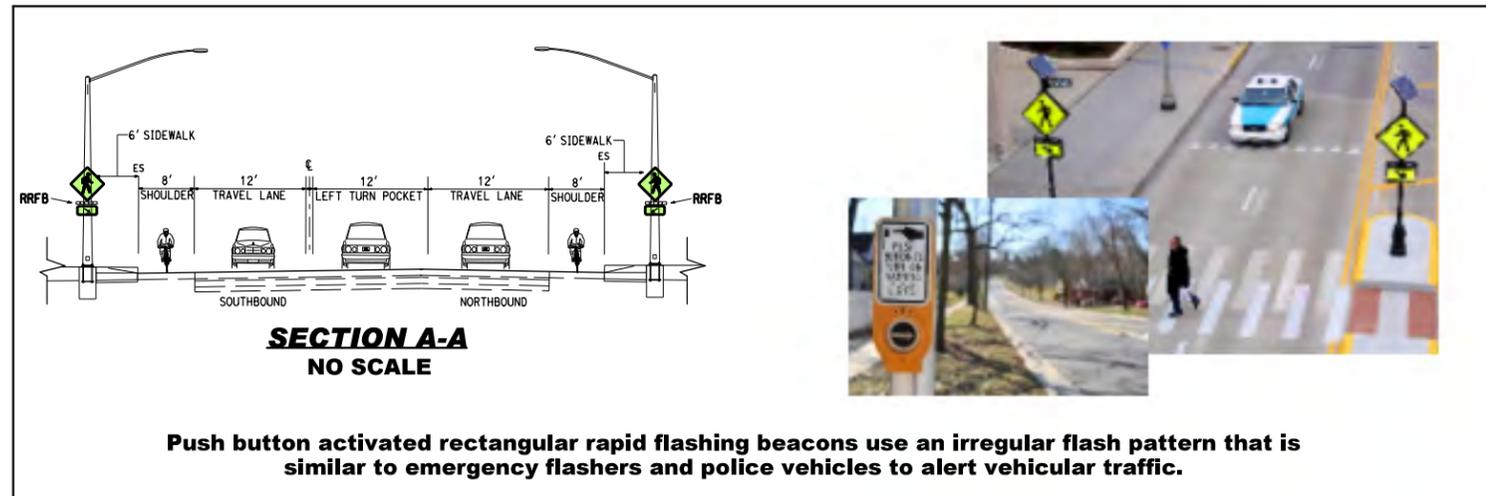
ALTERNATIVE

2

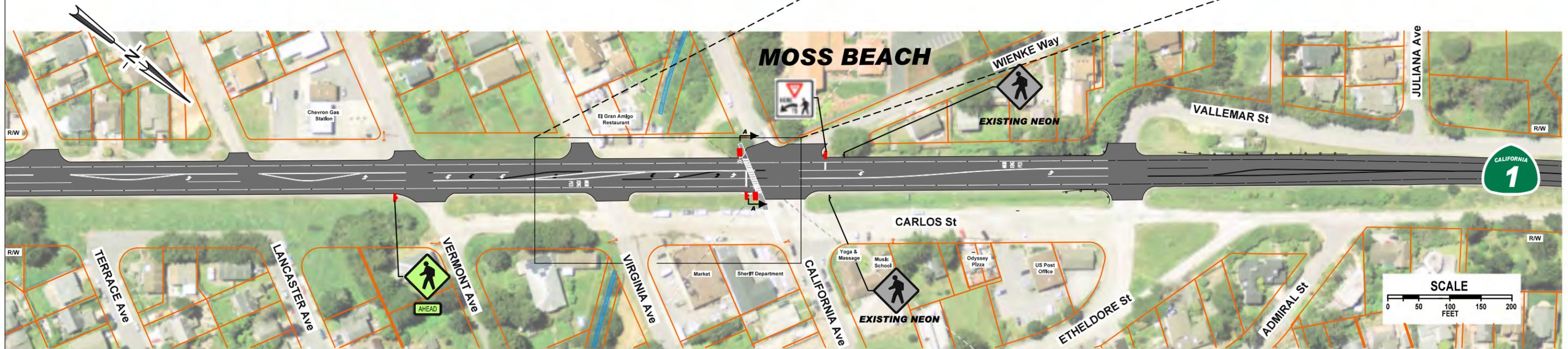
JUNE 2015

DESIGNATED PEDESTRIAN CROSSINGS VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 1B

RECTANGULAR RAPID FLASH BEACON



SEE CYPRESS AVE - ALTERNATIVE 1



LEGEND:

- EXISTING STRIPING
- EXISTING ROADWAY
- PROPOSED STRIPING
- PROPOSED SIGNAGE
- EXISTING SIGNAGE



CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

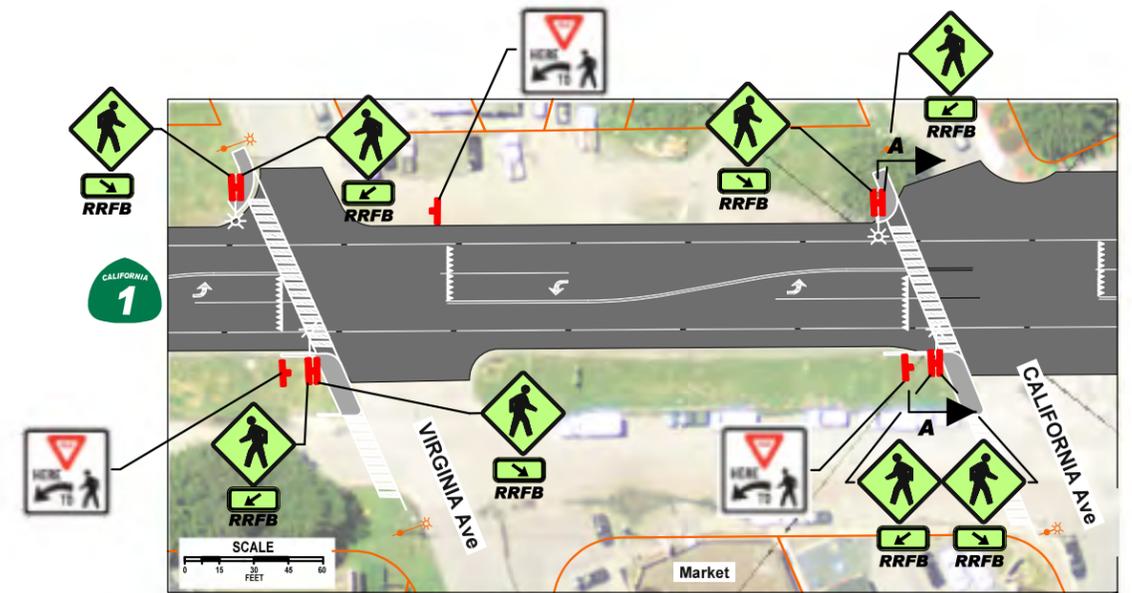
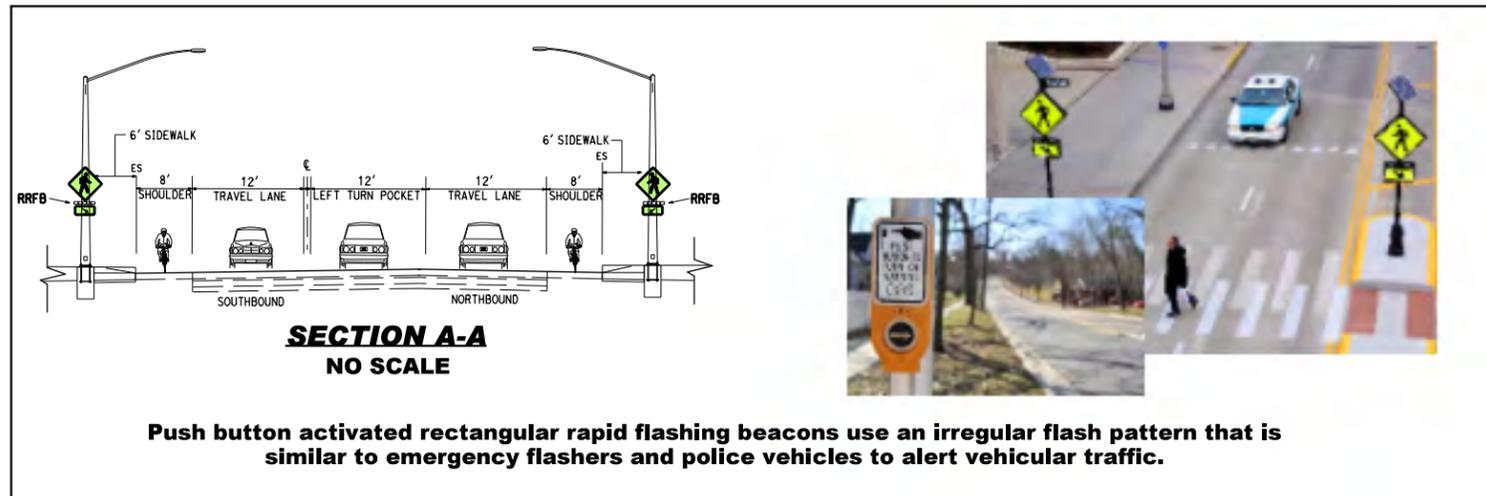
ALTERNATIVE

1B

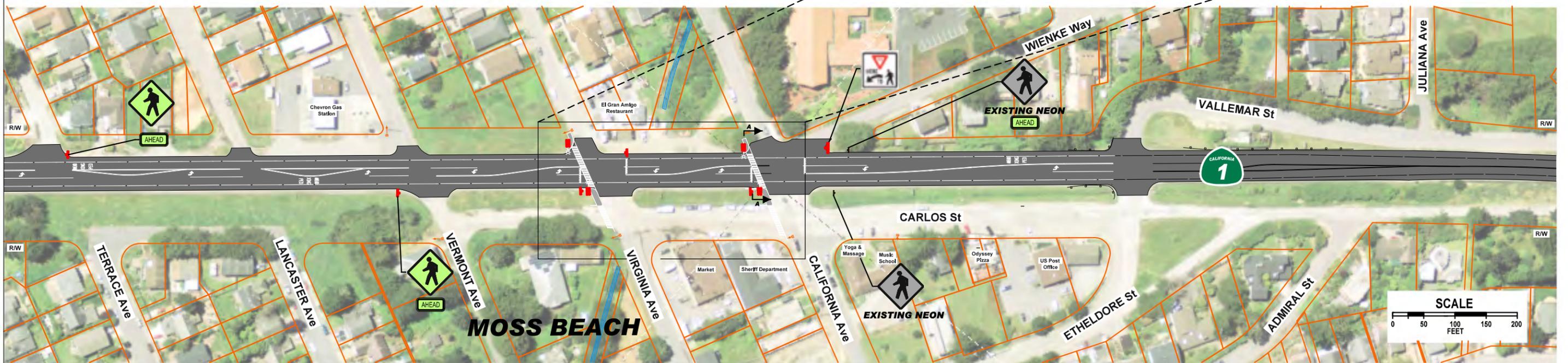
JUNE 2015

DESIGNATED PEDESTRIAN CROSSINGS VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 1A

RECTANGULAR RAPID FLASH BEACON



SEE CYPRESS AVE - ALTERNATIVE 1



LEGEND:

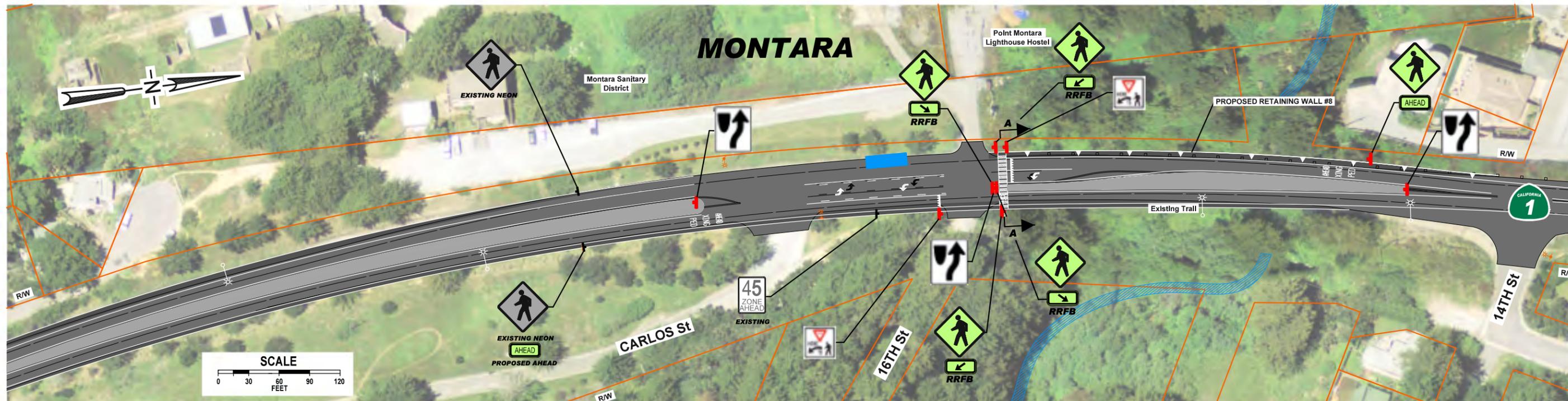
- EXISTING STRIPING**
- PROPOSED STRIPING**
- EXISTING ROADWAY**
- PROPOSED SIGNAGE**
- EXISTING SIGNAGE**



CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE
1A
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING 16TH STREET - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB AND RAPID RECTANGULAR FLASHING BEACONS



RAISED MEDIAN WITH DECORATIVE PAVERS

Proposed raised median provides traffic calming and refuge for crossing pedestrians

RAPID RECTANGULAR FLASHING BEACONS

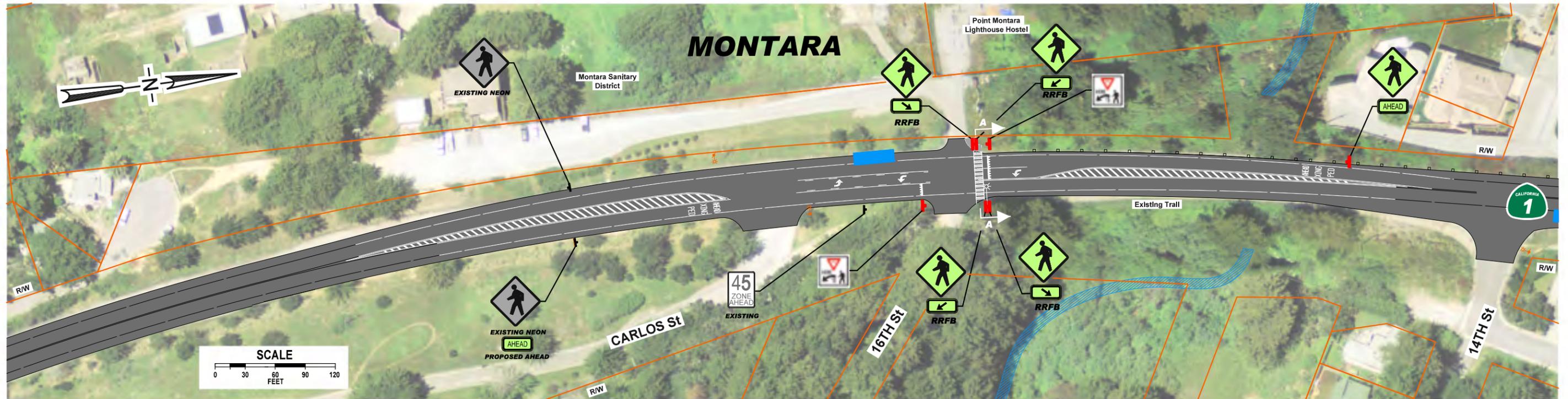
Push button activated rectangular rapid flashing beacons use an irregular flash pattern that is similar to emergency flashers and police vehicles to alert vehicular traffic.

LEGEND:

- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- PROPOSED SIGNAGE
- EXISTING SIGNAGE



DESIGNATED PEDESTRIAN CROSSING 16TH STREET - ALTERNATIVE 1



RECTANGULAR RAPID FLASHING BEACON WITH PAINTED MEDIAN



LEGEND:

- EXISTING STRIPING**
- PROPOSED STRIPING**
- EXISTING ROADWAY**
- EXISTING BUS STOP**
- EXISTING SIGNAGE**
- PROPOSED SIGNAGE**



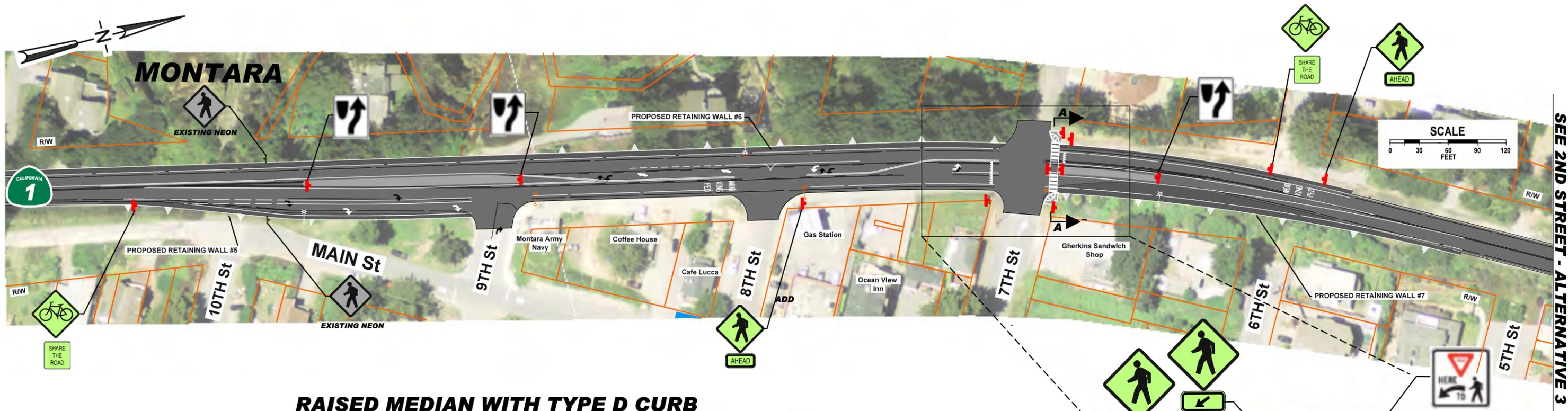
16TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE

1

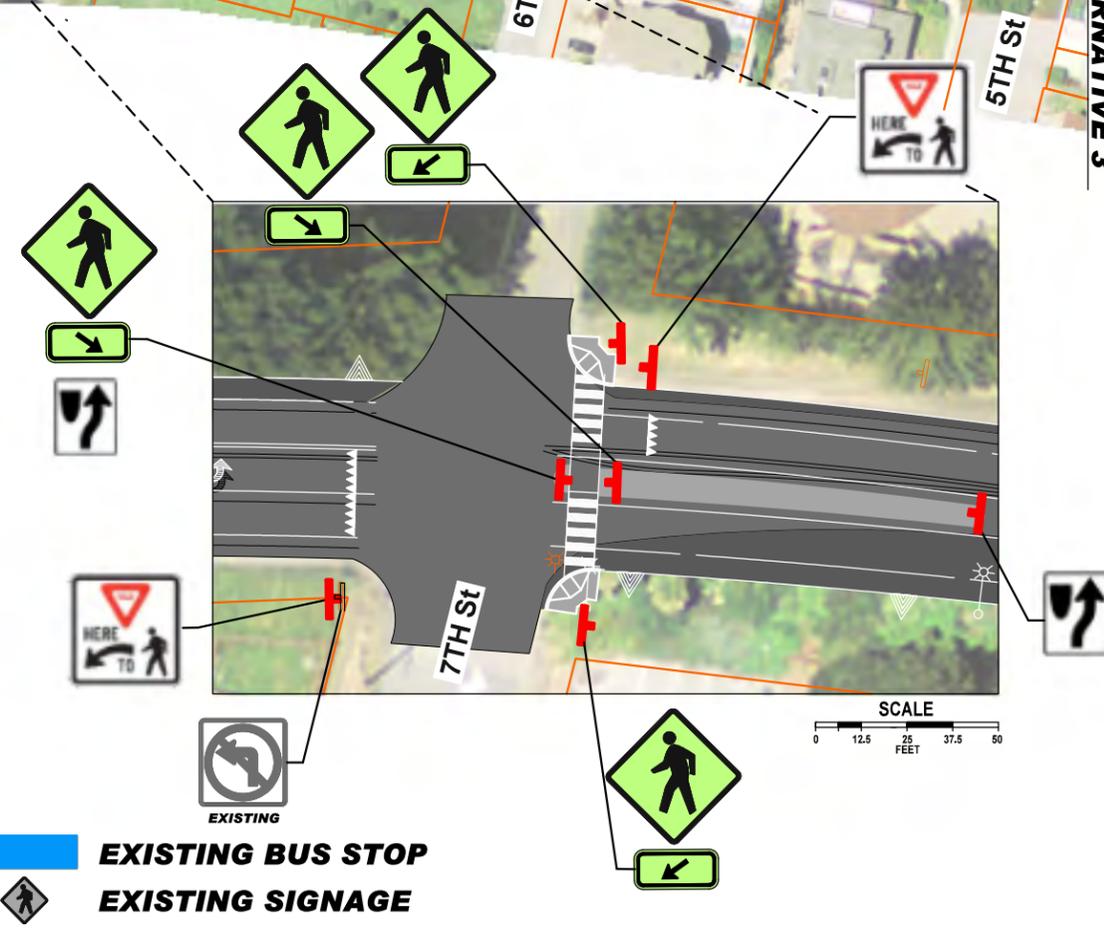
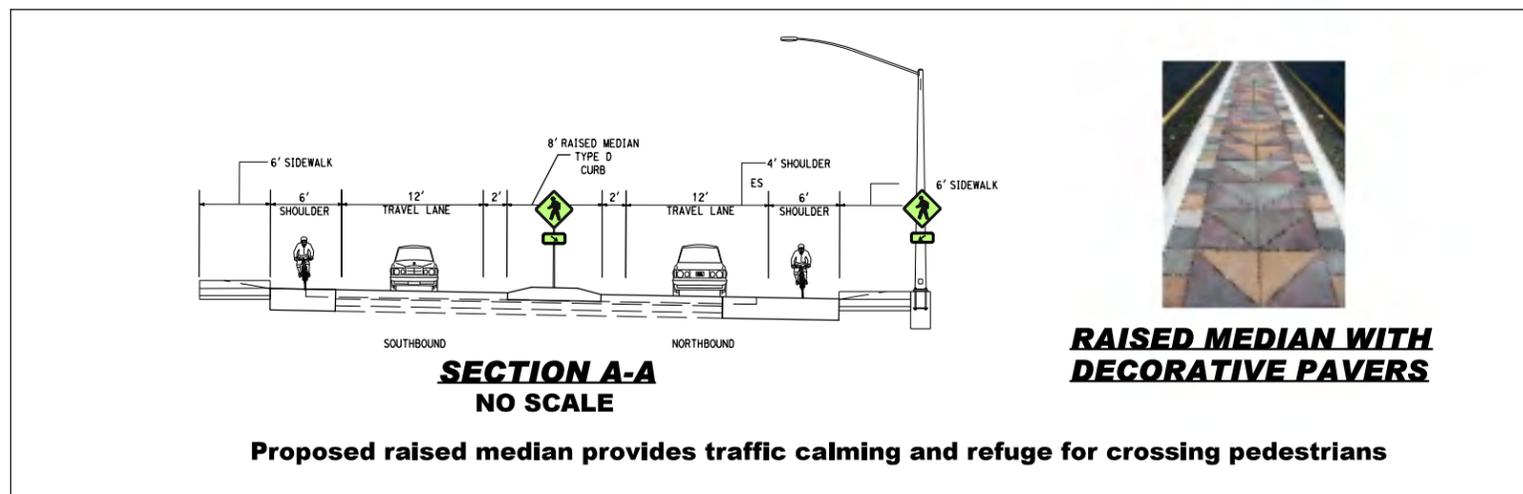
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING | RAISED MEDIAN 7TH STREET - ALTERNATIVE 3



SEE 2ND STREET - ALTERNATIVE 3

RAISED MEDIAN WITH TYPE D CURB



LEGEND:

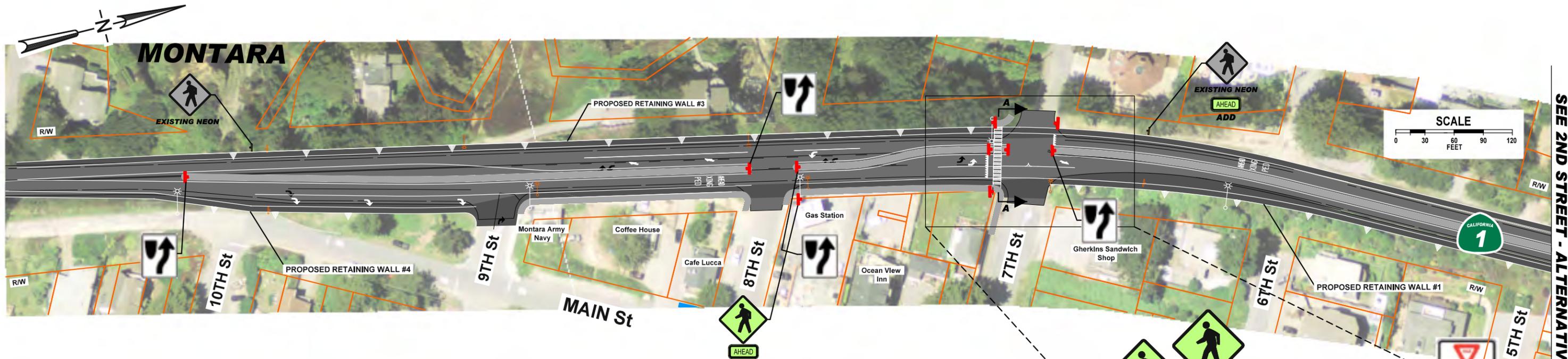
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE



7TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

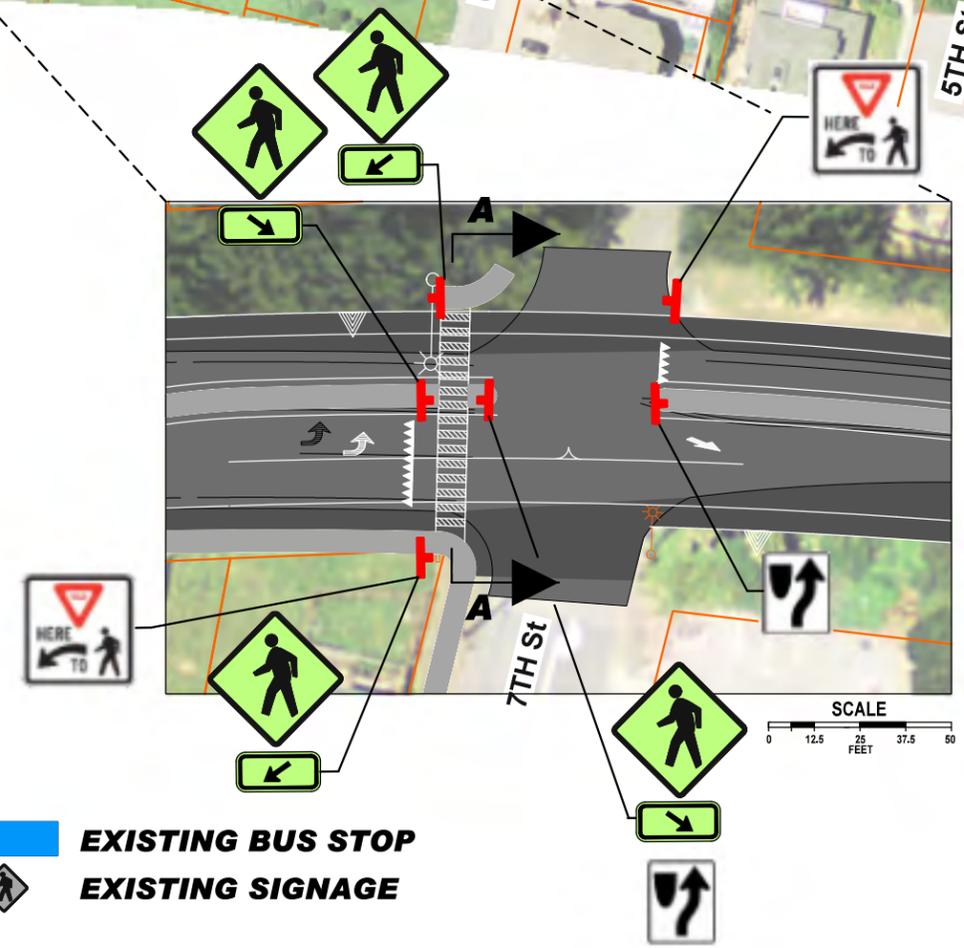
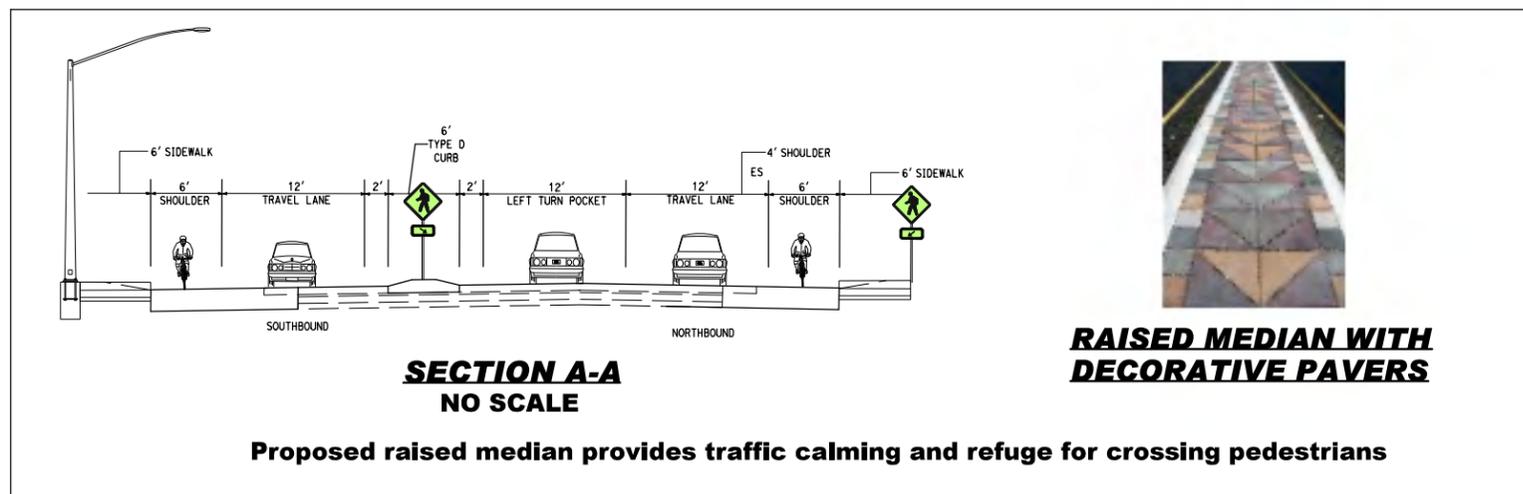
ALTERNATIVE
3
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 7TH STREET - ALTERNATIVE 2



SEE 2ND STREET - ALTERNATIVE 2

RAISED MEDIAN WITH TYPE D CURB



LEGEND:

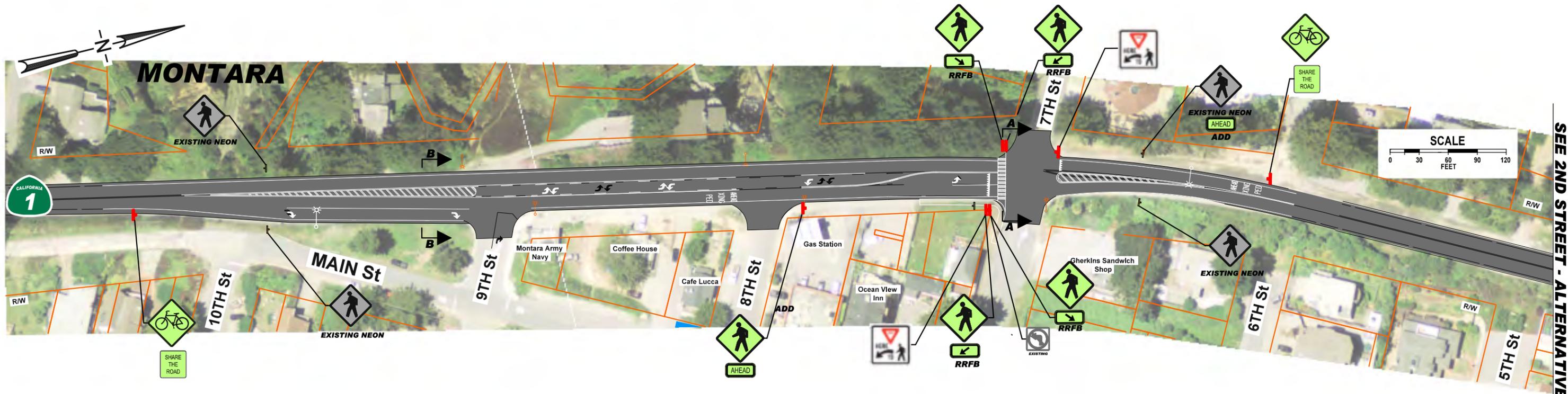
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE



7TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

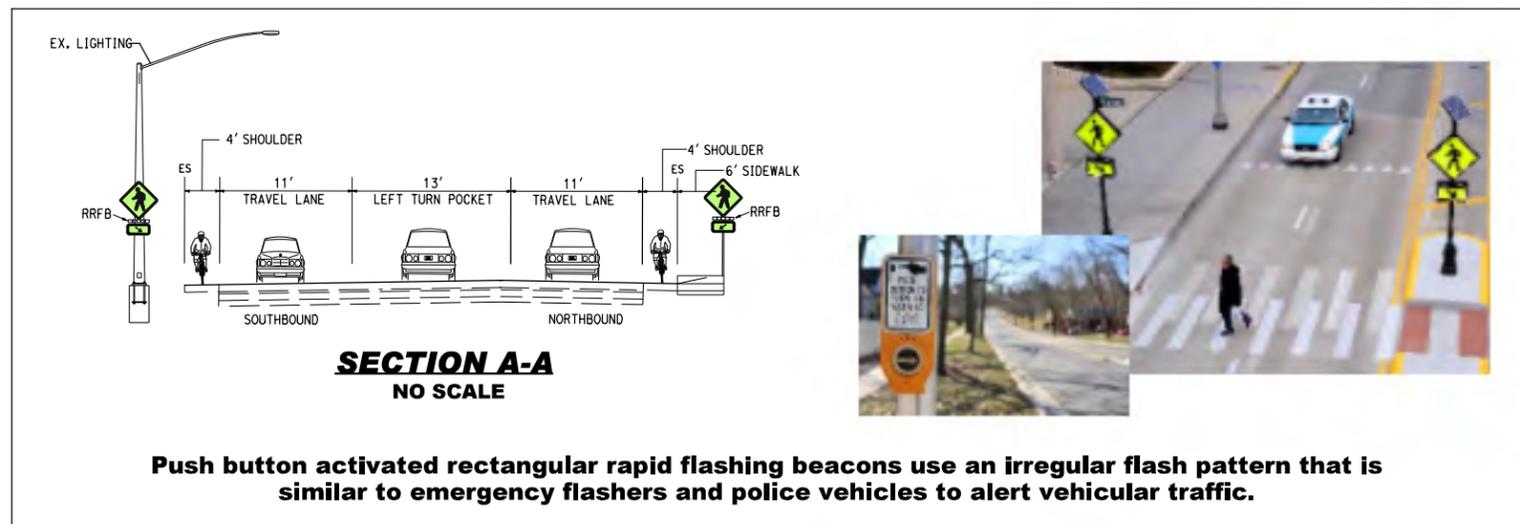
ALTERNATIVE
2
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING / PAINTED MEDIAN 7TH STREET - ALTERNATIVE 1

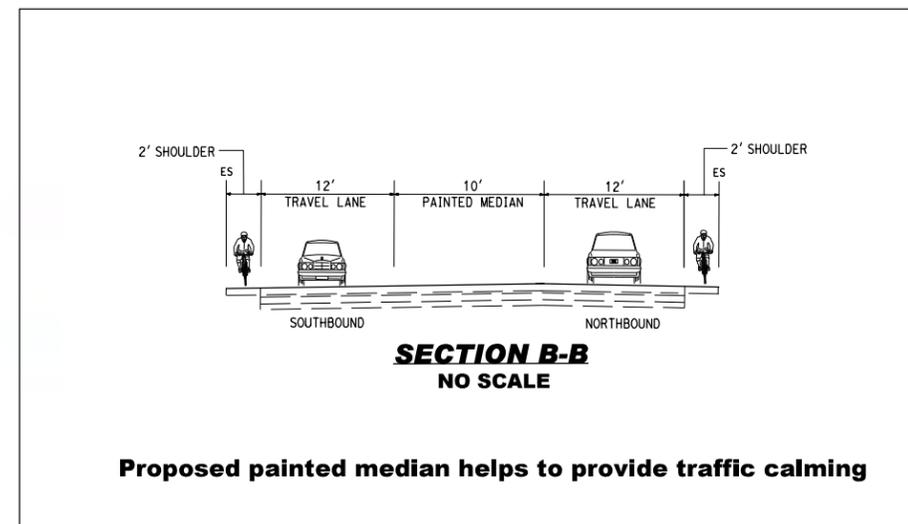


SEE 2ND STREET - ALTERNATIVE 1

RECTANGULAR RAPID FLASH BEACON



HIGH VISIBILITY PAINTED MEDIAN



LEGEND:

- EXISTING STRIPING**
- PROPOSED STRIPING**
- PROPOSED RAISED MEDIAN**
- EXISTING BUS STOP**
- PROPOSED SIGNAGE**
- EXISTING SIGNAGE**

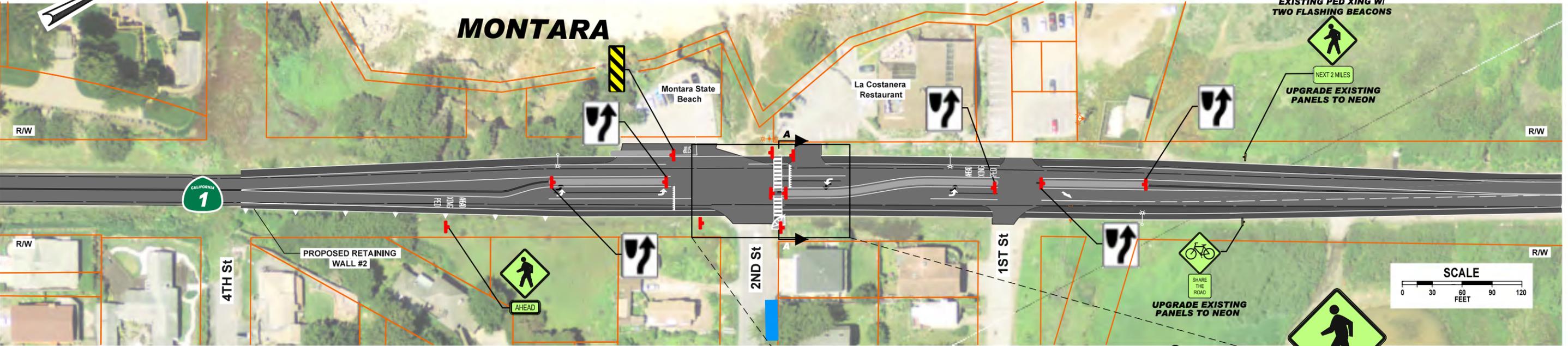


7TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

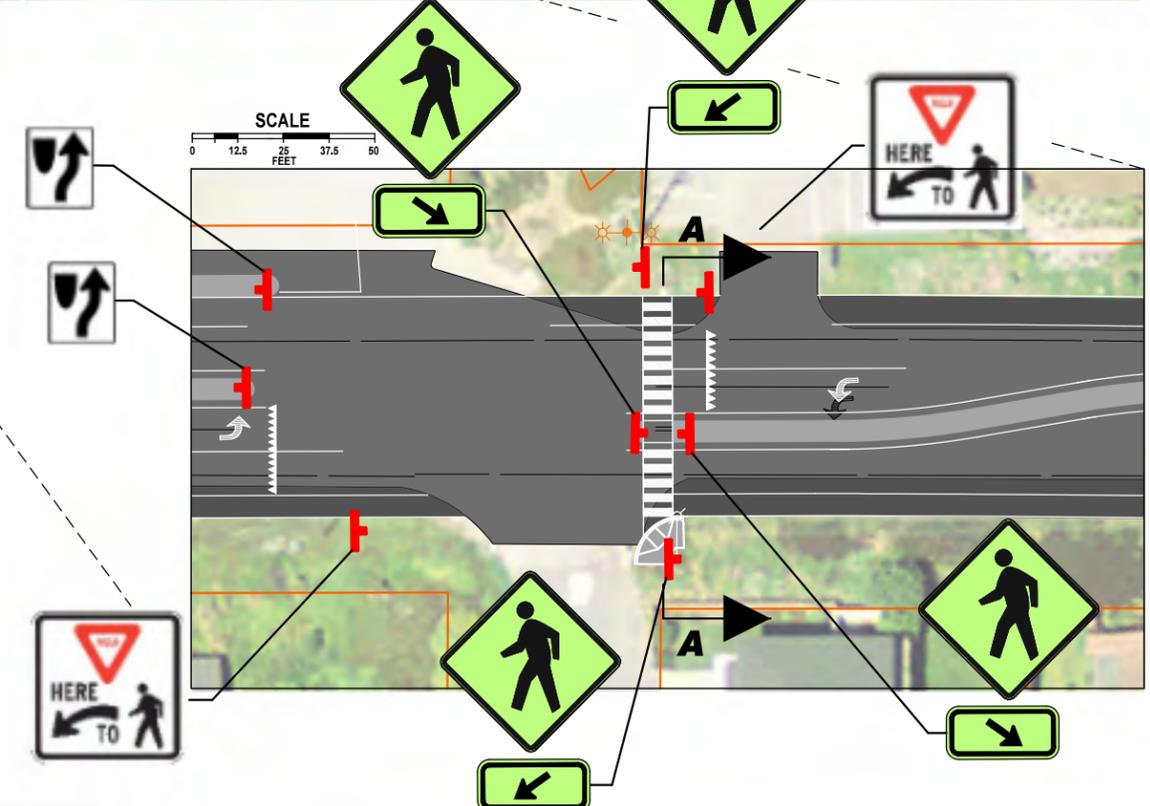
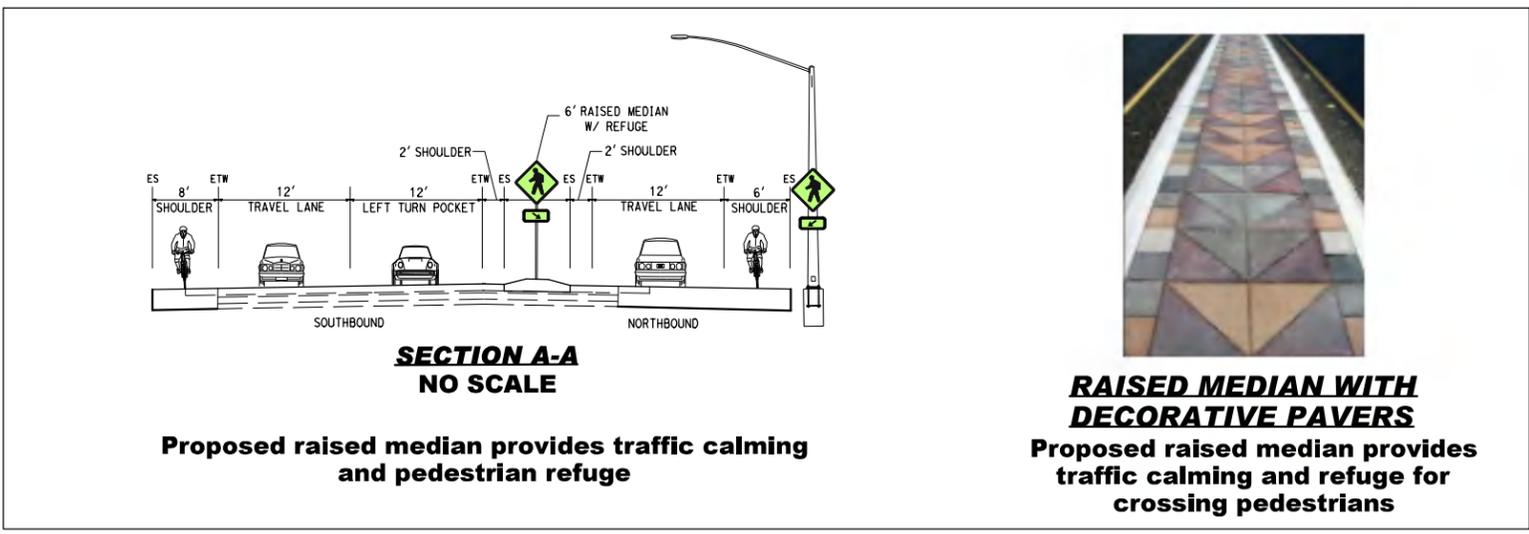
ALTERNATIVE
1
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 2ND STREET - ALTERNATIVE 3

SEE 7TH STREET - ALTERNATIVE 3



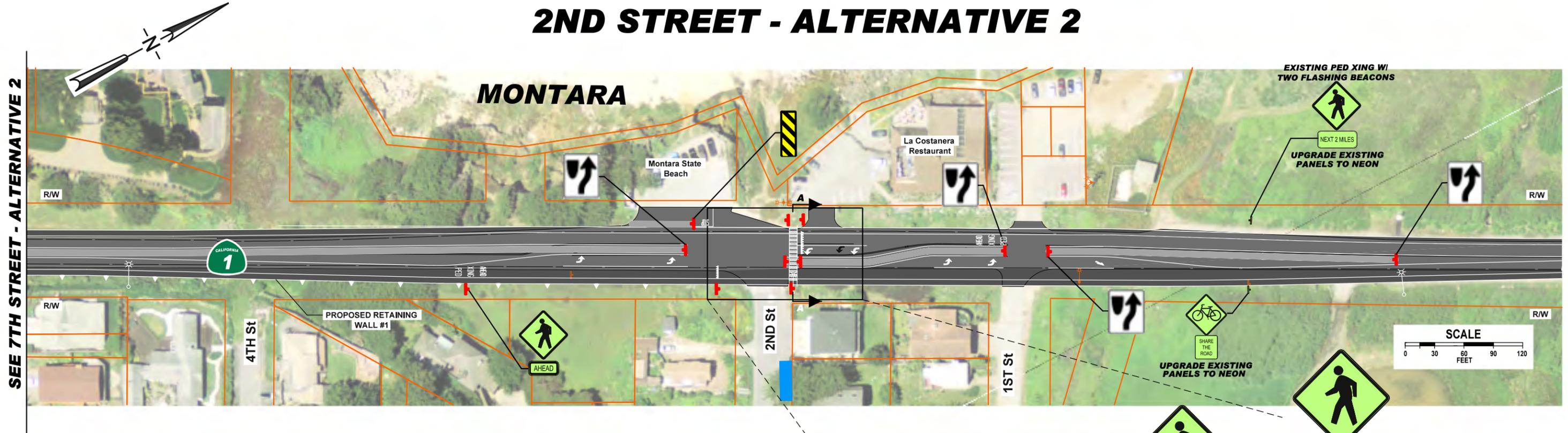
RAISED MEDIAN WITH TYPE D CURB



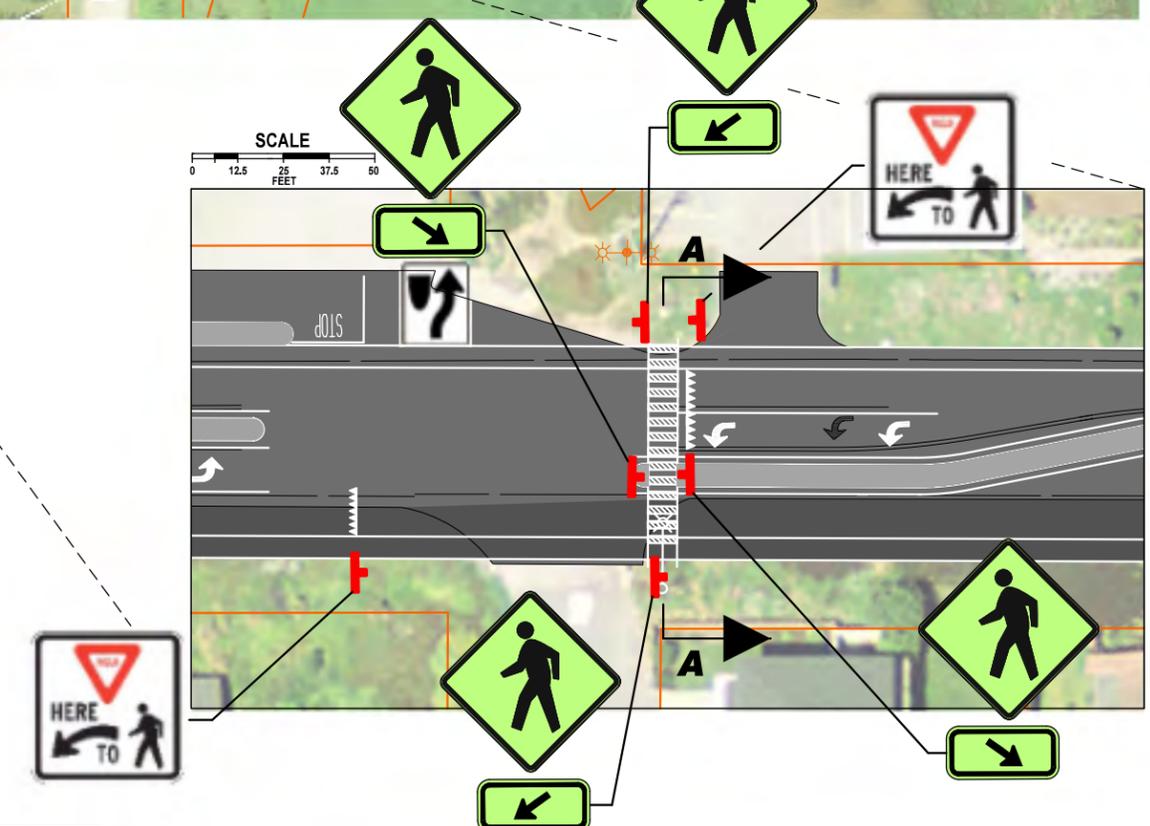
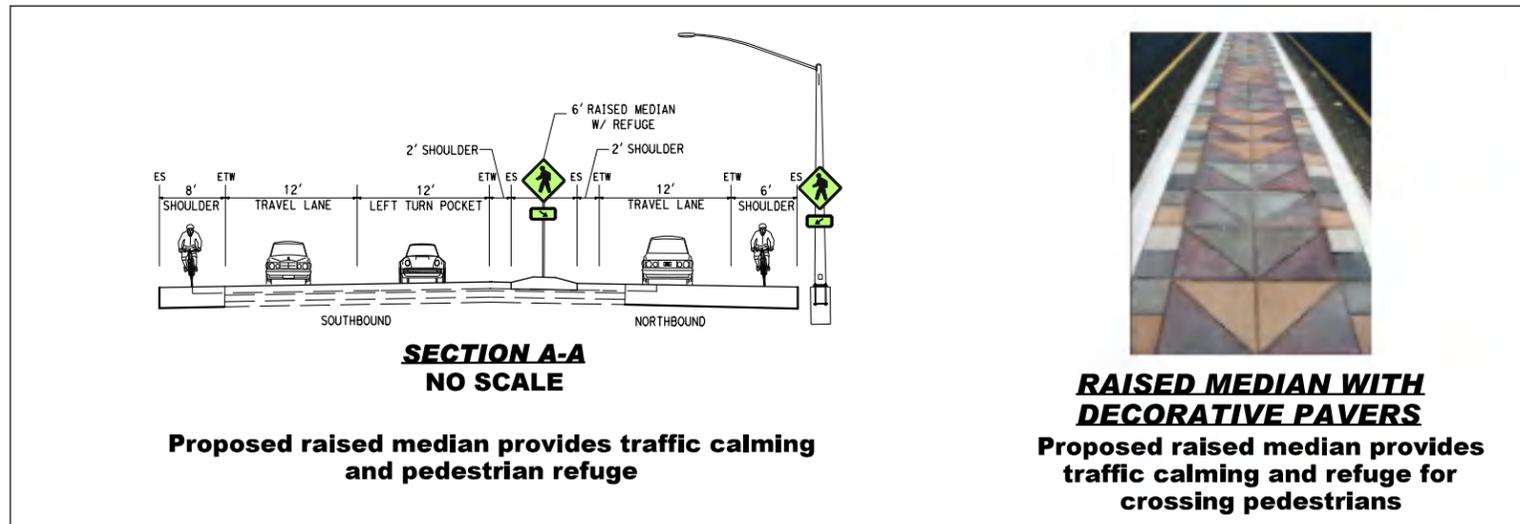
LEGEND:

- PROPOSED WIDENING
- PROPOSED STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- EXISTING ROADWAY
- EXISTING STRIPING
- PROPOSED SIGNAGE
- EXISTING SIGNAGE

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 2ND STREET - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB

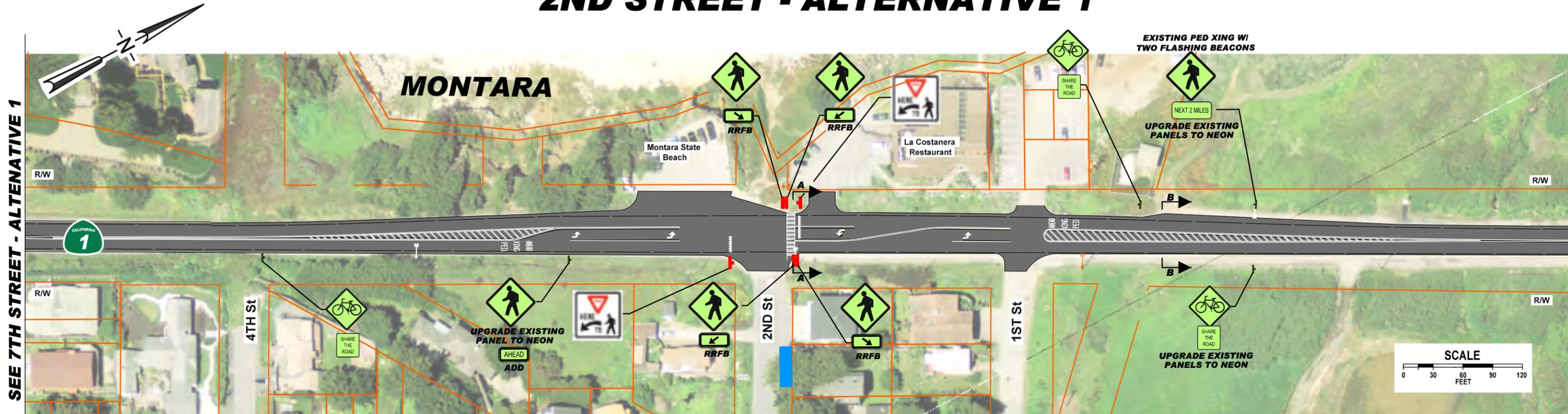


LEGEND:

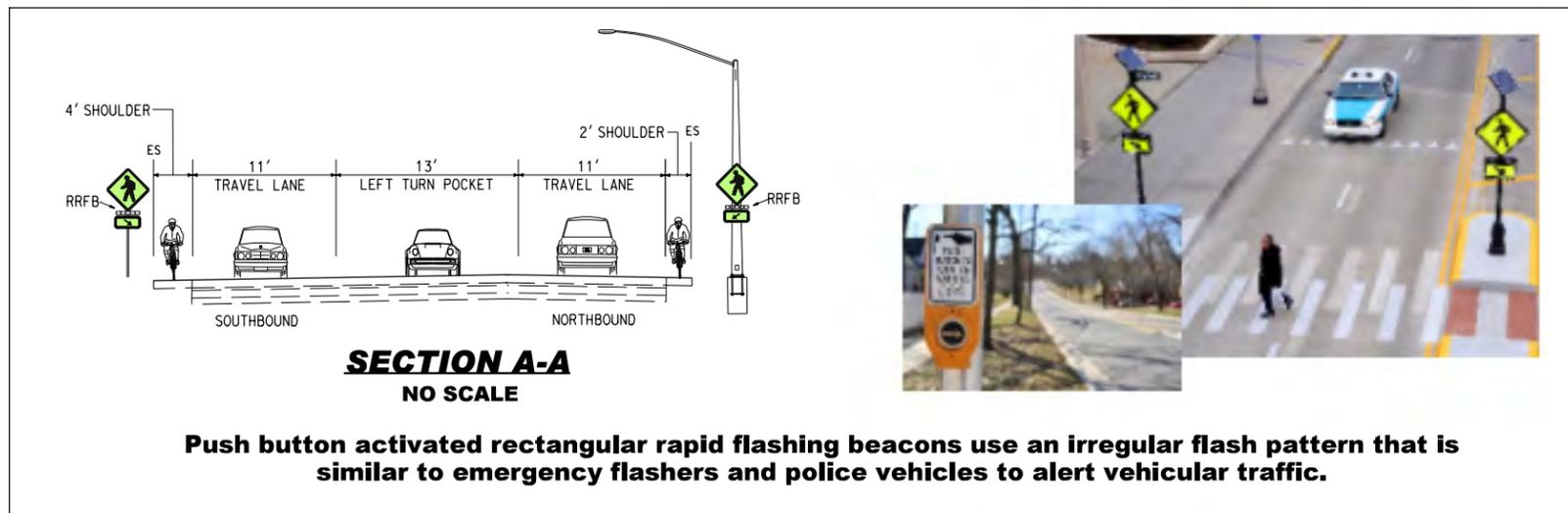
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE



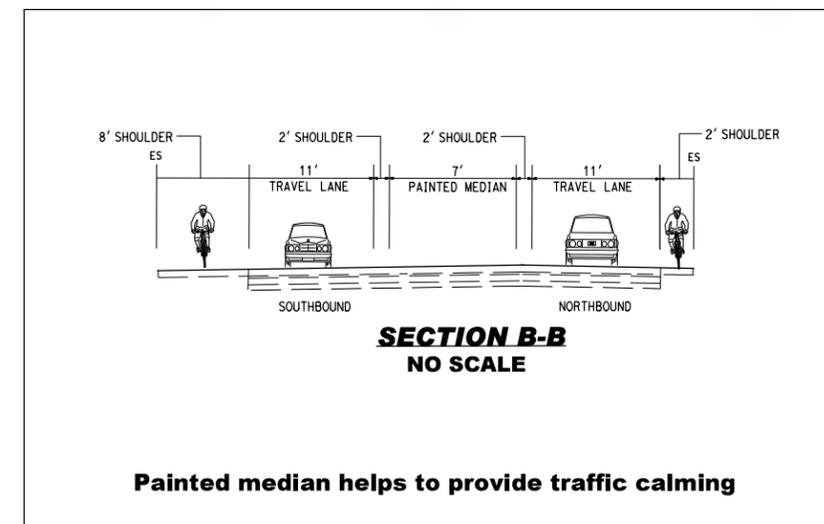
DESIGNATED PEDESTRIAN CROSSING / PAINTED MEDIAN 2ND STREET - ALTERNATIVE 1



RECTANGULAR RAPID FLASH BEACON



HIGH VISIBILITY PAINTED MEDIAN



LEGEND:

- PROPOSED STRIPING**
- EXISTING ROADWAY**
- PROPOSED RAISED MEDIAN**
- EXISTING STRIPING**
- EXISTING BUS STOP**
- PROPOSED SIGNAGE**



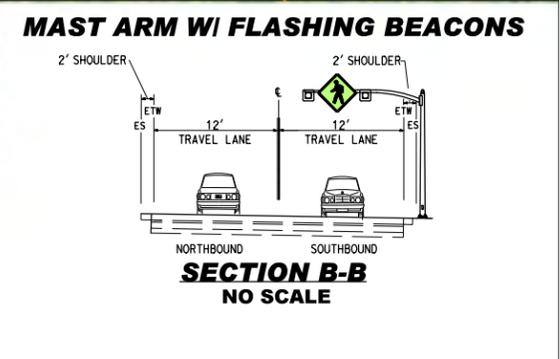
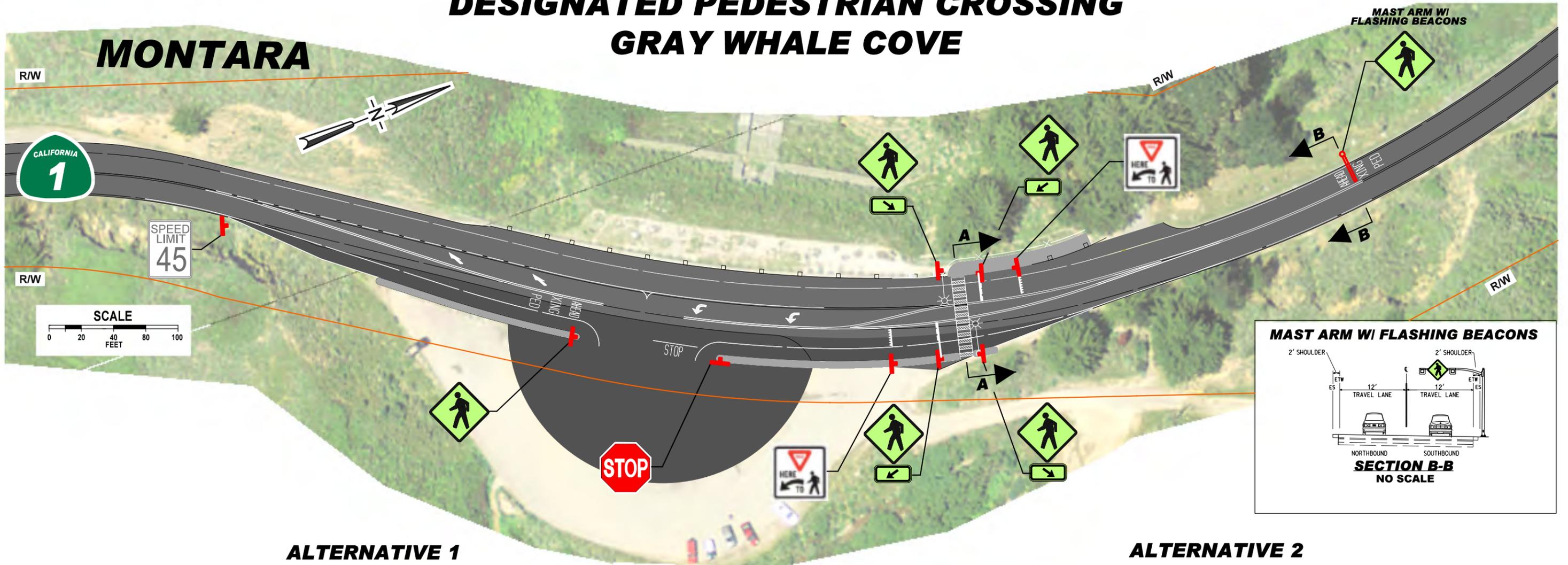
2ND STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE

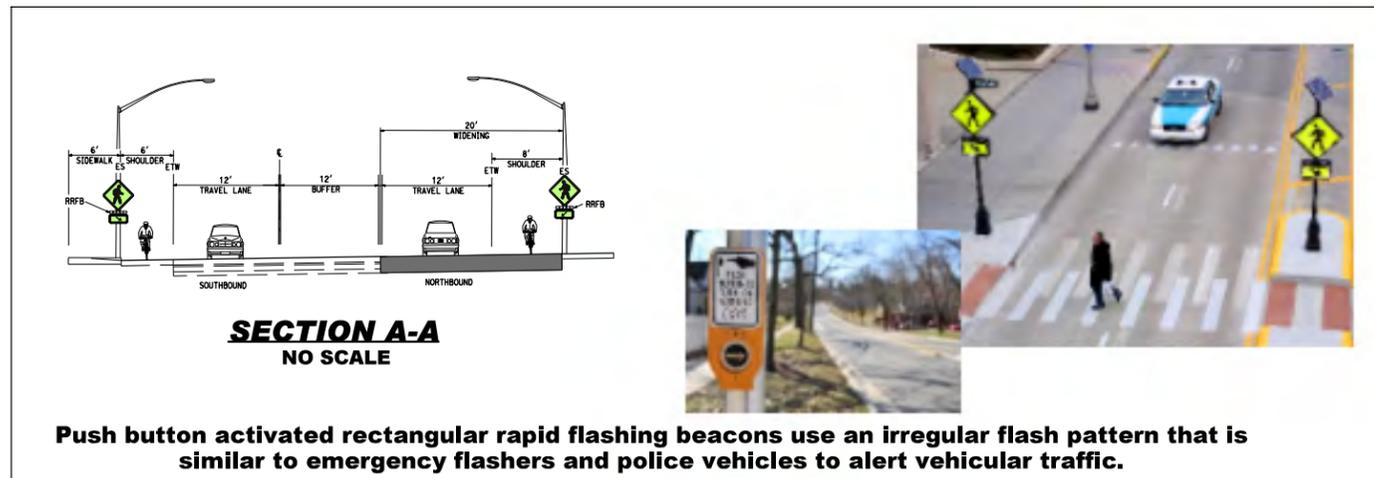
1

JUNE 2015

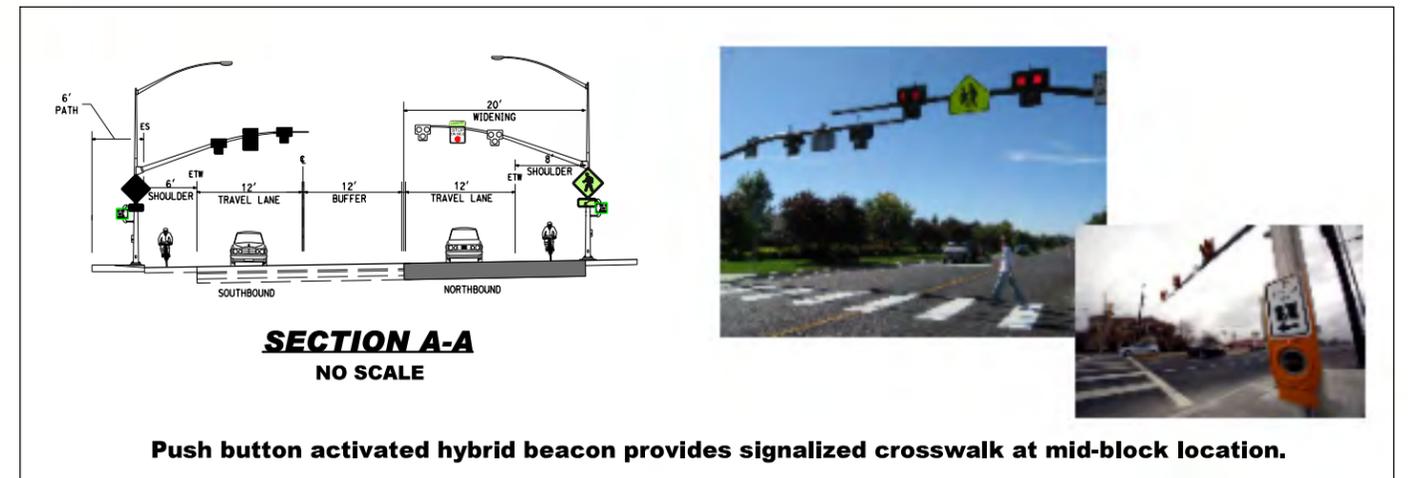
DESIGNATED PEDESTRIAN CROSSING GRAY WHALE COVE



**ALTERNATIVE 1
RECTANGULAR RAPID FLASH BEACON**



**ALTERNATIVE 2
HYBRID BEACON**



LEGEND:

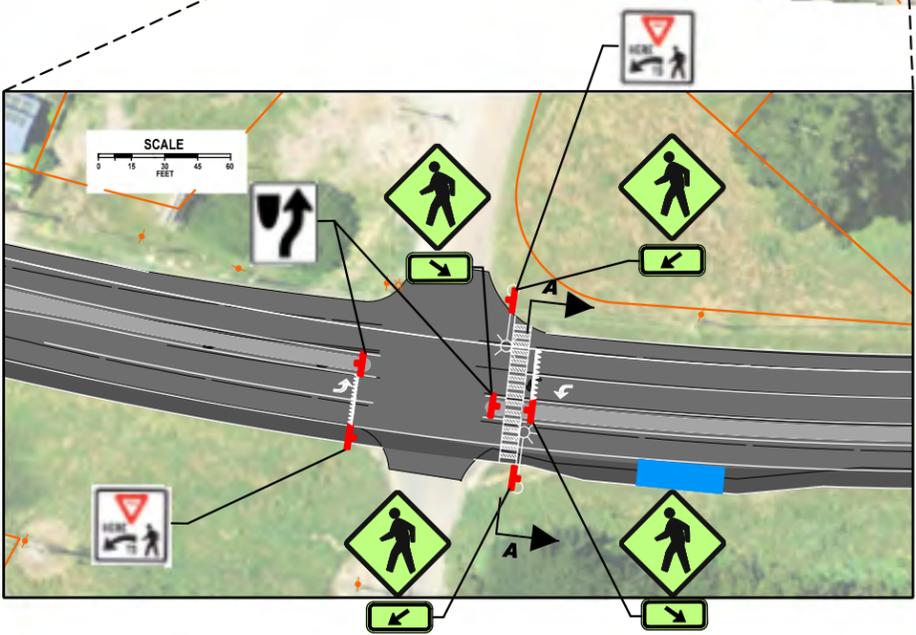
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED SIGNAGE



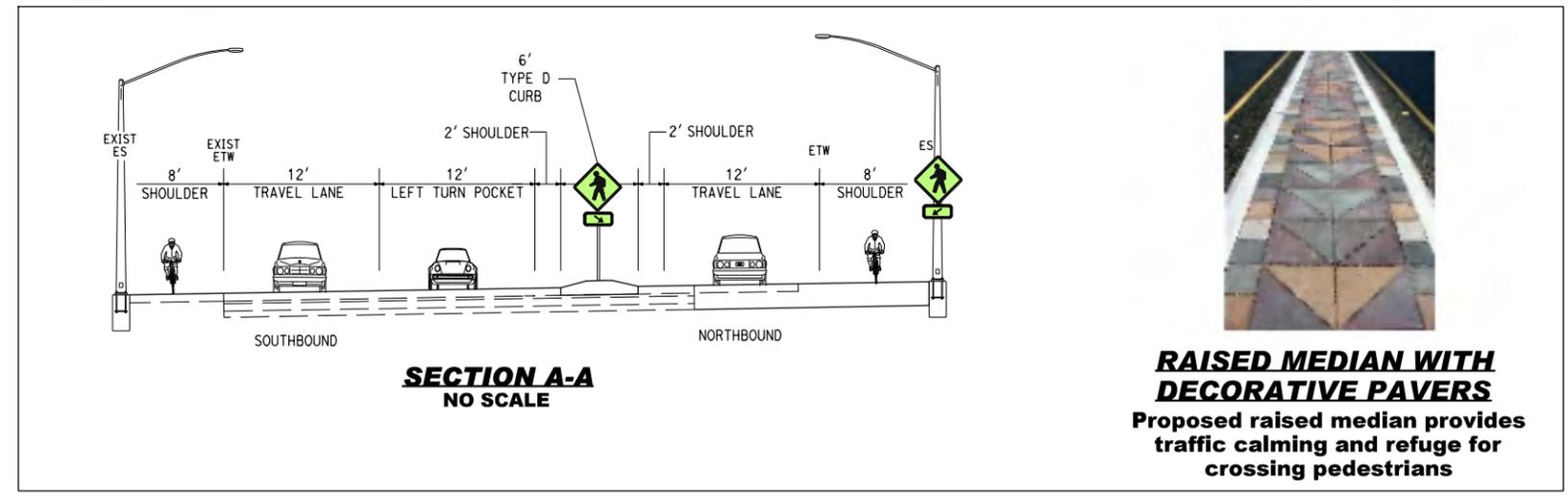
GRAY WHALE COVE, MCNEE RANCH STATE PARK HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE
1 & 2
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING MIRADA ROAD - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB

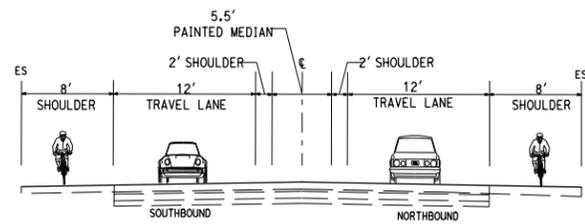


LEGEND:

- PROPOSED WIDENING
- PROPOSED STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- EXISTING ROADWAY
- EXISTING STRIPING
- PROPOSED SIGNAGE

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN CYPRESS AVE - ALTERNATIVE 1

HIGH VISIBILITY PAINTED MEDIAN

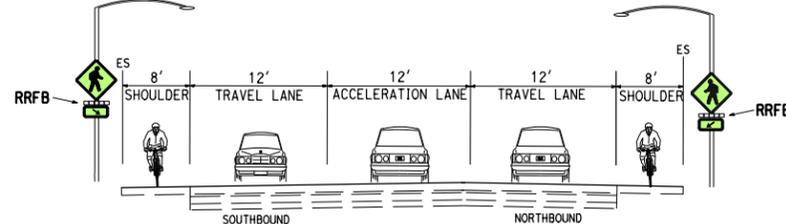


**SECTION B-B
NO SCALE**



Painting existing median helps to provide traffic calming

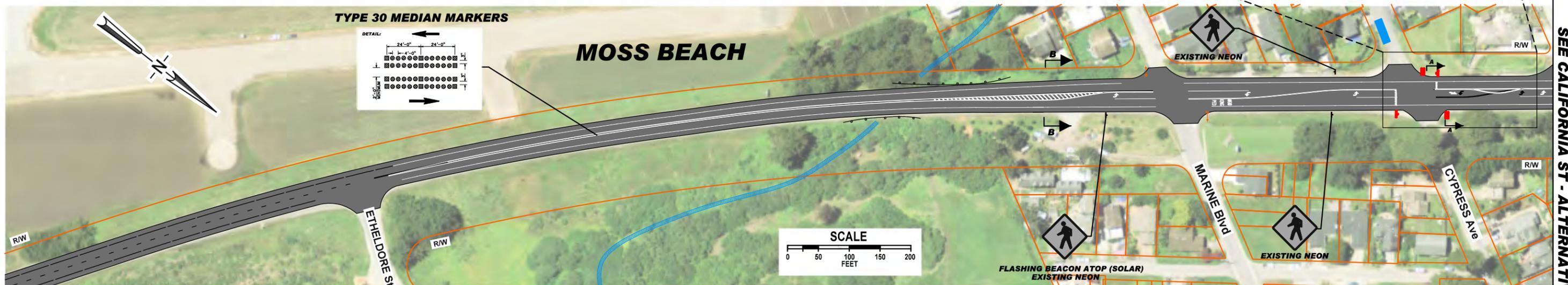
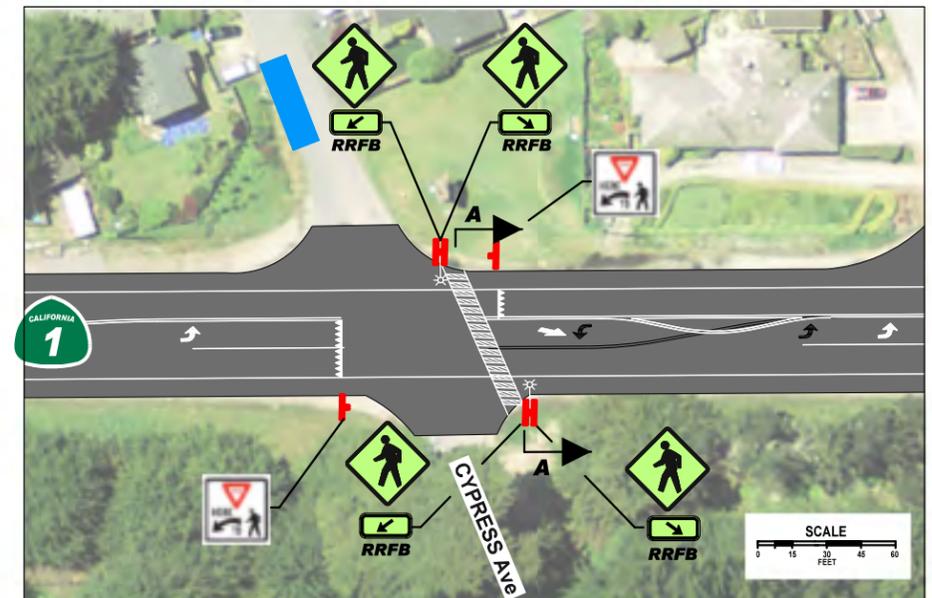
RECTANGULAR RAPID FLASHING BEACON



**SECTION A-A
NO SCALE**



Push button activated rectangular rapid flashing beacons use an irregular flash pattern that is similar to emergency flashers and police vehicles to alert vehicular traffic.



LEGEND:

- PROPOSED STRIPING
- EXISTING ROADWAY
- EXISTING BUS STOP
- EXISTING STRIPING
- EXISTING SIGNAGE
- PROPOSED SIGNAGE

SEE CALIFORNIA ST - ALTERNATIVE 1



ETHELDORE ST - CYPRESS AVE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

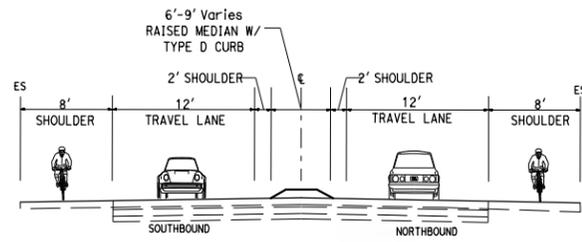
ALTERNATIVE

1

JUNE 2015

RAISED MEDIAN ACCELERATION LANE CYPRESS AVE - ALTERNATIVE 3

RAISED MEDIAN



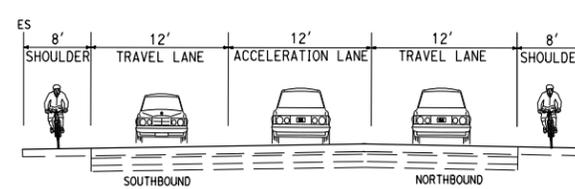
**TYPICAL SECTION
NO SCALE**



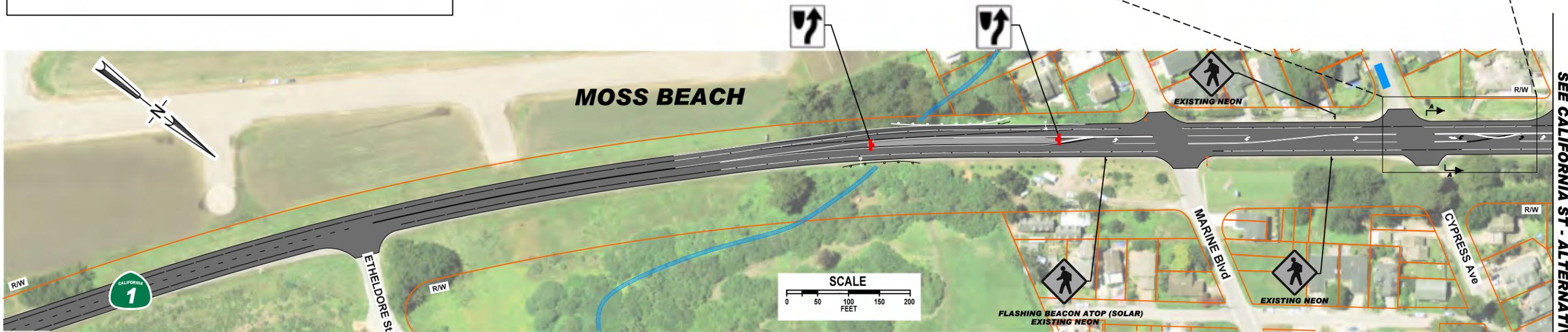
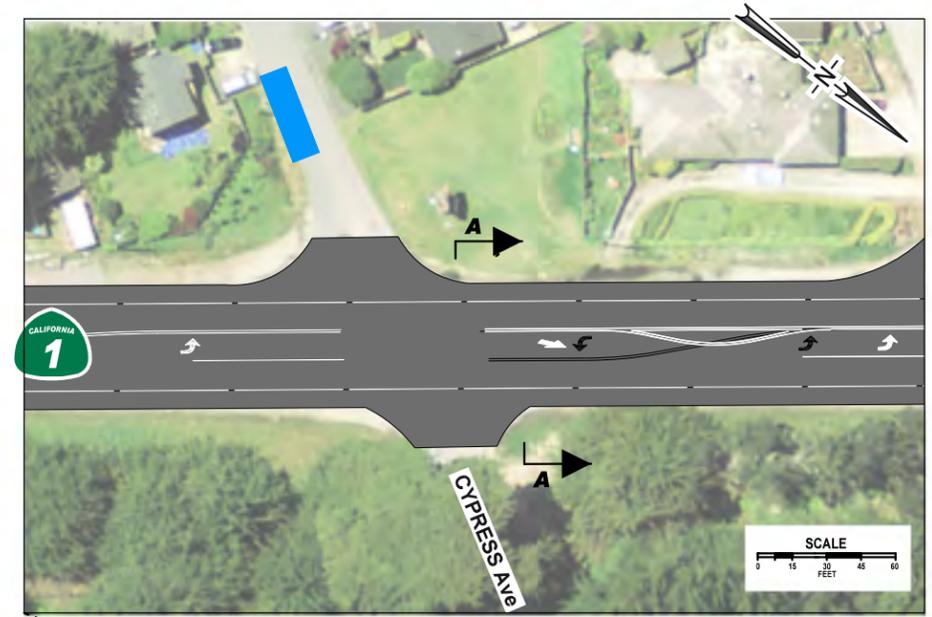
**RAISED MEDIAN WITH
DECORATIVE PAVERS**

Proposed raised median provides traffic calming.

ACCELERATION LANE



**SECTION A-A
NO SCALE**



LEGEND:

- PROPOSED WIDENING**
- PROPOSED STRIPING**
- PROPOSED RAISED MEDIAN**
- EXISTING BUS STOP**
- EXISTING ROADWAY**
- EXISTING STRIPING**
- PROPOSED SIGNAGE**
- EXISTING SIGNAGE**

SEE CALIFORNIA ST - ALTERNATIVE 3



ETHELDORE ST - CYPRESS AVE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

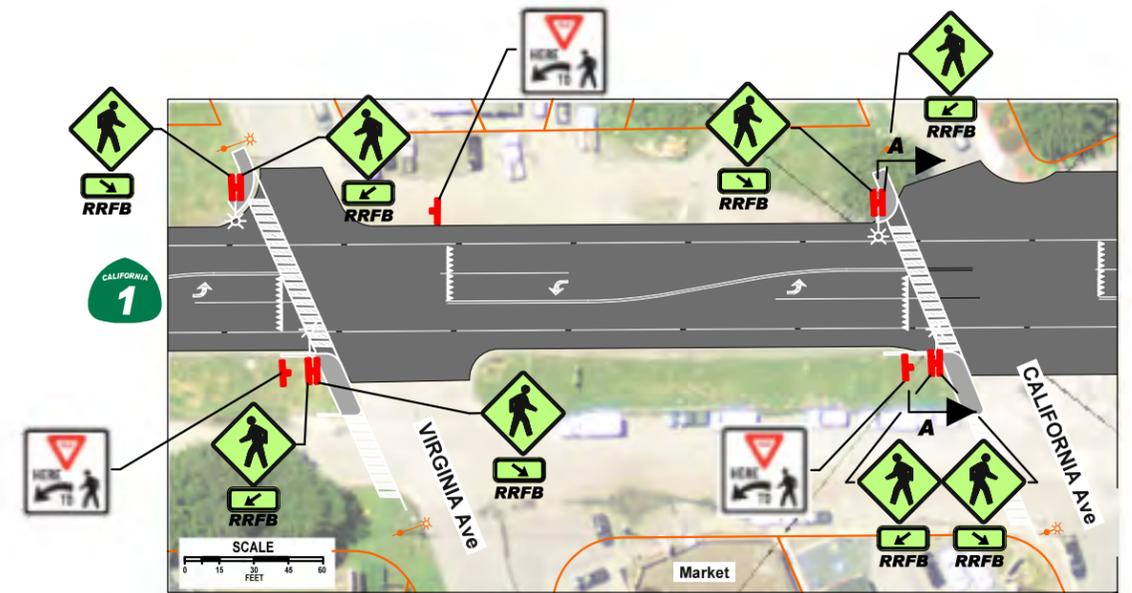
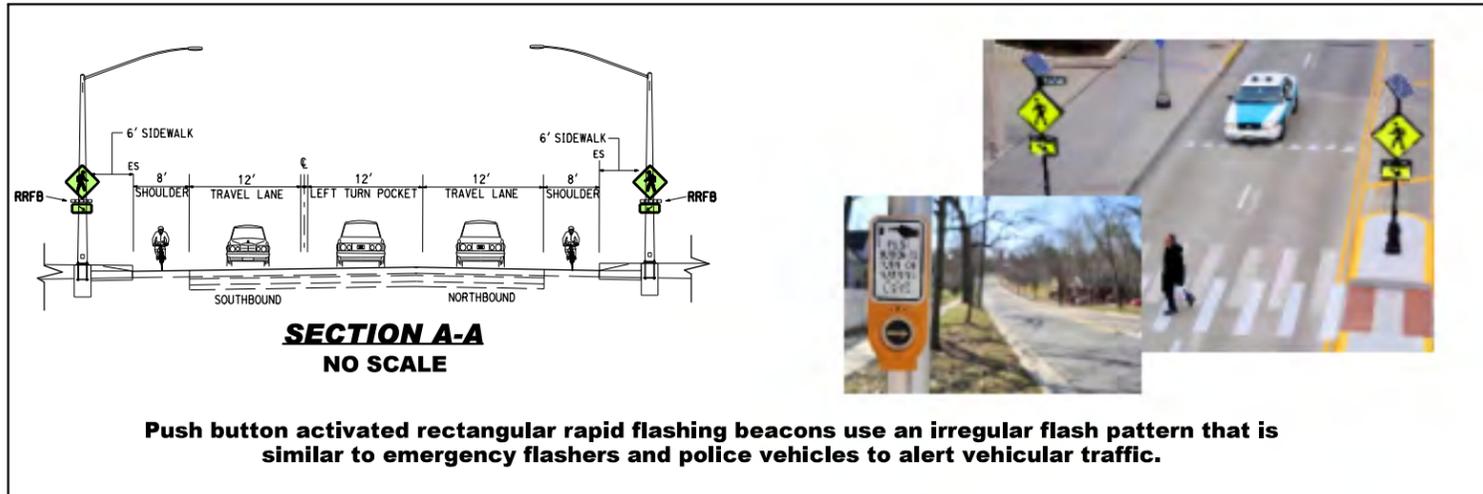
ALTERNATIVE

3

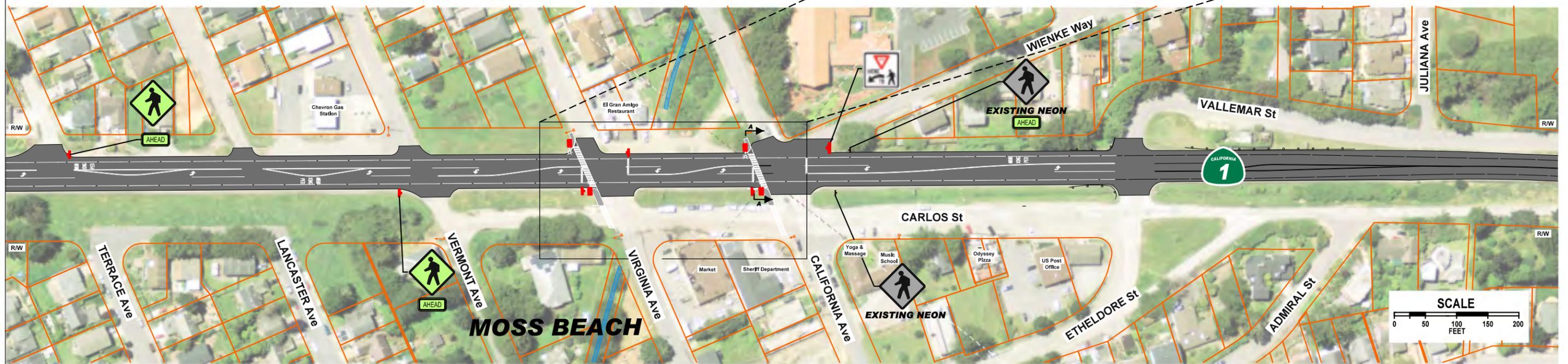
JUNE 2015

DESIGNATED PEDESTRIAN CROSSINGS VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 1A

RECTANGULAR RAPID FLASH BEACON



SEE CYPRESS AVE - ALTERNATIVE 1



LEGEND:

- EXISTING STRIPING**
- PROPOSED STRIPING**
- EXISTING ROADWAY**
- PROPOSED SIGNAGE**
- EXISTING SIGNAGE**

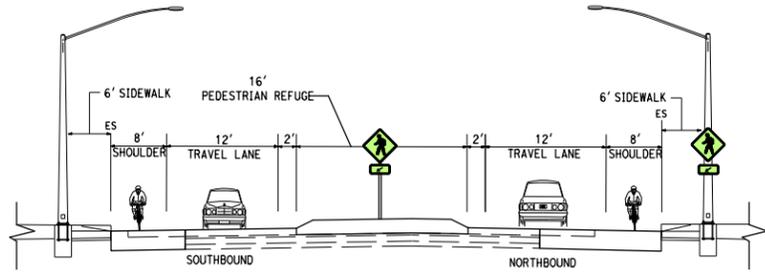


CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE
1A
JUNE 2015

DESIGNATED PEDESTRIAN CROSSINGS VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 2

RAISED MEDIAN WITH TYPE D CURB

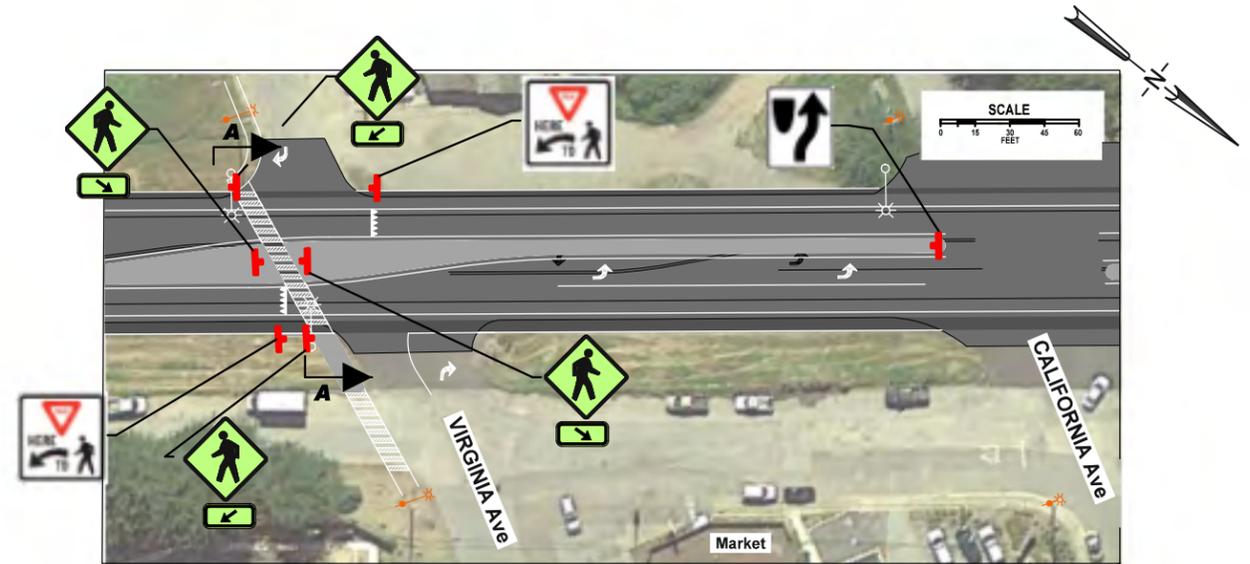


**SECTION A-A
NO SCALE**

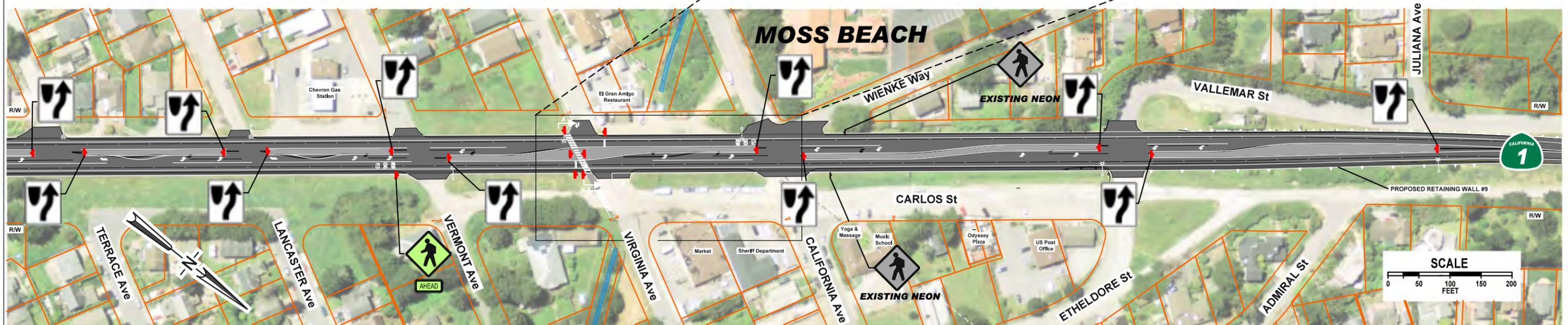


**RAISED MEDIAN WITH
DECORATIVE PAVERS**

Proposed raised median provides traffic calming and refuge for crossing pedestrians



SEE CYPRESS AVE - ALTERNATIVE 2



LEGEND:

- | | | | | |
|--------------------------|--------------------------|-------------------------------|-------------------------|-------------------------|
| PROPOSED WIDENING | PROPOSED STRIPING | PROPOSED RAISED MEDIAN | PROPOSED SIGNAGE | EXISTING SIGNAGE |
| EXISTING ROADWAY | EXISTING STRIPING | | | |



CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

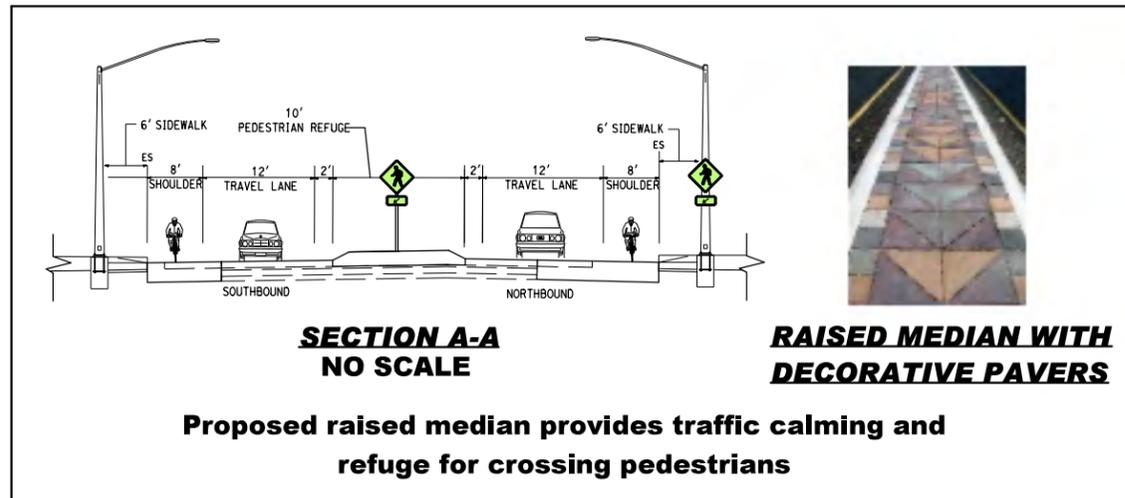
ALTERNATIVE

2

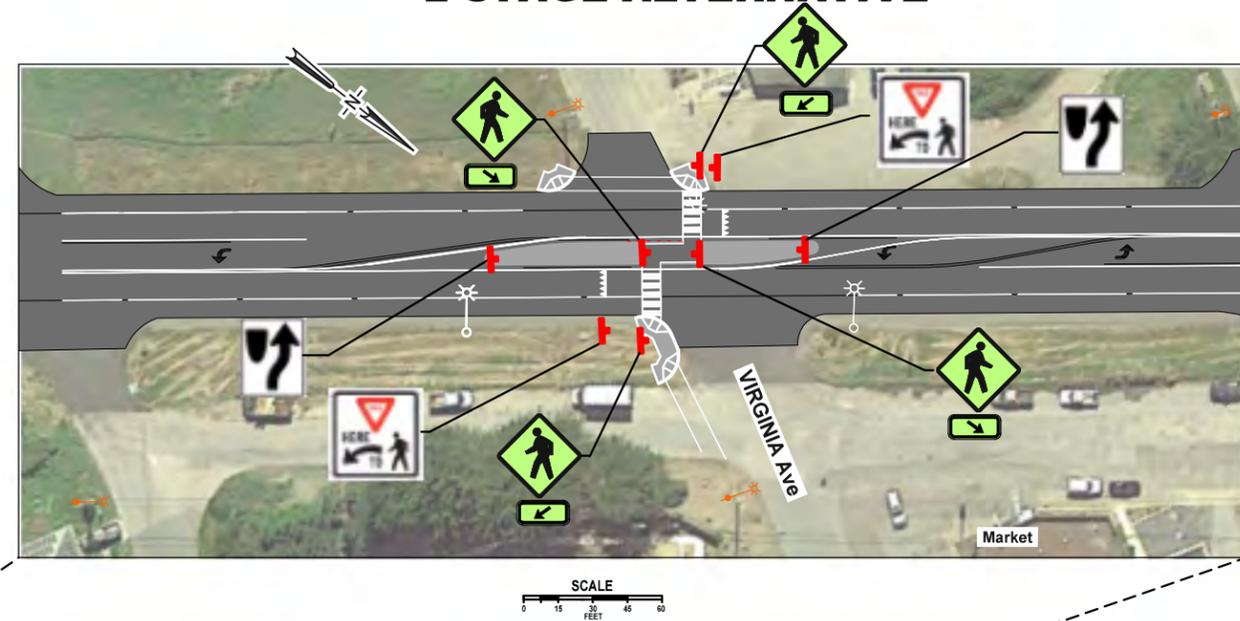
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING | RAISED MEDIAN VIRGINIA & CALIFORNIA AVE - ALTERNATIVE 3

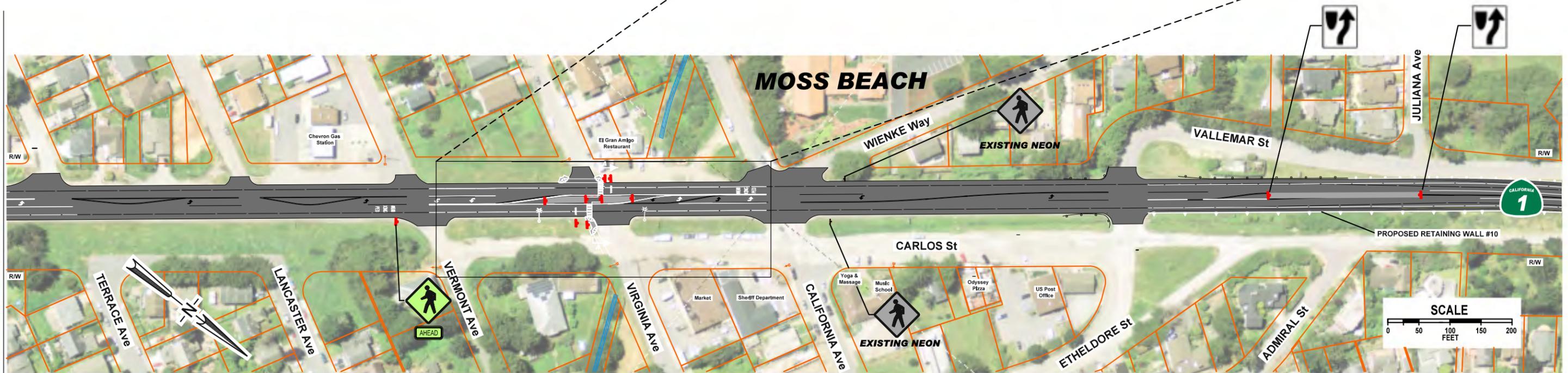
RAISED MEDIAN WITH TYPE D CURB



2 STAGE ALTERNATIVE



SEE CYPRESS AVE - ALTERNATIVE 3



LEGEND:

- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING SIGNAGE



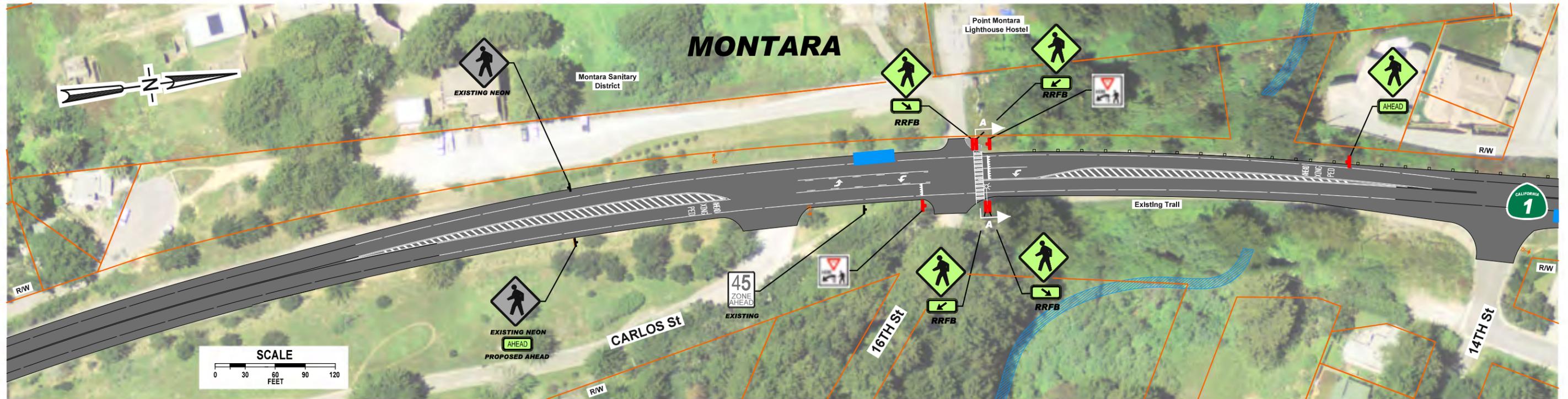
CALIFORNIA AVENUE, MOSS BEACH HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE

3

JUNE 2015

DESIGNATED PEDESTRIAN CROSSING 16TH STREET - ALTERNATIVE 1



RECTANGULAR RAPID FLASHING BEACON WITH PAINTED MEDIAN



LEGEND:

- EXISTING STRIPING**
- PROPOSED STRIPING**
- EXISTING ROADWAY**
- EXISTING BUS STOP**
- EXISTING SIGNAGE**
- PROPOSED SIGNAGE**



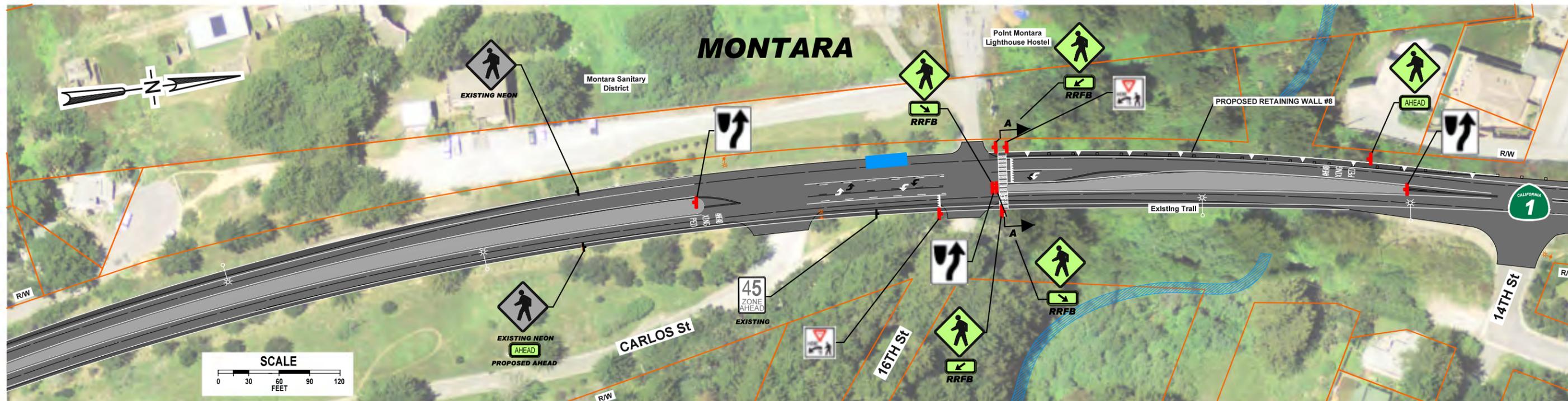
16TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE

1

JUNE 2015

DESIGNATED PEDESTRIAN CROSSING 16TH STREET - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB AND RAPID RECTANGULAR FLASHING BEACONS

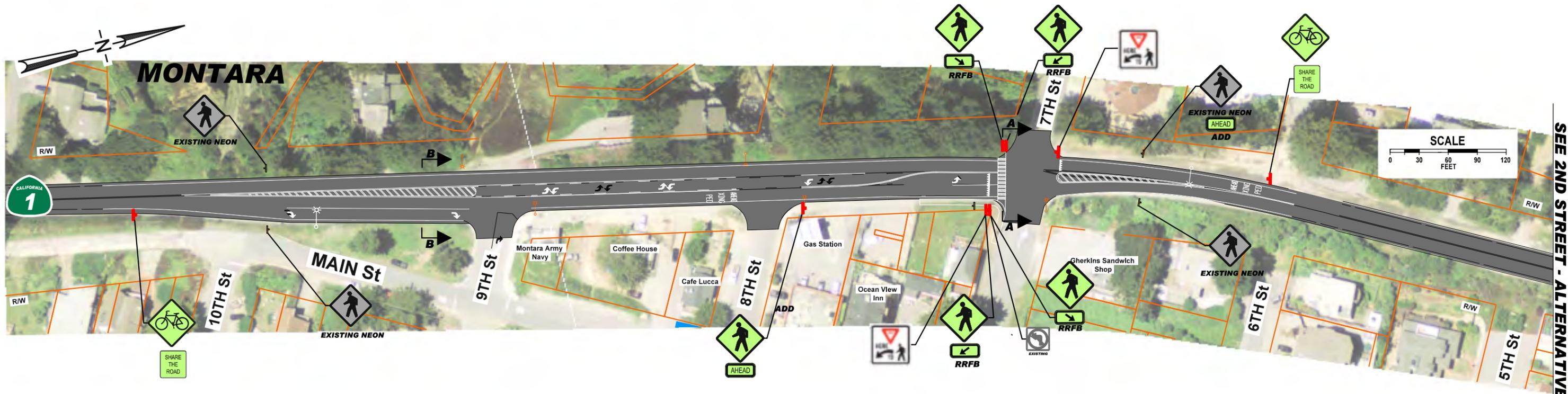


LEGEND:

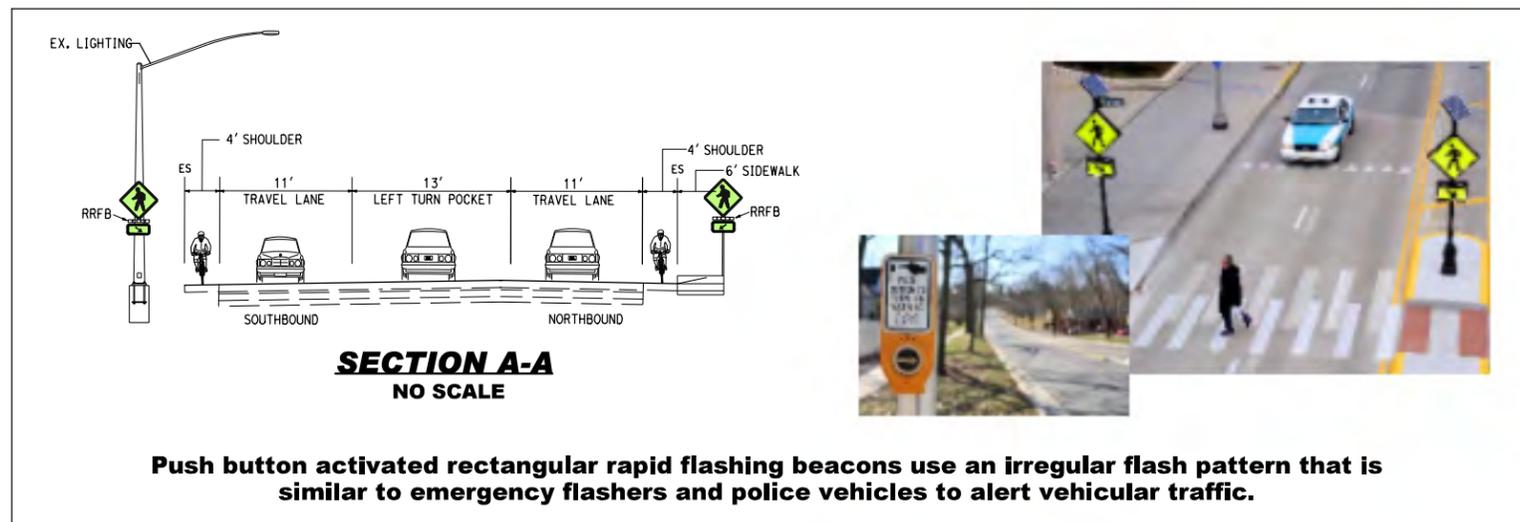
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- PROPOSED SIGNAGE
- EXISTING SIGNAGE



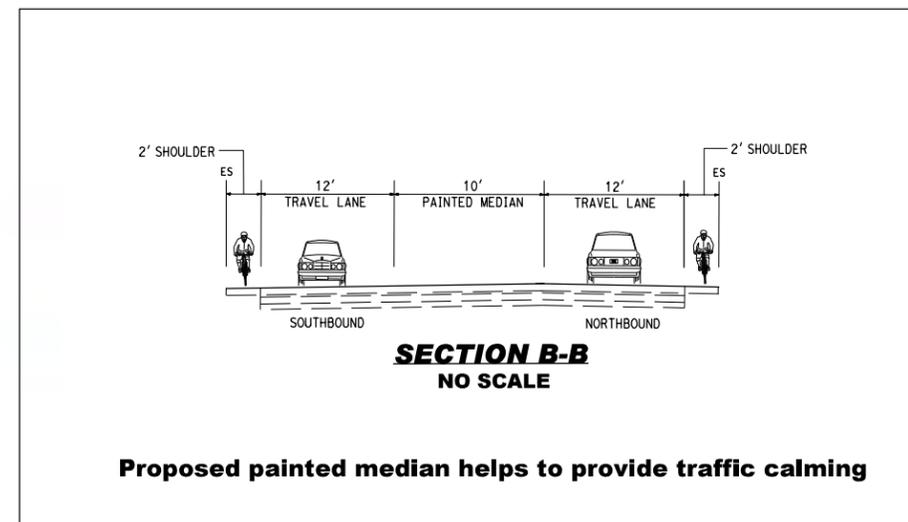
DESIGNATED PEDESTRIAN CROSSING / PAINTED MEDIAN 7TH STREET - ALTERNATIVE 1



RECTANGULAR RAPID FLASH BEACON



HIGH VISIBILITY PAINTED MEDIAN

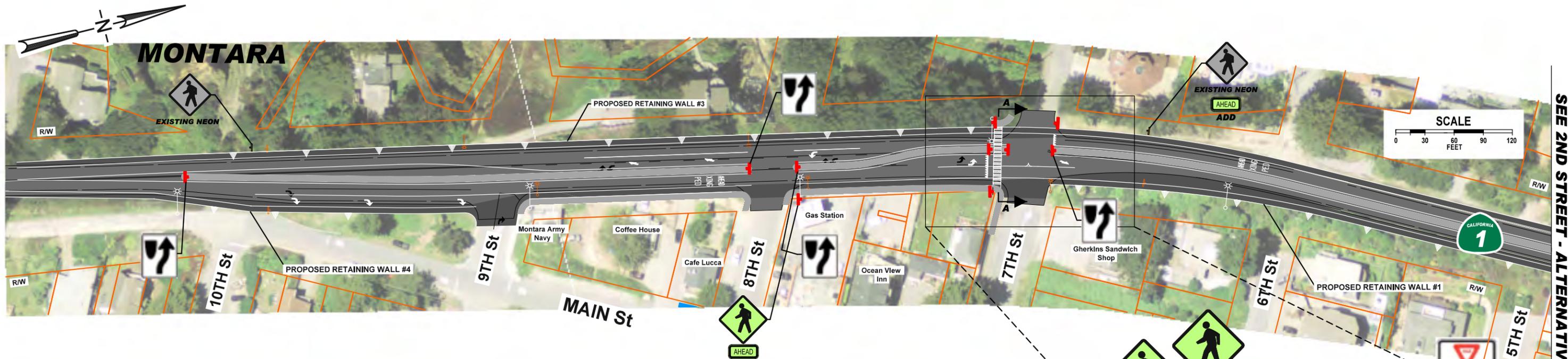


LEGEND:

- EXISTING STRIPING**
- PROPOSED STRIPING**
- PROPOSED RAISED MEDIAN**
- EXISTING BUS STOP**
- PROPOSED SIGNAGE**
- EXISTING SIGNAGE**

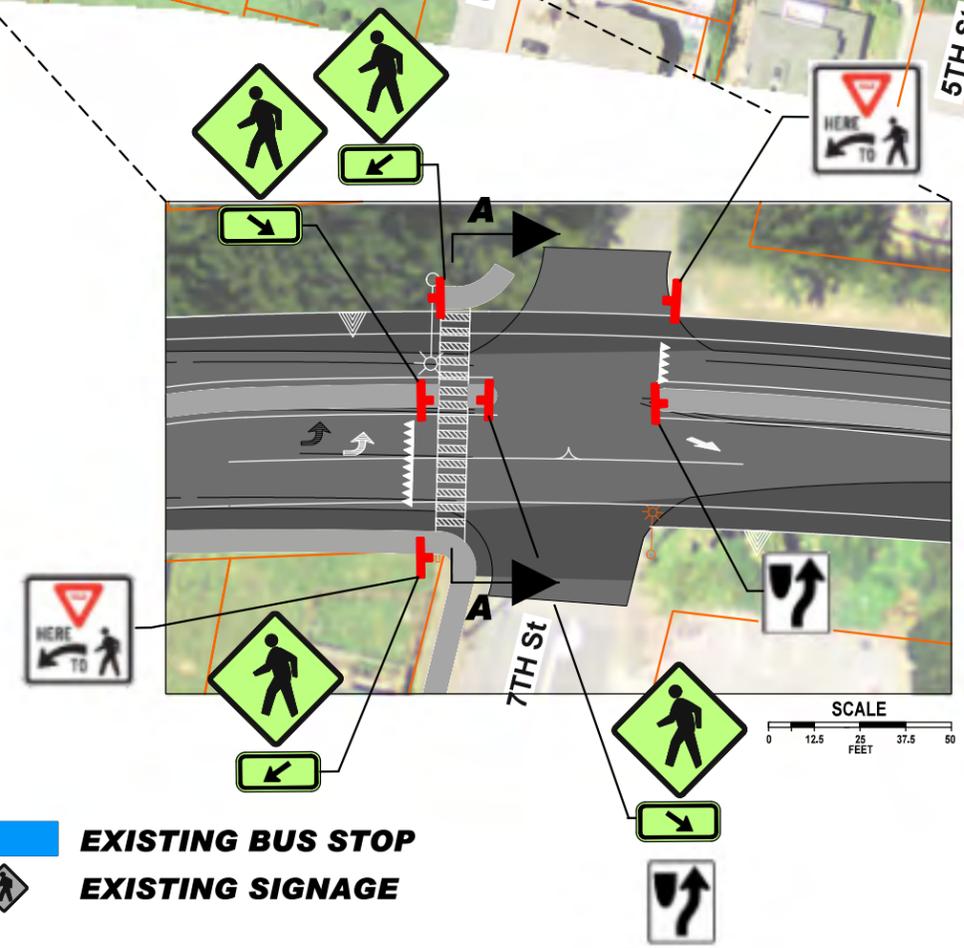
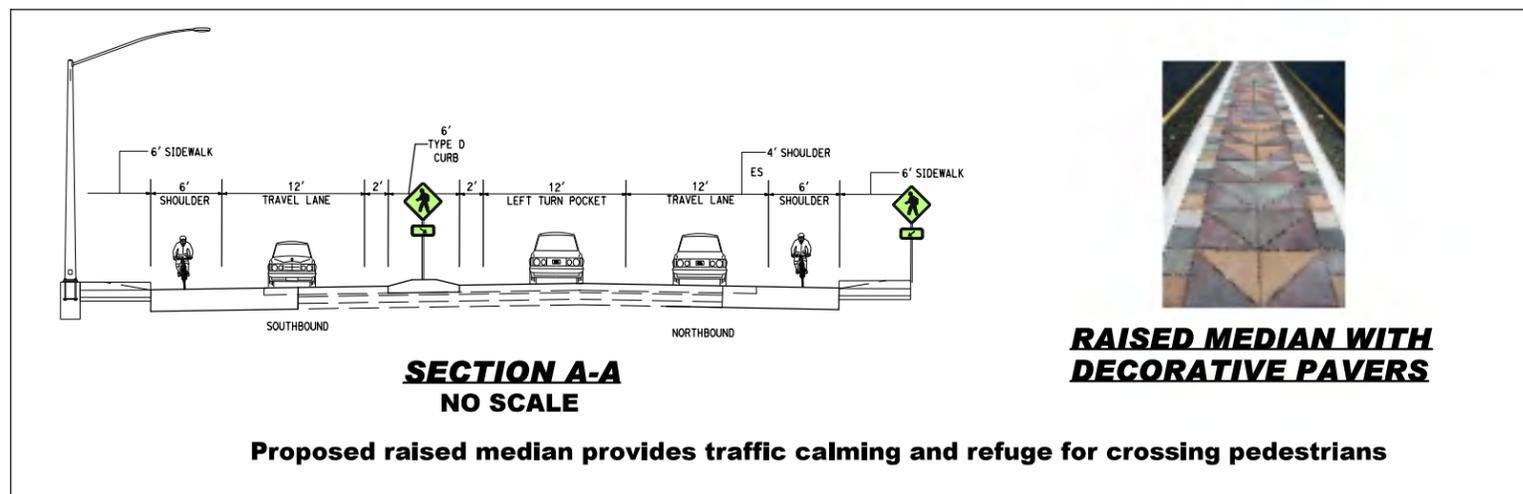


DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 7TH STREET - ALTERNATIVE 2



SEE 2ND STREET - ALTERNATIVE 2

RAISED MEDIAN WITH TYPE D CURB



LEGEND:

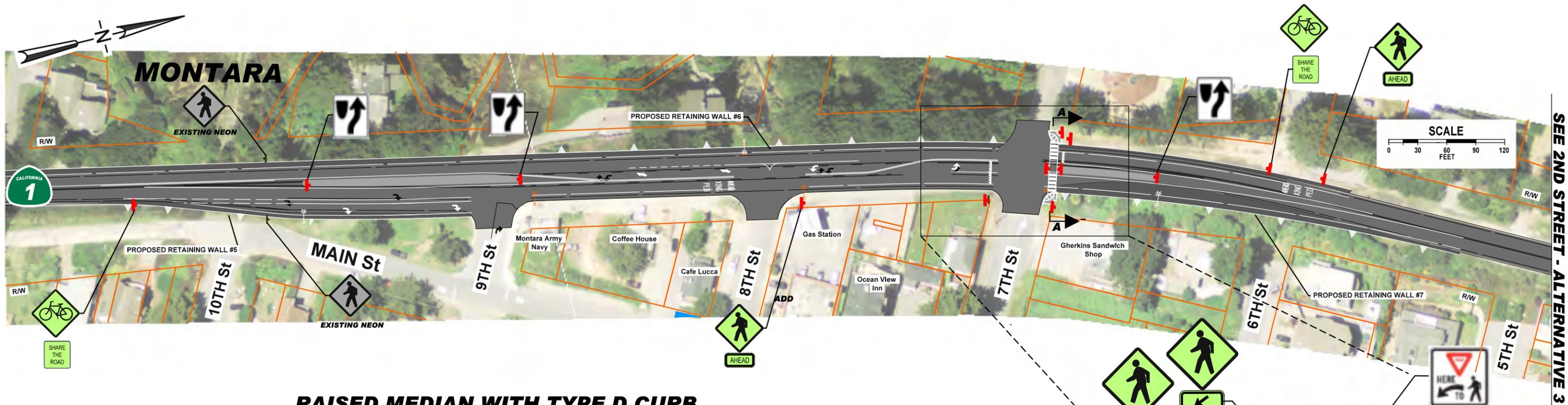
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE



7TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

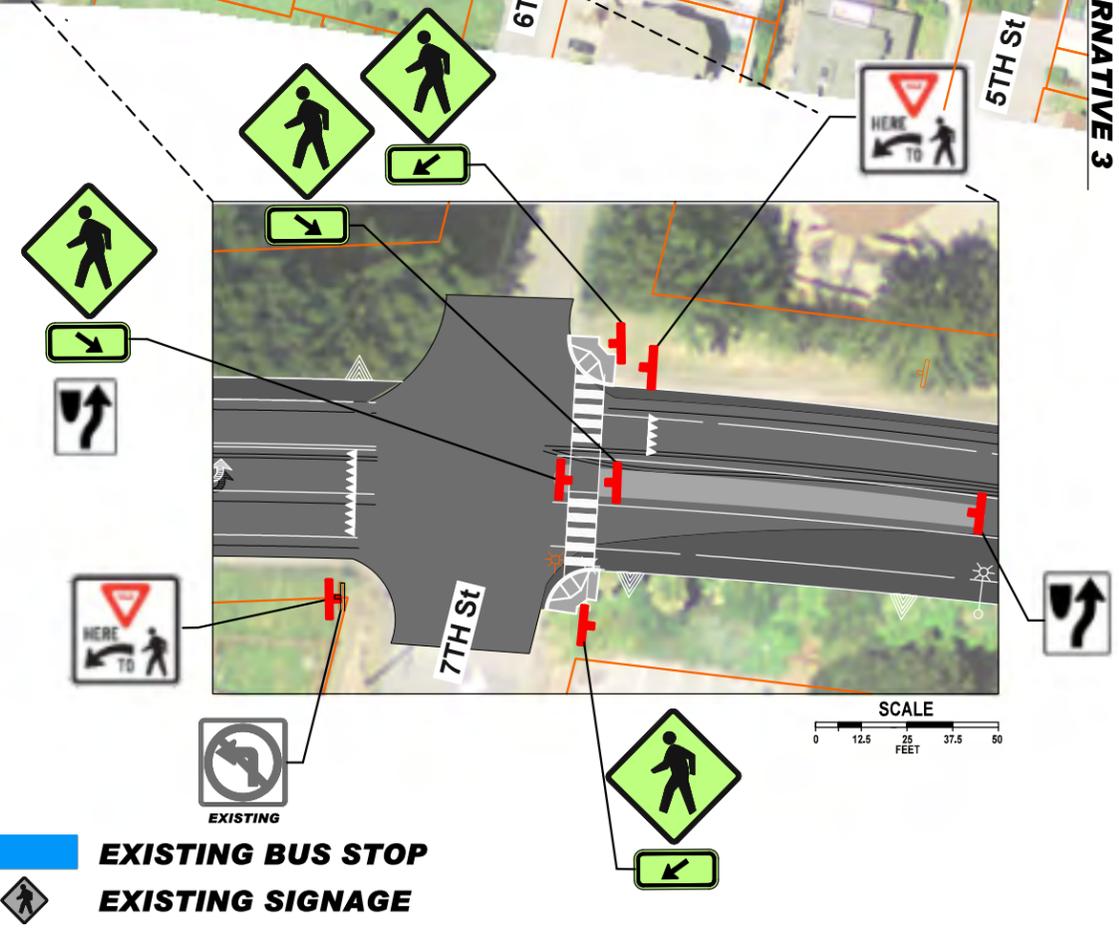
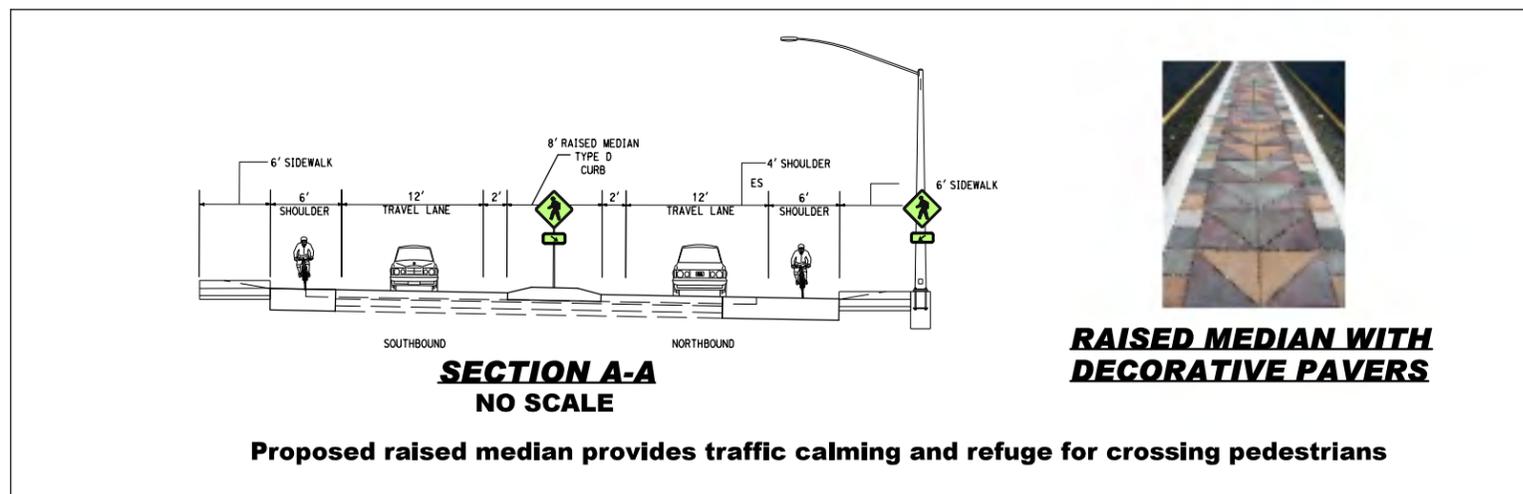
ALTERNATIVE
2
JUNE 2015

DESIGNATED PEDESTRIAN CROSSING | RAISED MEDIAN 7TH STREET - ALTERNATIVE 3



SEE 2ND STREET - ALTERNATIVE 3

RAISED MEDIAN WITH TYPE D CURB



LEGEND:

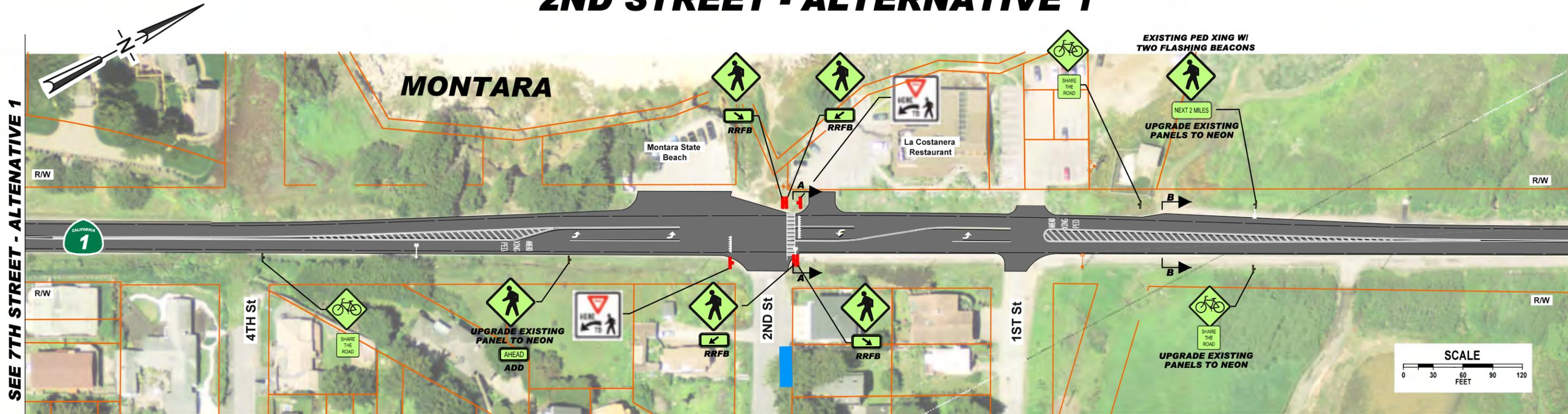
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE



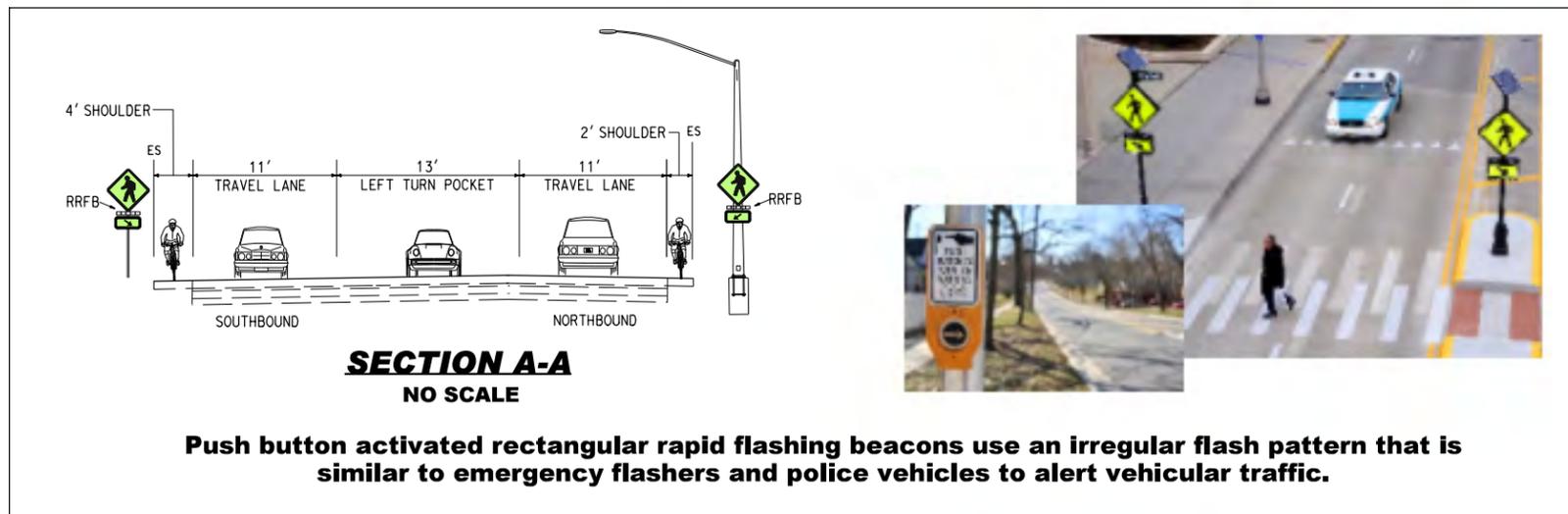
7TH STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE
3
JUNE 2015

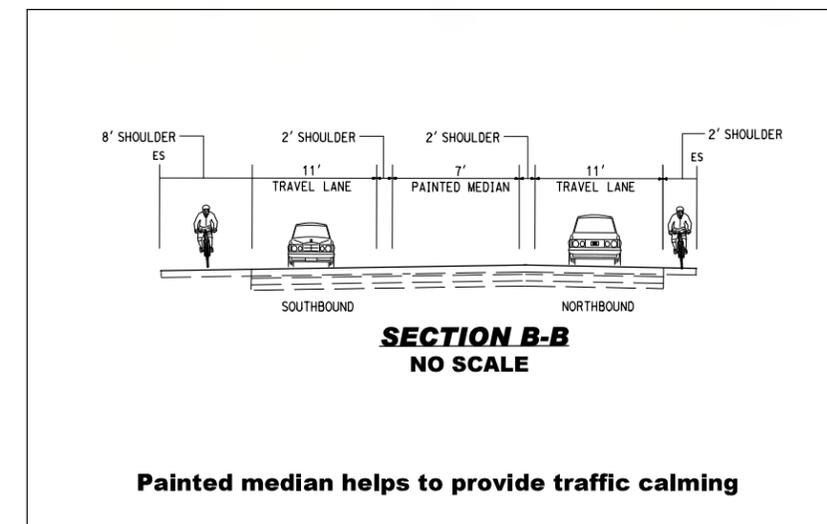
DESIGNATED PEDESTRIAN CROSSING / PAINTED MEDIAN 2ND STREET - ALTERNATIVE 1



RECTANGULAR RAPID FLASH BEACON



HIGH VISIBILITY PAINTED MEDIAN



LEGEND:

- PROPOSED STRIPING**
- EXISTING ROADWAY**
- PROPOSED RAISED MEDIAN**
- EXISTING STRIPING**
- EXISTING BUS STOP**
- PROPOSED SIGNAGE**



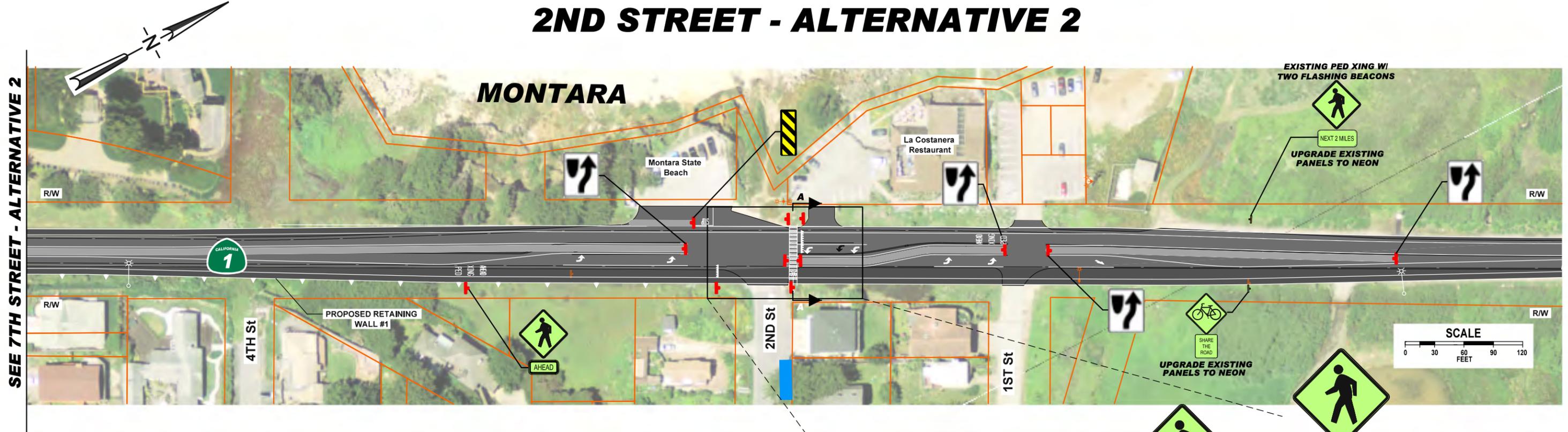
2ND STREET, MONTARA HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE

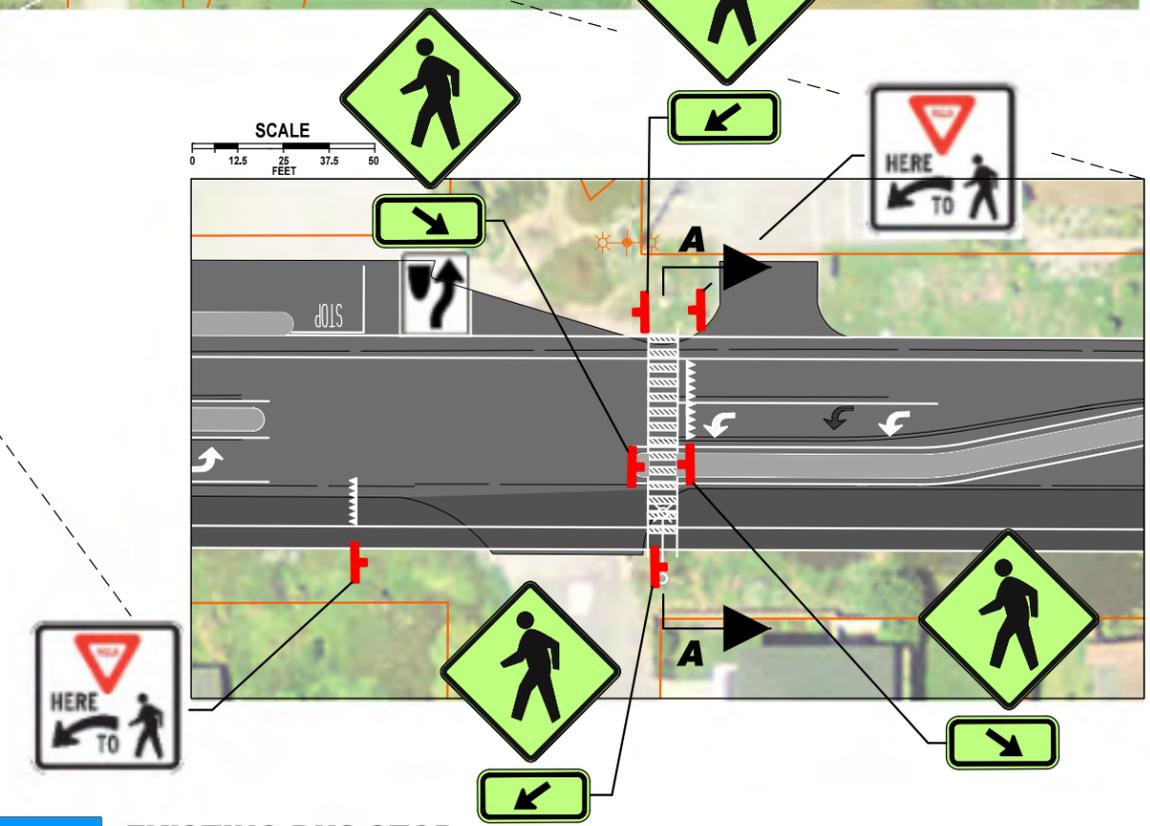
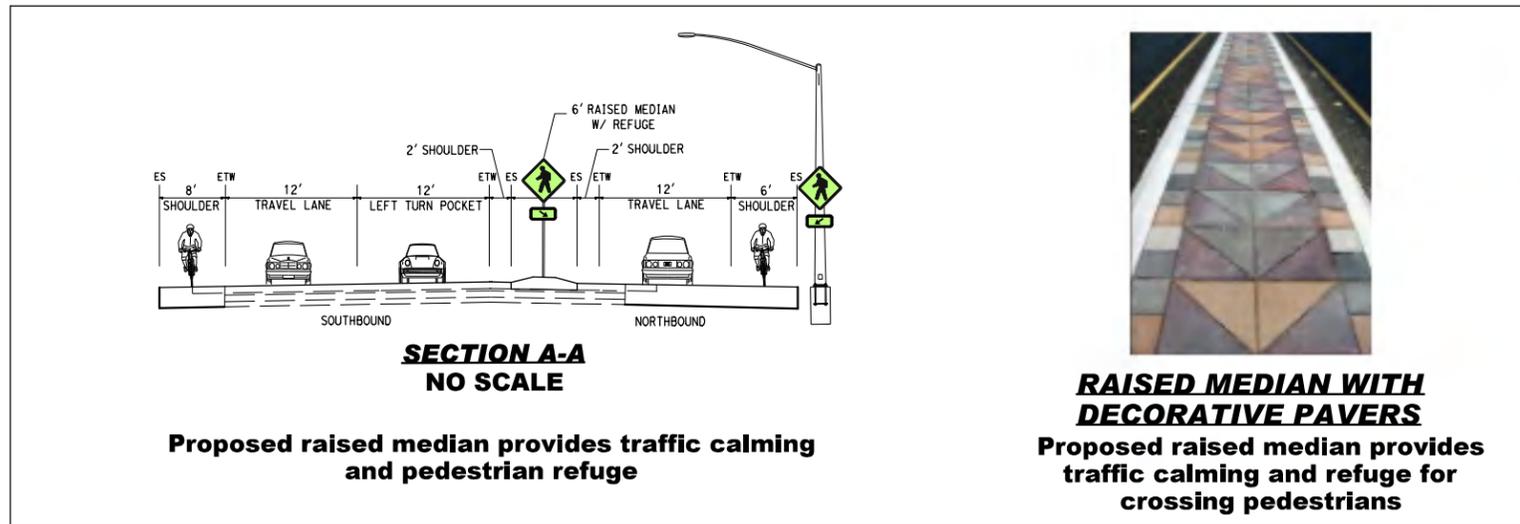
1

JUNE 2015

DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 2ND STREET - ALTERNATIVE 2



RAISED MEDIAN WITH TYPE D CURB



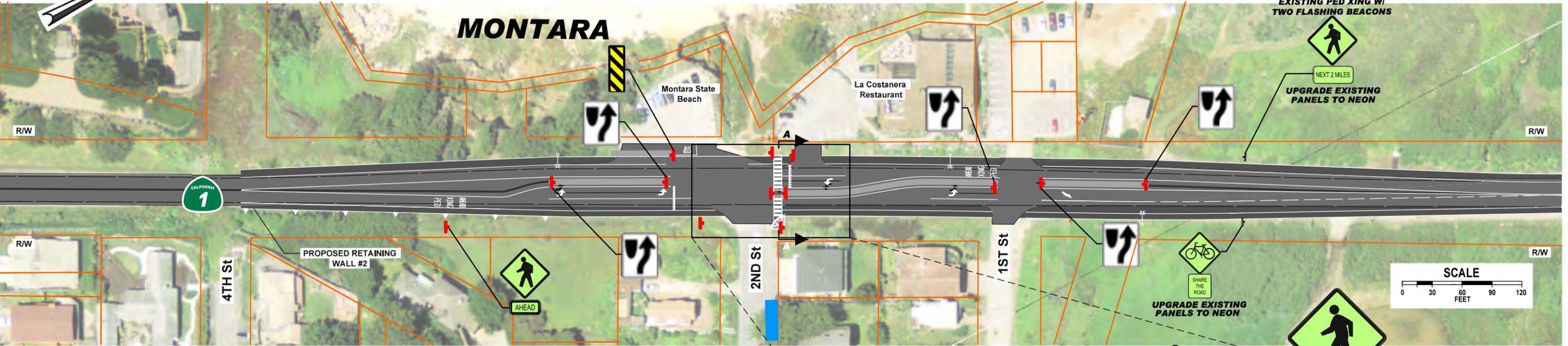
LEGEND:

- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- EXISTING BUS STOP
- PROPOSED SIGNAGE
- EXISTING SIGNAGE

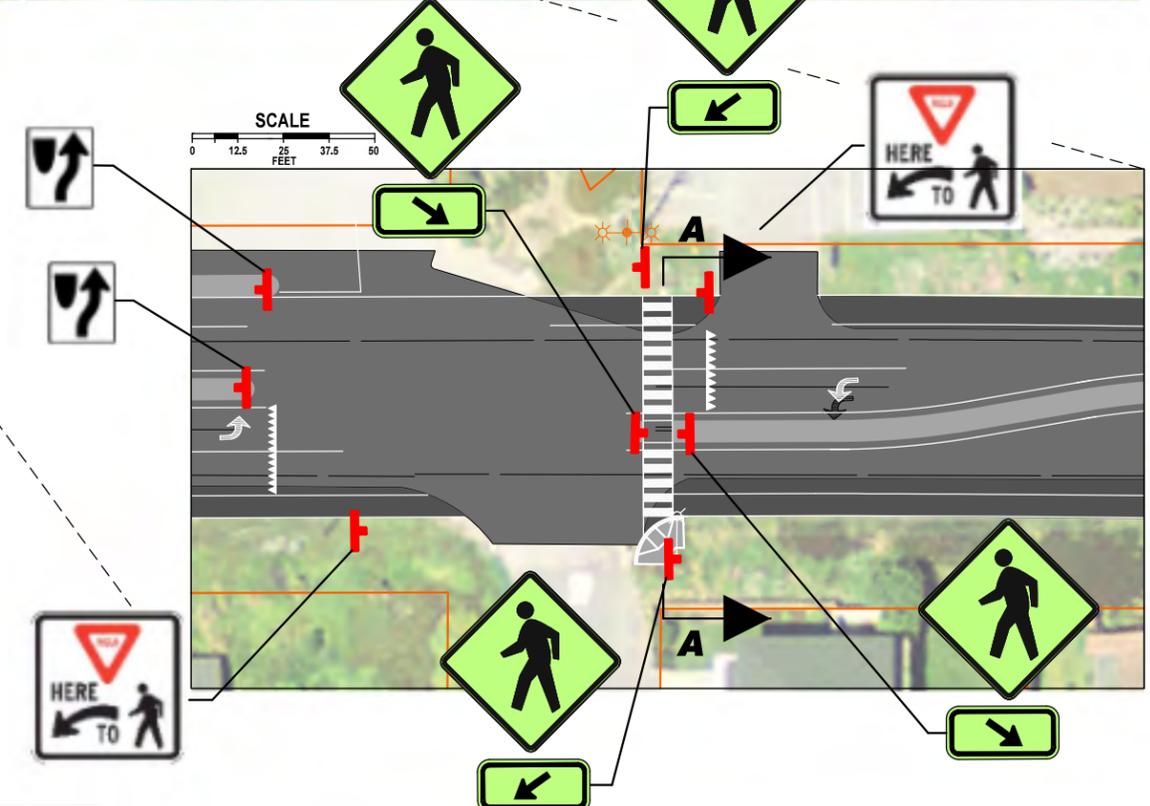
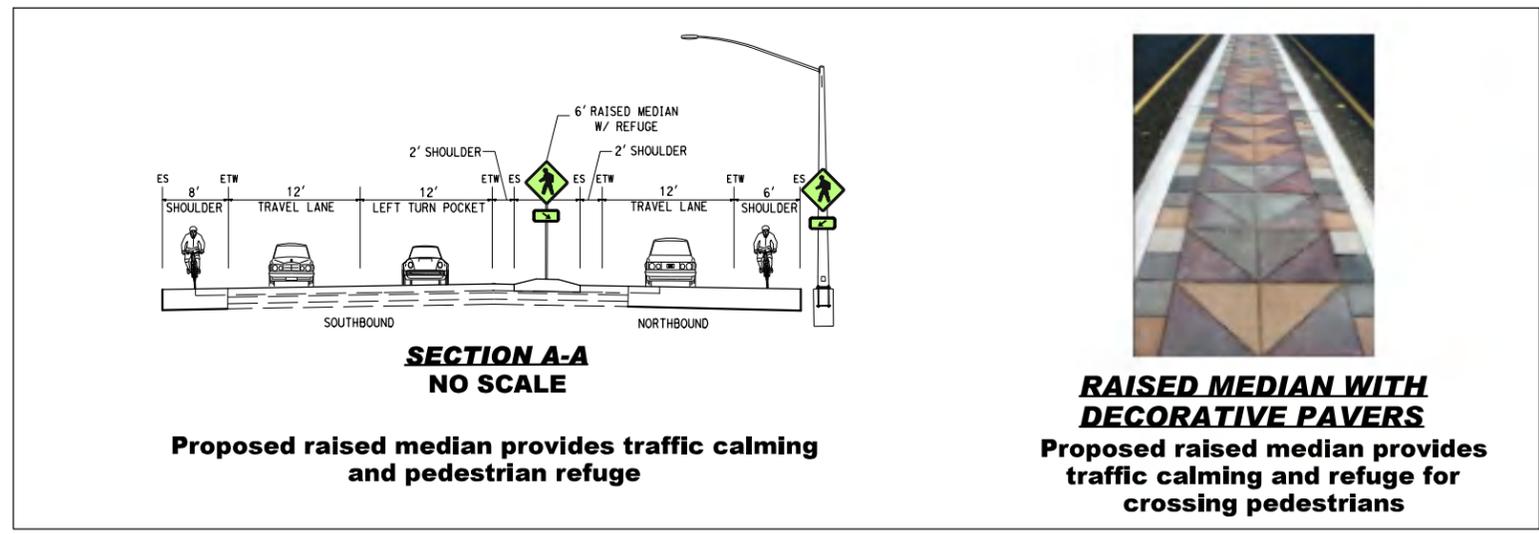


DESIGNATED PEDESTRIAN CROSSING / RAISED MEDIAN 2ND STREET - ALTERNATIVE 3

SEE 7TH STREET - ALTERNATIVE 3



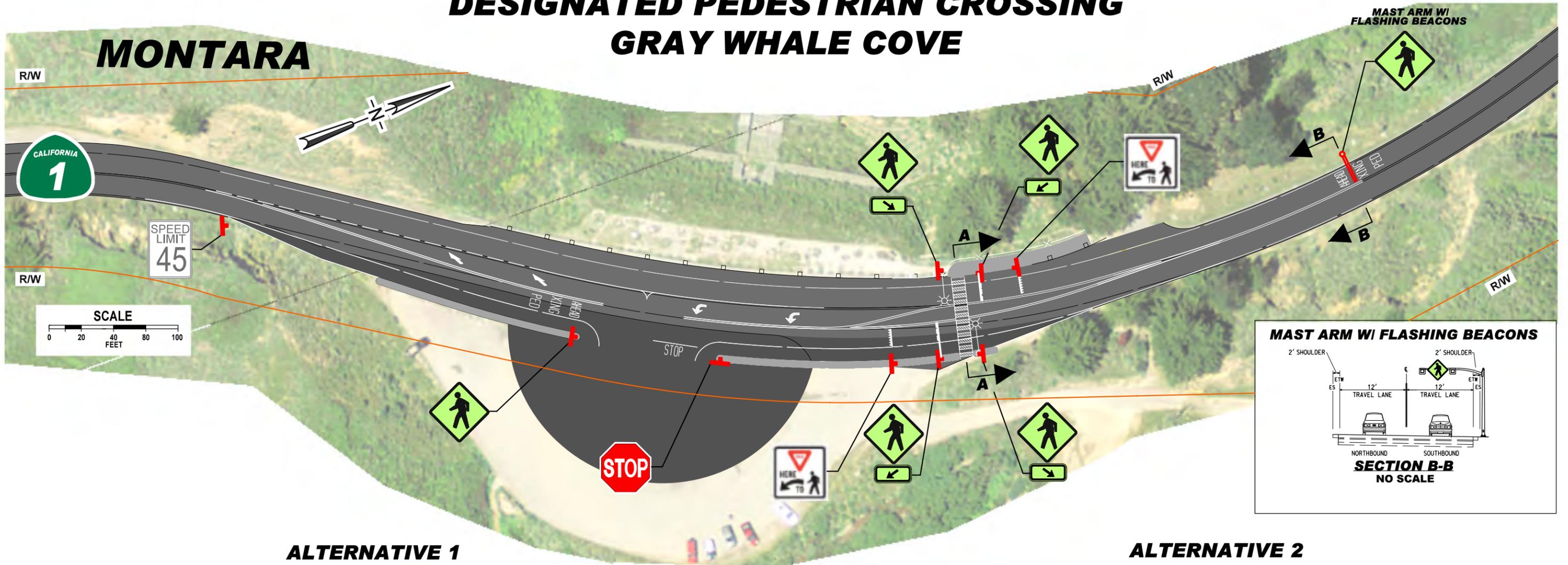
RAISED MEDIAN WITH TYPE D CURB



LEGEND:

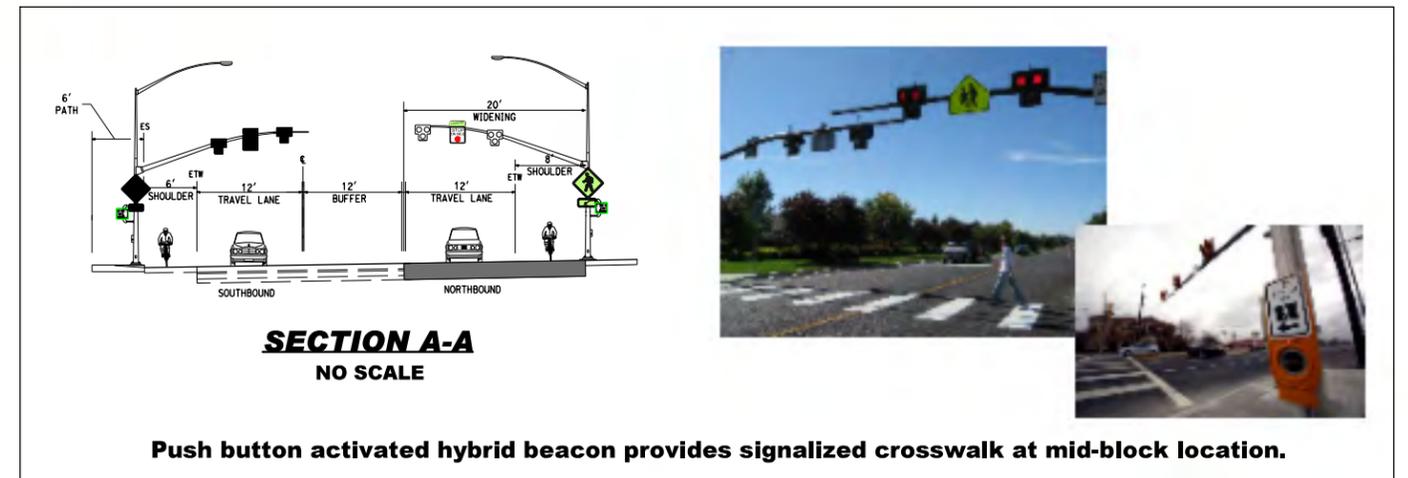
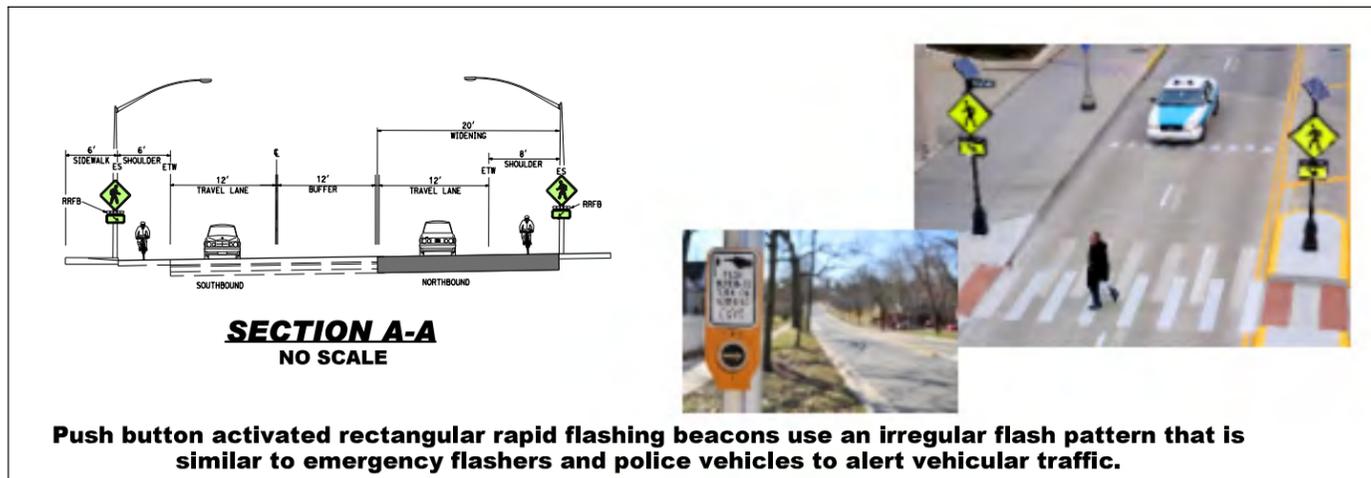
- PROPOSED WIDENING
- EXISTING ROADWAY
- PROPOSED STRIPING
- EXISTING STRIPING
- PROPOSED RAISED MEDIAN
- PROPOSED SIGNAGE
- EXISTING BUS STOP
- EXISTING SIGNAGE

DESIGNATED PEDESTRIAN CROSSING GRAY WHALE COVE



**ALTERNATIVE 1
RECTANGULAR RAPID FLASH BEACON**

**ALTERNATIVE 2
HYBRID BEACON**



LEGEND:

- PROPOSED WIDENING**
- EXISTING ROADWAY**
- PROPOSED STRIPING**
- EXISTING STRIPING**
- PROPOSED SIGNAGE**



GRAY WHALE COVE, MCNEE RANCH STATE PARK HIGHWAY 1 PRELIMINARY PLANNING STUDY (PPS)

ALTERNATIVE
1 & 2
JUNE 2015

**Attachment C:
Cost Estimates**

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District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) RRFB's

Alternative:

Mirada Road Alternative 1 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 356,000
TOTAL STRUCTURE ITEMS	<u>\$ -</u>
SUBTOTAL CONSTRUCTION COSTS	\$ 356,000
ESCALATION	<u>\$ 14,300 ⁽¹⁾</u>
TOTAL CONSTRUCTION COSTS	\$ 370,300
TOTAL RIGHT OF WAY & UTILITY ITEMS	<u>\$ -</u>
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 370,300
Project Report and Enviro Doc	\$ 37,030
Design Phase (PS&E)	\$ 44,436
Construction Administration	<u>\$ 55,545</u>
TOTAL SUPPORT COST	\$ 137,011
TOTAL PROJECT COST	\$ 510,000

- Note 1: Based on escalation rate of 2.00% per year for two years
- Note 2: Project Report and Environmental Document based on 10% of Construction Cost
- Note 3: Design Cost based on 12% of Construction Cost
- Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

I. ROADWAY ITEMS

Section 1 Earthwork	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Develop Water Supply	<u>1</u>	<u>LS</u>	<u>\$2,500.00</u>	<u>\$ 2,500</u>	
Subtotal Earthwork					<u>\$ 2,500</u>

Section 2 Pavement Structural Section					
Slurry Seal	<u>76,000</u>	<u>SQFT</u>	<u>\$ 2.00</u>	<u>\$ 152,000</u>	
Subtotal Pavement Structural Section					<u>\$ 152,000</u>

Section 3 Drainage					
Subtotal Drainage					<u>\$ -</u>

Section 4 Specialty Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (3%)	<u>1</u>	<u>LS</u>	<u>\$5,910.00</u>	<u>\$ 5,910</u>	
Water Pollution Control (2.5%)	<u>1</u>	<u>LS</u>	<u>\$4,925.00</u>	<u>\$ 4,925</u>	
Subtotal Specialty Items					<u>\$ 10,835</u>

Section 5 Traffic Items					
Thermoplastic Stripe	5,700	LF	\$ 1.50	\$ 8,550	
RRFB System (2-pole)	1	EA	\$ 4,200	\$ 4,200	
Roadside Sign Panel - No Post	4	EA	\$ 300	\$ 1,200	
Roadside Sign Plaque	6	EA	\$ 150	\$ 900	
Roadside Sign - One Post	4	EA	\$ 400	\$ 1,600	
Type 15 Standard Electrolier w/ LED Luminaire	2	EA	\$ 4,800	\$ 9,600	
Conductors, Conduit, Pull Box & Trenching	<u>1</u>	<u>LS</u>	<u>\$ 15,000</u>	<u>\$ 15,000</u>	
Subtotal Traffic Items					<u>\$ 41,050</u>
TOTAL SECTIONS 1-5					<u>\$ 207,000</u>

Section 6 Minor Items					
Subtotal Sections 1 - 5	<u>\$ 207,000</u>	x	<u>10%</u>	<u>\$ 20,700</u>	
Total Minor Items					<u>\$ 21,000</u>

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$	207,000			
Minor Items	\$	<u>21,000</u>			
Subtotal Sections 1 - 6	\$	<u>228,000</u>	x	<u>10%</u>	\$ <u>22,800</u>
Total Roadway Mobilization					\$ <u>23,000</u>

Section 8 Roadway Additions

Supplemental Work	\$	<u>228,000</u>	x	<u>10%</u>	\$ <u>22,800</u>
Contingencies*	\$	<u>273,800</u>	x	<u>30%</u>	\$ <u>82,140</u>
Total Roadway Additions					\$ <u>105,000</u>
Total Roadway Items (Total of Sections 1-8)					\$ <u>356,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

II. STRUCTURES ITEMS

Bridge Number:
 Structure Type:
 Width (out to out) - (ft)
 Span Lengths - (ft)
 Total Area - (ft²)
 Footing Type (pile/spread)
 Cost Per ft²
 (incl. 10% mobilization
 and 25% contingency)
 Total Cost for Structure

	Subtotal Structures Items	\$	-
	(Sum of Total Cost for Structures)		
 Railroad Related Costs:		\$	-
	Subtotal Railroad Items	\$	-
	Total Structures Items	\$	-
	(Sum of Structures Items plus Railroad Items)		

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

II. RIGHT OF WAY ITEMS

	Current Value	Escalation Rate Per Year	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ -	2.00%	\$ -
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support	\$ -	2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)	<u>\$ -</u>	Total Esc. Value Rounded	<u>\$ -</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F. Construction Contract Work
 Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

Mirada Road Alternative 2 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	\$	3,784,000
TOTAL STRUCTURE ITEMS	\$	-
SUBTOTAL CONSTRUCTION COSTS	\$	3,784,000
ESCALATION	\$	311,900 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$	4,095,900
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$	26,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$	4,121,900
	Project Report and Enviro Doc	\$ 412,190
	Design Phase (PS&E)	\$ 494,628
	Construction Administration	\$ 618,285
TOTAL SUPPORT COST	\$	1,525,103
TOTAL PROJECT COST	\$	5,650,000

- Note 1: Based on escalation rate of 2.00% per year for four years (mid-year of construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by:

 (Signature)

Approved by Project Manager:

 (Signature)

Date: August 10, 2015

Phone No.: 408-297-9585

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	6000	CY	\$ 50.00	\$ 300,000	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
Subtotal Earthwork					\$ 310,000

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Slurry Seal	165,000	SF	\$ 1.00	\$ 165,000	
Hot Mixed Asphalt (Type A)	3,150	TON	\$ 110.00	\$ 346,500	
Class 3 Aggregate Base	3,070	CY	\$ 65.00	\$ 199,550	
Subtotal Pavement Structural Section					\$ 711,050

Section 3 Drainage	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Extend 2 - 60" Culvert and Replace Headwall	1	LS	\$ 30,000.00	\$ 30,000	
Median Drainage	1	LS	\$ 80,000.00	\$ 80,000	
Subtotal Drainage					\$ 110,000

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Erosion Control (3%)	1	LS	\$ 75,000.00	\$ 75,000	
Water Pollution Control (2.5%)	1	LS	\$ 62,500.00	\$ 62,500	
Storm Water BMP (4.25%)	1	LS	\$ 106,250.00	\$ 106,250	
Environmental Mitigation (10%)	1	LS	\$ 250,000.00	\$ 250,000	
Remove Misc (AC Dike, Conc Curb...)	0	LF	\$ 14.00	\$ -	
Type D Curb and Gutter	4,630	LF	\$ 20.00	\$ 92,600	
Misc. Concrete Work	0	SF	\$ 14.00	\$ -	
Minor Concrete (Stamped Concrete)	16,600	SF	\$ 15.00	\$ 249,000	
Metal Beam Guardrail	300	LF	\$ 40.00	\$ 12,000	
Remove MBGR	300	LF	\$ 12.00	\$ 3,600	
Subtotal Specialty Items					\$ 850,950

Section 5 Traffic Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Thermoplastic Stripe	14,000	LF	\$ 1.00	\$ 14,000	
RRFB system (2-pole)	1	EA	\$ 4,200	\$ 4,200	
Roadside Sign Panel - No Post	4	EA	\$ 300	\$ 1,200	
Roadside Sign Plaque	6	EA	\$ 150	\$ 900	
Roadside Sign - One Post	2	EA	\$ 400	\$ 800	
Object Marker - One Post	8	EA	\$ 250	\$ 2,000	
Type 15 Standard Electrolier w/ LED Luminaire	10	EA	\$ 4,800	\$ 48,000	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 150,000	\$ 150,000	
Subtotal Traffic Items					\$ 221,100
TOTAL SECTIONS 1-5					\$ 2,204,000

Section 6 Minor Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Subtotal Sections 1 - 5			\$ 2,204,000	x 10%	\$ 220,400
Total Minor Items					\$ 221,000

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 2,204,000				
Minor Items	<u>\$ 221,000</u>				
Subtotal Sections 1 - 6	\$ 2,425,000	x	10%	<u>\$ 242,500</u>	
				Total Roadway Mobilization	<u>\$ 243,000</u>

Section 8 Roadway Additions

Supplemental Work	\$ 2,425,000	x	10%	<u>\$ 242,500</u>	
Contingencies*	\$ 2,910,500	x	30%	<u>\$ 873,150</u>	
				Total Roadway Additions	<u>\$ 1,116,000</u>
				Total Roadway Items (Total of Sections 1-8)	<u>\$ 3,784,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----

II. STRUCTURES ITEMS

Bridge Number:
 Structure Type:
 Width (out to out) - (ft)
 Span Lengths - (ft)
 Total Area - (ft²)
 Footing Type (pile/spread)
 Cost Per ft²
 (incl. 10% mobilization
 and 25% contingency)
 Total Cost for Structure

	Subtotal Structures Items	\$ -
	(Sum of Total Cost for Structures)	
Railroad Related Costs:		\$ -
	Subtotal Railroad Items	\$ -
	Total Structures Items	\$ -
	(Sum of Structures Items plus Railroad Items)	

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: ----

II. RIGHT OF WAY ITEMS		Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ 24,000	2.00%	\$ 25,470
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support		2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)		<u>\$ 24,000</u>	Total Esc. Value Rounded	<u>\$ 25,470</u> <u>\$ 26,000</u>

**Anticipated Date of Right of Way Certification
 (Date to which Values are Escalated)** _____

F. Construction Contract Work
 Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The improvements included in this alternative are 1) restriping 2) 3 proposed pedestrian crossings
w/ RRFB's and lighting

Alternative:

Moss Beach Alternative 1A Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 653,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 653,000
ESCALATION	\$ 26,300 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 679,300
TOTAL RIGHT OF WAY & UTILITY ITEMS	\$ -
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 679,300
Project Report and Enviro Doc	\$ 67,930
Design Phase (PS&E)	\$ 81,516
Construction Administration	\$ 101,895
TOTAL SUPPORT COST	\$ 251,341
TOTAL PROJECT COST	\$ 940,000

Note 1: Based on escalation rate of 2.00% per year for two years
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
				Subtotal Earthwork	\$ 5,000

Section 2 Pavement Structural Section	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Slurry Seal	220,000	SF	\$ 1.00	\$ 220,000	
				Subtotal Pavement Structural Section	\$ 220,000

Section 3 Drainage	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
				Subtotal Drainage	\$ -

Section 4 Specialty Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (3%)	1	LS	\$ 15,120.00	\$ 15,120	
Water Pollution Control (2.5%)	1	LS	\$ 12,600.00	\$ 12,600	
Misc. Concrete Work	900	SF	\$ 14.00	\$ 12,600	
				Subtotal Specialty Items	\$ 40,320

Section 5 Traffic Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Thermoplastic Stripe	18,800	LF	\$ 1.00	\$ 18,800	
RRFB system (2-pole)	3	EA	\$ 4,200	\$ 12,600	
Roadside Sign Panel - No Post	12	EA	\$ 300	\$ 3,600	
Roadside Sign Plaque	14	EA	\$ 150	\$ 2,100	
Roadside Sign - One Post	8	EA	\$ 400	\$ 3,200	
Type 15 Standard Electrolier w/ LED Luminaire	6	EA	\$ 4,800	\$ 28,800	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 45,000	\$ 45,000	
				Subtotal Traffic Items	\$ 114,100
				TOTAL SECTIONS 1-5	\$ 380,000

Section 6 Minor Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Subtotal Sections 1 - 5			\$ 380,000	x 10%	\$ 38,000
				Total Minor Items	\$ 38,000

Section 7 Roadway Mobilization	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Subtotal Sections 1 - 5			\$ 380,000		
Minor Items			\$ 38,000		
Subtotal Sections 1 - 6			\$ 418,000	x 10%	\$ 41,800
				Total Roadway Mobilization	\$ 42,000

Section 8 Roadway Additions

Supplemental Work \$ 418,000 x 10% \$ 41,800

Contingencies* \$ 501,800 x 30% \$ 150,540

Total Roadway Additions \$ 193,000

Total Roadway Items (Total of Sections 1-8) \$ 653,000

Estimate Prepared by: Sam Sowko Phone: 408-297-9585 Date: August 10, 2015

Estimate Checked by: Lan Ho Phone: 408-297-9585 Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____ -
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ _____ -

Subtotal Railroad Items \$ _____ -

Total Structures Items \$ _____ -
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS		Current Value	Escalation Rate Per Year	Escalated Value
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ -	2.00%	\$ -
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support	\$ -	2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)		\$ -	Total Esc. Value Rounded	\$ -

Anticipated Date of Right of Way Certification
(Date to which Values are Escalated) _____

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The improvements included in this alternative are 1) restriping 2) 1 proposed pedestrian crossing
w/ RRFB's and lighting 3) Acceleration Lane at Cypress

Alternative:

Moss Beach Alternative 1B Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 554,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 554,000
ESCALATION	\$ 22,300 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 576,300
TOTAL RIGHT OF WAY & UTILITY ITEMS	\$ -
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 576,300
Project Report and Enviro Doc	\$ 57,630
Design Phase (PS&E)	\$ 69,156
Construction Administration	\$ 86,445
TOTAL SUPPORT COST	\$ 213,231
TOTAL PROJECT COST	\$ 790,000

Note 1: Based on escalation rate of 2.00% per year for two years
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015

Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
				Subtotal Earthwork	\$ 5,000

Section 2 Pavement Structural Section	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Slurry Seal	220,000	SF	\$ 1.00	\$ 220,000	
				Subtotal Pavement Structural Section	\$ 220,000

Section 3 Drainage	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
				Subtotal Drainage	\$ -

Section 4 Specialty Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (3%)	1	LS	\$ 12,060.00	\$ 12,060	
Water Pollution Control (2.5%)	1	LS	\$ 10,050.00	\$ 10,050	
Misc. Concrete Work	450	SF	\$ 14.00	\$ 6,300	
				Subtotal Specialty Items	\$ 28,410

Section 5 Traffic Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Thermoplastic Stripe	18,800	LF	\$ 1.00	\$ 18,800	
RRFB system (2-pole)	2	EA	\$ 4,200	\$ 8,400	
Roadside Sign Panel - No Post	8	EA	\$ 300	\$ 2,400	
Roadside Sign Plaque	8	EA	\$ 150	\$ 1,200	
Roadside Sign - One Post	5	EA	\$ 400	\$ 2,000	
Type 15 Standard Electrolier w/ LED Luminaire	4	EA	\$ 4,800	\$ 19,200	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 15,000	\$ 15,000	
				Subtotal Traffic Items	\$ 67,000
				TOTAL SECTIONS 1-5	\$ 321,000

Section 6 Minor Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Subtotal Sections 1 - 5	\$ 321,000		x 10%	\$ 32,100	
				Total Minor Items	\$ 33,000

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 321,000			
Minor Items	<u>\$ 33,000</u>			
Subtotal Sections 1 - 6	<u>\$ 354,000</u>	x	<u>10%</u>	<u>\$ 35,400</u>
			Total Roadway Mobilization	<u>\$ 36,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 354,000</u>	x	<u>10%</u>	<u>\$ 35,400</u>
Contingencies*	<u>\$ 425,400</u>	x	<u>30%</u>	<u>\$ 127,620</u>
			Total Roadway Additions	<u>\$ 164,000</u>
			Total Roadway Items (Total of Sections 1-8)	<u>\$ 554,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____ -
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ _____ -

Subtotal Railroad Items \$ _____ -

Total Structures Items \$ _____ -
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS

	Current Value	Escalation Rate Per Year	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ -	2.00%	\$ -
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support	\$ -	2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)	\$ -	Total Esc. Value Rounded	\$ -

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)**

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

Moss Beach Alternative 2 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 6,811,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 6,811,000
ESCALATION	\$ 561,400 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 7,372,400
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$ 32,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 7,404,400
Project Report and Enviro Doc	\$ 740,440
Design Phase (PS&E)	\$ 888,528
Construction Administration	\$ 1,110,660
TOTAL SUPPORT COST	\$ 2,739,628
TOTAL PROJECT COST	\$ 10,150,000

- Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
- Note 2: Project Report and Environmental Document based on 10% of Construction Cost
- Note 3: Design Cost based on 12% of Construction Cost
- Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Roadway Excavation	12,600	CY	\$ 40.00	\$ 504,000	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
				Subtotal Earthwork	\$ 514,000

Section 2 Pavement Structural Section	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Slurry Seal	220,000	SQFT	\$ 1.00	\$ 220,000	
Hot Mixed Asphalt (Type A)	6,950	TON	\$ 110.00	\$ 764,500	
Class 3 Aggregate Base	6,890	CY	\$ 65.00	\$ 447,850	
				Subtotal Pavement Structural Section	\$ 1,432,350

Section 3 Drainage	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Extend 2 - 48" Culverts and Replace Headwall	1	LS	\$ 36,000.00	\$ 36,000	
Modify Cross Culverts	1	LS	\$ 36,000.00	\$ 36,000	
Median Drainage	1	LS	\$ 100,000.00	\$ 100,000	
				Subtotal Drainage	\$ 172,000

Section 4 Specialty Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (3%)	1	LS	\$ 94,000.00	\$ 94,000	
Water Pollution Control (2.5%)	1	LS	\$ 78,000.00	\$ 78,000	
Storm Water BMP (4.25%)	1	LS	\$ 133,000.00	\$ 133,000	
Environmental Mitigation (10%)	1	LS	\$ 311,000.00	\$ 311,000	
Type D Curb and Gutter	8,000	LF	\$ 20.00	\$ 160,000	
Minor Concrete (Stamped Concrete)	29,080	SF	\$ 15.00	\$ 436,200	
Retaining Wall #9	2,650	SF	\$ 100.00	\$ 265,000	
Architectual Treatment	2,650	SF	\$ 8.00	\$ 21,200	
Metal Beam Guardrail	320	LF	\$ 40.00	\$ 12,800	
Remove MBGR	320	LF	\$ 10.00	\$ 3,200	
				Subtotal Specialty Items	\$ 1,514,400

Section 5 Traffic Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Thermoplastic Stripe	20,800	LF	\$ 1.00	\$ 20,800	
RRFB system (2-pole)	1	EA	\$ 4,200	\$ 4,200	
Roadside Sign Panel - No Post	4	EA	\$ 300	\$ 1,200	
Roadside Sign Plaque	5	EA	\$ 150	\$ 750	
Roadside Sign - One Post	3	EA	\$ 400	\$ 1,200	
Object Marker - One Post	18	EA	\$ 250	\$ 4,500	
Type 15 Standard Electrolier w/ LED Luminaire	13	EA	\$ 4,800	\$ 62,400	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 240,000	\$ 240,000	
				Subtotal Traffic Items	\$ 335,050
				TOTAL SECTIONS 1-5	\$ 3,968,000

Section 6 Minor Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Subtotal Sections 1 - 5	\$ 3,968,000		x 10%	\$ 396,800	
				Total Minor Items	\$ 397,000

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 3,968,000			
Minor Items	<u>\$ 397,000</u>			
Subtotal Sections 1 - 6	<u>\$ 4,365,000</u>	x	<u>10%</u>	<u>\$ 436,500</u>
			Total Roadway Mobilization	<u>\$ 437,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 4,365,000</u>	x	<u>10%</u>	<u>\$ 436,500</u>
Contingencies*	<u>\$ 5,238,500</u>	x	<u>30%</u>	<u>\$ 1,571,550</u>
			Total Roadway Additions	<u>\$ 2,009,000</u>
			Total Roadway Items (Total of Sections 1-8)	<u>\$ 6,811,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

	Subtotal Structures Items (Sum of Total Cost for Structures)	\$ -
Railroad Related Costs:		\$ -
	Subtotal Railroad Items	\$ -
	Total Structures Items (Sum of Structures Items plus Railroad Items)	\$ -

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS		Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ 30,000	2.00%	\$ 31,840
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support		2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)		<u>\$ 30,000</u>	Total Esc. Value Rounded	<u>\$ 31,840</u>
				<u>\$ 32,000</u>

Anticipated Date of Right of Way Certification
(Date to which Values are Escalated) _____

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

Moss Beach Alternative 3 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 2,702,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 2,702,000
ESCALATION	\$ 222,700 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 2,924,700
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$ 22,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 2,946,700
Project Report and Enviro Doc	\$ 294,670
Design Phase (PS&E)	\$ 353,604
Construction Administration	\$ 442,005
TOTAL SUPPORT COST	\$ 1,090,279
TOTAL PROJECT COST	\$ 4,040,000

- Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5 \$ 1,573,000
Minor Items \$ 158,000

Subtotal Sections 1 - 6 \$ 1,731,000

x 10% \$ 173,100

Total Roadway Mobilization \$ 174,000

Section 8 Roadway Additions

Supplemental Work \$ 1,731,000

x 10% \$ 173,100

Contingencies* \$ 2,078,100

x 30% \$ 623,430

Total Roadway Additions \$ 797,000

Total Roadway Items (Total of Sections 1-8) \$ 2,702,000

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: May 5, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: May 5, 2015

II. RIGHT OF WAY ITEMS

	Current Value	Escalation	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ 20,000	2.00%	\$ 21,230
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support		2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)	<u>\$ 20,000</u>	Total Esc. Value	<u>\$ 21,230</u>
		Rounded	<u>\$ 22,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)**

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian crossings w/ RRFBS and
lighting, 2) left-turn lane pockets and 3) painted median

Alternative:

16th Street, Montara Alternative 1 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 362,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 362,000
ESCALATION	\$ 14,600 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 376,600
TOTAL RIGHT OF WAY & UTILITY ITEMS	\$ -
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 376,600
Project Report and Enviro Doc	\$ 37,660
Design Phase (PS&E)	\$ 45,192
Construction Administration	\$ 56,490
TOTAL SUPPORT COST	\$ 139,342
TOTAL PROJECT COST	\$ 520,000

- Note 1: Based on escalation rate of 2.00% per year for two years
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Develop Water Supply	1	LS	\$ 2,500.00	\$ 2,500	
				Subtotal Earthwork	\$ 2,500
Section 2 Pavement Structural Section					
Slurry Seal	81,500	SF	\$ 2.00	\$ 163,000	
				Subtotal Pavement Structural Section	\$ 163,000
Section 3 Drainage					
				Subtotal Drainage	\$ -
Section 4 Specialty Items	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (3%)	1	LS	\$ 5,100.00	\$ 5,100	
Water Pollution Control (2.5%)	1	LS	\$ 4,250.00	\$ 4,250	
Misc. Concrete Work	110	SF	\$ 14.00	\$ 1,540	
				Subtotal Specialty Items	\$ 10,890
Section 5 Traffic Items					
Thermoplastic Stripe	6,600	LF	\$ 1.00	\$ 6,600	
RRFB system (2-pole)	1	EA	\$ 4,200	\$ 4,200	
Roadside Sign Panel - No Post	2	EA	\$ 300	\$ 600	
Roadside Sign Plaque	5	EA	\$ 150	\$ 750	
Roadside Sign - One Post	4	EA	\$ 400	\$ 1,600	
Type 15 Standard Electrolier w/ LED Luminaire	1	EA	\$ 4,800	\$ 4,800	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 15,000	\$ 15,000	
				Subtotal Traffic Items	\$ 33,550
				TOTAL SECTIONS 1-5	\$ 210,000
Section 6 Minor Items					
Subtotal Sections 1 - 5	\$ 210,000	x	10%	\$ 21,000	
				Total Minor Items	\$ 21,000
Section 7 Roadway Mobilization					
Subtotal Sections 1 - 5	\$ 210,000				
Minor Items	\$ 21,000				
Subtotal Sections 1 - 6	\$ 231,000	x	10%	\$ 23,100	
				Total Roadway Mobilization	\$ 24,000

Section 8 Roadway Additions

Supplemental Work \$ 231,000 x 10% \$ 23,100

Contingencies* \$ 278,100 x 30% \$ 83,430

Total Roadway Additions \$ 107,000

Total Roadway Items (Total of Sections 1-8) \$ 362,000

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
 Structure Type:
 Width (out to out) - (ft)
 Span Lengths - (ft)
 Total Area - (ft²)
 Footing Type (pile/spread)
 Cost Per ft²
 (incl. 10% mobilization
 and 25% contingency)
 Total Cost for Structure

Subtotal Structures Items
 (Sum of Total Cost for Structures) \$ -

Railroad Related Costs: \$ -

Subtotal Railroad Items \$ -

Total Structures Items
 (Sum of Structures Items plus Railroad Items) \$ -

Comments:

Estimate Prepared by: N/A Phone: Date:

Comments:

Estimate Prepared by: N/A Phone: Date:

II. RIGHT OF WAY ITEMS

	Current Value	Escalation Rate Per Year	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ -	2.00%	\$ -
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support	\$ -	2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)	\$ -	Total Esc. Value Rounded	\$ -

Anticipated Date of Right of Way Certification
 (Date to which Values are Escalated) _____

F. Construction Contract Work
 Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko Phone: 408-297-9585 Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

16th Street, Montara Alternative 2 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 2,939,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 2,939,000
ESCALATION	\$ 242,200 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 3,181,200
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$ 144,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 3,325,200
Project Report and Enviro Doc	\$ 332,520
Design Phase (PS&E)	\$ 399,024
Construction Administration	\$ 498,780
TOTAL SUPPORT COST	\$ 1,230,324
TOTAL PROJECT COST	\$ 4,560,000

Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

Section 6 Minor Items

Subtotal Sections 1 - 5	<u>\$ 1,711,000</u>	x	<u>10%</u>	<u>\$ 171,100</u>	
				Total Minor Items	<u>\$ 172,000</u>

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	<u>\$ 1,711,000</u>				
Minor Items	<u>\$ 172,000</u>				
Subtotal Sections 1 - 6	<u>\$ 1,883,000</u>	x	<u>10%</u>	<u>\$ 188,300</u>	
				Total Roadway Mobilization	<u>\$ 189,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 1,883,000</u>	x	<u>10%</u>	<u>\$ 188,300</u>	
Contingencies*	<u>\$ 2,260,300</u>	x	<u>30%</u>	<u>\$ 678,090</u>	
				Total Roadway Additions	<u>\$ 867,000</u>
				Total Roadway Items (Total of Sections 1-8)	<u>\$ 2,939,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: L:an Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ _____

Subtotal Railroad Items \$ _____

Total Structures Items \$ _____
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by:

Phone:

Date:

Comments:

Estimate Prepared by:

Phone:

Date:

II. RIGHT OF WAY ITEMS

	Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ 135,000	2.00%	\$ 143,270
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support		2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)	<u>\$ 135,000</u>	Total Esc. Value Rounded	<u>\$ 143,270</u> <u>\$ 144,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F.	Construction Contract Work	
	Brief Description of Work	

	Right of Way Branch Cost Estimate for Work	<u>\$ -</u>

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings with RRFB's and lighting, 2) left-turn lane pockets and 3) raised medians.

Alternative:

1st - 9th Street, Montara Alternative 1 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 497,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 497,000
ESCALATION	\$ 20,000 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 517,000
TOTAL RIGHT OF WAY & UTILITY ITEMS	\$ -
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 517,000
Project Report and Enviro Doc	\$ 51,700
Design Phase (PS&E)	\$ 62,040
Construction Administration	\$ 77,550
TOTAL SUPPORT COST	\$ 191,290
TOTAL PROJECT COST	\$ 710,000

Note 1: Based on escalation rate of 2.00% per year for two years
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

Section 6 Minor Items

Subtotal Sections 1 - 5	<u>\$ 289,000</u>	x	10%	<u>\$ 28,900</u>	
				Total Minor Items	<u>\$ 29,000</u>

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	<u>\$ 289,000</u>				
Minor Items	<u>\$ 29,000</u>				
Subtotal Sections 1 - 6	<u>\$ 318,000</u>	x	10%	<u>\$ 31,800</u>	
				Total Roadway Mobilization	<u>\$ 32,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 318,000</u>	x	10%	<u>\$ 31,800</u>	
Contingencies*	<u>\$ 381,800</u>	x	30%	<u>\$ 114,540</u>	
				Total Roadway Additions	<u>\$ 147,000</u>
				Total Roadway Items (Total of Sections 1-8)	<u>\$ 497,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. RIGHT OF WAY ITEMS		Current Value	Escalation Rate Per Year	Escalated Value
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ -	2.00%	\$ -
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support	\$ -	2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)		<u>\$ -</u>	Total Esc. Value Rounded	<u>\$ -</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

1st - 9th Street, Montara Alternative 2 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 6,391,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 6,391,000
ESCALATION	\$ 526,800 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 6,917,800
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2017)	\$ 329,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 7,246,800
Project Report and Enviro Doc	\$ 724,680
Design Phase (PS&E)	\$ 869,616
Construction Administration	\$ 1,087,020
TOTAL SUPPORT COST	\$ 2,681,316
TOTAL PROJECT COST	\$ 9,930,000

Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	5,450	CY	\$ 40.00	\$ 218,000	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
				Subtotal Earthwork	\$ 228,000

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Slurry Seal	123,000	SQFT	\$ 1.00	\$ 123,000	
Hot Mixed Asphalt (Type A)	3,710	TON	\$ 110.00	\$ 408,100	
Class 3 Aggregate Base	3,670	CY	\$ 65.00	\$ 238,550	
				Subtotal Pavement Structural Section	\$ 769,650

Section 3 Drainage	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Relocate and Modify Drainage Facilities	7	EA	\$ 4,000.00	\$ 28,000	
Modify Drainage System	610	LF	\$ 100.00	\$ 61,000	
				Subtotal Drainage	\$ 89,000

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Erosion Control (3%)	1	LS	\$ 92,670.00	\$ 92,670	
Water Pollution Control (2.5%)	1	LS	\$ 77,225.00	\$ 77,225	
Storm Water BMP (4.25%)	1	LS	\$ 131,290.00	\$ 131,290	
Environmental Mitigation (10%)	1	LS	\$ 308,900.00	\$ 308,900	
Type D Curb and Gutter	5,200	LF	\$ 20.00	\$ 104,000	
Misc. Concrete Work	3,300	SF	\$ 14.00	\$ 46,200	
Minor Concrete (Stamped Concrete)	11,680	SF	\$ 15.00	\$ 175,200	
Retaining Wall #1	8,400	SF	\$ 100.00	\$ 840,000	
Retaining Wall #3	6,000	SF	\$ 100.00	\$ 600,000	
Retaining Wall #4	800	SF	\$ 100.00	\$ 80,000	
Architectual Treatment	15,200	SF	\$ 8.00	\$ 121,600	
				Subtotal Specialty Items	\$ 2,455,485

Section 5 Traffic Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Thermoplastic Stripe	14,000	LF	\$ 1.00	\$ 14,000	
Roadside Sign Panel - No Post	2	EA	\$ 300	\$ 600	
Roadside Sign Plaque	9	EA	\$ 150	\$ 1,350	
Roadside Sign - One Post	10	EA	\$ 400	\$ 4,000	
Object Marker - One Post	10	EA	\$ 250	\$ 2,500	
Type 15 Standard Electrolier w/ LED Luminaire	8	EA	\$ 4,800	\$ 38,400	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 120,000	\$ 120,000	
				Subtotal Traffic Items	\$ 180,850
				TOTAL SECTIONS 1-5	\$ 3,723,000

Section 6 Minor Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Subtotal Sections 1 - 5			\$ 3,723,000	x 10%	\$ 372,300
				Total Minor Items	\$ 373,000

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 3,723,000			
Minor Items	<u>\$ 373,000</u>			
Subtotal Sections 1 - 6	<u>\$ 4,096,000</u>	x	<u>10%</u>	<u>\$ 409,600</u>
				Total Roadway Mobilization
				<u>\$ 410,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 4,096,000</u>	x	<u>10%</u>	<u>\$ 409,600</u>
Contingencies*	<u>\$ 4,915,600</u>	x	<u>30%</u>	<u>\$ 1,474,680</u>
				Total Roadway Additions
				<u>\$ 1,885,000</u>
				Total Roadway Items (Total of Sections 1-8)
				<u>\$ 6,391,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ _____

Subtotal Railroad Items \$ _____

Total Structures Items \$ _____
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS		Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ 310,000	2.00%	\$ 328,980
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support		2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)		<u>\$ 310,000</u>	Total Esc. Value Rounded	<u>\$ 328,980</u>
				<u>\$ 329,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)**

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossings, 2) left-turn lane pockets and 3) raised medians.

Alternative:

1st - 9th Street, Montara Alternative 3 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 3,734,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 3,734,000
ESCALATION	\$ 307,800 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 4,041,800
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2017)	\$ 64,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 4,105,800
Project Report and Enviro Doc	\$ 410,580
Design Phase (PS&E)	\$ 492,696
Construction Administration	\$ 615,870
TOTAL SUPPORT COST	\$ 1,519,146
TOTAL PROJECT COST	\$ 5,630,000

Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015

Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	3,237	CY	\$ 40.00	\$ 129,480	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	

Subtotal Earthwork \$ 139,480

Section 2 Pavement Structural Section

Slurry Seal	123,000	SQFT	\$ 1.00	\$ 123,000	
Hot Mixed Asphalt (Type A)	1,892	TON	\$ 110.00	\$ 208,120	
Class 3 Aggregate Base	1,869	CY	\$ 65.00	\$ 121,485	

Subtotal Pavement Structural Section \$ 452,605

Section 3 Drainage

Relocate and Modify Drainage Facilities	3	EA	\$ 4,000.00	\$ 12,000	
Modify Drainage System	350	LF	\$ 100.00	\$ 35,000	

Subtotal Drainage \$ 47,000

Section 4 Specialty Items

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Erosion Control (3%)	1	LS	\$ 92,670.00	\$ 92,670	
Water Pollution Control (2.5%)	1	LS	\$ 77,225.00	\$ 77,225	
Storm Water BMP (4.25%)	1	LS	\$ 131,290.00	\$ 131,290	
Environmental Mitigation (10%)	1	LS	\$ 308,900.00	\$ 308,900	
Type D Curb and Gutter	1,677	LF	\$ 20.00	\$ 33,540	
Misc. Concrete Work	500	SF	\$ 14.00	\$ 7,000	
Minor Concrete (Stamped Concrete)	5,250	SF	\$ 15.00	\$ 78,750	
Retaining Wall #2	2,316	SF	\$ 100.00	\$ 231,600	
Retaining Wall #5	720	SF	\$ 100.00	\$ 72,000	
Retaining Wall #6	1,728	SF	\$ 100.00	\$ 172,800	
Retaining Wall #7	1400	SF	\$ 100.00	\$ 140,000	
Architectual Treatment	6,164	SF	\$ 8.00	\$ 49,312	

Subtotal Specialty Items \$ 1,395,087

Section 5 Traffic Items

Thermoplastic Stripe	14,000	LF	\$ 1.00	\$ 14,000	
Roadside Sign Panel - No Post	3	EA	\$ 300	\$ 900	
Roadside Sign Plaque	15	EA	\$ 150	\$ 2,250	
Roadside Sign - One Post	16	EA	\$ 400	\$ 6,400	
Object Marker - One Post	12	EA	\$ 250	\$ 3,000	
Type 15 Standard Electrolier w/ LED Luminaire	7	EA	\$ 4,800	\$ 33,600	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 80,000	\$ 80,000	

Subtotal Traffic Items \$ 140,150
TOTAL SECTIONS 1-5 \$ 2,175,000

Section 6 Minor Items

Subtotal Sections 1 - 5	<u>\$ 2,175,000</u>	x	<u>10%</u>	<u>\$ 217,500</u>	
				Total Minor Items	<u>\$ 218,000</u>

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	<u>\$ 2,175,000</u>				
Minor Items	<u>\$ 218,000</u>				
Subtotal Sections 1 - 6	<u>\$ 2,393,000</u>	x	<u>10%</u>	<u>\$ 239,300</u>	
				Total Roadway Mobilization	<u>\$ 240,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 2,393,000</u>	x	<u>10%</u>	<u>\$ 239,300</u>	
Contingencies*	<u>\$ 2,872,300</u>	x	<u>30%</u>	<u>\$ 861,690</u>	
				Total Roadway Additions	<u>\$ 1,101,000</u>
				Total Roadway Items (Total of Sections 1-8)	<u>\$ 3,734,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

Subtotal Structures Items \$ -
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ -

Subtotal Railroad Items \$ -

Total Structures Items \$ -
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS	Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ 60,000	2.00%	\$ 63,680
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support		2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)		2.00%	\$ -
Total Right of Way & Utilities (Current Value)	<u>\$ 60,000</u>	Total Esc. Value Rounded	<u>\$ 63,680</u> <u>\$ 64,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossing, 2) left-turn lane pockets and 3) RRFB's.

Alternative:

Gray Whale Cove Alternative 1 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 765,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 765,000
ESCALATION	\$ 63,000 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 828,000
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$ 123,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 951,000
Project Report and Enviro Doc	\$ 95,100
Design Phase (PS&E)	\$ 114,120
Construction Administration	\$ 142,650
TOTAL SUPPORT COST	\$ 351,870
TOTAL PROJECT COST	\$ 1,310,000

Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015
 Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Roadway Excavation	1,900	CY	\$ 15.00	\$ 28,500	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
				Subtotal Earthwork	\$ 38,500

Section 2 Pavement Structural Section

Slurry Seal	25,000	SF	\$ 1.00	\$ 25,000	
Hot Mixed Asphalt (Type A)	1,290	TON	\$ 110.00	\$ 141,900	
Class 3 Aggregate Base	1,270	CY	\$ 65.00	\$ 82,550	
				Subtotal Pavement Structural Section	\$ 224,450

Section 3 Drainage

Adjust Drainage Inlet	1	EA	\$ 4,000.00	\$ 4,000	
				Subtotal Drainage	\$ 4,000

Section 4 Specialty Items

	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Cost</u>	<u>Section Cost</u>
Erosion Control (1%)	1	LS	\$ 15,000.00	\$ 15,000	
Water Pollution Control (2.5%)	1	LS	\$ 12,500.00	\$ 12,500	
Storm Water BMP (4.25%)	1	LS	\$ 21,250.00	\$ 21,250	
Environmental Mitigation (10%)	1	LS	\$ 50,000.00	\$ 50,000	
Type D Curb and Gutter	600	LF	\$ 20.00	\$ 12,000	
Misc. Concrete Work	708	SF	\$ 14.00	\$ 9,920	
Metal Beam Guardrail	10	LF	\$ 150.00	\$ 1,500	
Terminal End System	1	EA	\$ 3,000.00	\$ 3,000	
Remove MBGR	40	LF	\$ 25.00	\$ 1,000	
				Subtotal Specialty Items	\$ 126,170

Section 5 Traffic Items

Thermoplastic Stripe	5,600	LF	\$ 1.00	\$ 5,600	
RRFB system (2-pole)	1	EA	\$ 4,200	\$ 4,200	
Roadside Sign Panel - No Post	5	EA	\$ 300	\$ 1,500	
Roadside Sign Plaque	4	EA	\$ 150	\$ 600	
Roadside Sign - One Post	3	EA	\$ 400	\$ 1,200	
Type 15 Standard Electrolier w/ LED Luminaire	2	EA	\$ 4,800	\$ 9,600	
Type 40 FBS standard and foundation	1	EA	\$ 14,000	\$ 14,000	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 15,000	\$ 15,000	
				Subtotal Traffic Items	\$ 51,700
				TOTAL SECTIONS 1-5	\$ 445,000

Section 6 Minor Items

Subtotal Sections 1 - 5	\$ 445,000	x	10%	\$ 44,500	
				Total Minor Items	\$ 44,500

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 445,000			
Minor Items	<u>\$ 45,000</u>			
Subtotal Sections 1 - 6	<u>\$ 490,000</u>	x	<u>10%</u>	<u>\$ 49,000</u>
			Total Roadway Mobilization	<u>\$ 49,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 490,000</u>	x	<u>10%</u>	<u>\$ 49,000</u>
Contingencies*	<u>\$ 588,000</u>	x	<u>30%</u>	<u>\$ 176,400</u>
			Total Roadway Additions	<u>\$ 226,000</u>
			Total Roadway Items (Total of Sections 1-8)	<u>\$ 765,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____ -
(Sum of Total Cost for Structures)

Railroad Related Costs:

\$ _____ -

Subtotal Railroad Items \$ _____ -

Total Structures Items \$ _____ -
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS

	Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B. Utility Relocation	\$ 115,000	2.00%	\$ 122,040
C. Relocation Assistance	\$ -	2.00%	\$ -
D. TCE/Permit to Enter	\$ -	2.00%	\$ -
E. R/W Support	\$ -	2.00%	\$ -
F. Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)	<u>\$ 115,000</u>	Total Esc. Value Rounded	<u>\$ 122,040</u> <u>\$ 123,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F. Construction Contract Work
Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ _____ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

District-County_Route: 04-SM-1
 Type of Estimate: Preliminary Planning
 PM: SM 1: 31.0/38.0
 EA: -----
 Program Code: -----

Project Description:

Limits: The project is located in the unincorporated Midcoast area of San Mateo County
from Gray Whale Cove south, to Mirada Road in Miramar.

Proposed Improvement (Scope):

The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian
crossing, 2) left-turn lane pockets and 3) Pedestrian Hybrid Beacon

Alternative:

Gray Whale Cove Alternative 2 Cost Estimate

SUMMARY OF PROJECT COST ESTIMATE

	Costs
TOTAL ROADWAY ITEMS	\$ 874,000
TOTAL STRUCTURE ITEMS	\$ -
SUBTOTAL CONSTRUCTION COSTS	\$ 874,000
ESCALATION	\$ 53,400 ⁽¹⁾
TOTAL CONSTRUCTION COSTS	\$ 927,400
TOTAL RIGHT OF WAY & UTILITY ITEMS (Escalated Value 2018)	\$ 123,000
TOTAL PROJECT CAPITAL OUTLAY COST	\$ 1,050,400
Project Report and Enviro Doc	\$ 105,040
Design Phase (PS&E)	\$ 126,048
Construction Administration	\$ 157,560
TOTAL SUPPORT COST	\$ 388,648
TOTAL PROJECT COST	\$ 1,440,000

Note 1: Based on escalation rate of 2.00% per year for four years (mid-year construction)
 Note 2: Project Report and Environmental Document based on 10% of Construction Cost
 Note 3: Design Cost based on 12% of Construction Cost
 Note 4: Construction Administration cost based on 15% of Construction Cost

Reviewed by: _____
 (Signature)

Approved by Project Manager: _____
 (Signature)

Date: August 10, 2015

Phone No.: 408-297-9585

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	1,900	CY	\$ 15.00	\$ 28,500	
Clearing & Grubbing	1	LS	\$ 5,000.00	\$ 5,000	
Develop Water Supply	1	LS	\$ 5,000.00	\$ 5,000	
Subtotal Earthwork					\$ 38,500

Section 2 Pavement Structural Section	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Slurry Seal	25,000	SF	\$ 1.00	\$ 25,000	
Hot Mixed Asphalt (Type A)	1,290	TON	\$ 110.00	\$ 141,900	
Class 3 Aggregate Base	1,270	CY	\$ 65.00	\$ 82,550	
Subtotal Pavement Structural Section					\$ 249,450

Section 3 Drainage	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Adjust Drainage Inlet	1	EA	\$ 4,000.00	\$ 4,000	
Subtotal Drainage					\$ 4,000

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Erosion Control (3%)	1	LS	\$ 18,000.00	\$ 18,000	
Water Pollution Control (2.5%)	1	LS	\$ 15,000.00	\$ 15,000	
Storm Water BMP (4.25%)	1	LS	\$ 25,500.00	\$ 25,500	
Environmental Mitigation (10%)	1	LS	\$ 60,000.00	\$ 60,000	
Type D Curb and Gutter	600	LF	\$ 20.00	\$ 12,000	
Misc. Concrete Work	708	SF	\$ 14.00	\$ 9,920	
Metal Beam Guardrail	10	LF	\$ 150.00	\$ 1,500	
Terminal End System	1	EA	\$ 3,000.00	\$ 3,000	
Remove MBGR	40	LF	\$ 25.00	\$ 1,000	
Subtotal Specialty Items					\$ 145,920

Section 5 Traffic Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Thermoplastic Stripe	5,600	LF	\$ 1.00	\$ 5,600	
Roadside Sign Panel - No Post	7	EA	\$ 300	\$ 2,100	
Roadside Sign Plaque	4	EA	\$ 150	\$ 600	
Roadside Sign - One Post	3	EA	\$ 400	\$ 1,200	
Type 17-3-100 standard and foundation	2	EA	\$ 13,000	\$ 26,000	
Type 40 FBS standard and foundation	1	EA	\$ 14,000	\$ 14,000	
Hybrid Beacon Signal Head	4	EA	\$ 900	\$ 3,600	
LED Luminaire	2	EA	\$ 800	\$ 1,600	
Pedestrian Push Button	2	EA	\$ 250	\$ 500	
Conductors, Conduit, Pull Box & Trenching	1	LS	\$ 15,000	\$ 15,000	
Subtotal Traffic Items					\$ 70,200
TOTAL SECTIONS 1-5					\$ 508,070

Section 6 Minor Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Subtotal Sections 1 - 5			\$ 508,070	x 10%	\$ 50,807
Total Minor Items					\$ 51,000

Section 7 Roadway Mobilization

Subtotal Sections 1 - 5	\$ 508,070			
Minor Items	<u>\$ 51,000</u>			
Subtotal Sections 1 - 6	<u>\$ 559,070</u>	x	<u>10%</u>	<u>\$ 55,907</u>
				Total Roadway Mobilization
				<u>\$ 56,000</u>

Section 8 Roadway Additions

Supplemental Work	<u>\$ 559,070</u>	x	<u>10%</u>	<u>\$ 55,907</u>
Contingencies*	<u>\$ 670,977</u>	x	<u>30%</u>	<u>\$ 201,294</u>
				Total Roadway Additions
				<u>\$ 258,000</u>
				Total Roadway Items (Total of Sections 1-8)
				<u>\$ 874,000</u>

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

Estimate Checked by: Lan Ho

Phone: 408-297-9585

Date: August 10, 2015

II. STRUCTURES ITEMS

Bridge Number:
Structure Type:
Width (out to out) - (ft)
Span Lengths - (ft)
Total Area - (ft²)
Footing Type (pile/spread)
Cost Per ft²
(incl. 10% mobilization
and 25% contingency)
Total Cost for Structure

_____ **Subtotal Structures Items** \$ _____
(Sum of Total Cost for Structures)

Railroad Related Costs: \$ _____

Subtotal Railroad Items \$ _____

Total Structures Items \$ _____
(Sum of Structures Items plus Railroad Items)

Comments:

Estimate Prepared by: N/A

Phone:

Date:

Comments:

Estimate Prepared by: N/A

Phone:

Date:

II. RIGHT OF WAY ITEMS		Current Value 2015	Escalation Rate Per Year	Escalated Value 2018
A.	Acquisition, including excess lands, damages to remainder(s) and Goodwill	\$ -	2.00%	\$ -
B.	Utility Relocation	\$ 115,000	2.00%	\$ 122,040
C.	Relocation Assistance	\$ -	2.00%	\$ -
D.	TCE/Permit to Enter	\$ -	2.00%	\$ -
E.	R/W Support	\$ -	2.00%	\$ -
F.	Cost (Eng. Appraisals, etc.)	\$ -	2.00%	\$ -
Total Right of Way & Utilities (Current Value)		<u>\$ 115,000</u>	Total Esc. Value Rounded	<u>\$ 122,040</u>
				<u>\$ 123,000</u>

**Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)** _____

F. Construction Contract Work

Brief Description of Work

Right of Way Branch Cost Estimate for Work \$ -

Comments:

Estimate Prepared by: Sam Sowko

Phone: 408-297-9585

Date: August 10, 2015

**Attachment D:
Preliminary Environmental Analysis Report (PEAR) Checklist(s)**

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Attachment A: PEAR Environmental Studies Checklist Alternative 1

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Growth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Farmlands/Timberlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Community Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Relocations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Environmental Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Utilities/Emergency Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	H	
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Historic Resources Evaluation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Finding of Effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Hydrology and Floodplain	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L	
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L	
Geology, Soils, Seismic and Topography	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Paleontology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L	
PER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
PMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
PSI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Noise and Vibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Energy and Climate Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Section 7:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Formal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
No effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Section 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
USFWS Consultation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
NMFS Consultation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	

Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk*			Comments
				L	M	H	
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>			
Wetlands & Other Waters/Delineation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
404(b)(1) Alternatives Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Wild & Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Coastal Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
HMMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
DFG Consistency Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
2081	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Context Sensitive Solutions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Section 4(f) Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Permits:							
401 Certification Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
404 Permit Coordination, IP, NWP, or LOP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
1602 Agreement Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
US Coast Guard (Section 10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			
BCDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>			

Attachment A: PEAR Environmental Studies Checklist Alternative 2

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Growth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Farmlands/Timberlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Community Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Relocations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Environmental Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Utilities/Emergency Services	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Resources Evaluation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Finding of Effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Paleontology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
PMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
PSI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Noise and Vibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Energy and Climate Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Section 7:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Formal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
No effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Section 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
USFWS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
NMFS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	

Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk*	Comments
				L M H	
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Wetlands & Other Waters/Delineation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
404(b)(1) Alternatives Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Wild & Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Coastal Management Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
HMMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
DFG Consistency Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
2081	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Context Sensitive Solutions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Permits:					
401 Certification Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
404 Permit Coordination, IP, NWP, or LOP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
1602 Agreement Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
US Coast Guard (Section 10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
BCDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	

Attachment A: PEAR Environmental Studies Checklist Alternative 3

Rev. 11/08

Environmental Studies for PA&ED Checklist					
	Not anticipated	Memo to file	Report required	Risk* L M H	Comments
Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Growth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Farmlands/Timberlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Community Impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Community Character and Cohesion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Relocations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Environmental Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Utilities/Emergency Services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
Visual/Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>H</u>	
Cultural Resources:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Archaeological Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Resources Evaluation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Property Survey Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Historic Resource Compliance Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Section 106 / PRC 5024 & 5024.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Native American Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>L</u>	
Finding of Effect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Data Recovery Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Memorandum of Agreement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Hydrology and Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Water Quality and Stormwater Runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Geology, Soils, Seismic and Topography	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Paleontology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
PER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
PMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Hazardous Waste/Materials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
ISA (Additional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
PSI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Noise and Vibration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Energy and Climate Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Biological Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Natural Environment Study	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Section 7:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Formal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
Informal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
No effect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>M</u>	
Section 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>L</u>	
USFWS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	
NMFS Consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>M</u>	

Environmental Studies for PA&ED Checklist

	Not anticipated	Memo to file	Report required	Risk*	Comments
				L M H	
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
Wetlands & Other Waters/Delineation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
404(b)(1) Alternatives Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Wild & Scenic River Consistency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Coastal Management Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
HMMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
DFG Consistency Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
2081	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Other:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Cumulative Impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Context Sensitive Solutions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	L	
Permits:					
401 Certification Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
404 Permit Coordination, IP, NWP, or LOP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
1602 Agreement Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
Local Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
State Coastal Development Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
NPDES Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M	
US Coast Guard (Section 10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
TRPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	
BCDC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L	

**Attachment E:
Caltrans Speed Survey**

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DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE

P.O. BOX 23660

OAKLAND, CA 94623-0660

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FAX (510) 286-5903

TTY 711

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*Serious drought
Help save water!*

December 10, 2014

4-SM-001-PM 34.60/37.12

ENGINEERING AND TRAFFIC SURVEY REPORT**I. SURVEY ORIGIN AND CONTENT**

In an email dated August 13, 2014, Captain Mike Maskarich, CHP Area Commander for the Redwood City Area, requested a current speed zone survey be provided for State Route 1, Cabrillo Highway, in San Mateo County between post miles 34.60 and 37.12, so that radar enforcement may be utilized. The request is in accordance with Vehicle Code Section 22354.

This survey includes:

- Analysis and recommendations - For each speed zone studied, an analysis of prevailing speeds, accident data, and roadway conditions not readily apparent to the driver was performed, and the appropriate speed limits recommended.
- Enforcement jurisdiction and attitude
- Summary of recommendations

II. ANALYSIS AND RECOMMENDATIONS**A. Between PM 34.60 at 150 feet south of Etheldore Street and PM 36.13 at 600 feet south of 9th Street****1. Analysis****a. Prevailing Speed Data**

The existing speed limit is **50** mph.

The prevailing speed checks are as follows:

	<u>Northbound</u>	<u>Southbound</u>
Critical Speed -	54.0 mph	50.8 mph
Pace Speed -	44.5-54.5 mph	41.3-51.3 mph
Average Speed -	49.6 mph	46.7 mph

The speed data is consistent with retention of the existing speed limit.

b. Accident Data

The accident rates within this highway segment are as follows:

	<u>Actual Rates</u>		<u>Average Rates</u>	
	<u>Fatal & Injury</u>	<u>Total</u>	<u>Fatal & Injury</u>	<u>Total</u>
07/01/09-06/30/10	0.74	1.24	0.44	1.09
07/01/10-06/30/11	0.49	0.86	0.44	1.09
07/01/11-06/30/12	0.75	1.38	0.44	1.09

The three-year accident history analyses between 07/01/09 and 06/30/12 indicates that there are 28 accidents. The primary collision factors are as follows: Influence of Alcohol – 7 percent, Failure to Yield – 29 percent, Improper Turn – 14 percent, Speeding – 32 percent and Other Violations - 18 percent.

Fifty percent of the accidents were intersection related.

The types of collisions are as follows: Sideswipe – 4 percent, Rear-End – 28 percent, Broadside – 39 percent, Hit Object – 14 percent, Auto-pedestrian – 11 percent and Other – 4 percent.

Analysis of the accident data indicates that the present speed limit is appropriate.

c. Highway, Traffic, and Roadside Conditions Not Readily Apparent to the Driver

None.

2. Recommendations

Retain the existing speed limit of **50** mph.

B. Between PM 36.13 at 600 feet south of 9th Street and PM 37.12 at 2850 feet north of 2nd Street

1. Analysis

a. Prevailing Speed Data

The existing speed limit is 45 mph.

The prevailing speed checks are as follows:

		<u>Northbound</u>	<u>Southbound</u>
Critical Speed	-	52.0 mph	48.7 mph
Pace Speed	-	42.0-52.0 mph	40.0-50.0 mph
Average Speed	-	46.9 mph	44.9 mph

The speed data is consistent with retention of the existing speed limit.

b. Accident Data

The accident rates within this highway segment are as follows:

	<u>Actual Rates</u>		<u>Average Rates</u>	
	<u>Fatal & Injury</u>	<u>Total</u>	<u>Fatal & Injury</u>	<u>Total</u>
07/01/09-06/30/10	0.00	0.39	0.44	1.09
07/01/10-06/30/11	0.95	1.52	0.44	1.09
07/01/11-06/30/12	0.19	0.58	0.44	1.09

The three-year accident history analyses between 07/01/09 and 06/30/12 indicates that there are 13 accidents. The primary collision factors are as follows: Influence of Alcohol – 8 percent, Failure to Yield – 31 percent, Improper Turn – 23 percent, Speeding – 15 percent, Other Violations – 8 percent and Other Than Driver – 15 percent.

Twenty-three percent of the accidents were intersection related.

The types of collisions are as follows: Head-on – 8 percent, Sideswipe – 8 percent, Rear-end – 15 percent, Broadside – 38 percent, Hit-Object – 15 percent, Auto-pedestrian – 8 percent and Other – 8 percent.

Analysis of the accident data indicates that the present speed limit is appropriate.

c. Highway, Traffic, and Roadside Conditions Not Readily Apparent to the Driver

None.

2. Recommendations

Retain the existing speed limit of 45 mph.

III. ENFORCEMENT JURISDICTION AND ATTITUDE

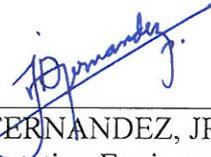
The California Highway Patrol concurs with the recommendations in this report.

IV. SUMMARY OF RECOMMENDATIONS

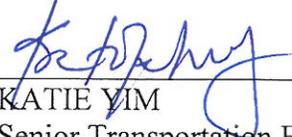
- A. Retain the existing 50 mph speed limit between PM 34.60 and PM 36.13.
- B. Retain the existing 45 mph speed limit between PM 36.13 and PM 37.12.

PREPARED BY

APPROVED BY



JOSE FERNANDEZ, JR.
Transportation Engineer
Office of Traffic Safety
Speed Zone Survey Branch



KATIE YIM
Senior Transportation Engineer
Office of Traffic Safety
(San Mateo and Solano Counties)
License No. 45029

**Attachment F:
Traffic Analysis Methodology Memorandum**

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Technical Memorandum

Date: November 19th 2014
To: San Mateo County Transportation Authority
From: Phong Vo, TE (URS Corporation)
Subject: Traffic Analysis Methodology Memorandum

This memorandum is to document the methodology for the traffic analysis for the Highway 1 Preliminary Planning Study (PPS) project. The project proposes to address congestion, throughput and safety improvements along a seven (7) mile stretch of Hwy 1. The project is located in the unincorporated Midcoast area of San Mateo County from Gray Whale Cove south, to Mirada Road in Miramar. The types of projects proposed for this section of Hwy 1 are 1) designated pedestrian crossings, 2) acceleration lanes 3) raised medians, and 4) left turn pockets.

The traffic analysis will be based on existing traffic and pedestrian counts obtained from the County of San Mateo and Caltrans. The preliminary traffic analysis will be conducted for existing conditions only (2014) and will be structured to assess operational deficiencies and/or benefits of the alternatives (variants) for comparative purposes. Below includes the traffic methodology for the analysis and recommendations for future data collection.

Pedestrian Crossings

Pedestrian crossings are proposed at several locations throughout the project limits. The pedestrian counts received from the County of San Mateo were conducted during weekday AM and PM peak hours in 2014 which reflect low pedestrian crossing volumes. Of these counts, the following locations did not have available pedestrian counts where crosswalks are proposed:

- Grey Whale Cove
- Cypress Ave
- Mirada Rd

However, of the counts performed they do not accurately reflect the true pedestrian volumes because this area is known to attract more pedestrians during the weekend. As a result, counts at each pedestrian crossing should be conducted during the weekend.



Technical Memorandum

Acceleration Lanes

Intersection will be analyzed and assessed for acceleration lanes based on predominant turning movements.

Raised Medians & Left Turn Pockets

Raised medians are proposed in the Moss Beach and Montara as well as between Mirada Road and Medio Drive. Left turn pockets and raised medians will require intersection analysis to determine where median openings should be located. Currently intersection traffic counts are not available at the following Highway 1 intersections within the project limits where raised medians are proposed:

- 1st St
- 4th St
- 9th St
- 16th St
- Terrace Ave
- Lancaster Ave
- Marine Blvd
- Furtado Ln
- Mirada Rd

Traffic distribution will be needed at locations where the project proposes raised medians using 2014 counts. Once counts are obtained, high level required length of left turn lanes at un-signalized intersection of two-lane roadways will be analyzed based on the gap acceptance theory and AASHTO standards.

The left turn length requirement based on gap acceptance theory was derived from “Lengths of Left-Turn Lanes at Un-signalized Intersections, Transportation Research Record 1500.” A critical gap of 7.0 seconds (the minimum time headway in the opposing flow that is required for a driver to complete a left turn maneuver) and a length of 30 feet per vehicle were used to estimate the required storage length.

On the other hand, AASHTO suggested the following procedure to calculate the left turn storage length: “the storage length may be based on the number of turning vehicles likely to arrive in an



*Technical
Memorandum*

average 2-minute period within the peak hour.” Table 1 summarizes the storage requirement for the left turn lane for both methods.



Technical Memorandum

Table 1 Adequate Left Turn Length at Un-signalized Intersections (in feet)

Left Turn Volumes (vph)	Gap Theory- Critical Gap 7.0 second										AASHTO (ft)
	Opposing Volumes (vph)										
	100	160	220	280	340	400	460	520	580	640	
40	0 ^a	60	60	60	60	60	60	60	60	60	40
80	60	60	60	60	60	60	90	90	90	120	80
120	60	60	60	60	90	90	120	120	150	150	120
160	60	60	60	90	90	120	150	150	180	210	160
200	60	60	90	90	120	150	180	180	210	270	200
240	60	90	90	120	150	180	210	240	270	330	240
280	60	90	120	150	180	210	240	270	330	420	280
320	60	120	120	150	180	240	270	330	420	540	320
360	90	120	150	180	210	270	330	420	540	750	360
400	90	150	150	210	240	300	390	480	690	750	400

^a A zero lane length indicates that a left turn lane is not warranted.

Source: Transportation Research Record 1500

**Attachment G:
Public Comments**

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Preliminary Planning Study for Highway 1 Congestion and Safety Improvement Project Public Comments

Included within:

June 18th 2014 Public Meeting #1

Meeting Notes.....	2
Comment Cards.....	8

July 31st 2014 Public Meeting #2 (*MCC Meeting – No Comment Cards*)

Meeting Notes.....	14
--------------------	----

March 11th 2015 Public Meeting #3

Comment Cards.....	18
Mind Mixer, MCC & Committee for Green Foothills Comments.....	24

June 23rd 2015 Public Meeting #4

Comments and Survey Data.....	25
-------------------------------	----

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Farallone View Elementary School, Montara, CA 7-9pm
Wednesday June 18th, 2014
Meeting Notes**

COMMENTS (CHRONOLOGICAL)

1. Proposed parking lot at Avenue Portola (Surfer's Beach) is wholly inconsistent with current land use plans to build park and recreational facilities at same location
2. "Urban" is an inaccurate area description
3. Jaywalking is ingrained at Surfer's Beach; no one will actually use designated crosswalk there
4. "This is a highway!"; vehicles have precedence
5. Highway 1 Safety & Mobility Improvement studies indicated median refuges for pedestrians; would prefer to cross highway one lane at a time; gives pedestrians a "choice"
6. Speeds too high in Moss Beach; need medians
7. Need more acceleration lanes in Moss Beach, especially @ Cypress; need better access to Seal Cove, etc.
8. There are too many crossings featured; would cause excessive vehicle delay
9. Staff have not been responsive to feedback from prior studies on same Highway 1 issues; "County has not been listening to us"
10. Designs are obstacles to vehicular traffic
11. Distrust in the direction of this PPS
12. Preference for median refuges
13. Didn't see connection to west side trail @ Gray Whale Cove; would like safe access to Devil's Slide from there (as opposed to walking along Hwy 1)
14. Preventing left turns in Moss Beach is awkward
15. 7th St. crossing is unnecessary because most people cross @ 8th St., to connect to existing trailhead there
16. Moss Beach is the most dangerous area (in this study); preference for Alternative 2 for Moss Beach; encourage roundabouts
17. Preference for acceleration lane at Cypress
18. Concern regarding crossings at curves, especially 16th St. in Montara
19. Have never seen some of the proposed crossing locations studied before (see question #3, below)
20. Concern regarding light pollution
21. Support acceleration lanes @ Cypress
22. Concerned about design proposals funneling traffic into neighborhood streets
23. Need west side trail connection from Gray Whale Cove to Devil's Slide
24. "Respect the commute traffic (needs)"
25. "These design alternatives are false dichotomies"
26. Center median is "only solution" @ Surfer's Beach
27. Lights will ruin the coastal view (street & beacons); "no new street lighting on the coast!"
28. Must have vehicular storage lanes at controlled intersections/segments
29. Way too many signs in proposals
30. Do not want vehicle delay

31. Pedestrian crossing signals provide false sense of security
32. “This is a semi-rural area! Not urban!”
33. “This is a plan to ruin the coastside”
34. Suggestion to embed flashing beacons in crossings
35. Suggestion to focus on east side trail access from @ Gray Whale Cove (to Devil’s Slide)
36. Support north crossing (Alternative 1) @ 2nd St.; do not support south crossing @ 2nd St.
37. Support traffic calming in Moss Beach, especially medians
38. Like hybrid beacons @ 2nd St.
39. Concerned about pedestrian safety
40. California St. is a key location
41. Need west side access @ Gray Whale Cove
42. “Want a safe highway and vibrant coastal area”
43. Not in favor of building all alternatives; just some (only most popular ones)
44. Feel like a “prisoner” at home on weekends
45. Big fan of pedestrian underpasses; do not favor overpasses though; look at Marin County examples (i.e., Larkspur) – they work great
46. Concerned about decreasing parking @ Gray Whale Cove while increasing vehicular accessibility with proposed turn lanes/acceleration lanes
47. Want minimal crossings; like having east-west access, but not too much interference on roadway
48. “Respect neighborhoods”
49. “Have to have” 2nd St. crossing
50. Center medians are crucial
51. No 2-way left turn lanes
52. Like acceleration lanes
53. Preserve traffic flow and pedestrian safety
54. No hybrid beacons; RRFBS are better
55. Center medians are a “must”; don’t need lighting @ crossings
56. Alternate storage lanes (in Moss Beach)
57. Concerned about sight distance @ 16th St.; highway was engineered poorly there; pedestrian safety now compromised
58. California St. is difficult to cross; glad to see design proposals
59. Support raised median refuges
60. Want northbound access onto Hwy 1 @ Cypress (acceleration lane); Cypress has issues with vehicular backups waiting to get onto highway
61. Pedestrian crossings and traffic congestion are historical problems on the coastside
62. “Suspicion” regarding “urban solutions”
63. Equivalent of coastside congestion is stopped traffic
64. Congestion in Montara & Moss Beach is non-existent, so there’s no need to introduce vehicular delay (with crossings)
65. Feel that Caltrans likes congestion, in order to mitigate with lane/highway expansion
66. More lighting is a harsh solution
67. Santa Cruz has hybrid beacons and they are ineffective
68. Support for Gray Whale Cove alternative because of access to trail
69. Public needs more detail @ proposed crossings
70. Agreement with lighting crossings
71. Want proper signal timing
72. Street lighting is “disruptive”; we like rural character
73. Support for Gray Whale Cove crossing
74. Surfer’s Beach crossing would create excessive vehicle delay
75. Concerned about the intent of this meeting; feel it was advertised differently

76. Support for acceleration lane @ Cypress (like the one near the Airport)
77. Support for center dividers and medians
78. Concerned that public feedback falls by the wayside
79. Find a “balance” between vehicles and pedestrians
80. Support for 16th St. crossings; multiple fatalities in recent years; and Lighthouse access is bonus, but still concerned about sight distance there
81. Suggestion for overpass near Lighthouse
82. Don’t like signals since they would make Hwy 1 feel like El Camino Real; beacons are “unsightly” and mast arms look like bridges; if we “have to have signals”, coordinate them so that there’s no vehicle delay
83. Concerned about juvenile pranks on pedestrian-activated lights (i.e., excessive flashing & delay)
84. Pedestrian underpass is best option; would avoid all at-grade conflicts; pedestrian safety should also trump cost concerns
85. Want raised median @ 2nd St.
86. Concerned about lack of staff knowledge of coastside; no “grasp” of issues
87. Frustrated with weekend traffic and “urban” designs/treatments
88. Concerned about increased traffic in Montara constraining southbound access onto Hwy 1, to get to Half Moon Bay, etc.
89. Support pedestrian safety
90. Support coastal ambiance
91. Need to address (vehicular) traffic impacts
92. Found FHWA data that rates medians as superior to beacons
93. Support for medians
94. Request Caltrans presence at next meeting
95. “This is not a Caltrans highway, this is a public highway”
96. Concerned about Caltrans staff responsiveness (or lack thereof)
97. Need more acceleration lanes (onto highway), not necessarily turn lanes off highway
98. Like the visuals (poster boards)
99. Include collision data at next meeting
100. Support pedestrian median crossing @ Surfer’s Beach

QUESTIONS

1. Why aren’t there medians in Moss Beach design alternatives?
2. What data is available with respect to relative safety of hybrid flashing beacons vs. RRFBs?
3. How were crossing locations picked?
4. Who will pay for lighting?
5. Is there data available regarding the vehicle-pedestrian collisions in study area?
6. How long would hybrid beacon stop vehicles (on red)? And, how long is crossing on a hybrid beacon red?
7. Why is it 50mph through Moss Beach while everywhere else it’s 45mph?
8. What is justification for crossing @ Mirada Rd.?

COMMENTS (CATEGORICAL)

MEDIAN (REFUGES)

1. Highway 1 Safety & Mobility Improvement studies indicated median refuges for pedestrians; would prefer to cross highway one lane at a time; gives pedestrians a “choice”

2. Speeds too high in Moss Beach; need medians
3. Preference for median refuges
4. Center median is “only solution” @ Surfer’s Beach
5. Support traffic calming in Moss Beach, especially medians
6. Center medians are crucial
7. *Center medians are a “must”; don’t need lighting @ crossings* [duplicate]
8. Support raised median refuges
9. Support for center dividers and medians
10. Want raised median @ 2nd St.
11. *Found FHWA data that rates medians as superior to beacons* [duplicate]
12. Support for medians
13. Support pedestrian median crossing @ Surfer’s Beach

LIGHTING

1. Concern regarding light pollution
2. Lights will ruin the coastal view (street & beacons); “no new street lighting on the coast!”
3. *Center medians are a “must”; don’t need lighting @ crossings* [duplicate]
4. More lighting is a harsh solution
5. Agreement with lighting crossings
6. Street lighting is “disruptive”; we like rural character
7. *Don’t like signals since they would make Hwy 1 feel like El Camino Real; beacons are “unsightly” and mast arms look like bridges; if we “have to have signals”, coordinate them so that there’s no vehicle delay* [duplicate]
8. Support coastal ambiance

ACCELERATION LANES

1. Need more acceleration lanes in Moss Beach, especially @ Cypress; need better access to Seal Cove, etc.
2. Preference for acceleration lane at Cypress
3. Support acceleration lanes @ Cypress
4. Like acceleration lanes
5. Want northbound access onto Hwy 1 @ Cypress (acceleration lane); Cypress has issues with vehicular backups waiting to get onto highway
6. Support for acceleration lane @ Cypress (like the one near the Airport)
7. Need more acceleration lanes (onto highway), not necessarily turn lanes off highway

8. TRAFFIC

9. There are too many crossings featured; would cause excessive vehicle delay
10. Designs are obstacles to vehicular traffic
11. “Respect the commute traffic (needs)”
12. Must have vehicular storage lanes at controlled intersections/segments
13. Do not want vehicle delay
14. Want minimal crossings; like having east-west access, but not too much interference on roadway
15. *Preserve traffic flow and pedestrian safety* [duplicate]
16. Alternate storage lanes (in Moss Beach)
17. Equivalent of coastside congestion is stopped traffic
18. Congestion in Montara & Moss Beach is non-existent, so there’s no need to introduce vehicular delay (with crossings)
19. Want proper signal timing
20. Surfer’s Beach crossing would create excessive vehicle delay

21. *Find a “balance” between vehicles and pedestrians* [duplicate]
22. *Don’t like signals since they would make Hwy 1 feel like El Camino Real; beacons are “unsightly” and mast arms look like bridges; if we “have to have signals”, coordinate them so that there’s no vehicle delay* [duplicate]
23. Frustrated with weekend traffic and “urban” designs/treatments
24. Concerned about increased traffic in Montara constraining southbound access onto Hwy 1, to get to Half Moon Bay, etc.
25. Need to address (vehicular) traffic impacts

SAFETY/ACCESS

1. Didn’t see connection to west side trail @ Gray Whale Cove; would like safe access to Devil’s Slide from there (as opposed to walking along Hwy 1)
2. Concern regarding crossings at curves, especially 16th St. in Montara
3. Moss Beach is the most dangerous area (in this study); preference for Alternative 2 for Moss Beach; encourage roundabouts
4. 7th St. crossing is unnecessary because most people cross @ 8th St., to connect to existing trailhead there
5. Need west side trail connection from Gray Whale Cove to Devil’s Slide
6. Pedestrian crossing signals provide false sense of security
7. Suggestion to embed flashing beacons in crossings
8. Suggestion to focus on east side trail access from @ Gray Whale Cove (to Devil’s Slide)
9. Support north crossing (Alternative 1) @ 2nd St.; do not support south crossing @ 2nd St.
10. Like hybrid beacons @ 2nd St.
11. Concerned about pedestrian safety
12. Need west side access @ Gray Whale Cove
13. “Want a safe highway and vibrant coastal area”
14. Big fan of pedestrian underpasses; do not favor overpasses though; look at Marin County examples (i.e., Larkspur) – they work great
15. “Have to have” 2nd St. crossing
16. *Preserve traffic flow and pedestrian safety* [duplicate]
17. No hybrid beacons; RRFBS are better
18. Concerned about sight distance @ 16th St.; highway was engineered poorly there; pedestrian safety now compromised
19. California St. is difficult to cross; glad to see design proposals
20. Support for Gray Whale Cove alternative because of access to trail
21. Support for Gray Whale Cove crossing
22. *Find a “balance” between vehicles and pedestrians* [duplicate]
23. Support for 16th St. crossings; multiple fatalities in recent years; and Lighthouse access is bonus, but still concerned about sight distance there
24. Suggestion for overpass near Lighthouse
25. Pedestrian underpass is best option; would avoid all at-grade conflicts; pedestrian safety should also trump cost concerns
26. Support pedestrian safety
27. *Found FHWA data that rates medians as superior to beacons* [duplicate]
28. Include collision data at next meeting

GENERAL/OTHER

1. Staff have not been responsive to feedback from prior studies on same Highway 1 issues; “County has not been listening to us”
2. Distrust in the direction of this PPS

3. Preventing left turns in Moss Beach is awkward
4. Have never seen some of the proposed crossing locations studied before (see question #3, below)
5. Concerned about design proposals funneling traffic into neighborhood streets
6. "These design alternatives are false dichotomies"
7. Way too many signs in proposals
8. "This is a semi-rural area! Not urban!"
9. "This is a plan to ruin the coastside"
10. California St. is a key location
11. Not in favor of building all alternatives; just some (only most popular ones)
12. Feel like a "prisoner" at home on weekends
13. Concerned about decreasing parking @ Gray Whale Cove while increasing vehicular accessibility with proposed turn lanes/acceleration lanes
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16. Pedestrian crossings and traffic congestion are historical problems on the coastside
17. "Suspicion" regarding "urban solutions"
18. Feel that Caltrans likes congestion, in order to mitigate with lane/highway expansion
19. Santa Cruz has hybrid beacons and they are ineffective
20. Public needs more detail @ proposed crossings
21. Concerned about the intent of this meeting; feel it was advertised differently
22. Concerned that public feedback falls by the wayside
23. Concerned about juvenile pranks on pedestrian-activated lights (i.e., excessive flashing & delay)
24. Concerned about lack of staff knowledge of coastside; no "grasp" of issues
25. Request Caltrans presence at next meeting
26. "This is not a Caltrans highway, this is a public highway"
27. Concerned about Caltrans staff responsiveness (or lack thereof)
28. Like the visuals (poster boards)

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Farallone View Elementary School, Montara, CA 7-9pm
Wednesday June 18th, 2014
Comment Cards**

Kathryn Slater-Carter

1. Montara/Moss Beach
 - a. Will the questions and comments be answered?
 - b. Need warning lights in advance of each crossing
 - c. Who will maintain the landscaping?
 - d. Who will install, maintain and pay for the lighting?
 - e. How were these locations selected?
 - f. Was there an assessment of where people cross the most?
 - g. Need access and merge lanes on Cypress
 - h. Will 16th St have improved left turn lane from current plan?
 - i. 2nd St crossing should be on the north side of street
 - j. Need west side trail from Gray Whale Cove to Devil's Slide
 - k. Tunnels are homes for homeless
-

John Qaungah

1. Please reconsider an over pass crossing at the berm at 16 St. It is a blind curve at 50 mph and rectangular flashing lights are not safe enough
 2. Agree with left turn acceleration lane (going north) from Cypress
 3. Center dividers are preferred over multiple stop lights/cross walks
-

Paul Langan

1. Moss Beach
 - a. Prefers alternative 1
 2. Montara
 - a. Prefers alternative 1
-

Claire Bennington

1. Needed:
 - a. Pedestrian activated crosswalks
 - i. 2nd St, north side
 - ii. Gray Whale Cove
 - iii. California St.
 - iv. Carlos St.
2. Not needed:
 - a. Most people turn right from 2nd St to Highway 1 or left from Highway 1 to 2nd St.

- b. The signal should be on south side of 2nd St. to avoid interruption

Laura

1. Surfer's Beach
 - a. Neither Alt preferred
 - b. Mid street crossings would not be beneficial since no one today uses the available crossings. I suggest limiting the on HWY shoulder parking and building a designated lot and a crosswalk there. A mid street crossing will not be utilized if everyone can still park anywhere along Highway 1 near Surfer's Beach

Dave Holland

1. Need to petition Caltrans to remove the "highway" designation for Hwy 1 from Devil's Slide to HMB and reduce it to a rural road so speeds will be reduced through communities. Also, some intersections could use traffic circles

Beverly Garrity

1. Moss Beach- Alt 2: looks like the better option for Moss Beach (fewer cars turning onto HWY)
 - a. suggest a grassy median by Virginia Ave
 - b. suggest a round-about at California/Wienke/HWY intersection to slow traffic and increase efficient movement at this complex intersection for safety
2. Gray Whale Cove- Alt 1: Hybrid Beacons preferred for safety
 - a. Where is the promised trail on the west side of HWY 1 to the Devil's Slide trail parking lot
3. Montara: Does the grassy median at 1st St prevent southbound cars from turning left onto 1st St?
 - a. Alt 1 preferred for safe access: can stop mid-way, north bound cars have more visual response time (coming down blind slope) to stop for pedestrians
 - b. 7th St cross walk is unnecessary as most people cross at 8th St. Suggest cross walk moved to south side of 8th St with trail on west side
4. Cypress: suggest acceleration lane to support turning onto highway 1 instead of turn lane for turning off of highway 1
5. Surfer's Beach: median, not cross walk
6. Lights: minimize light pollution, use road level lights not poles

Cid Young

1. Cypress to Highway 1
 - a. Northbound acceleration lane
 - b. Please provide acceleration lane for people leaving cypress in Moss Beach
 - c. Busy intersection backs up when a "nervous" driver can't turn left
 - d. Add a street light at this intersection so it is easier to see at night

Fran Pollard

1. El Granada
 - a. Maybe raised medians and no signals
 - b. Don't like signals at every intersection. It will become the El Camino of the Coast. Big overhang multi-signals look like bridges so we may as well have bridges
 - c. If we must have signals, how about simple single pole signals that all coordinate like the great highway. All set up to go off at the same time if you drive 45 or 50 mph. This will have them stop periodically and automatically for people trying to cross. No need for buttons to stop traffic. Don't stop traffic.
-

Bill Kehoe

1. 16th St./Carlos St/HWY1: a blind curve where people drive 50 mph or more. Adding a coastal trail crossing only complicates it more.
 2. I would suggest making 1 intersection by combining 16th St and Carlos St and moving cars further from the blind curve
-

Sally Lehrman

1. Montara
 - a. What happened to the roundabouts?
 - b. Studies have proven that they are the safest option. They would be great at 2nd St.
 - c. The suggestion for refuge islands and RRFB are excellent
 - d. Provide acceleration lane from Cypress
 - e. I prefer option 1 for 2nd Street in Montara to avoid head on collisions between residents turning left and people going to the beach or restaurant.
 - f. Why not flashing lights on the roadway as well as RRFB?
 - g. We residents on the Coastside must understand that the Coastside is changing and we must make some adaptations for safety and to accommodate the dramatic increase in visitors.
 - h. The section of HWY 1 heading north before 2nd St. in Montara is treated like an acceleration chute, so a flashing light or roundabout would be vital.
 - i. I love the idea of timed signals like the great highway.
-

Raymond Hochemoci

1. Montara
 - a. Why not under the road tunnels?
-

Sue Hawley

1. Gray Whale Cove
 - a. Please- no lights, we like the night sky
 - b. Don stop traffic, it is already horrible
 - c. This is not an urban space and your proposals will turn it into one
 - d. Medians for refuge
 - e. Crossing on north side of 2nd St
 - f. Crossing on north side of Gray Whale Cove
 - g. Medians to calm traffic
 - h. Keep traffic moving, keep rural- no signs/lights
-

Bill Sorefleet

1. Traffic calming with roundabouts in Moss Beach
 2. Use medians the entire length of Moss Beach to improve both pedestrian crossing with safe haven and also slow traffic
 - a. Improve entry/exit of vehicles onto highway 1
 3. How will infrastructure be brought to Surfer's Beach mid-block crossing? Will this require ADA improvements to sidewalks on both sides of street?
-

James Barnes

1. Moss Beach-Montara
 - a. Why oh why can't we use traffic circles/roundabouts?
 - b. Fewer lights needed, traffic calming, free flow- what's not to like?
 - c. California St. in Moss Beach
 - d. 8th St. in Montara
-

Annette Saunders

1. Mirada Rd-Gray Whale Cove
 - a. All options too invasive
 - b. No hybrid beacons
 - c. This is not an "urban" area- so please don't approach it as one
 - d. Signs are a type of visual pollution-please don't put up 51 signs between Moss Beach and Montara
 - e. If there must be a light put to use for pedestrians, then RRFB only
 - f. I don't like either option- way too much for our rural area and would slow traffic too much. We don't need so many crossings
 - g. Like residents idea of a merge lane from Cypress to get onto HWY1 as it is a bottle neck because of cars turning north
 - h. People j-walk the entire length of Surfer's Beach. A mid-block crossing won't work. People will still j-walk-therefore a center divide would be best and not hinder traffic in a negative way
 - i. Don't want lights-ruin rural feel

- j. Don't want hybrid beacons- block views, slow traffic
 - k. Once you stop traffic- that "wave" propagates for a long way and long time
-

Beth Oehlert

- 1. Montara-Moss Beach
 - a. No street lights at all
 - b. No flashing beacons
 - c. No stop bars
 - d. 51 signs in 1.7 mile stretch- crazy!
 - e. Put more merge lanes in the center
 - f. This project is being forced on us= I don't see any indication that you listened to us in 2012
 - g. Think about Coastside commuters- we don't want longer commutes
-

Dan Haggerty

- 1. All
 - a. No lights
 - b. Yes raised medians
 - c. Have feds pay for cut and cove simple pedestrian tunnel
 - d. We are a global destination because of the beauty, don't ruin it
-

James Bemminton

- 1. Montara
 - a. 1 crossing in Montara not 3
 - b. Cross walks are a two way street
 - c. They encourage the visiting public to utilize our neighborhood streets to park and use the beach
 - d. The neighborhood should not become a parking lot
 - e. Crossing should be at 8th St not 7th St
 - f. The hybrid beacon should be used at Gray Whale Cove and 8th St
 - g. Like the left turn improvement for Virginia and California
-

Leonard Warren

- 1. Surfer's Beach
 - a. No night lighting
 - b. No poles holding lights
 - c. The only acceptable answer at Surfer's Beach is raised medians
 - d. Signals without storage lanes don't improve traffic congestion but do the opposite
 - e. See signals with no storage lanes at Coronado and Frenchman's creek- way too many signs

- f. Nothing which further degrades the ocean view from the center of El Granada is allowable
 - g. Don't ruin the semi-rural nature
 - h. Move the parking to Caltrans land south of Coronado east of HWY1. Then beach visitors will easily cross at the existing signals
-

Stacy Saba

- 1. Gray Whale Cove
 - a. Pedestrian Bridge - A pedestrian bridge would provide a safer alternative that would not impact traffic flow
-

James Barnes

- 1. Montara- Moss Beach
 - a. I would rather have actual pedestrian operated stoplights so that traffic stops.
 - b. Most people, especially in Moss Beach cross on foot and bicycle
 - c. Too many have been hit

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Cypress Meadows, Moss Beach, CA 7-9pm
Thursday July 31st, 2014
Meeting Notes**

COMMENTS (CHRONOLOGICAL)

MCC Comments:

1. Accident Data?
 2. Concern for traffic Flow?
 3. Why chosen Intersections?
 4. Anyway to Model Traffic Flow?
 5. Where did Surfers Beach go?
-

Unnamed:

1. Acceleration Lanes: Is there any way to make these first? Was unaware it would take this long...
 2. Can we make it low hanging fruit
 3. Looks like acceleration lanes and left turns are low hanging fruit, Can we do these first?
-

Sid, Moss Beach:

1. Possibility of flashing crosswalks in pavement?
 2. Right turn lane to go right off of Cypress (Currently huge pot hole)
 3. Does Big Wave project provide possible conflicts with this project?
-

Unnamed

1. Semi-Rural Reminder
 2. Acceleration lanes are too short and need to be wider
 3. 45 MPH would be a good resolution
 4. I believe Small # against roundabouts
 5. Can you put the light standards low to ground?
-

David:

1. Highway parking is a problem
 2. Can someone hold businesses accountable for landscaping?
 3. Please provide no tunnel Parking
 4. Worry that light standards will increase motor Fatalities (Struck)
-

Unnamed:

1. 50MPH zones make 45 MPH – Can we do this first
 2. Seems like low hanging fruit
-

Adrian:

1. Concerns for lights creating pollution and ruining night sky
-

Ed, Moss Beach:

- 1) Sand Hill Road from I 280 to El Camino should be an example of what Highway 1 should look like
-

Carl, Moss Beach:

1. Montara – Support for 2 way left turn lane
 2. Disagree with Roundabouts
 3. Let's phase this to bring certain items faster
-

Katie, Moss Beach:

1. Support
 2. Need to Widen to add space for bikers
 3. Please provide bike lane to Montara
-

Katie, Moss Beach:

1. Support
 2. Need to Widen to add space for bikers
 3. Please provide bike lane to Montara
-

Liz, Moss beach:

1. Cypress location needs attention
-

James, Montara:

1. Curious if studies have ever been done for people walking parallel to highway?
 2. Concerns for ambient lighting
 3. Would like to see what widening would entail for raised Medians
-

Neil:

1. Would like to see at least 1 Cross walk before 2020
-

Unnamed, Moss Beach:

1. Cypress Backup
 2. No need for crosswalk at Cypress
 3. Need acceleration lane at Cypress going NB on Highway 1
-

Unnamed:

1. If we utilized parking at harbor it would solve mess at surfers beach
 2. 14th 16th and San Carlos – We should look at solving whole problem by combining intersection
-

COMMENTS (CATEGORICAL)

MEDIAN (REFUGES)

1. Painted medians would help with just providing space for pedestrian
2. Don't understand why this would require widening
3. Concern with slowing traffic
4. Good example is Sand Hill Road from 280 to the El Camino. – Believes this is what Highway 1 should look like
5. Support for widening
6. Next presentation can you illustrate the widening extent

ACCELERATION LANES

1. Need Acceleration lanes first
2. These seem like low hanging fruit. Any way to break up project. (DUPLICATE)
3. Most of all SB on Highway 1 from Cypress
4. Current acceleration lane lengths and turn pockets don't seem standard

LIGHTING

1. Please explore lighting in the roadway for Pedestrian crossings (like in Redwood city)
2. Any way to make light standards low to the ground
3. Concern for light pollution (ruining night sky) (DUPLICATE)
4. Concern for fatalities from hitting roadside light fixtures

TRAFFIC

1. Concern with flow when lowering speed limit and adding medians
2. Need Cypress acceleration lane and right turn lane to help traffic on Cypress

SCHEDULE

1. Big concern with schedule (DUPLICATE)

2. Any way to break into phases to bring smaller projects first (DUPLICATE)
3. Please a crosswalk before 2020

SPEED

1. Please lower Moss Beach (DUPLICATE)
2. Concern with slower speed limit and its effect on traffic

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Cypress Meadows, Moss Beach, CA 7-9pm
Wednesday March 11th, 2015
Comment Cards**

16 th Ave.	Alternative 1
California Ave	Alternative 1A
Cypress/Etheldore	Alternative 1: Like the roundabout possibility.
Mirada Road	Alternative 2

16 th Ave.	Alternative
California Ave	Alternative
Cypress/Etheldore	Alternative: Need traffic light! There is so much going on at Cypress/Highway 1. Cars turning north block views of cars turning south. Cars turning from Highway 1 onto Cypress. Need broader shoulders on Highway 1 to facilitate moving onto Highway 1 South <u>and</u> making right turn from Highway 1 to Cypress. As elderly drivers, this is the most dangerous intersection we encounter on the coast. Too many distractions.
Mirada Road	Alternative

16 th Ave.	Alternative 1: Lowest possible impact on traffic flow and environment.
California Ave	Alternative 1A: Same as 16 th Ave. Two stage cross ISL between El Gran Amigo & Market. Island to be in location of.
Cypress/Etheldore	Alternative 1: Same as 16 th Ave.
Mirada Road	Alternative 1: Same as 16 th Ave.

16 th Ave.	Alternative 1
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California Ave	Alternative 1A: Only 1 crossing at VA. VA doesn't conflict with Wenke. Blocking VA builds traffic.
Cypress/Etheldore	Alternative 1: No lighting at RRFB's.
Mirada Road	Alternative 1

Throughout: wish there were options for short raised medians with "refuges" and no flashing light.

16 th Ave.	Alternative 1: (CIRCLED) Pedestrian overpass across the cut just south of here would be great, but no one would use it.
	Alternative 2: (Crossed Out) Overkill. Raised median more of a hazard than a solution.

California Ave	Alternative 1A: Too many crosswalks too close together
	Alternative 1B: (CIRCLED)
	Alternative 2: (Crossed Out) The worst of all worlds. Way too much.

Cypress/Etheldore	Alternative 1 and Alternative 2 Crossed Out. Big wave would turn this into a disaster! For now, crossing at Cypress only. Flashing lights would make for too many in a short stretch of Moss beach, so raised median with refuge, better here – but only short ones either side of Cypress.
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Mirada Road	Alternative 1: (CIRCLED)
	Alternative 2: (Crossed Out) Too wide, too much construction – way overkill and inappropriate.

16 th Ave.	Alternative 2
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California Ave	Alternative 2: Don't need 2 ped xings a block apart. Put 1 mid block to keep peds away from car turning movements.
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Cypress/Etheldore	Alternative 2: Acceleration lanes need to be longer, wider, better marked than Caltrans has done. This comment applies to all (accell?) lanes
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Mirada Road	Alternative 2: No flashing lights. No ped-controlled devices to stop traffic. This comment goes for every location on this project.
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16 th Ave.	Alternative 1
California Ave	Alternative 1A: (CIRCLED) With one x-walk to keep traffic from backing up w/ all proposed x-walks along this short corridor. Alternative 1B: eliminating turn lanes funnels more traffic to already busy CA Ave. due to Marine Reserve traffic. Also creates more congestion w? Wenke Way exits.
Cypress/Etheldore	Alternative 1
Mirada Road	Alternative 1

Gray Whale Cove	(No Selection) Sight lines are terrible here for both vehicles and pedestrians. The new opening for the parking lot is worse for North bound traffic. I like the idea of a pedestrian bridge just north of where the crosswalk is indicated.
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2 nd Street	Alternative 1: (CIRLCED) Alternative 2: (Crossed Out) Too wide. Too much construction. Raised medians will actually constrict traffic.
------------------------	---

7 th Street	Alternative 1: (CIRCLED) Consider moving cross walk to 8 th , farther away from hill, or to a location between 7 th & 8 th . Alternative 2: (Crossed Out) Way too wide for the location. Bad for access business on Hwy. Raised medians restrict traffic.
------------------------	---

Gray Whale Cove	(No Selection) No traffic-stopping devices! Just left turn and merge (“accel”) lanes.
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2 nd Street	Alternative 2: With NB accel lane.
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7 th Street	Alternative 2
------------------------	---------------

From: Pollard, PO Box 832, El Granada, CA 94018
Highway Safety Crossings

We don't want signals up and down coast and especially not with push buttons and tall flashing lights. So, perhaps a way to avoid all signals is a protected narrow median strip (not one wide enough to convert to another car lane) and perhaps low lights for safety. That way people can cross one lane at a time.

However, if there must be periodic signals, they must be coordinated, like the signals of the great highway in SF. When you drive 35 M/P/H, you can make all the signals without ever having to stop. If they can do that there, they can do that here and the signals don't need push buttons. People walking can wait a minute for the signals to change, not push buttons every time someone wants to cross at every signal. Maybe the speed limit could be 45 or 50 M/P/H.

So, if most of us can agree to that, let's all agree to push for that at tonight's meeting. Whoever is first to state it, then other speakers should say they agree. If a majority agrees, we may be able to influence them, rather than have a 100 different opinions. With everyone saying something different, then Caltrans will definitely do what they want!

Fran Pollard – [LPFB@comcast.net](mailto:LPF@comcast.net)

PS The 3 signals in HMB on Highway 1 from Main St. to 92 need to be coordinated, also.

Maybe we should wait for The Connect the Coast mtg. and coordinate the two plans?

PS – About 15 - 20 of us communicated on this and several people said they agree with me this morning.

Deb Malone
Montara, CA
March 11, 2015

To: San Mateo Board of Supervisors
CC: Midcoast Community Council

Regarding the Midcoast Highway 1 Traffic and Safety Improvements proposals

1. Montara – 8th and 9th Streets.
 - a. 9th Street
 - i. Please retain both left and right turns onto Hwy 1 from 9th Street in Montara.
 - ii. Install left turn pocket (mean acceleration lane) from 9th Street onto Hwy 1.
 - iii. 9th has clearer sight lines both north and south than 8th Street
 1. Signage at Ocean View Inn & Gas Station block view of southbound traffic at 8th Street.
 2. Curve in road to south blocks clear view of northbound traffic at 8th Street.
 - iv. Please pace “Slow to 25 mph” sign at right turn pocket off Hwy 1 onto 9th Street in Montara.
 1. People do not slow down when making that right turn and then immediate left onto northbound Main Street.
 - a. Drivers take right turn too fast and wide and end up on 9th on wrong side of road;
 - b. Drivers who don't slow down coming off of Hwy 1 also cut the corner & drive into oncoming lane when turning left onto Main.
 2. Have been almost hit in my car when driving towards Hwy 1 and 9th and when driving southbound on Main at 9th.
 3. Have almost been hit as pedestrian crossing 9th at Main Street.

v. Also, consider putting a stop sign at 9th and Main to ensure traffic slows down before turning either direction onto Main.

b. 8th Street

i. Retain both left and right turns onto Hwy 1 at 8th Street but close off “driveway” between Fish and Frites and coffee shop.

Gray Whale Cove	Alternative	
2 nd Street	Alternative 2	
7 th Street	Alternative 1: 9 th Street – need to allow left turn w/ acceleration lane for southbound traffic. Do not block Westside homes from highway access (no raised medians. No retaining wall on West	side)

Gray Whale Cove	Alternative: (CIRCLED)	
	Alternative 2: if you stop the traffic you’ve added to the congestion.	
2 nd Street	Alternative 1	
7 th Street	Alternative 1	

Shelly Smith – Live in Montara, near 2nd St. crossing. 728-1413

Gray Whale Cove	Alternative 1: Overall – need crossings up and down coast, but very concerned about impact on traffic. Currently, traffic is bumper to bumper every Fri, Sat & Sun night from Pacifica to Moss Beach from 4:30 – 7 pm. Please evaluate hour – each of those crossings will impact traffic. Perhaps choose only those most used and exchange the others.
-----------------	---

2 nd Street	Alternative 1: Yes, but Modified. We definitely need a safer crossing at 2 nd Street. Having a flashing light is good. I would not have raised median north & south of it. I would have the reflective stripping on ground. Reasons for this are: <ul style="list-style-type: none">- Lower costs- Still slows down traffic- No need for extra lights except at crosswalks
------------------------	---

- Having median as enter on Montara on north side might make sense but not on south side of 2nd Street because you are still in town. But might lead people to cross at 1st St. which is not helpful for safety. Better to funnel to 2nd St. flashing cross walk. So painted median slows traffic and focus pedestrians to 2nd St.

Alternative 2: NO! No one crosses Hwy 1 south of 2nd St. to 7th. No roads access the highway + it is too steep to climb down from 3rd, 4th, 5th. So having a raised median makes no sense along this stretch. No pedestrians would use it + it requires too much widening retaining walls etc too costly for no return.

7th Street Alternative

Gray Whale Cove Need pedestrian overpass from parking

2nd Street Alternative 1

7th Street Alternative 1

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Cypress Meadows, Moss Beach, CA 7-9pm
Wednesday March 11th, 2015
Mind Mixer, MCC & Committee for Green Foothills Comments**



Survey: Highway 1 Congestion & Safety Improvement Project

Question: Mirada Road: What alternative outlined in the report do you prefer?

Alternative 1 : 14

Alternative 2 : 12

Question: Explain why you prefer that improvement.

Better safety for pedestrians

Cost and minimize impact on the surrounding area. You are NOT fixing the problem with Sam's Chowder House. Someone is going to get killed there. I cannot believe the restaurant cannot purchase the lot next to them and put in more parking. They must be making enough money.

Do not like either plan

Do not want to widen the road

Doesn't require widening

feels safer

Flashing lights will impede traffic flow.

Raised medians are the safest alternative.

Widening should *not* lead to a future 4-lane highway!

I believe a raised median/safe refuge offset from the actual intersection by a few hundred feet would minimize the number of variables a person would have to check from 4 street flows down to 2. The safe refuge needs to provided adequate protective devices to prevent a vehicle from jumping the median and injuring anyone waiting to cross. I don't think blinking lights, or crossing controls are needed but a street light with down focus illumination on the cross walks would be good.

I do not like either alternative. I prefer two stage crossing with Short raised median . No flashing lights. Low environmental impact

I do not support Alt. 1 or 2. I do not like this survey, due to limited unclear



options available to choose. I would support a lower environmental impact simple two stage refuge island without (false security) controlled signals. Preferably set away from the intersection.

I do not support the alternatives provided.

I like the median between the north and south bound traffic lanes. Features like that - a safe zone in the middle - make me feel safer crossing a busy road.

I see no need for a crossing at Mirada Road. Aside from the fact that it is piecemeal planning, people run red lights. I would not trust a flashing light and a few stripes on the road to consistently stop traffic, especially since people are just getting over their frustration at having been sitting at a standstill where Route 1 merges from 2 lanes to 1, then encountering Frenchman Creek's stoplight. Motorists will then increase their speed, cruising by the time they hit Mirada Road. In addition

I'm not confident that drivers will notice the lights, pedestrians need a refuge.

it is the least disruptive to the flow of traffic. I also feel that all of these improvements are fruitless without some improvement to the gauntlet at surfer beach. That is the biggest traffic snarl culprit and it backs up into neighborhoods both north and south particularly on weekends.

Less is always better. Widening the road for raised medians would require much more construction for a longer period of time. This would create more traffic during construction and the end result is the same amount of lanes.

lower cost, can be implemented sooner

Lower cost, more practical to not add medians, earlier implementation

Lower cost, shorter construction timeline, increased pedestrian/bicycle safety are achieved all without widening the road, increasing the impact on the local environment.

Median and refuge for pedestrians.

Perceive this as the less expensive option; cost of option 2 could best be



spent elsewhere on Hwy 1

SAFETY

Short raised median for a two-stage crossing. Minimal lighting. No flashing lights, no devices to stop traffic.

Simple treatment is adequate in this more rural fringe area where traffic calming is not required.

Some pedestrian protection is better than nothing. Raised medians offer nominally more protection than just painted lines. The more protection the better. This comment applies to all my alternative choices.

The cost of Alternative 2 is very steep. This Alternative allows for no utility relocations or bus stop reconstructions. Although this is a dangerous place to cross improved visibility and pedestrian crossing should notify oncoming vehicles.

The other alternative seems like expensive overkill

There is little benefit of the proposed raised medians in Alternative 2 and a significant cost

This area is constantly congested on nice weekends. Every effort should be put forth to 'calm traffic' through this section.

This area is extremely congested during commute times and heavy tourist weekends. Many cars use the turn lanes to pull out from cross streets and motorists also pass over the double yellow line. A solid raised median would help to prevent accidents and make the area safer for pedestrians and motorists alike.

Visually looks better

Question: Cypress Avenue: What alternative outlined in the report do you prefer?

Alternative 1 : 14

Alternative 2 : 10



Question: Explain why you prefer that improvement.

A roundabout would be the best solution here.

alternative 2 at cypress - Pedestrian crossing needs to take place at Virginia. California has too many feeder roads for any poor soul trying to navigate across the street.

The description of these projects is so confusing to read, that it will be amazing if anyone answers this survey. I have been following these meetings and I am finding the descriptions and diagrams unbearably confusing. This is taking much more time than I have available to complete this.

Better fits the needs of that intersection, also can be implemented sooner

Better safety for pedestrians

constructing a raised median has a negative environmental impact and is unnecessary. Additional lighted signage will accomplish the same thing

Conversion of southbound left-turn lane to northbound left-merge lane by simple restriping should be done ASAP and independently of other improvements. Alt 2 raised medians define village entry, provide traffic calming, and offer safer 2-stage highway crossing without need for crosswalk at this location.

Dangerous area with two-way traffic; median would serve to reduce accidents and separate traffic lanes.

do not like either plan

feels safer

For essentially the same reasons as the Mirada Road crossing.

I am pleased with the acceleration lane in both alternatives. This will make etheldore street more active after construction as residents from Montara (sunshine valley) and Moss beach will use Etheldore to Cypress or Etheldore to go Northbound hwy 1. I like Alternative 1 because it does not require relocation utilities and is much less expensive.



I do not support Alt. 1 or 2. I do not like this survey, due to limited unclear options available to choose. I would support an acceleration lane northbound 1 from Cypress.

I do not support the alternatives provided.

I don't like either alternative 1 or 2 and don't see them alleviating the current backup of east bound traffic on Cypress Ave because of traffic turning left (northbound Hwy 1). Future development may necessitate a roundabout with a safe crossing would be better but this alternative is not even given. No traffic lights, they only cause more congestion.

I don't notice a whole lot of pedestrian activity in that area.

I like the idea of consolidating crossings

I like the median between the north and south bound traffic lanes. Features like that - a safe zone in the middle - make me feel safer crossing a busy road.

I think the middle lane on Hwy 1 through this section is sufficient and raised medians in this section would add more confusion than help pedestrians.

I want roundabouts to slow people down through the midcoast!

I want short raised median or refuge island. , no controlled lights , lowest environmental impact,

It's the lesser of two evils. No crossing here would be better, but unrealistic.

Lower cost, more practical to not add medians, earlier implementation

Lower cost, shorter construction timeline, increased pedestrian/bicycle safety are achieved all without widening the road, increasing the impact on the local environment.

Median and refuge for pedestrians.

Much lower cost.

No raised medians equals less environmental impact, more affordability and



less delays during construction. Again, the amount of traffic lanes remains the same therefore not accomplishing exponential differences either way. Lower the speed limit throughout Coastside and enforce them. Smooth traffic delivers results.

Pedestrian crossing not necessary here

Safer, more work put in

SAFETY

Section 3.1 of the draft study stipulates that the purpose of this project is for increased ped safety and traffic congestion alleviation. With the designs proposed, these two purposes are at odds with each other. More at-grade ped crossings on a busy highway will absolutely increase traffic congestions. These alternatives will not make things any better. In addition to increased traffic congestion, these crossings will encourage more crossing of the highway. Continued below:

The traffic calming measures, signage and acceleration lane provide the most cost effective measures.

Question: Moss Beach: What alternative outlined in the report do you prefer?

Alternative 1A : 8

Alternative 1B : 5

Alternative 2 : 11

Question: Explain why you prefer that improvement.

Alternative 2 is expensive and requires widening the road and relocating utilities. It says that it will help with broadside accidents. I chose Alternative 1B to increase visibility and have one pedestrian crossing instead of two pedestrian crossings right next to each other.

As above, in my opinion, the less distractions for drivers through this section the better for peds. The continual presence of SMC Sheriff's vehicles at the substation would be a cost effective way to 'calm traffic' in this section too.



At California convert (repaint) southbound left-turn lane to northbound left-merge lane from west side. At Vermont convert (repaint) northbound left-turn lane to southbound left-merge lane from east side. At Cypress, conversion of southbound left-turn lane to northbound left-merge lane by simple restriping should be done ASAP and independently of other improvements.

Blocking off Virginia and forcing this left turn (north bound) traffic to the already horrendous Fitzgerald traffic on California is not the answer. I also think pedestrian crossings at both intersections will contribute to the traffic problem. Pick one. Disrupting local wetlands is not acceptable. Without creating additional traffic lanes the traffic increases we are seeing will not be alleviated. Again, lower the speeds, enforce this option and control the flow.

Cost.

Dangerous area with two-way traffic; median would serve to reduce accidents and separate traffic lanes.

do not any of the plans

Do not want to widen the road

Drivers think it is a highway, since it no longer is--make it obvious.

Feels more inviting to walk from one side to the other and visually it improves the look of the neighborhood.

feels safer

I do not support Alt. 1a,b or 2. I do not like this survey, due to limited unclear options available to choose. I would support a lower environmental impact simple two stage refuge island without (false security) controlled signals. Preferably set at Virginia s/b left turn pocket.

I do not support the alternatives provided.

I don't like any of the alternatives 1a, 1b, or 2. I think one raised median/safe refuge placed between the Virginia & California intersection would minimize the number of variables a person would have to check from 4 street flows down to 2 when crossing. I don't think blinking lights, or crossing controls



are needed but a street light with down focus illumination on the cross walks would be good. A roundabout at Valemar/Etheldore (North) on Hwy 1 might be viable and serve as a traffic calming d

I like the idea of consolidating crossings

I like the median between the north and south bound traffic lanes. Features like that - a safe zone in the middle - make me feel safer crossing a busy road.

I like this alternative best but feel that two independent ped xings are overkill. Flashing signage indicating the crossing is more than exists now and is the most cost effective solution. I am completely opposed to restricting traffic at Virginia. It will add additional traffic to Cal.Ave which already has a heavy burden of traffic with the marine sanctuary. This would also add confusion to an already unusual traffic configuration at Wienke Way thus would also propose the ped xing at Virginia

I think it best fits the needs and traffic patterns, as well as being able to be completed sooner. I'd like the central medina in alternative 2, but the timing seems to far out. I also believe the 1B pedestrian crossing should be moved from California to Virginia, because I see significantly more pedestrians and bicycles at Virginia, compared to California.

I want roundabouts to slow people down through the midcoast!

I want short raised median or refuge island. , no controlled lights , lowest environmental impact,

Lower cost, shorter construction timeline, increased pedestrian/bicycle safety are achieved all without widening the road, increasing the impact on the local environment.

Many people live on the east side of Hwy 1 and struggle, especially on weekends, to get across to the recreation areas. I think this provides the best safety for pedestrians, including people walking with children, strollers and/or pets.

Median and refuge for pedestrians.

More crossings mean higher probability of accidents. Simple statistics.



"Traffic calming" means slower traffic and more congestion. From page 36 of the draft study: "Both alternatives are anticipated to slow traffic within the project area." Have any traffic simulations models/counts been run to determine what roadway and intersection LOS will be after the installation of these crossings?

No disturbance of wetlands

None of those proposals are any good. Put in a mid-block short raised median for a two-stage crossing. Minimal lighting. No flashing lights, no devices to stop traffic.

Raised medians define the entry points, provide traffic calming and opportunity for 2-stage highway crossing for the length of town. One crosswalk with RRFB at Virginia is sufficient, preferably on north side, deleting left-turn lane at that location to allow pedestrian refuge. Additionally, re-stripe center lane to southbound left merge at Vermont and northbound left merge at California. These modifications would also apply to Alt 1, if chosen.

Right turn in and out only on Virginia is not a good idea given the location of the small market which generates customers from both directions and both sides of the highway. Turning movements to and from Highway 1 and to and from the frontage road at California and Vermont are not desirable movements given proximity of frontage road to Highway 1 and given increased queuing on Vermont and California due to elimination of left turns at Virginia.

SAFETY

The single RRFB crossing is enough, the improvement in left turns

This alternative seems the safest one.

Question: 16th Street, Montara: What alternative outlined in the report do you prefer?

Alternative 1 : 15

Alternative 2 : 9

Question: Explain why you prefer that improvement.



Alternative 2 is lesser of evils, but still too much as proposed. Put in a short raised median away from the cross streets for a two-stage crossing. Minimal lighting. No flashing lights, no devices to stop traffic.

Better safety for pedestrians

Cost. You won't get a 10x better solution with Alt. 2, which costs 10x. Also, you are not fixing the real problem which is southbound traffic turning left on 14th. We have lived at 175 Farallone for 25 years (just north of 14th) and hear the accidents! The problem is not so much speed as it is inattentive drivers not expecting a car to be stopped in front of them.

Dangerous area with two-way traffic; median would serve to reduce accidents and separate traffic lanes.

Do not install flashing beacons with this alternative.

Do not like either plan

Feels more inviting to walk from one side to the other and visually it improves the look of the neighborhood.

feels safer

Formalize connection of 16th St to Carlos for Hwy 1 access, which allows closing 16th St. access to Hwy 1, which would allow conversion of southbound left turn at 16th to northbound left merge lane from lighthouse/MWSD.

I do not support Alt. 1 or 2. I do not like this survey, due to limited unclear options available to choose. I would support a lower environmental impact simple two stage refuge island without (false security) controlled signals. Preferably set away from the intersection.

I do not support the alternatives provided.

I don't like either alternative 1 or 2. Hwy 1, Carlos St., 16 St., and the Light House intersection were completely messed up by CalTrans when they did the repaving and striping. A raised median/safe refuge at 16th St would be good but an over crossing south of Carlos St. would be safer. You can NOT



eliminate the informal trail east of Highway 1 between 16th and 14th Sts., as it is used by many people walking between Moss Beach and Montara.

I don't see many pedestrians in this area.

I like the median between the north and south bound traffic lanes. Features like that - a safe zone in the middle - make me feel safer crossing a busy road.

I want roundabouts to slow people down through the midcoast!

Informal trail along east side of Hwy 1 is important and should not be eliminated. It should be improved and pedestrian safety measures should be added (San Carlos to 16th Street). This is the only pedestrian access between Moss Beach and Montara.

Less cost. Not much less relief. Do not use expensive and time consuming measures for minimal improvement. Without more lanes what are we accomplishing? Safty is a seperate issue and could be considered on it's own agenda.

Like the flashing light beacons

Lower cost, more practical to not add median, earlier implementation, no need for widening.

Lower cost, shorter construction timeline, increased pedestrian/bicycle safety are achieved all without widening the road, increasing the impact on the local environment.

Median and refuge for pedestrians.

No loss of trail

Perceive this as the less expensive option; cost of option 2 could best be spent elsewhere on Hwy 1

SAFETY

short raised median. No controlled traffic lights . lowest environmental impact



since this is on a curve and slope, and has significant pedestrian traffic due to the hostel and informal coastal trail, I think a median here is desirable, but the widening required, and impact on the existing informal trail would be too significant.

The poor visibility makes this location a bad choice for a crossing. Again probably not feasible to eliminate the crossing--do what you can to make it noticable.

This is another dangerous intersection. I chose alternative 1 because it will bring more visibility and a crosswalk to and from the lighthouse. Alternative 2 is too expensive and requires a retaining wall.

to keep the traffic moving but alert infrequent travelers of the presence of pedestrians

Would be much more helpful to people if the lengthy descriptions of the design alternatives were accompanied with the design drawings. Having the drawings in separate attachments makes it hard for people to visualize while they read and hard to understand the complicated drawings and project details while they visualize.

Question: Montara: What alternative outlined in the report do you prefer?

Alternative 1 : 11

Alternative 2 : 12

Question: Explain why you prefer that improvement.

Again, it is no longer, functionally, a highway--do what you can to make the point to drivers.

Beach access at 2nd necessitates ped safety improvements. Raised medians important given vehicular volumes and number of informal turning movements to restaurant, beach parking and 2nd Avenue. Possibly signalize?

Better safety for pedestrians



Cost and less concrete. Also, a general suggestion: Make the entire stretch from Devil's Slide to HMB 45 mph, except past the airport, which can stay 55. With the speed limit toggling back and forth between 45 and 50, it encourages people to speed.

Dangerous area with two-way traffic; median would serve to reduce accidents and separate traffic lanes.

do not either plan

Do not want to widen the road

Feels more inviting to walk from one side to the other and visually it improves the look of the neighborhood.

feels safer

For both 2nd and 7th street pedestrian crossings and increase visibility will help motorists to slow down in downtown Montara. It is much needed to beach access and not sure where 7th street will take you on the west side of highway. Would you be able to turn left on 7th street and 2nd street heading to northbound? Currently 7th street does not allow left turns but cars do it anyway

I do not support Alt. 1 or 2. I do not like this survey, due to limited unclear options available to choose. I would support a lower environmental impact simple two stage refuge island without (false security) controlled signals. Preferably set away from the intersection.

I do not support the alternatives provided.

I don't like either alternative 1 or 2. I am in favor of raised median/safe refuge crossing at 2nd and 7th. I don't think blinking lights, or crossing controls are needed but a street light with down focus illumination on the crosswalks would be good for dusk to dawn crossings. The left turn lanes and other turning directions are not explained well and were never fully presented to give the community a chance to see how traffic patterns would be changed in both Moss Beach and Montara.

I like the idea of consolidating crossings



I like the median between the north and south bound traffic lanes. Features like that - a safe zone in the middle - make me feel safer crossing a busy road.

I want roundabouts to slow people down through the midcoast!

Less work

Lower cost, more practical to not widen the road, safety improvement achieved with this option is sufficient

Lower cost, shorter construction timeline, increased pedestrian/bicycle safety are achieved all without widening the road, increasing the impact on the local environment.

Median and refuge for pedestrians.

Neither choice is any good. Long (continuous) raised medians are not needed and are inappropriate for the character of the Midcoast. Put in a mid-block short raised median for a two-stage crossing. Minimal lighting. No flashing lights, no devices to stop traffic.

No controlled signals nor lights. Short raised medians/refuge island

Please do not install flashing beacons here too.

SAFETY

same as above; in addition I truly believe that if a single speed limit was chosen for this corridor it would also help the traffic flow. From the tunnel to half moon there are 5 speed limits: 45 to 50 to 55 to 50 to 45 to 40.

Same reasons... too much finances with delays and lacking accomplishments.

The only things that are going to make crossing the highway safer is above-grade or below-grade crossings, especially at Gray Whale Cove, 16th street, and Miramar. The only things that are going to alleviate traffic congestion instead of greatly contributing to it are above-grade or below-grade crossings, especially at Gray Whale Cove, 16th street, and Miramar. All else is just a band-aid on a compound fracture, somewhat of a waste of money



and time, and a false sense of having done something.

This area is dangerous for merging drivers and pedestrians. Any efforts to slow traffic and improve pedestrian safety is helpful.

This is the minimal effort, and could be in place sooner. I'd prefer elements of alternative two, perhaps reducing or eliminating west-bound left turn lanes to accommodate a raised median, without roadway widening. For example, there are only 4 houses on 7th, west of Hwy 1. A left turn lane doesn't really seem necessary there (I lived a block from this intersection for 3 years, and crossed at 7th frequently to get to the bluff and reef). 2nd street really does need the median do to use level

Undecided -- While road widening necessitating retaining walls is a concern, this does provide the additional significant benefit of widened shoulders where bike lanes are currently substandard.

Question: Gray Whale Cove: What alternative outlined in the report do you prefer?

Alternative 1 : 15

Alternative 2 : 11

Question: Explain why you prefer that improvement.

Actually either works and neither will help the traffic issues. Safty and traffic cannot be looked at in the same fashion.

alternative 1 - but no flashing lights. Caltrans was able to change many of their routine standards when it came to the tunnel. They can do the same for the crossings here.

Dangerous area with two-way traffic; median would serve to reduce accidents and separate traffic lanes.

do not either plan

Do not want to widen the road

Don't really care on this one. Costs are very close. Another general note: the behavior of pedestrians needs to be enforced, not just vehicles. Otherwise,



you will put in a crosswalk and still have the dang peds running across the road wherever they damn feel like it. We were coming home from the City one night at 11:00 when 3 people darted in front of us in the pure dark. Only God's grace saved us all.

feels safer

I do not support Alt. 1 or 2. I do not like this survey, due to limited unclear options available to choose. I would support a lower environmental impact simple two stage refuge island without (false security) controlled signals. Preferably set away from the intersection.

I do not support the alternatives provided.

I do not think stopping traffic on hwy 1 is required at grey whale cove. Rather alternative one widens the road, adds an acceleration lane northbound, and improves visibility.

I don't like either alternative 1 or 2. While I am in favor of left turn lanes into and out of the parking lot, I am not in favor of flashing beacons or other kind of control lighting. Simple pedestrian crossing signs are enough. In fact, since the beach closes at sunset even street lighting should be avoided. As far as the placement of the crosswalk, I think an at-grade crossing is dangerous at the location and it should be further south. It should have a raised median/safe refuge for tourists

I don't really like either option at this location. Why not a tunnel or a bridge? We just build a much bigger tunnel as I recall. And why aren't we done with the Green Valley Trail?

I'm not a traffic expert, but this curve has to rank up there on dangers for pedestrians. Anything to warn drivers ahead of this blind curve of people crossing would be an improvement.

Improves pedestrian safety without compromising on environmental impact

Minimize the flashing lights for Alternative 1. Alternative 2 is unacceptable due to stopping traffic, which will cause many rear-end collisions and greatly increase traffic congestion.

No hybrid beacon.



No overhead lights! They would be visible from much of Montara at night, and the existing tunnel flashing yellow is already disturbing. View is too important, overhead lights are not necessary for safe crossing.

Non residents aren't expecting pedestrians, they're looking at the view...

Overhead signage seems a bit "too much" for this rural location.

Prefer RRFB which are less obtrusive.

RRFB crossing is less disruptive to vehicle traffic, since there are no auto-pedestrian accidents in table 2-3, the more disruptive option (which is also higher cost) is not warranted.

SAFETY

short raised median or refuge island. No controlled traffic light signal . Lowest environmental impact.

That area is an accident waiting to happen and Alternative 1 seems the safest alternative.

the left turn lane will keep traffic moving south bound and the flashing beacons will remind cars that there are peds xing.

There are so many pedestrians at this location the higher level of driver compliance is a good idea.

This crossing needs the signal as proposed; I have nearly been rear-ended several times slowing for pedestrians here.

This is a very dangerous intersection. I think there will be fatalities if we don't address the problem of the parking lot on the east side and a beautiful beach across the street.

This is not a residential area or a huge walking area. This area just needs a basic crosswalk for when folks need to cross. Crossing is only an issue on the weekends. A simple cross walk is fine - no lights.

This opportunity for input is extremely disappointing. Nowhere is there any



place to make larger comments about the project as a whole or to ask questions. We are basically given two extremely similar options for each location and then asked to pick which one of the two very similar options we prefer. What if we prefer neither and have other suggestions? Like above-grade and below-grade crossings. Limit of 500 characters per comment? Please . . .

We are in a very different and critical space at this time, namely the most severe drought ever seen in CA, even though it's only 3 years. We had a 6 year drought and it wasn't as severe because there was half the population then. This could become the norm.

We should not consider widening hwy 1 nor urban type infrastructure to accommodate ever more growth. Short, narrow median strips periodically is all we need for safe crossing & low lighting if necessary.

Comments

Number of Comments 10

Comment 1: Public comments from meetings last June and July on this topic are carefully captured and posted on MCC Hwy 1 issues page:

<http://www.midcoastcommunitycouncil.org/highway-1/>

They are worth reviewing for content and the contrast with this online survey process and the March 11 meeting format. | By Lisa K

Comment 2: I have witnessed the Gray Whale Cove Parking Lot become a significant choke point for SR 1. I have seen traffic backed up for miles as a result on peak weekend use. To mitigate, I recommend somehow controlling left turns into and out of the parking lot at peak use. I feel it is reasonable to have no left turns out of the parking lot. There is now a safe place to make a u-turn at the south portal signal of the tunnel. An under grade crossing (similar to Julia Pfeiffer State Beach) would also be a great benefit to Gray Whale Cove safe access and reduce SR 1 congestion. | By Dan H

Comment 3: I am concerned that widespread objections by the community to the proposed changes to State Route 1 in the Midcoast have not been adequately addressed in the limited choices presented for voting in the online survey. Protecting the existing beauty of State Route 1 appears to be a common thread in previous community comments. Specifically, a frequent request is to have the lowest possible impact on environment and congestion while providing appropriate safe crossings. It appears that a "two-stage" pedestrian refuge island concept without flashing beacons could provide better pedestrian and vehicle safety, with a lower impact to overall traffic flow on SR 1. Some areas may require flashing beacons. This should



be explored as to limit the effect of a false sense of security. A two-stage pedestrian crossing allows the pedestrian to cross half way, only having to check traffic in one direction at a time. I have currently witnessed locals using turn pockets as two stage crossings.

| By Dan H

Comment 4: I don't think blinking lights, or crossing controls are needed but a street light with down focus illumination on the cross walks would be good for dusk to dawn crossings.

Minimize any widening to increase traffic calming effects.

Hwy 1 needs painted bike lanes from the tunnel south to HMB.

A maximum speed limit of 45 mph should be consistent through out the Midcoast except maybe at the airport.

Surfers Beach needs to be addressed. Originally it was in the study but was taken out because it was too hard to fix and yet on a sunny weekend it is the biggest congestion point in the Midcoast.

Proposed medians and turns in Moss Beach and Montara are confusing. Too many parts and options to understand the overall affects. The plans need to be presented in smaller chunks with all the variables listed so each community can see what their own situation will be. Traffic flows are not fully fleshed out and will cause many future problems if not supported by the residents.

| By Bill K

Comment 5: The survey should include one of the three options below:

- 1.) none of the above
- 2.) against all alternatives provided
- 3.) I do not support the alternatives provided | By Sabrina B

Comment 6: Note the survey has been adjusted so that comments can be made on each location without choosing an alternative. If you already submitted your survey, you may click Change Your Survey to start over. | By Lisa K

Comment 7: I submitted my survey response and got this message, "Whoops! A required question has no answer".

I'm including my comments here because the survey is significantly flawed. The survey prevents the public from making alternative suggestions without rewriting the survey:



Mirada Road: What alternative outlined in the report do you prefer?

I support a roundabout with a crosswalk at Mirada Rd. I do NOT support Alternative 1 or 2.

Cypress Avenue: What alternative outlined in the report do you prefer?

I support a roundabout with a crosswalk OR a traffic signal with a crosswalk at Cypress. I do NOT support Alternative 1 or 2.

Moss Beach: What alternative outlined in the report do you prefer?

I support a roundabout with a crosswalk OR a traffic signal with a crosswalk. I do NOT support Alternative 1A, 1B or 2.

16th Street, Montara: What alternative outlined in the report do you prefer?

I support an over crossing NEAR 16th and Carlos St. I do NOT support Alternative 1 or 2.

Gray Whale Cove: What alternative outlined in the report do you prefer?

I support an over crossing at Gray Whale Cove. I do NOT support Alternative 1 or 2.

PLEASE NOTE: A striped bike lane should be included on Highway 1.

| By Sabrina B

Comment 8: MONTARA: In weighing alternatives, consider the Pacific Coast Bicycle Route that Caltrans is supposed to maintain. Pavement widening to accommodate the center raised median of Alt 2 will also improve the shoulder width from 2 ft in places to 6-8 ft. | By Lisa K

Comment 9: MOSS BEACH: Don't restrict highway access without providing improved access close by. Conversion of two left-turn lanes to left-merge lanes can provide improved highway access points for both sides of the highway, as low-cost near-term improvement. At California convert (repaint) southbound left-turn lane to northbound left-merge lane from west side. At Vermont convert (repaint) northbound left-turn lane to southbound left-merge lane from east side. At Cypress, conversion of southbound left-turn lane to northbound left-merge lane by simple restriping should be done ASAP and independently of other improvements.

LIGHTHOUSE/16th: Formalize the connection of 16th St to Carlos for Hwy 1 access and close 16th St access to Hwy 1. Convert (repaint) southbound left-turn lane at 16th to northbound left-merge lane from lighthouse/MWSD, which has significantly higher vehicle counts. | By Lisa K

Comment 10: 1.) KEEP STRIPING, FORGET ABOUT ALL RAISED MEDIANS!

2.)ADD OR ADJUST ACCELERATION LANES ONTO THE HIGHWAY AS WELL AS THE TURN OFFS.

3.) COUNTY TO WORK WITH CALTRANS TO IMPROVE WEST CYPRESS INTERSECTION FOR A SOUTHBOUND TURNING STRIP ONTO CYPRESS FROM THE HIGHWAY, AS



WELL AS A WIDENING OF THE "MOUTH" OF CYPRESS TO ALLOW MOTORISTS TO TURN RIGHT WHEN A LEFT TURNING CAR AT THE FRONT OF THE LINE-UP IS HOLDING UP EVERYONE INCLUDING SOUTHBOUND FOLKS, WHILE WAITING FOR A BREAK IN TRAFFIC TO TURN LEFT. ALLOWING THE RIGHT TURNERS TO GET BY WOULD HELP CLEAR THE BACK UP, BUT AT PRESENT THERE IS A DEEP (SLIGHTLY BROKEN) CULVERT THERE WHICH PREVENTS THAT POSSIBILITY. | By Cid Y

Midcoast Community Council

*An elected Advisory Council to the San Mateo County Board of Supervisors
representing Montara, Moss Beach, El Granada, Princeton, and Miramar*
P.O. Box 248, Moss Beach, CA 94038-0248 - www.MidcoastCommunityCouncil.org

Dave Olson **Chris Johnson** **Lisa Ketcham** **Dan Haggerty** **Erin Deinzer** **Laura Stein**
Chair Vice-Chair Secretary Treasurer

Date: April 28, 2015

To: James Hinkamp, Project Planner

CC: Supervisor Don Horsley

From: Midcoast Community Council/ Dave Olson, Chair

Subject: **Midcoast At-Grade Crossings, Raised Medians and Left Turns -
Highway One Congestion and Safety Improvement Project**

The Midcoast Community Council (MCC) submits the following comments on the design alternatives proposed in the February 2015 Draft Preliminary Planning Study¹ (PPS) for the Highway 1 Congestion & Safety Improvement Project.

Background

Key near-term priorities identified by the MCC in March 2012, following completion of the Midcoast Highway 1 Safety & Mobility Improvement Studies (Mobility Studies), include pedestrian crossings with refuge island, and lowered speed limit to 45 mph in Moss Beach (which will require installation of traffic-calming features such as raised medians).

Transportation Authority (TA) funding for project design and permitting was approved in October 2012 for these specific project elements:

- at-grade pedestrian crossings at 8 locations,
- raised medians in Montara and Moss Beach, and
- left-turn lanes at 8th St in Montara and Gray Whale Cove.

These improvements are based on concept plans identified as short-term in the Mobility Studies. The June 2012 TA grant application states, *“Raised medians... will provide ‘safe refuges’ for pedestrians/bicyclists when crossing the highway. All safe crossings will be connected to medians for this purpose.”*

Pedestrian refuge islands are discussed in the PPS (p.4-2): *“Providing raised medians or pedestrian refuge areas at pedestrian crossings at marked crosswalks has demonstrated a 46% reduction in pedestrian crashes. At unmarked crosswalk locations, pedestrian crashes have been reduced by 39%. Installing raised pedestrian refuge islands on the approaches to unsignalized intersections has had the most impact reducing pedestrian crashes. ... Caltrans HDM mandates that the minimum median width used for pedestrian refuges is 6 feet.”*

The Feb 2015 PPS notes, *“Most of the comments received at the two public meetings held to date fall into six main categories: medians for pedestrian refuge, acceleration lanes, lighting concerns, traffic concerns, speed issues, and schedule concerns.”*²

¹ posted here: <http://www.midcoastcommunitycouncil.org/home/2015/4/23/mcc-special-meeting-april-28.html>

² public comments posted here: <http://www.midcoastcommunitycouncil.org/highway-1/>

Process

The public process for evaluating design alternatives for this complex project would have benefited from the following:

- A project name less generic and opaque that reveals something about the project elements and that is less easily confused with other concurrent projects.
- Careful differentiation and public education about the scope of this project and similar concurrent projects. Public confusion was unnecessarily escalated by doing meeting outreach from the Connect the Coastside website and email list, and neglecting to take the time at the March 11 meeting to clearly and accurately explain the difference.
- Earlier and more frequent community input in the design process, to avoid the delay and duplication of effort to bring the designs into line with project elements originally proposed, such as pedestrian refuges instead of flashing beacons. It can be very useful, especially for outside consultants, to get early input with local knowledge such as from a steering committee.
- Clearly understandable one-page summary of each location alternative with list of distinguishing features, impacts and illustration on the same page. Definitions and features in common could be listed and illustrated separately so that important differences are not lost in extensive repetition.
- Close adherence to the concept plans of the Mobility Studies and use of Context Sensitive Solutions³ if adjustments are necessary.
- More modest design proposals with reduced raised medians focused on gateway traffic calming and crossing refuges, rather than maximum cost/impact scenarios with raised medians extended beyond what was proposed in the Mobility Studies. The public expressed clear concerns at the second meeting when they learned about high cost and project delays due to raised medians.
- More robust public evaluation of the second set of alternatives. The complex set of alternatives did not lend itself to polling of either/or choice of min/max project extremes which resulted in confusion, superficial understanding, and a significant number of abstaining attendees. It does not serve the public process to have a rushed presentation and to limit group Q&A and discussion. People do better when exposed collectively to many ideas and comments. This stimulates thinking and helps in understanding other points of view. Multiple explanations of complicated or overlapping topics increases understanding. Posters and smaller groups are useful but cannot replace the group discussion.

Design Alternatives

Public acceptance is highest where safe crossing opportunities do not add to traffic congestion. Raised median refuge islands, wherever they can be accommodated without extensive road widening, can provide greatly improved crossing opportunities without necessarily stopping traffic. There is concern that a proliferation of painted crosswalks and flashing beacons will add to congestion and detract from the scenic quality of our rural highway. Even narrower raised medians, though technically for traffic calming purposes, will be useful to aid highway crossing wherever they are located.

³ http://www.dot.ca.gov/hq/LandArch/cs_solutions/

It is clear from the accident statistics that night lighting is necessary for high-speed highway pedestrian crossings and raised medians. Dark night skies are important to Midcoast residents -- please specify downward-directed lighting with direct rays confined to the roadway. Also consider a dimming option for low-traffic overnight times, particularly at Gray Whale Cove.

Please expedite any conversions of left-turn to acceleration lanes separately from this project. It should not be necessary to wait 3 to 5 more years to change the arrows painted on the road to help reduce intersection delays.

Mirada Road

Many don't see a need for a crossing at Mirada Rd. There may be better opportunities for mid-block crossings, away from intersection turning movements, utilizing median refuge in the existing center turn lane. Alternative (Alt) 2 goes far beyond a crossing design, adding an extended raised median requiring road widening throughout Miramar, which was not proposed in the Mobility Studies or in the Project Scope of Work.

Moss Beach

The need for traffic calming is greatest in Moss Beach, the one village in the Midcoast that is bisected by Highway 1, but has the highest speed limit, 50 mph. Caltrans' recent traffic survey recommends no speed limit reduction. The Mobility Studies Action Plan places a high priority on reducing the speed limit in Moss Beach and notes that raised medians and other traffic calming treatments may reduce prevailing speeds, a precondition for reducing posted speed limits. The PPS notes, "*Motorists are traveling at high speeds through the town limits because there are currently no features that define the context of the town center.*" Raised medians the length of town would provide that context as well as an extended area of improved crossing opportunities.

At a minimum, Moss Beach should have attractive gateway features including raised medians south of Marine and north of Vallemar, and one pedestrian crossing with refuge island. Alt 1 Moss Beach does not reach this minimum. It provides no traffic calming except a high-visibility painted median south of Marine, an uninspired choice for village gateway. In contrast, Alt 1 Montara proposes two sets of traffic calming raised medians bracketing 7th/9th and 1st/2nd which are attractive and don't require road widening. If that is possible in Montara, why isn't it proposed in Alt 1 Moss Beach which has higher speeds and need for traffic calming?

Restricting highway access and turning movements, such as at Virginia, is proposed to improve traffic flow and safety. It might be more useful to first address the several businesses on the west side with unrestricted highway access and pedestrian no-man's-land along entire blocks. Also, consider the long delays to enter the highway from many local side streets, and that the cause of broadside accidents may be due to exasperated motorists turning onto the highway in unsafe manner. Closing some street access without nearby access improvements only shifts traffic to other intersections, worsening delays there.

Conversion of left-turn lanes to acceleration lanes to aid left turns onto the highway should be evaluated for two more locations in Moss Beach, in addition to Cypress. This could improve intersection level of service (LOS) and safety:

- North side of California: Convert left-turn lane to northbound acceleration lane.
- South side of Vermont: Convert left-turn lane to southbound acceleration lane.
- North side of Virginia: Remove left-turn lane to allow for pedestrian refuge island.
- Southbound left turns would be diverted to Etheldore and Vermont.
- Northbound left turns would be diverted to Virginia and California. Vallemar would be unaffected.

Lighthouse/16th

This important highway crossing of the Coastal Trail must be considered in combination with the essential east-side trail connecting 14th and 16th across the ravine that divides Montara from Moss Beach. Without improvements from the Lighthouse to 14th St, the Coastal Trail is unconnected and so is everyone living in Montara who wishes to reach the rest of the Midcoast without their car. These issues should be noted in the PPS p.2-4. Designation of the CA Coastal Trail as a Priority Conservation Area, as currently proposed, would improve grant opportunities to construct this trail connection.

Evaluate conversion of the southbound left-turn lane at 16th to northbound acceleration lane from lighthouse/MWSD, which has significantly higher traffic volume. Since there are only a few homes on 16th, consider formalizing the connection of 16th to Carlos, which would allow closing east 16th highway access. Simplified vehicle turning movements will increase bike/pedestrian safety at this important crossing.

There is no explanation for the extensive length of proposed raised median in Alt 2 (unknown off the south end of the picture) or why the proposed widening could not include space for the essential east-side trail at the ravine.

Montara

Alt 1 provides raised medians at town center entry points (*south of 9th, north of 7th, south of 2nd, and north of 1st*) as traffic-calming warning to motorists, and does not require pavement widening, retaining walls, drainage improvements, or utility relocations. These raised medians would also provide informal assistance to pedestrians crossing at 1st to the beach and at 7th and 9th to visit the coastal viewpoints there. However the official crossings in this alternative do not provide the safety of a median refuge which we would prefer.

At 7th St, the Mobility Study locates the crossing refuge on the north side where the proposed 8-ft-wide raised median is located. There is improved line of sight for westbound pedestrian crossing from the center of the road.

At 2nd St, the Mobility Study locates the crossing refuge on the south side, removing conflict between pedestrians and heavy southbound left-turn traffic onto 2nd.

Gray Whale Cove

There is a 12-ft-wide mid-highway buffer area at the crossing location. If feasible, a raised median refuge within this area would enable safer 2-stage crossing without stopping traffic. At a minimum, please explore surface treatments to help increase safety in the buffer area, such as tactile edging, and colorized/textured paving treatments. Vegetation that contributes to the blind curve should be pruned.

Thank you for the opportunity to comment.



April 20, 2015

Via Email

James Hinkamp, Project Planner
455 County Center, 2nd Floor
Redwood City, CA 94063

Re: Comments on Draft Preliminary Planning Study for Highway One Congestion and Safety Improvement Project, February 23, 2015

Dear James,

Thanks for providing me with a copy of the above-referenced Study. The associated On-Line Survey had very limited opportunity to provide anything more than a sentence or two on the Alternatives. Please accept these comments and recommendations on behalf of Committee for Green Foothills (CGF). I have focused my comments on the Mirada Road/Alto Avenue project area due to time constraints.

Background: Phase 1 of the Highway 1 Safety and Mobility Study recommended developing a consistent roadway edge through each context zone (rural areas, transitional areas, and village areas) in the study area, improving intersection visibility, adding entry treatments and roundabouts, managing access, and adding walkways and bikeways.

Phase 2 of the Safety and Mobility Study recommended raised medians in village areas, designated pedestrian and bicycle crossings in high demand areas, consideration of roundabouts, pedestrian and bicycle trails along parallel routes, and parking re-configurations for beach and trail access.

The five proposed projects contained in the subject Planning Study (which could be more aptly described as “Highway 1 Five Crossings Study”) are considered “low hanging fruit” that will implement some of these recommendations more quickly than the more ambitious and more costly projects.

General Comments:

Section 2 Background, page 2-3 and Section 4 Visual/Aesthetics, page 4-18, states that Highway 1 within the project limits is listed as an Eligible State Scenic Highway. CGF notes that San Mateo County has already designated Highway 1 (aka Cabrillo Highway) as a County Designated Scenic Route in the County General Plan (Table 4.6 and Policy 4.42.c and d) and as a County Scenic Road and Corridor in the County Local Coastal Program (LCP Policy 8.30.b) throughout the project limits. As such, these proposed transportation projects should reflect the scenic and historic nature of the study area. LCP and Coastal Act policies regarding minimizing of impacts to scenic and historic resources and avoiding impacts to Environmentally Sensitive Habitat Areas (ESHA) while providing for visitor access to the coast support Context Sensitive Solutions (CSS). Caltrans defines Context Sensitive Solutions as;

“ Quality transportation design is the culmination of philosophy and principles in the project development process that provides a transportation system that enhances the place in which it serves. Whether a project is in an urban, rural or natural setting, the transportation facility must be in harmony with the community goals and the natural environment”. (emphasis added)

Section 2. Existing Facility, page 2-1, third paragraph, names major destinations within the project limits. McNee Ranch State Park and Rancho Corral de Tierra are misspelled. Other major destinations that should be included are: Point Montara Lighthouse and Hostel, Maverick’s Surf Break, Surfer’s Beach, and Mirada Surf County Park. The last sentence of this paragraph notes that peak travel demands occur on weekends. Midcoast residents will attest to the fact that peak visitation is highly affected by weather, surf conditions, and/or extremely high or low tides, which are not limited to summer, so peak travel demands can be at any time of the year.

CGF suggests that as part of the proposed improvements, special signage should be developed at the entry to each of the communities of Montara, Moss Beach, and Miramar (and also for El Granada and Princeton as a component of other highway improvement projects) with common thematic design graphics featuring the place name and a special symbol of that community’s definitive scenic, natural history, or historic feature. Possibilities include a whale for Gray Whale Cove, the lighthouse for Montara, and a Cypress tree or starfish for Moss Beach. Beautiful signage with a small area of appropriate landscaping not only would celebrate each community’s uniqueness but would also provide a sense of arrival and traffic calming benefits as noted in the Phase 1 Highway 1 Safety and Mobility Study (page 15).

Mirada Road (n.b., Mirada Road/Alto Avenue would be a more correct title):

CGF questions whether the Mirada Road/Alto Avenue project should be included as one of the five proposed project areas. It does not appear to be a priority for the following reasons:

1. Few pedestrians cross at this intersection. In Section 2.4 Deficiencies, page 2-3, the Report states that at Mirada Road, residents and visitors cross Highway 1 to access Miramar Beach and the California Coastal Trail. CGF questions whether pedestrian crossings pose a significant safety issue at this intersection. There are relatively few residents or businesses east of Highway 1 served by Alto Avenue and Purissima Way. No data is provided as to how many people cross at this location. Nor is there data as to how many people use the bus stop at the Mirada Road/Alto Avenue intersection, but it is likely not many.
2. This intersection has experienced very few accidents. In Table 2-3, page 2-6: which breaks down the 3-year accident history for 2009 - 2012, there have been only three accidents at this intersection, and none involved pedestrians.
3. The planned Parallel Trail along the east side of Highway One will provide an important pedestrian/bicycle route for residents to get to schools and neighborhood services in the Midcoast and Half Moon Bay. CGF has consistently recommended that this southernmost segment of the Parallel Trail in the Midcoast should be built first, as it will connect to the northernmost phase of Half Moon Bay’s Parallel Trail from Roosevelt to the City Limits,

thereby providing much greater connectivity. Residents who live on the east side of Highway 1 will not have to cross the Highway 1 to access local jobs, neighborhood services, and schools except at the signalized intersection at Frenchman's Creek.

4. Alternative 2 Plans for this intersection as depicted in Attachment B propose a continuous raised median and continuous left turn lanes rather than a simple island of refuge for pedestrians at the intersection. This continuous raised median and left turn lanes extend from an unknown point south of the Half Moon Bay city limits to an unknown point north of Medio Drive; it is impossible to determine exactly where this project ends, since the Plans in Attachment B extend beyond the page. This far more extensive project would require increasing the width of the highway by at least 18 feet and would unnecessarily impact sensitive wetlands and riparian habitats (ESHA) on each side of Arroyo de en Medio Creek. Alternative 2 could also potentially make the Parallel Trail more challenging and perhaps infeasible due to significant additional impacts to ESHA at Arroyo de en Medio. (n.b., the name of the community on the Mirada Road Plans should be changed from "El Granada" to "Miramar").

Environmental Issues, Section 4, page 4-17 identifies coastal resources potentially affected by the project. Transportation and Traffic are **not** coastal resources, and should not be included in this list. Overhead street lighting for medians is an important safety feature, but should be carefully directed so that the lighting does not spill beyond the roadway. Special consideration will need to be given any overhead lighting at the Gray Whale Cove area to ensure that fugitive lighting does not shine out to the ocean, which could adversely affect pelagic birds. The suggested Rapid Rectangular Flashing Beacons (RRFBs) at some pedestrian crossings may not be suitable considering the County Scenic Corridor policies. At Gray Whale Cove, RRFBs or similar devices would be important safety measures due to the speed of traffic and limited sight distance. CGF is also concerned that Alternative 2 projects would require removal of 90 trees. What species and size of trees would be removed? The mature Monterey cypress trees are a scenic amenity in Moss Beach and Montara and contribute greatly to the scenic and visual quality of these communities. They should be preserved to the maximum extent possible. Application of Context Sensitive Solutions would support their preservation.

Recommendations, Section 6, page 6-1: The Report states that public acceptance of the alternatives is a key factor for the project moving forward. CGF is concerned that this statement implies that all five projects must be treated as a single project., and the only choice is between Alternatives 1 and 2.

CGF suggests that the Recommendations should include an additional step which further refines the various elements of the Alternatives at each of the five locations to reach a Preferred Alternative that will likely not be simply Alternative 1 or 2 throughout the project limits. CGF strongly recommends "no project" at Mirada Road.

General Recommendations and action items for future studies, page 6-1 include "determine the optimal locations for the pedestrian crossings based on pedestrian counts". In Moss Beach, if there is a continuous raised median to provide refuge for pedestrians, optimal locations may well be at

each intersection, since most people will not bother to go out of their way to cross the highway. In Montara, Alternative 1 provides median islands at key crossings, which CGF supports rather than a continuous raised median.

Finally, CGF requests that the Preferred Alternative, as modified in response to public comments, should be presented to the Midcoast Community Council and the San Mateo County Planning Commission before moving into the Environmental Review and Permitting process. To date there has been a lot of confusion between this project and the Connect the Coastside planning effort.

If you have any questions, please feel free to contact me at: 650-854-0449, or email. Any written correspondence should be sent to my home office address: 339 La Cuesta Drive, Portola Valley, CA 94028.

Thanks for consideration of our comments.

Sincerely,

A handwritten signature in black ink that reads "Lennie Roberts". The signature is written in a cursive, slightly slanted style.

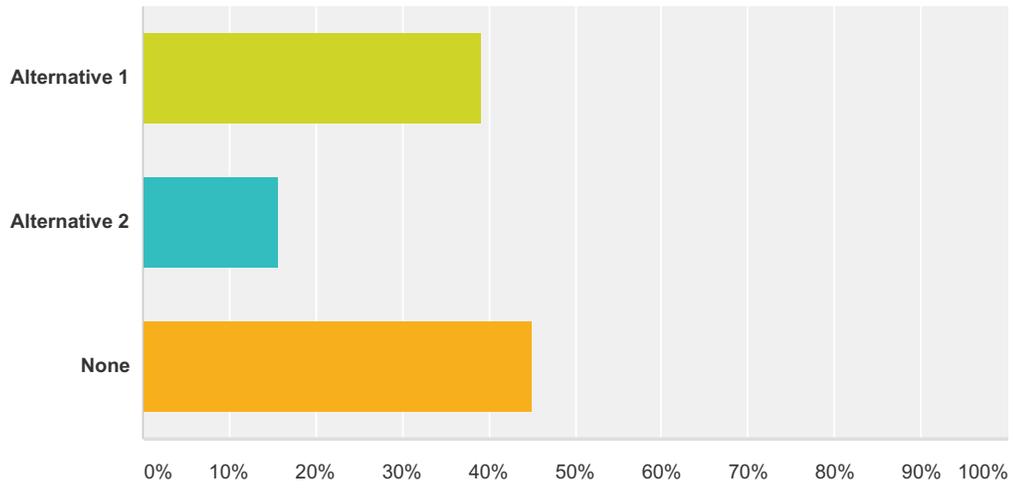
Lennie Roberts, San Mateo County Legislative Advocate
Committee for Green Foothills

cc: Supervisor Don Horsley
Midcoast Community Council

**Preliminary Planning Study for Highway 1 Congestion and Safety
Improvement Project
Half Moon Bay Yacht Club, El Granada, CA 7-9pm
Tuesday June 23rd, 2015
Comments and Survey**

Q1 Which alternative for Mirada Road do you prefer?

Answered: 51 Skipped: 16



Answer Choices	Responses
Alternative 1	39.22% 20
Alternative 2	15.69% 8
None	45.10% 23
Total	51

Highway 1 Safety and Mobility Study

Q2 Comments?

Answered: 25 Skipped: 42

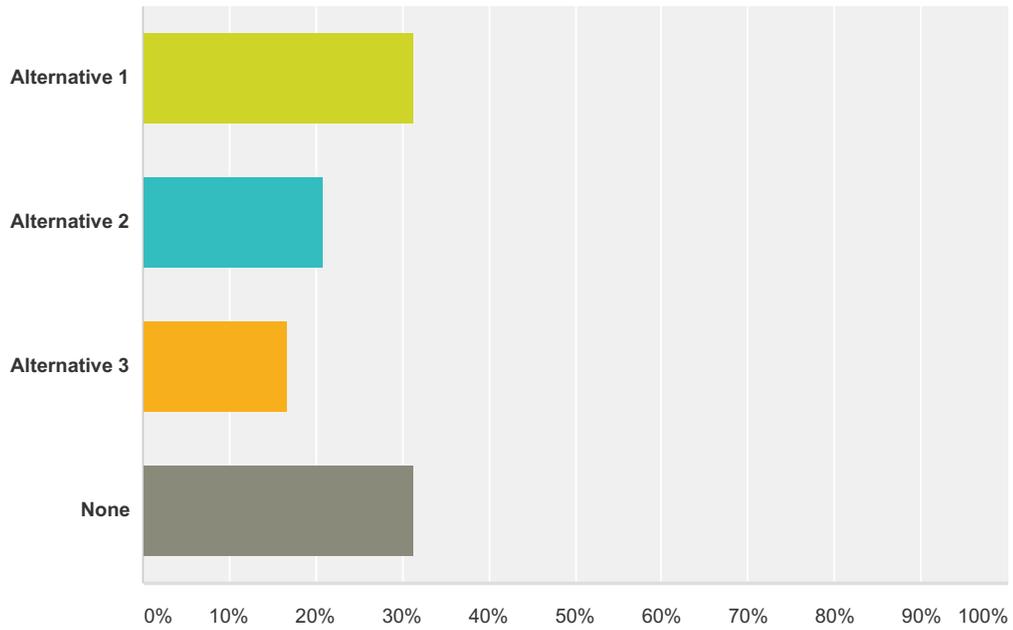
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:13 PM
2	The people living here do not want these changes.	7/11/2015 12:51 AM
3	put in plants	7/10/2015 10:51 PM
4	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:21 PM
5	This intersection is very close to HMB planned crossing; very little pedestrians cross here anyway.	7/10/2015 4:33 PM
6	Just a simple median where pedestrians can wait clearing of traffic. No flashing signs, lights, etc.	7/10/2015 9:35 AM
7	On weekend days the traffic in this area is aggressive and a crosswalk would invite people onto a dangerous section of road.	7/10/2015 9:34 AM
8	I think we should look at Portola Road and Alpine Road for examples of how just painting lanes and left turn only lanes are being used.	7/10/2015 8:01 AM
9	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:01 AM
10	I am concerned that raised medians will create additional unsafe conditions for pedestrians, cyclists, and motorists alike. This is a rural area, not an urban setting.	7/9/2015 11:52 PM
11	Flashing beacons will create traffic issues and raised medians will expand the road in a way which is not productive.	7/9/2015 8:26 PM
12	The exponentially-greater benefits (safety, multi-function utility, visual appeal and community enhancement) of Alternative 2 more than justify the greater expense and longer time-frame of this alternative.	7/9/2015 7:36 PM
13	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:54 PM
14	Alternative 1 with no Rapid Flashing Beacons, no road widening and a minimal impact street lamp would be better.	7/9/2015 5:19 PM
15	Overall I would like to see us keeping the coastal, small community feel of the road along the communities. A widening would give the impression of a 'bigger' highway, possibly inviting faster driving. (my kids said that actually!). If we widen then I'd like to see the extra space being used for peak hour traffic relief.	7/8/2015 10:33 PM
16	This presentation is hard to understand. unable to zoom, doesn't fit in window	7/8/2015 5:14 PM
17	This is not the location that you see people crossing. Has an actual count of pedestrians crossing the road been taken? The community has been asking for models of how these road treatments will impact Route 1 traffic. These have not been provided. To go from Surfer's Beach, coming south and stopping at this intersection will add more to the congestion.	7/8/2015 10:10 AM
18	Changes should be the minimum to improve safety; the roadway should be widened as little as possible; raised medians should be as short as possible (and vegetated would be nice but I know that costs more and requires maintenance); on-demand flashing lights should be used coordinated with the overhead lights at night--so the overheads only come on when someone wants to cross, which will provide even more notice to drivers; overall signage should be minimal needed.	7/7/2015 4:17 PM
19	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:17 AM
20	What about a round-about 1 lane only for each direction please Neither design makes it easier or safer to make a left turn onto Highway 1	7/6/2015 10:06 PM

Highway 1 Safety and Mobility Study

21	NO RAISED MEDIANS.	7/6/2015 6:29 PM
22	Simply understood direction. Do not spend \$\$ on pavers, they will be covered by sand and debris, and will cost monthly to get them cleaned.	7/6/2015 4:24 PM
23	Move crossing South 100 feet to create a "midblock" safe crossing with large painted Refuge Island and no flashing beacons. Flashing beacons create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.	7/5/2015 10:33 AM
24	I would like to see alternative 1 implemented at Medio, not at Mirada. There is much more pedestrian activity at Medio, and there is a bus stop there as well.	6/29/2015 7:29 AM
25	Hard to read the diagrams - too small on this website.	6/24/2015 3:09 PM

Q3 Which alternative for Cypress and Etheldore do you prefer?

Answered: 48 Skipped: 19



Answer Choices	Responses	
Alternative 1	31.25%	15
Alternative 2	20.83%	10
Alternative 3	16.67%	8
None	31.25%	15
Total		48

Highway 1 Safety and Mobility Study

Q4 Comments?

Answered: 28 Skipped: 39

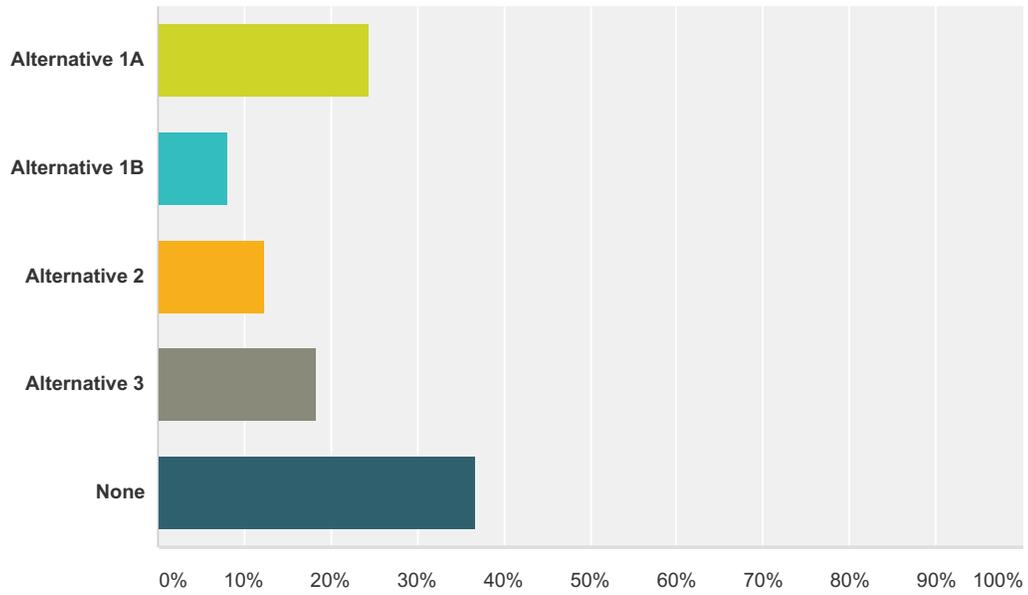
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:15 PM
2	Again, the local people do not want these changes.	7/11/2015 12:52 AM
3	plants if raised. Prefer Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be betterno raised median	7/10/2015 10:55 PM
4	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/10/2015 7:21 PM
5	I do not support flashing beacons or additional lanes/widening of the hightway.	7/10/2015 1:49 PM
6	This is a blind corner, and the primary exit from the Moss Beach Distillery. An acceleration lane would invite collisions. It's also where the speed limit changes, and vehicles are moving at speed.	7/10/2015 9:38 AM
7	Just a simple median with a turning lane for vehicles. No flashing lights	7/10/2015 9:37 AM
8	No raised medians, no flashing lights, no crosswalk!	7/10/2015 9:09 AM
9	I think that the painted medians without the flashing lights! Who want sflashing lights at the beach? Really ruins the rural atmosphere.....	7/10/2015 8:05 AM
10	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:02 AM
11	I would support Alternative #1 as the least problematic of the alternatives presented. In regard to the other alternatives, raised medians create an added safety issue for pedestrians and cyclists, and are more of an impediment than a solution. This is a rural setting, not an urban one. In the areas of Moss Beach and Montara, the primary solution that would have the most positive impact on safety for motorists, pedestrians and cyclists is to lower the speed limit to at least 45 miles per hour. Lowering the speed limit should be the first solution. Additionally, a full stop that remains green unless a pedestrian pushes a button to cross at the pedestrian crossings, should be considered instead of a flasing beacon.	7/10/2015 12:06 AM
12	no additional lanes added or widening of road. No lights as they add to traffic congestion. Make better us of turn lanes	7/9/2015 8:32 PM
13	The exponentially-greater benefits (safety, multi-function utility, visual appeal and community enhancement) of Alternative 3 more than justify the greater expense and longer time-frame of this alternative compared to Alternative 1. Alternative 2 is *way* too much; Etheldore is not an important or even advisable pedestrian crossing (What's on the West side here? Only restricted airport lands, surrounded by chain-link fencing.) The vast expanse of median from south of Etheldore to Cypress is just a waste, the cost of which is not justified, as there is little to no utility.	7/9/2015 7:46 PM
14	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:54 PM
15	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 5:36 PM
16	I am concerned with the impact of the "highway lighting" referred to in all of the alternatives. The design descriptions are not clear on the scale of these street lights (height, brightness, etc). They are not clearly indicated on the maps as to their location. Only the side views depict them. This is a semi-rural area, not a major interstate and the presence of such lighting would have a negative impact on those us that live near the road.	7/9/2015 10:42 AM
17	Again same idea as in feedback above. Keep it smaller and efficient. keep with as is. Perhaps add underground passage for safe corssing for all ages and mobility. In favor of traffic circles to slow traffic down. Keep small community feel. Lights shold be approaptie for country side , not city elumination strength. love the flashing pedestrian lights.	7/8/2015 10:37 PM
18	widening the highway does not enhance pedestrian safety.	7/8/2015 6:13 PM

Highway 1 Safety and Mobility Study

19	Changes should be the minimum to improve safety;the roadway should be widened as little as possible; raised medians should be as short as possible (and vegetated would be nice but I know that costs more and requires maintenance); on-demand flashing lights should be used coordinated with the overhead lights at night--so the overheads only come on when someone wants to cross, which will provide even more notice to drivers; overall signage should be minimal needed. I see no real need for improvements at Etheldore/1 due to low usage.	7/7/2015 4:21 PM
20	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:17 AM
21	NO WIDENING, NO CROSSWALK, NO RAISED MEDIANS; ACCELERATION LANE ONLY AND WAIT FOR BIG WAVE CONSTRUCTION TRAFFIC INCREASE B-S TO DECIDE.	7/6/2015 6:34 PM
22	I do not believe raised medians will keep us safe. Spending on pavers is wasteful especially on a highway!	7/6/2015 4:30 PM
23	Alternative 2 with an added cross walk at Cypress, please.	7/5/2015 1:36 PM
24	Alt 2 with a crosswalk at Cypress	7/5/2015 1:20 PM
25	Provide acceleration lane for turning north bound onto 1 from Cypress. No raised median. Move crossing South to create a "midblock" safe crossing with painted Refuge Island and no flashing lights. Flashing lights create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.	7/5/2015 10:41 AM
26	Prefer Moss Beach Alt 2, for traffic calming and safe crossing opportunities throughout the town center. Raised median need not extend south of Etheldore South. Alt 3 would be an acceptable compromise, but Cypress needs a streetlight.	6/28/2015 4:16 PM
27	Decorative raised median is much too long, ghastly in appearance, and inappropriate for the setting. Flashing beacons are garish and also inappropriate for the local setting. Need two-stage crossing without widening or other urban trappings. As much as safe crossings are needed, I would rather have nothing than projects that change the character of the towns from casual and semi-rural to urban.	6/25/2015 11:59 PM
28	With the approval of Big Wave I believe it is a mistake to not provide a traffic light at the intersection of Cypress and Hwy 1. It is currently difficult to turn left from Cypress and often dangerous.	6/24/2015 5:20 PM

Q5 Which alternative for California Ave do you prefer?

Answered: 49 Skipped: 18



Answer Choices	Responses	
Alternative 1A	24.49%	12
Alternative 1B	8.16%	4
Alternative 2	12.24%	6
Alternative 3	18.37%	9
None	36.73%	18
Total		49

Highway 1 Safety and Mobility Study

Q6 Comments?

Answered: 25 Skipped: 42

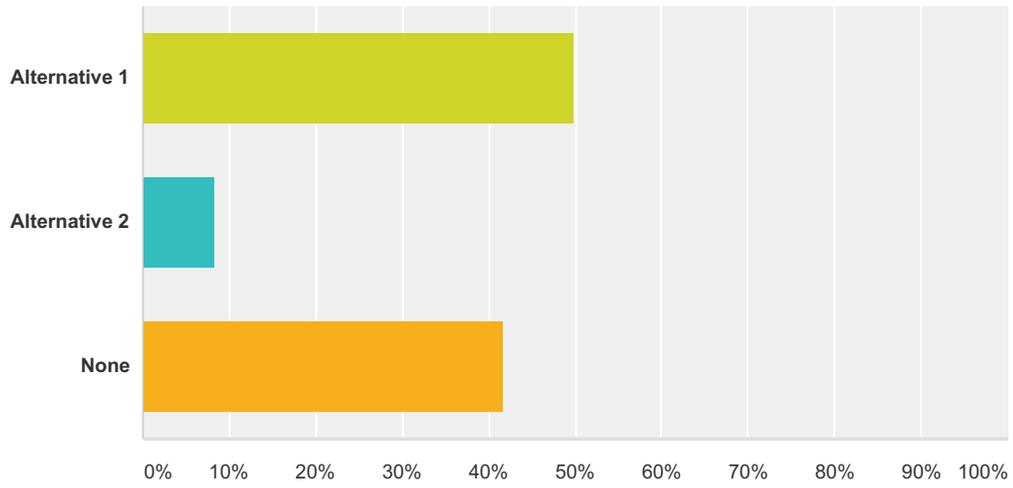
#	Responses	Date
1	I prefer no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:17 PM
2	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:22 PM
3	Are you removing all left turns onto highway from side streets since you removed all the areas to pull into and feed into moving traffic? Is the intent to have all make right turns and then U turns at next intersections? I think 1 walk way in this area and 1 at Cypress is sufficient.	7/10/2015 2:14 PM
4	California is a complex and busy intersection. A crosswalk there would add to the complexity. The stagger in the crosswalk at Virginia will hopefully reduce the temptation to "dash across 1".	7/10/2015 9:42 AM
5	Just the turn lane with no flashing lights. Median for pedestrians.	7/10/2015 9:38 AM
6	California is a TERRIBLE location for any crosswalk. It is a FIVE way intersection. If you must put in a crosswalk, this is NOT the location for it.	7/10/2015 9:10 AM
7	Prefer painted medians no overhead flashing , lights, stop lights..How about the lights that flash in the road at crosswalks? Painted lanes like on Portola Road and cross walk lights in the ground like on San Antonio Road in Los Altos....	7/10/2015 8:10 AM
8	Alternative 1A with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:02 AM
9	These designs don't clearly present how the turning lanes that seem to be drawn on Alternatives 1A and 1B will function. There needs to be better visuals and communication on these designs, as they aren't easy to read or interpret. The acceleration and turn lanes seem to be in conflict with the pedestrian crossings. I am concerned that because you have limited the options early on in this process, that we will end up being forced to choose between four undesirable options because the process isn't conducive to more comprehensive development of options at the outset. Reducing the speed limit is the primary solution that should be instituted first. And, again No raised medians. Raised medians will create an unsafe condition for pedestrians and cyclists, limiting crossing to only certain points at which no bike lane is provided on the other side to get back to the crossing point needed. It will be unsafe by forcing someone to ride along the side or in the road to get back past the median to where they intend to go. I would support a new Alternative that incorporates two pedestrian crossings with a full stop required when a pedestrian pushes a button, and painted medians only.	7/10/2015 12:31 AM
10	work with existing road scale to make better turn options	7/9/2015 8:34 PM
11	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/9/2015 8:28 PM
12	The exponentially-greater benefits (safety, multi-function utility, visual appeal and community enhancement) of Alternative 3 more than justify the greater expense and longer time-frame of this alternative compared to Alternatives 1A & 1B. Alternative 2 is *way* too much for our little town, and its incremental increase in utility compared to Alternative 3 does not justify its vastly greater expense and the enormous disruption its construction would cause. Furthermore, motorists would become frustrated, injured and desensitized by so many crossings and just ignore them all. One good crossing in town, which Alternative 3 will provide, is just fine for Moss Beach.	7/9/2015 8:13 PM
13	Alternative 1A with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:55 PM
14	Alternative 1A with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 5:39 PM
15	The ability to turn onto Virginia Ave must be retained for access to the local business there which is frequented by locals. The idea of restricting access makes no sense. Again, concern about the impact and ambiguity of the number of street lights being proposed. They will completely change the night time character of this rural area.	7/9/2015 10:48 AM

Highway 1 Safety and Mobility Study

16	What happened at the idea of traffic circles? Again underground passage, keep width, keep small town abience and keep lights according to a country feel please. Love the beacon lights for crossing.	7/8/2015 10:43 PM
17	It is the best alternative as it does not require the widening of Hwy 1	7/8/2015 3:57 PM
18	1B will serve the local store(s) and other facilities as well as the taqueria on the other side the best w/ minimal changes.	7/7/2015 4:44 PM
19	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:18 AM
20	PAINTED MEDIAN ONLY - NO RAISED MEDIAN - AND ONLY ONE CROSSWALK. KEEP VIRGINIA OPEN.	7/6/2015 6:38 PM
21	Keep it simple and uniform on all changes! We must keep the turning into Virginia!	7/6/2015 4:38 PM
22	Virginia Ave Crossing only. Provide painted Refuge Island at existing s/b Virginia left turn pocket with no flashing beacons. Flashing beacons create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.	7/5/2015 10:48 AM
23	Keep street lights and light pollution to a minimum.	7/4/2015 3:10 PM
24	Locate a straight crossing on the north side of Virginia, rather than the 2-stage jay-walk-type design. Prefer not to close off vehicle turning movements at Virginia. Closing some street access without nearby access improvements (such as acceleration lane) only shifts traffic to other intersections, worsening delays there. Prefer Moss Beach Alt 2, for traffic calming and safe crossing opportunities throughout the town center, but Alt 3 would be an acceptable compromise. While dark skies are important to me, if there is one place where streetlights are truly needed it is along the highway in our town centers.	6/28/2015 4:18 PM
25	How about a single crossing in the middle of the short block between Virginia and California? No widening! Decorative raised median is ghastly in appearance, and inappropriate for the setting. Flashing beacons are garish and also inappropriate for the local setting. Need two-stage crossing without widening or other urban trappings. As much as safe crossings are needed, I would rather have nothing than projects that change the character of the towns from casual and semi-rural to urban.	6/26/2015 12:02 AM

Q7 Which alternative for 16th Street do you prefer?

Answered: 48 Skipped: 19



Answer Choices	Responses
Alternative 1	50.00% 24
Alternative 2	8.33% 4
None	41.67% 20
Total	48

Highway 1 Safety and Mobility Study

Q8 Comments?

Answered: 26 Skipped: 41

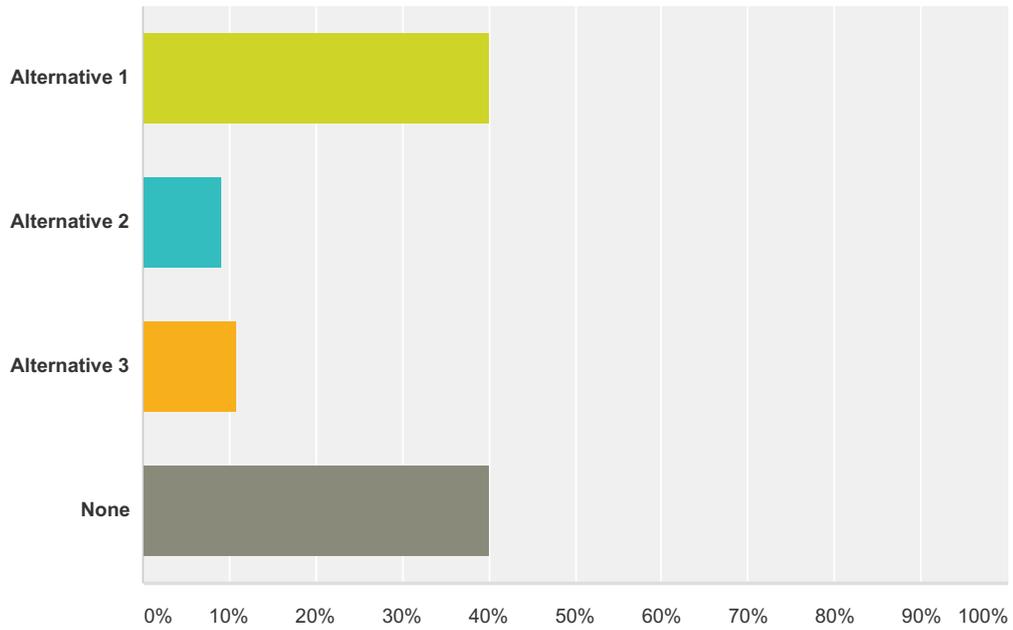
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:17 PM
2	I have been crossing at this spot for 25 years without a problem.	7/11/2015 12:54 AM
3	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:22 PM
4	Assume coast side trail will eventually cross at this light to west side?	7/10/2015 2:15 PM
5	I do not support flashing beacons.	7/10/2015 1:52 PM
6	Blind curve, traveled at speed, ideal location for an overpass.	7/10/2015 9:43 AM
7	Turn lane without all the flashing lights.	7/10/2015 9:39 AM
8	No raised median, no crosswalk! I cross here all the time. It is fine as it is.	7/10/2015 9:10 AM
9	Painted meridians, left turn lanes, acceleration lanes, in ground lights for cross walks	7/10/2015 8:12 AM
10	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:02 AM
11	need other options that do not require lights or widening of road	7/9/2015 8:51 PM
12	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/9/2015 8:28 PM
13	Alternative 1 is sufficient for this crossing. Alternative 2 is *way* too much for this location, and its incremental increase in utility compared to Alternative 1 does not justify its vastly greater expense and the enormous disruption its construction would cause. Actually, there should be a much simpler, scaled-down raised-median version with NO flashing beacons as a third alternative that compromises between #1 & #2 for this crossing.	7/9/2015 8:21 PM
14	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:55 PM
15	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 5:40 PM
16	Alternative 2 is too costly and way to big in scale. Again underground passage?	7/8/2015 10:45 PM
17	as a resident of this area i support a pedestrian crossing here, however i am very against light pollution of additional streetlights. Additionally, losing the pedestrian walkway along Hwy 1 will do more to harm pedestrian safety than it will to help it by adding the crosswalk. please do not widen the highway here!!!! this would make the area even more dangerous for pedestrians! what happened to the idea of an overpass here?	7/8/2015 6:18 PM
18	A footbridge over the hwy would eliminate any need for painted or raised medians, for a crosswalk, streetlights or for widening the hwy. And it would be far safer for pedestrians, who wouldn't have to worry whether the oncoming car will see them within this blind turn. And there is already a raised berm on both sides of the hwy to support a footbridge so the cost would be very reasonable. This option was proposed and discussed multiple times at MCC meetings as well as at the Highway 1 Safety and Mobility workshops. Why is it not listed as an option now? NO TO BOTH THESE OPTIONS. Option 1 would be just as dangerous by providing false security to pedestrians and option two would cause light pollution and would not be much safer.	7/8/2015 5:50 PM
19	Please do not have flashing lights at 14th Street. There are many homes there, mine included. Flashing lights at 14th Street leading up to the proposed crosswalk at 16th Street will be detrimental to our privacy and the value of our homes. We moved to Montara specifically for the wooded/ocean views and scenery. Flashing lights will significantly take away from that. I would like to have a cross walk at 16th Street so we can all safely cross there. But I think that can be accomplished without beacons of lights leading up to it. Thank you.	7/7/2015 9:06 AM

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20	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:18 AM
21	NO FLASHING BEACON - CHEAPEST ALTERNATIVE PLEASE .NO WIDENING - LOW IMPACT	7/6/2015 6:41 PM
22	Uniform and no widening of the highway. A village is a village let's not be in a rush to widen therefore loosing natural environment.	7/6/2015 4:42 PM
23	Provide painted Refuge Island with no flashing beacons. Flashing beacons create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.	7/5/2015 10:50 AM
24	Not seeing why we should be spending money here.	7/4/2015 3:12 PM
25	Raised median crossing refuge is preferred, but any road widening must include accommodating the east-side trail connection across the ravine.	6/28/2015 4:19 PM
26	But only Alternative 1 WITHOUT the flashing beacon. Otherwise, favor none of these.	6/26/2015 12:04 AM

Q9 Which alternative for 7th Street do you prefer?

Answered: 55 Skipped: 12



Answer Choices	Responses	
Alternative 1	40.00%	22
Alternative 2	9.09%	5
Alternative 3	10.91%	6
None	40.00%	22
Total		55

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Q10 Comments?

Answered: 28 Skipped: 39

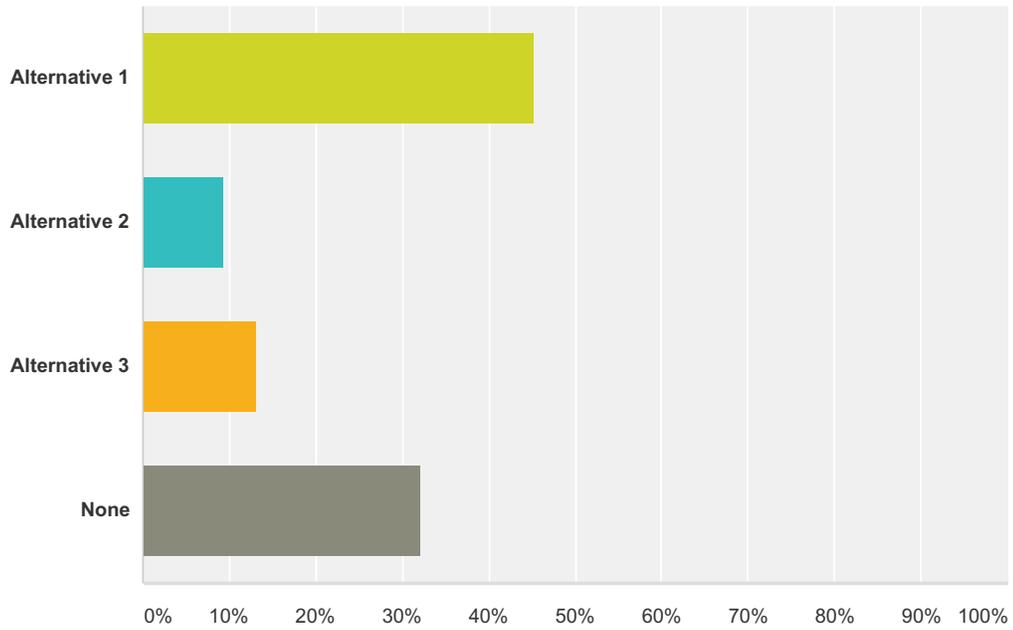
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:18 PM
2	Why would anyone cross at this spot...there is nothing there to go to.	7/11/2015 12:55 AM
3	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:22 PM
4	While we must have cross walks between Gray Whale and Mirada, I think 7-8 cross walks proposed are too many and will significantly degrade traffic flow stopping 8 times in this stretch. One crossing in middle of Moss Beach instead of 2 and no crossing at 7th would help put the emphasis on the the main volume of pedestrians. The volume at 7th does not warrant the blight it will cause to the character of Montara, the additional expense and negative impact on traffic flow.	7/10/2015 2:20 PM
5	There is virtually nothing west of the highway at 7th. Why a crosswalk?	7/10/2015 9:49 AM
6	Turn lane, median for pedestrians. no flashing signals.	7/10/2015 9:40 AM
7	No raised median, no crosswalk!	7/10/2015 9:11 AM
8	Painted traffic control designations, meridians, acceleration lanes, left turn lance, in ground lights for cross walks.....	7/10/2015 8:13 AM
9	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:03 AM
10	The exponentially-greater benefits (safety, multi-function utility, visual appeal and community enhancement) of Alternative 3 more than justify the greater expense and longer time-frame of this alternative compared to Alternative 1. Alternative 2 is *way* too much for this location, and its incremental increase in utility compared to Alternative 3 does not justify its vastly greater expense and the enormous disruption its construction would cause.	7/9/2015 8:31 PM
11	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/9/2015 8:29 PM
12	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:55 PM
13	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 5:41 PM
14	I like the idea of slowing down traffic and safety lights.	7/8/2015 10:46 PM
15	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:19 AM
16	PAINTED MEDIAN ISLAND REFUGE ONLY -MOVE CROSSWALK NORTH TO AVOID LEFT TURNOUT CONFLICT	7/6/2015 6:43 PM
17	the entrance onto Seacliff Court needs to be paved in order to connect Seacliff with Highway 1.	7/6/2015 2:49 PM

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18	I absolutely oppose proposal 2 as it would prevent everyone living on Seacliff Ct from turning north onto Hwy 1 or turning left onto Seacliff Ct when coming from the south. The workarounds would create more traffic problems rather than making the area safer. And this proposal would have a significant impact of the ability of emergency personnel to have rapid access to our homes. While not covered in these proposals I would also like to see the addition of a left turn lane for Seacliff Ct. As a neighbor has already pointed out there is plenty of room on the current gravel shoulder for the addition of this turn lane. If safety really is your concern it should be obvious why Seacliff as well as 7th street deserve a turn lane. There are as many houses on 7th west of Highway 1 as there are on Seacliff so we should have the same safety protections that our neighbors do. I am also concerned about how you have gone about notifying residents of these proposed changes. Luckily I happened to be on twitter one evening and see a notice posted AFTER the last public meeting was held. If I hadn't seen this notice most of the residents of Seacliff Ct would not have known about these proposals that could so drastically affect us. I was told that notices were posted in the local paper and on Social Media. I would like to point out that this is obviously insufficient notice as only 1 resident of Seacliff was even remotely aware of these meetings ahead of time. You're relying on the purchase of the paper (I don't subscribe) or knowing exactly what/who to follow on Social Media. I still don't know that information as I just happened to see a random retweet. If I can get a letter from the zoning department notifying me that a neighbor on the other side of the highway proposes a remodel to their home I should certainly be able to get a letter from your department informing me of proposed changes to the highway that is my **sole exit** from the coast. This is especially important to those of us who live on the west side of Hwy 1 as we don't have other options. Please rethink your notification process for the future. Thank you for taking the time to read my feedback. Nancy Hoagland 115 Seacliff Ct Montara	7/6/2015 2:27 PM
19	As a 31 year resident of Montara at Cabrillo Highway and Seacliff Court, on the west side of Highway 1, I strongly request a left hand turn lane into Seacliff Court for the safety and benefit of the six households that will be using this turn lane.	7/6/2015 1:22 PM
20	Please also put in a left hand turn lane so we can turn into Seacliff Ct heading North as we are at risk always of being rear ended	7/6/2015 12:42 PM
21	Move crossing to north side to create a more "midblock-like" safe crossing with painted Refuge Island and no flashing lights. Flashing lights create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.	7/5/2015 10:53 AM
22	Would also like a left hand turn lane added on Hwy one into Seacliff ct.	7/4/2015 5:35 PM
23	I would be oh so grateful if you could put a left hand turn lane Northbound off of highway 1 onto Seacliff Court. Thank you kindly!	7/4/2015 5:31 PM
24	Keep costs and lighting down.	7/4/2015 3:14 PM
25	If safety is anyone's concern, we also need a left turn lane onto Seacliff similar to the one on 7th Street. Alternative 2 makes NO sense whatsoever either from a safety or ease of access stand point. It's unthinkable that residents and visitors would have to drive to the state beach parking lot and negotiate a u-turn to get back to their homes. It's a wonder that anyone could possibly come up with such a convoluted idea.	7/4/2015 1:00 PM
26	In addition to the flashing pedestrian light, I would like a left hand turn lane onto Seacliff Ct.	7/4/2015 12:52 PM
27	The crossing at 7th St will provide safe access for Montara residents to the spectacular coastal views from 5th St to 9th St. at a central location without the many vehicle turning movements at 8th St. Any west side road adjustments should not prevent pedestrian access to the shoreline at 8th St. – any new retaining wall must include steps.	6/28/2015 4:20 PM
28	Any crossing at 7th Street is too close to the hill for safety from speeding southbound traffic. Move all consideration to 8th. Decorative raised median is much too long, ghastly in appearance, and inappropriate for the setting. Flashing beacons are garish and also inappropriate for the local setting. Need two-stage crossing without widening or other urban trappings. As much as safe crossings are needed, I would rather have nothing than projects that change the character of the towns from casual and semi-rural to urban.	6/26/2015 12:08 AM

Q11 Which alternative for 2nd Street do you prefer?

Answered: 53 Skipped: 14



Answer Choices	Responses	
Alternative 1	45.28%	24
Alternative 2	9.43%	5
Alternative 3	13.21%	7
None	32.08%	17
Total		53

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Q12 Comments?

Answered: 20 Skipped: 47

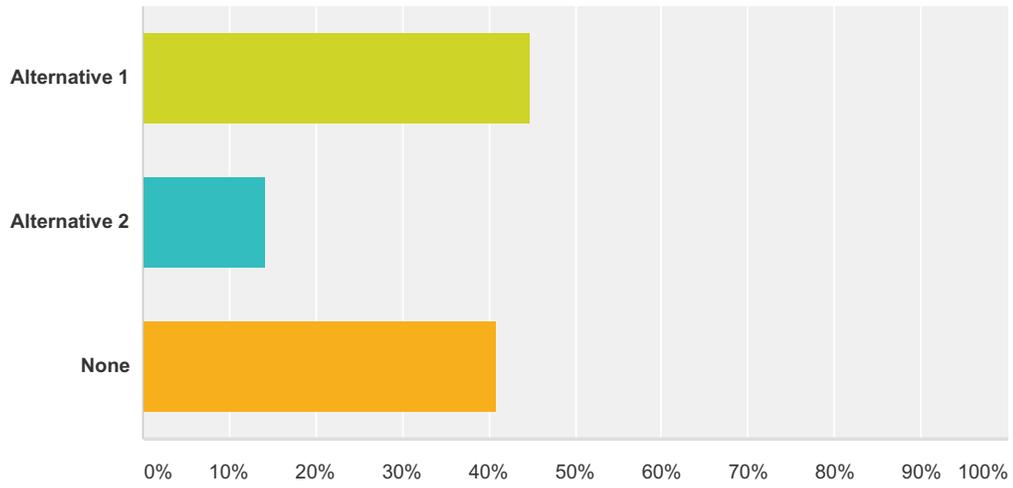
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:20 PM
2	Again, I have been crossing here for 25 years without a problem.	7/11/2015 12:59 AM
3	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:23 PM
4	Minimum impact to character is best. Placing ugly cement walls with barbed wire at top, destroying trees, having 50ft bright lights along the coast side makes it look like El Camino Real, Daly City or Pacifica. Please do not destroy our community. Flashing lights that alert drivers to stop for pedestrians is better than having them run to median with strollers and bikes. Alt 1 allows safe crossing with less impact.	7/10/2015 2:36 PM
5	Since I'm unable to get all the intersections being studied, I want the following statement to apply to all the intersections for continuity along Highway 1. None, but Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp is preferred over other alternatives.	7/10/2015 2:10 PM
6	A crosswalk on the north side of this intersection will seriously impact left turns onto 2nd st and left turns out of the beach parking lot. Put the crosswalk on the south side of the intersection if you must have one here.	7/10/2015 9:56 AM
7	Turn lanes, median. No flashing lights or extra signage	7/10/2015 9:43 AM
8	No raised median, no crosswalk!	7/10/2015 9:13 AM
9	Painted meridians, and traffic control lanes... in ground cross walk lights	7/10/2015 8:20 AM
10	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:08 AM
11	Many of the neighbors I have spoken with don't understand that some of these designs require a retaining wall. The presentation materials need to be more clear so that people know what they are voting for and aren't confused or unclear about the additional requirements that come with these designs.	7/10/2015 1:11 AM
12	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 9:17 PM
13	The exponentially-greater benefits (safety, multi-function utility, visual appeal and community enhancement) of Alternative 3 more than justify the greater expense and longer time-frame of this alternative compared to Alternative 1. Alternative 2 is *way* too much for this location, and its incremental increase in utility compared to Alternative 3 does not justify its vastly greater expense and the enormous disruption its construction would cause.	7/9/2015 8:50 PM
14	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/9/2015 8:38 PM
15	wow, retaining walls? Cost.. outrageous for such a small town project. I think the other alternatives are way to big in scale. the widening of all spots along the coast will destroy our coastal community which draws tourists and think about our daily commute.. Do you want to enjoy your view out of the window or feel like you are driving down Highway 101? Safety is a must.. but it needs to make overall sense.	7/8/2015 10:57 PM
16	Do not widen the road! NO retaining walls!	7/7/2015 8:08 AM
17	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:19 AM
18	NO CROSSWALK AT 2ND STREET - TOO MUCH OF A CONFLICT WITH VOLUME OF TRAFFIC TURNING OFF HWY. ONE. CONSIDER 2 CROSSWALKS ONE AT 1ST STREET AND ONE AT STATE BEACH PARKING LOT THRU PAINTED MEDIANS. NOT AT TURN OUT LANE.	7/6/2015 6:59 PM

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19	<p>Move crossings south and/or north to create a more "midblock-like" safe crossing with painted Refuge Island and no flashing beacons. Move crossings away from busier and wider unsafe area. Flashing beacons create a false sense of security. This would not only serve people that live nearby a safer crossing, but would also provide pedestrians and bicyclists traveling up and down highway a highly needed additional efficient safe crossing. Minimum environmental impact and intelligent safe crossings should be guiding this process.</p>	7/5/2015 11:37 AM
20	<p>But only Alternative 1 WITHOUT the flashing beacons. Decorative raised median is much too long, ghastly in appearance, and inappropriate for the setting. Flashing beacons are garish and also inappropriate for the local setting. Better would be two-stage crossing without widening or other urban trappings. As much as safe crossings are needed, I would rather have nothing than projects that change the character of the towns from casual and semi-rural to urban.</p>	6/26/2015 12:31 AM

Q13 Which alternative for Gray Whale Cove do you prefer?

Answered: 49 Skipped: 18



Answer Choices	Responses	
Alternative 1	44.90%	22
Alternative 2	14.29%	7
None	40.82%	20
Total		49

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Q14 Comments?

Answered: 22 Skipped: 45

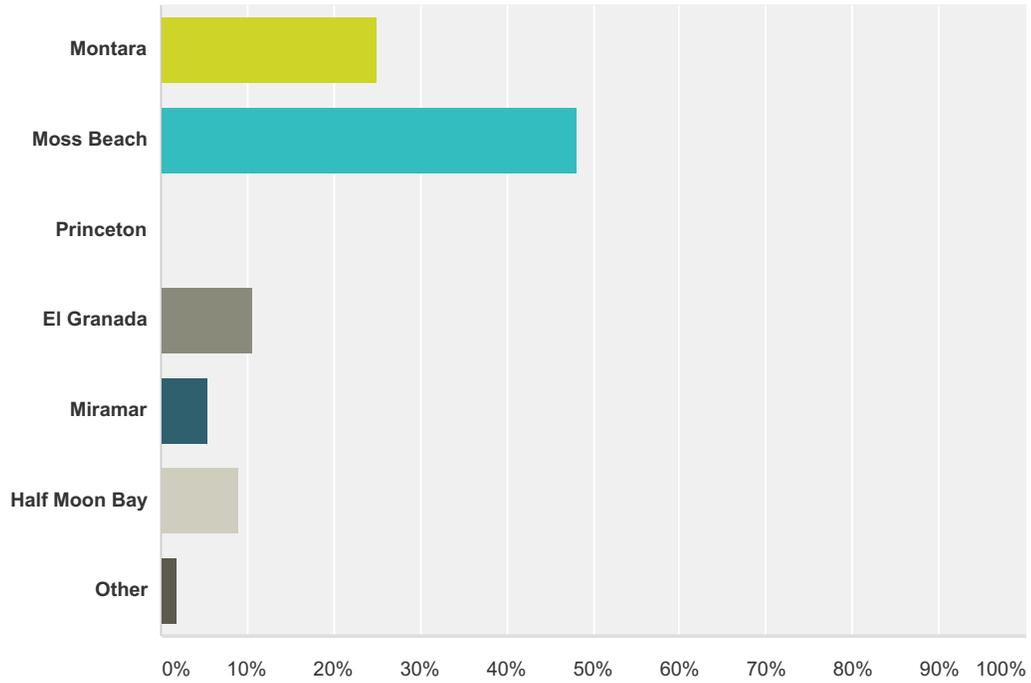
#	Responses	Date
1	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better."	7/11/2015 2:20 PM
2	Both of these will take away the rural atmosphere.	7/11/2015 12:59 AM
3	no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/10/2015 7:23 PM
4	Less Impact with safe crossing.	7/10/2015 2:36 PM
5	This is a completely blind curve. Move the crosswalk somewhat south if there must be one.	7/10/2015 9:56 AM
6	Simple turn lanes. none of the flashing lights or extra signage.	7/10/2015 9:43 AM
7	Please consider a tunnel or raised crosswalk. The traffic already backs up through the tunnel.	7/10/2015 9:13 AM
8	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better. Also lower speed limits.	7/10/2015 8:08 AM
9	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 9:17 PM
10	need other option	7/9/2015 8:55 PM
11	The exponentially-greater safety benefits of Alternative 2 for this high-pedestrian-traffic crossing (used by many families with small children accessing this popular beach) more than justify the slightly greater expense of this alternative compared to Alternative 1. Since the signal is activated only on-demand (as are the new signals at either end of the Lantos Tunnels, with no ill effects), there would be no unnecessary stoppage of motor traffic caused by this signal. The danger of this crossing (largely due to speeding motorists, but also due to poor visibility related to topography), combined with the high demand for pedestrian crossing here, justifies the installation of the signal envisioned by Alternative 2.	7/9/2015 8:50 PM
12	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better	7/9/2015 8:38 PM
13	Alternative 1 with no Rapid Flashing Beacons, no raised median, no road widening and a minimal impact street lamp would be better.	7/9/2015 6:55 PM
14	same as I stated already.	7/8/2015 10:57 PM
15	there is only one alt for gwc	7/8/2015 5:17 PM
16	Signs indicating pedestrian crossing should be located farther south too.	7/7/2015 4:50 PM
17	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:19 AM
18	NEITHER - RETHINK THIS AREA - DANGEROUS TURNING OFF OR ONTO HWY. CONSIDER NORTH-BOUND ONLY RE-ENTERING HWY ONE FROM PARKING LOT. DRIVERS CAN RETURN SOUTH-BOUND AT TUNNEL PARKING LOT WITH TRAFFIC SIGNAL.	7/6/2015 6:59 PM

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19	<p>This idea needs to be completely re-thought. This plan will make a dangerous situation more dangerous. This plan proposes to move left turn actions to s/b 1 from parking lot closer to the blind turn against cars traveling n/b. Also, it encourages crossing of auto turning paths into and out of parking lot. It reduces the number of cars that can use the lot with a less efficient parking layout. Moving the entrance and adding left turn lanes will create an illusion of a safer situation, but instead encourage more movements resulting in decreased safety for the real issue of pedestrians crossing. The best solution would be to provide an under-grade crossing, similar to Julia Pfeiffer Burns State Park crossing. The second best is a wide and highly visible painted refuge island without flashing beacons. Flashing beacons create a false sense of security. The left turn pockets will use the valuable space needed for a wide painted refuge island and cause other significant problems. Encourage southbound left turns from parking lot to instead go north and u-turn at safe south portal controlled signal. Minimum environmental impact and intelligent safe crossings should be guiding this process.</p>	7/5/2015 11:37 AM
20	<p>Keep costs and light pollution to a minimum.</p>	7/4/2015 3:16 PM
21	<p>Please explore surface treatments to help increase safety in the buffer area, such as tactile edging, and colorized/textured paving treatments. Vegetation that contributes to the blind curve should be pruned.</p>	6/28/2015 4:22 PM
22	<p>New entrance/exit has worse sightlines in both directions for vehicles trying to enter the highway from the parking lot. Current entrance/exit for lot is in a better location. No overhead lights here! No flashing beacons or hybrid beacons. Visit the place and then think for a moment about what the setting is and how the garish lights would screw up the values in this rural location. What's with the paving for the lot? The best project anyone has mentioned for this location would be an overhead walkway just north of the current entrance to the parking lot.</p>	6/26/2015 12:31 AM

Q15 Where do you live?

Answered: 56 Skipped: 11



Answer Choices	Responses	
Montara	25.00%	14
Moss Beach	48.21%	27
Princeton	0.00%	0
El Granada	10.71%	6
Miramar	5.36%	3
Half Moon Bay	8.93%	5
Other	1.79%	1
Total		56

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Q16 Please share any additional comments or questions here.

Answered: 33 Skipped: 34

#	Responses	Date
1	I would like (narrower) raised medians but *without road widening*. If this cannot be done by an exception to CalTrans rules about speed, I would prefer lowering the speed limit to 45mph.	7/11/2015 2:20 PM
2	Too many outdoor lights is light pollution...can't see stars at night.	7/11/2015 12:59 AM
3	if you do put in medians please include plants/trees	7/10/2015 11:01 PM
4	Alternative 1 allows crossings for walkers and bikes without cuts and widening. Less change to town's looks and natural setting. Achieves goal with lowest costs and least disruption.	7/10/2015 3:01 PM
5	I was at the last meeting. When you only give info about crossings and safety, I answered differently. If you explain the amount of change required for Alt 2 and 3, ie 4 lane highway, huge number of lights, ugly concrete walls etc... it changes my answers. You can sway the outcome based on what you present and what you leave out. It is important to have crossings for pedestrians, but I would like to do so and still live in Montara and not change it to Pacifica or even HMB. See stars at night and trees and dirt along the highway is a good thing. Flashing lights when someone hits a button to cross is safe and not light polluting all night long. Plus alt 1 is the cheapest so we can use money for the coastal trail across 16th and up Main St to the Rancho instead of funneling people down onto highway 1 which is more dangerous than using Main to 2nd street.	7/10/2015 2:36 PM
6	I believe that more designs need to be presented for many of these crossings before any decisions are made. They appear to be overbuilt and too urbanized in their design.	7/10/2015 2:06 PM
7	There have been several forums for public comment, and none of the comments have been taken into account in these recommendations. Is there anyone involved in producing these recommendations who has ever driven highway 1 on a summer weekend? You would not think so. Highway 1 is not a suburban street in Sunnyvale. Don't treat it like one.	7/10/2015 9:56 AM
8	Listen to the people who live here. No more lights, etc. to stop traffic. At all meetings the public requested simple solutions, not city-bred lights, etc.	7/10/2015 9:43 AM
9	I know raised crosswalks are expensive, but they should be considered and funded. Any options that slow traffic on Highway 1 are unacceptable. Yes, I cross it regularly. Walkers have to be patient but it can be done.	7/10/2015 9:13 AM
10	The county has been irresponsible in handling the Coastside and it's real congestion problems. The county keeps building out without consideration to all that reside on the coast for decades. Preservation doesn't seem to be a huge concern for these contractors that benefit with help of our tax dollars. These contractors and the government's representatives apparently don't question the costs of the small things that end up costing the community and causing frustration and distrust. Open and honest dialogue has been shrouded in secrecy and no one that is making these serious decisions actually live in these unincorporated areas. Does the gov't actually think that they know best? That's is one of the major problems.	7/10/2015 9:03 AM
11	I feel like if there are any overhead lights flashing or otherwise it is going to be awful. I want the area to keep it's rural atmosphere and this is just the start to urbanize the coast. NIMBY I am a bit resentful that the government agency wants to fix something that is not a problem. IF this is going to happen let's make it the LEAST invasive alternative. Why can't this be left alone?	7/10/2015 8:20 AM
12	These plans lack many important details for one to make an educated decision. I would like to actual measurements for medians, road width, cost etc between each alternative. Also you don't identify rapid flashing beacons as an option like you stated in the public meeting. It is still unclear what we will actually be voting on in the future.	7/10/2015 8:08 AM
13	People come this area because of the thoughtfulness in preserving our natural beauty. Bike path amongst a more natural setting rather than the road would enhance what living and visiting on the Coast is about. My concern about medians is that they widen the road tremendously taking away from what is our most precious commodity. It seems starting off slowly with minimal impact, where turning lanes, pedestrian crossings are indicated, would allow more movement and slowing down for crossings. Starting with minimal impact, would allow for evaluation of effectiveness.	7/10/2015 6:17 AM

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14	<p>I am concerned that because this process has momentum and money is being spent on it, that we will end up with alterations that aren't improvements and that make conditions worse for the sake of choosing an option rather than finding the right solution. Spending money on something that isn't a good fit, is worse than leaving things as they are. And again, the first solution should be lowering the speed limit to 45 miles an hour through Montara and Moss Beach. I am also concerned that during the public meetings I attended, the project staff and notably the public relations person presented some misinformation, conflicting information and some incorrect information during the presentations, that community participants based their feedback on. This isn't helpful and will lead to results that the community will be unhappy with if they don't have clear understanding of the options they are reviewing or providing feedback on. A point that someone made also was that it would be helpful to have designers, planners and engineers who understand the difference between rural and urban design, and who aren't applying urban design principles to a rural area. Highway 1 is historic and iconic, with rural character, and it shouldn't be turned into a high-speed, convenient drive-by that will degrade the very experience and reason that tourists like to visit, and that community members value. Thank you for considering my feedback. I do appreciate the work that people are putting into this process, and I feel that the process itself needs to be considered more, to make it clear, flexible and less rigid, and not oriented toward predetermined outcomes dictated by the County.</p>	7/10/2015 1:11 AM
15	<p>Even after attending all the meetings on this topic, I am still uncertain on what will be the actual impact of each of the alternatives. The lack of a comparative matrix showing details like road widening, costs, etc is disconcerting. People are voting on things without the proper information. And there are too many combinatorial details in all the alternatives to pick any one alternative because I don't want all the extras like flashing lights, road widening, etc.</p>	7/9/2015 9:17 PM
16	<p>There needs to be other options that do not require lights (contributes to traffic) or road widening (to make room for raised medians)</p>	7/9/2015 8:55 PM
17	<p>I believe the priority for installation of the above alternatives should be as follows: 1) Virginia/California; 2) Gray Whale Cove; 3) 2nd Street; 4) 16th Street; 5) Mirada Road; 6) Cypress; 7) 7th Street.</p>	7/9/2015 8:50 PM
18	<p>I have lived on the coast since 1981. Many changes have taken place including the increase in traffic and traffic related accidents and sadly fatalities. I do believe something must be done to make the coast roads safer but I do not believe the above proposals will meet safety needs of pedestrians or drivers. Excessive speed is the main reason that the roads are dangerous. Paint in crosswalks and put the money towards hiring more police officers to enforce speed limits. We need more officers on the coast anyway.</p>	7/9/2015 8:38 PM
19	<p>This study seems to miss some of the biggest problem spots along Highway 1 - most notably the stretch near Surfer's beach and Sams which on weekends involve an endless stream of people trying to cross and vehicles parked along the road. There is a lack of integration with or recognition of other large projects such as the Big Wave which will have a major impact on the traffic conditions. The impact of widening the highway and the location of a large number of street lights through the area will dramatically and negatively change nature of the semi-rural area. There is a perceived need that there is a large amount of pedestrian traffic trying to cross highway 1 through this stretch. Is that really true? Do we need this amount of modifications, especially the extensive changes outlined in alternatives 2 and 3 to support what on a daily basis is only a small need? The reports own analysis of traffic incidents shows that a majority of the accidents are rear-end collisions. There is no mention of why this is - are cars slamming on their breaks because people are crossing or is it something else such as varying traffic conditions, poor signage, etc? A concern would be that simply adding cross walks and encouraging people to step out into the middle of a highway where traffic in the Moss Beach/Montara stretch is able to maintain the 45-50MPH speeds, the rate of vehicle/pedestrian incidents could actually increase. Right now, people need to be careful crossing. The expectation that highway traffic will come to a screeching halt with the push of a cross walk button may be adding a false sense of safety.</p>	7/9/2015 11:06 AM
20	<p>We commute daily from MB to Mountain view. Our kids enjoy riding their bikes and would love a safe way to cross the highway or to ride their bikes to HMB from here. We feel its a great thing to have beacons along the coastal corridor, but what to keep the overall feel of our community, with appropriate lighting (lower voltage for night time (nature, residents, drivers) . What happened to the discussion around traffic circles along highway one? Support that idea fully. Slowing down traffic, safe crossings.. also like the idea to create underground passages.. of course safety considerations need to be made there as well (cameras?)/ potential urination problem addressed. Keep in mind how residents would be effected by widening of road.. An example of medians is seen on Jefferson in Redwood City, very ugly and 'city' feel. Please keep the coastal community's charm.. Traffic circles with planted areas would look lovely and would help for safety and budget concerns too. Thanks much. Manu Hipkins</p>	7/8/2015 10:57 PM
21	<p>Many of the best ideas from the workshops and MCC meetings are not represented in these options. For example, the pedestrian tunnels and bridge ideas made the most sense. Why were those options omitted? I am especially concerned about the 16th street options, which I consider to be dangerous and an eye sore.</p>	7/8/2015 5:58 PM

Highway 1 Safety and Mobility Study

22	Widening of Hwy 1 should be minimized at all locations; installation of lighting, including on-demand flashing lights, should be minimal to improve safety and street lights coordinated with flashing to only come on when needed at night.	7/7/2015 4:50 PM
23	Thank for a survey well done. As a coastsider, I sometime feel like we are the "adopted" tax payers and not in the County mix. I love the coast and would like to keep it a "secret" spot, but I realize that we do get hundreds of visitors and tourists especially on weekends therefore we should always consider their safety! Sandra Barocio	7/7/2015 8:08 AM
24	It's impossible to read the drawings that depict the alternatives included in this survey. Including the drawings is pointless at such a reduced scale.	7/7/2015 7:19 AM
25	Please make it safe for children to get to school.	7/6/2015 10:10 PM
26	SAVE MONEY - NO WIDENING AND NO RAISED MEDIANS. LESS ENVIRONMENTAL DISTURBANCE.	7/6/2015 6:59 PM
27	This is a very necessary project. When Highway 1 was repaved after the Tunnel was completed, several streets that tie into 1 were not "connected" leaving a dirt turn off between 1 and the street. Seacliff Court is one such missing connection.	7/6/2015 2:51 PM
28	I'm a 44-year resident of Moss Beach who used to walk to the beach several times a week. I stopped trying to cross the highway two years ago - way too congested with speeding drivers.	7/6/2015 1:58 PM
29	Keep Route 1 scenic and the reason so many people love and visit the area.	7/5/2015 11:37 AM
30	Keep costs and light pollution to a minimum.	7/4/2015 3:16 PM
31	The speed limit study for Moss Beach is B.S. We got the same line from Caltrans in Montara but still got the 45 mph limit through town. There is no mention of the location or the need to maintain the California Coastal Bike Route (formerly the Bicentennial Bike Route), which Caltrans is required to provide (but often ignores). This is NOT the California Coastal Trail, on which there is NO requirement for multi-use. As with all of these studies, the alternatives read like the first requirement is full employment for contractors, agency employees, and consultants, with the actual needs and requirements of the public, including quality of life for local citizens and minimum cost to get the job done, secondary.	6/26/2015 12:31 AM
32	need more speed controls and traffic calming, write more tickets	6/25/2015 8:33 PM
33	Thanks for all the reasonable ideas to improve traffic flow and increase safety.	6/24/2015 5:22 PM