



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

July 16, 2015
11:00 A.M.

651 Pine Street, Room 101, Martinez

Supervisor Candace Andersen, Chair
Supervisor Mary N. Piepho, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference
of the Committee

1. **Introductions**
2. **Public comment on any item under the jurisdiction of the Committee and not on this agenda.** (speakers may be limited to three minutes)
3. **Administrative Items, if applicable.** (John Cunningham, Department of Conservation and Development) Page 4
4. **REVIEW record of meeting for the June 1, 2015 Transportation, Water and Infrastructure Committee Meeting.** This record was prepared pursuant to the Better Government Ordinance 95-6, Article 25-205 (d) of the Contra Costa County Ordinance Code. Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. (John Cunningham, Department of Conservation and Development) Page 5
5. **AUTHORIZE the Public Works Director to submit grant applications to the Contra Costa Transportation Authority (CCTA) for the 2016 State Transportation improvement Program (STIP).** (Mary Halle, Department of Public Works) Page 15
6. **REVIEW issues associated with the health of the San Francisco Bay and Delta, including but not limited to Delta levees, flood control, dredging, drought planning, habitat conservation, and water quality, supply, and reliability.** (Cece Sellgren, Department of Public Works) Page 23
7. **CONSIDER report on Local, State and Federal Transportation Related Legislative Issues and take ACTION as appropriate.** (John Cunningham, Department of Conservation and Development) Page 53

8. **RECEIVE the report on the Olympic Corridor Trail Connector Study.** (John Cunningham, Department of Conservation and Development) Page 91
9. The next meeting is currently scheduled for Tuesday, September 8, 2015, at 1pm.
10. Adjourn

The Transportation, Water & Infrastructure Committee (TWIC) will provide reasonable accommodations for persons with disabilities planning to attend TWIC meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the TWIC less than 72 hours prior to that meeting are available for public inspection at the County Department of Conservation and Development, 30 Muir Road, Martinez during normal business hours.

Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For Additional Information Contact:

John Cunningham, Committee Staff
Phone (925) 674-7833, Fax (925) 674-7250
john.cunningham@dcd.cccounty.us

Glossary of Acronyms, Abbreviations, and other Terms (in alphabetical order): Contra Costa County has a policy of making limited use of acronyms, abbreviations, and industry-specific language in meetings of its Board of Supervisors and Committees. Following is a list of commonly used abbreviations that may appear in presentations and written materials at meetings of the Transportation, Water and Infrastructure Committee:

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ALUC Airport Land Use Commission	IPM Integrated Pest Management
AOB Area of Benefit	ISO Industrial Safety Ordinance
BAAQMD Bay Area Air Quality Management District	JPA/JEPA Joint (Exercise of) Powers Authority or Agreement
BART Bay Area Rapid Transit District	Lamorinda Lafayette-Moraga-Orinda Area
BATA Bay Area Toll Authority	LAFCo Local Agency Formation Commission
BCDC Bay Conservation & Development Commission	LCC League of California Cities
BDCP Bay-Delta Conservation Plan	LTMS Long-Term Management Strategy
BGO Better Government Ordinance (Contra Costa County)	MAC Municipal Advisory Council
BOS Board of Supervisors	MAF Million Acre Feet (of water)
CALTRANS California Department of Transportation	MBE Minority Business Enterprise
CalWIN California Works Information Network	MOA Memorandum of Agreement
CalWORKS California Work Opportunity and Responsibility to Kids	MOE Maintenance of Effort
CAER Community Awareness Emergency Response	MOU Memorandum of Understanding
CAO County Administrative Officer or Office	MTC Metropolitan Transportation Commission
CCTA Contra Costa Transportation Authority	NACo National Association of Counties
CCWD Contra Costa Water District	NEPA National Environmental Protection Act
CDBG Community Development Block Grant	OES-EOC Office of Emergency Services-Emergency Operations Center
CEQA California Environmental Quality Act	PDA Priority Development Area
CFS Cubic Feet per Second (of water)	PWD Contra Costa County Public Works Department
CPI Consumer Price Index	RCRC Regional Council of Rural Counties
CSA County Service Area	RDA Redevelopment Agency or Area
CSAC California State Association of Counties	RFI Request For Information
CTC California Transportation Commission	RFP Request For Proposals
DCC Delta Counties Coalition	RFQ Request For Qualifications
DCD Contra Costa County Dept. of Conservation & Development	SB Senate Bill
DPC Delta Protection Commission	SBE Small Business Enterprise
DSC Delta Stewardship Council	SR2S Safe Routes to Schools
DWR California Department of Water Resources	STIP State Transportation Improvement Program
EBMUD East Bay Municipal Utility District	SWAT Southwest Area Transportation Committee
EIR Environmental Impact Report (a state requirement)	TRANSPAC Transportation Partnership & Cooperation (Central)
EIS Environmental Impact Statement (a federal requirement)	TRANSPLAN Transportation Planning Committee (East County)
EPA Environmental Protection Agency	TWIC Transportation, Water and Infrastructure Committee
FAA Federal Aviation Administration	USACE United States Army Corps of Engineers
FEMA Federal Emergency Management Agency	WBE Women-Owned Business Enterprise
FTE Full Time Equivalent	WCCTAC West Contra Costa Transportation Advisory Committee
FY Fiscal Year	WETA Water Emergency Transportation Authority
GHAD Geologic Hazard Abatement District	WRDA Water Resources Development Act
GIS Geographic Information System	
HBRR Highway Bridge Replacement and Rehabilitation	



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

3.

Meeting Date: 07/16/2015
Subject: Administrative Items
Department: Conservation & Development
Referral No.: N/A
Referral Name: N/A
Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

This is an Administrative Item of the Committee.

Referral Update:

Staff will review any items related to the conduct of Committee business.

Recommendation(s)/Next Step(s):

Take ACTION as appropriate.

Fiscal Impact (if any):

N/A

Attachments

No file(s) attached.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

4.

Meeting Date: 07/16/2015

Subject: REVIEW record of meeting for the June 1, 2015 Transportation, Water and Infrastructure Committee Meeting.

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

County Ordinance (Better Government Ordinance 95-6, Article 25-205, [d]) requires that each County Body keep a record of its meetings. Though the record need not be verbatim, it must accurately reflect the agenda and the decisions made in the meeting.

Referral Update:

Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record.

Links to the agenda and minutes will be available at the TWI Committee web page:

<http://www.cccounty.us/4327/Transportation-Water-Infrastructure>

Recommendation(s)/Next Step(s):

Staff recommends approval of the attached Record of Action for the June 1, 2015 Committee Meeting with any necessary corrections.

Fiscal Impact (if any):

N/A

Attachments

June 2015 TWIC Meeting Minutes

6-1-15 TWIC Meeting Sign-In Sheet

TWIC 6-1-15 Mtg Hand-Out, Delta Stewardship Council Water Chart

TWIC 6-1-15 Mtg Hand-Out, EBMUD Pledge

TWIC 6-1-15 Mtg Hand-Out, Elements of Transportation Funding Plans
spkrcard



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

June 1, 2015

1:00 P.M.

651 Pine Street, Room 101, Martinez

Supervisor Candace Andersen, Chair
Supervisor Mary N. Piepho, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

Present: Candace Andersen, Chair
Mary N. Piepho, Vice Chair

Attendees: Steve Kowaleski, CC County Public Works Dept.
Julie Bueren, CC County Public Works Dept.
Nancy Wein, CC County Public Works Dept.
Angela Villar, CC County Public Works Dept.
Laura Case, Office of Supervisor Karen Mitchoff
Michelle Blackwell, EBMUD
Robert Sarmiento, CC County DCD, Transportation
John Cunningham, CC County DCD, Transportation

1. Introductions

Please see the attached sign-in sheet, hand-outs and "Attendees" section, above.

2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

Michelle Blackwell, East Bay Municipal Utility District (EBMUD) - Community Affairs distributed and described EBMUD's "Pledge to Partner In Saving Water"

There was no Committee action taken. Staff will work with the County Administrators Office, Water Agency, the Public Works Department, and the East Bay Municipal Utility District (EBMUD) to discuss an appropriate response to the EBMUD Water Saving Pledge. The response would then go to either the Transportation, Water, and Infrastructure Committee (TWIC) or Board of Supervisors (BOS).

3. Administrative items, if applicable (John Cunningham, Department of Conservation and Development).

The Committee unanimously approved a) moving Item #5 to end of the agenda, and b) the removal of Item #6 from the agenda, as it was mistakenly included having been previously acted on at the May 4, 2015 meeting.

4. Staff recommends approval of the attached Record of Action for the May 4, 2015 Committee Meeting with any necessary corrections.

The Committee unanimously approved the 5/4/15 meeting record.

5. CONSIDER Report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of specific recommendations in the report above.

The Committee unanimously recommended a support position on SB 321 (Beall) and directed staff bring to the recommendation to the Board of Supervisors on consent. Regarding progress on the Iron Horse Corridor effort, the Committee offered any assistance in reaching out to the County's legislative delegation.

6. **ACCEPT** staff report and **AUTHORIZE** the Public Works Director, on behalf of the County, to submit to Caltrans and MTC grant applications for the Active Transportation Program (ATP), Cycle 2.

The Committee unanimously removed this item from the June 1, 2015 TWIC Meeting Agenda as it was previously acted on at the 5/4/15 Committee meeting.

7. **AUTHORIZE** the Public Works Director, on behalf of the County, to submit grant applications to California Department of Transportation (Caltrans) for the Highway Safety Improvement Program (HSIP) Cycle 7 funding cycle.

Angela Villar (Public Works Department) reviewed the Highway Safety Improvement Program Grant requirements, and the County's grant application. The Committee unanimously approved the staff recommendation. The Committee requested a report on past grant efforts and awards.

8. **AUTHORIZE** the Public Works Director, on behalf of the County, to submit the two grant applications to DOT for the TIGER Discretionary Grant program.

Nancy Wein (Public Works Department) described the Transportation Investment Generating Economic Recovery (TIGER) grant process and the County's grant proposal. The Committee requested maps for future grants to orient the Supervisors and the public to the project geography. The Committee unanimously approved the staff recommendation.

9. **RECEIVE** update on Pedestrian-Rail Safety issues and **DIRECT** staff as appropriate.

The Committee members offered to send out messages via their regular email to the district. A report is to be brought back to TWIC in October. The Committee unanimously approved staff recommendation and directed staff to explore the possibility of timing a public service announcement with the return to school in the fall.

10. **Adjourn**

The Committee adjourned this meeting at 2:45 on the afternoon of Monday, June 1, 2015.

11. **The next meeting is currently scheduled for Thursday, July 16th at 11am.**

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John Cunningham, Committee Staff

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**Transportation, Water and Infrastructure Committee Meeting
June 1, 2015
SIGN-IN SHEET**

[illegible]

BY THE NUMBERS

May 28, 2015

Agenda Item 8
Attachment 1

Precipitation^{1,2}

Rain

35.2"

Northern Sierra*

74% seasonal average to
date: 5-27-2015

17.4"

Southern Sierra*

45% seasonal average to
date 5-27-2015

Snow Pack

0"

Northern Sierra
snow water equivalent

0% seasonal average to
date: 5-27-2015

0"

Central Sierra

0% seasonal average to
date: 5-27-2015

0"

State-wide average

0% seasonal average to
date: 5-27-2015

Water Supply^{3,4,5}

Reservoir storage

percent of average to date:
5-27-2015

64%

Shasta

55%

Oroville

68%

San Luis

Fish: Delta smelt
and Salmon

73 (273)

Delta Smelt (20 mm) catch to date
20 yr average in parenthesis

Flow

(cfs)

7,468

31% of 20 yr May
flow average

422

6% of 20 yr May
flow average

1,300

54% of 20 yr May
flow average

11 (65)

Winter- run juvenile salmon
Chippis Island trawl (March)
March 23 yr average in parenthesis
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Water Quality and Flow^{3,4}

Salinity

(electrical conductivity)

173
µS/cm

Sacramento River
@Freeport

San Joaquin River
@Vernalis

639
µS/cm

Combined
CVP+SWP
Diversion

598
(Banks) µS/cm

*precipitation for 10/2014-present

^{1,2} <http://tinyurl.com/qypvmp4>

^{3,4} <http://tinyurl.com/mm45els>

⁵ <http://tinyurl.com/oumqgqm>

Good
Fair
Poor
Bad



Dear Colleague:

In 2015 we face a critical water supply shortage. I invite you to partner with EBMUD in achieving our common water conservation goals with this pledge. This pledge is intended to foster collaboration on saving water between EBMUD and each city and county in its service area. I urge you to join me and become a water conservation partner. Please return your signed pledge to: Lynelle Lewis, Secretary of the District, 375 11th Street, Oakland, CA 94607

*Frank Mellon
President
EBMUD Board of Directors*

PLEDGE TO PARTNER IN SAVING WATER

I/We, representing the City of/County of _____, agree to partner with EBMUD and work together to reduce 2015 water use in the EBMUD service area by 20 percent compared to use in 2013. Together we can meet local and state water conservation mandates, and we will do our part by:

1. Immediately turning off any potable water systems used to irrigate ornamental turf in public medians;
2. Abiding by regulations that prohibit outdoor irrigation from 9 am to 6 pm, limit watering of outdoor landscapes to two non-consecutive days per week and require that we prevent overspray and runoff when watering;
3. Using a hose with a shutoff valve when hand-washing motor vehicles;
4. Using a broom or air blower, not water, to clean driveways, sidewalks, patios and other hard surfaces;
5. Turning off any fountain or decorative water feature that uses potable water unless the water is recirculated;
6. Partnering with EBMUD to promote conservation throughout our jurisdiction;
7. Alerting EBMUD to possible water waste for follow-up by conservation experts; and
8. Exploring ways to partner with EBMUD to put a stop to any violations of mandatory water use restrictions that may be identified in our community.

It is up to all of us to ensure there is enough water for our communities. We look forward to this partnership and hereby designate the following person as our contact:

Name

Phone

Email

(Signature of official)

Elements of Transportation Funding Plans, June 2015

Revenue Source	SB 16 (Beall)	Amount Raised	Senator Cannella	Amount Raised	Speaker's Plan	Amount Raised	Senate Reps (SCA 7)	Amount Raised
Gas Tax	10 cpg	\$1.45 B	25 cpg	\$3.6 B				
Diesel Tax	12 cpg	\$0.3 B	25 cpg	\$0.65 B				
Weight Fees	Phase in over 5 years	\$0.95 B \$0.2 B, annual	Direct Return; No backfill	\$0.95 B, annual	Direct Return; Backfill	\$0.95 B	Direct Return; No backfill	\$0.95 B
Transportation Loans	Phase in over 3 years	\$1.0 B; \$0.35 B annual					Direct Repay One time Weight Fee	\$1.1 B Misc. \$.2 B; Pre-42\$.9 B; \$1.3 B
VRF	\$35	\$1.1 B						
VLF (Backfill for Weight Fees)	Phase in over 5 years	.35%, total; .07% annual; \$0.2 B, annual	No VLF;					
Road Charge					\$50 per vehicle	\$1.8 B (less \$0.95 B)		
Sunset	5 years		N/A					
Transit/Rail	N/A		Cap and Trade?	?				
Cap and Trade							Fuels to roads End Cap and trade HSR	\$1 B (\$1.5 B)
Grand Totals		\$3.4 B		\$5.5 B		\$2 B		\$2.95 B

Contra Costa County
Transportation, Water & Infrastructure Committee

If you are interested in speaking, please sign your name, address and list the agenda item number to which you are going to speak. (Address & Telephone number information is optional.)

Item Number on Agenda: 2 Date: 6/1/15
Name: Middle Blackwell / EBMD
Address: 375 11th St
City: Oakland State: CA Zip: _____
Telephone: 510 287-2053 (Optional)



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

5.

Meeting Date: 07/16/2015

Subject: AUTHORIZE the Public Works Director to submit grant applications for the State Transportation Improvement Program (STIP).

Submitted For: Julia R. Bueren, Public Works Director/Chief Engineer

Department: Public Works

Referral No.: 2

Referral Name: REVIEW applications for transportation, water and infrastructure grants to be prepared by the Public Works and Conservation and Development Departments

Presenter: Mary Halle, Department of Public Works

Contact: Mary Halle
(925)313-2327

Referral History:

The authorization of transportation grant applications is a standing referral item of TWIC.

Referral Update:

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The magnitude of STIP funds available for Contra Costa will not be known until the California Transportation Commission (CTC) adopts the Fund Estimate in August 2015. However, Staff received a status update from Contra Costa Transportation Authority (CCTA) on July 2nd which stated that Statewide Funds for STIP are significantly reduced this year due to less revenue from the excise tax on gas. In 2014 STIP awards totaled \$1.26 billion; whereas, the current statewide estimate for 2015 is \$32 million.

The new STIP funds will not be available until FY 2019-20 and FY 2020-21. The STIP funds can be used to fund one or more phases of a capital project (e.g., environmental clearance, design, right-of-way, and/or construction).

Projects will be screened based on the following criteria:

1. Project must be consistent with the adopted Regional Transportation Plan (RTP). Local projects must be in a Congestion Management Plan (CMP).
2. Candidate projects must submit a draft Project Study Report (PSR) or Project Study Report equivalent along with the application by July 17, 2015.
3. Funds must be allocated for the phase(s) requesting STIP funding within the period between

FY 2019-20 and FY 2020-21.

4. Project or project phases must be fully funded with requested STIP funds and other committed fund sources.
5. Project must solve an existing problem related to safety, capacity, or operations.
6. Requested STIP funds must be at least \$1 million and be for Capital Improvements.
7. Letters of concurrence from the Regional Transportation Planning Committee (RTPCs) should be submitted with the application.
8. Roadway Projects must be on collector roads or above as classified by Caltrans California Road System (CRS) maps.
9. STIP funds are federalized. Project sponsors must be willing to go through Caltrans local Assistance for the complete federal process.
10. Projects that are operational in nature must show commitment of operations and Maintenance funds for the life of the project.
11. Projects considered for STIP funding are restricted to those within the Measure J Action Plan.

The following two projects selected for submittal fulfill all these requirements:

1. **Camino Tassajara Realignment at the County Line**
2. **Appian Way Complete Streets Project, Fran Way to San Pablo Dam Road**

Previously Awarded Projects:

Kirker Pass Road Truck Climbing Lanes
Camino Tassajara Shoulder Widening
Montalvin Manor Pedestrian Transit Access Improvements

Project Recommendations

Camino Tassajara Bike Lane Gap Closure

Total Project Cost: \$3,000,000

STIP Amount Requested: \$2,500,000

The Camino Tassajara Bike Lane Gap Closure Project is located on Camino Tassajara between Finley Road and Windemere Parkway, a total length of five miles. Camino Tassajara is a heavily traveled bicycle route as well as a high volume corridor for vehicle travel. While some sections of the roadway include fully paved shoulders, other sections have inadequate shoulders or no shoulders at all. The Project scope includes widening Camino Tassajara shoulders over four segments to provide a standard Class II continuous bike lane throughout. Filling the gaps in the bike infrastructure would create a continuous bike lane that extends for seven miles, from Blackhawk Plaza Circle to Windemere Parkway.

The Project will improve safety for motorists and bicyclists by separating the two modes of transportation. It will also facilitate congestion relief and reduce greenhouse gas emissions by providing an active transportation alternative. This gap closure project will provide a benefit that exceeds the value of the improvements as closing the missing links will allow the benefits to be

realized from the previous project improvements in this area to complete a uniform bike corridor.

Appian Way Complete Street Project

Total Project Cost: \$5,700,000

STIP Amount Requested: \$5,000,000

The Appian Way Complete Street Project will provide a transportation corridor for all modes of transportation that is consistent with complete streets policies while improving pedestrian and bicycle safety. The existing corridor is non-uniform with gaps in pedestrian facilities. The project scope includes installation of sidewalk, curb ramps, bulb-outs, and pedestrian actuated flashers on Appian Way from San Pablo Dam Road to Fran Way. This segment of Appian Way has experienced 7 pedestrian collisions and 3 bicycle collisions over the past six years, with 4 pedestrian collisions resulting in serious injuries. The project would not only close gaps in infrastructure but the installation of bulb-outs and pedestrian actuated flashers at crosswalks will improve safety at pedestrian crossings on this high volume minor arterial.

There have been two El Sobrante workshops for this project as an ongoing effort for a community based design for this corridor. Appian Way is a Route of Regional Significance within a Priority Development Area (PDA). The completion of pedestrian infrastructure in this corridor will prepare the area for future mixed-use developments to implement the Sustainable Communities Strategy. The project connects users to government buildings, churches, schools, the Boys and Girls Club of El Sobrante, and ten AC Transit bus stops.

Geographic Equity

Staff strives to provide equitable opportunities for projects throughout the County to compete for grant funding. Staff tracks the grant programs available, candidate projects submitted in the past, projects successfully awarded funding in the past, and project location. The attached table summarizes these efforts over the last five years. After a "call for project" is released for a specific grant program, staff first considers which projects will rate the highest as all State and Federal programs are very competitive. Next, an effort is made to recommend project applications that will spread funding opportunities county-wide.

The potential for additional funding through grant programs is a benefit countrywide to augment the local road fund, stretching local dollars to provide additional improvements overall. The attached summary table provides the grant application history from 2011-2015. The table was recently updated to eliminate tracking from 2002-2010, to gain a perspective of the more recent history from 2011-2015. Each column summarizes the opportunities provided in each supervisory district per each grant program. Each column also provides a list of the rating criteria or the goal of each program. Many grant programs have a goal to benefit disadvantaged communities. For this reason, one would expect the majority of these grant opportunities will be within Districts 1 and 5. Grant programs based upon safety improvement award funds to projects located in high collision areas. As many of the county's rural roads experience the highest rate of serious injury collisions, District 3 has the highest number of past grant opportunities in the safety category. The summary table also identifies the number of road miles within each District and compares the past grant opportunities to the percent of road miles.

Recommendation(s)/Next Step(s):

AUTHORIZE the Public Works Director, on behalf of the County, to submit grant applications to CCTA for the 2016 STIP funding cycle per staff recommendations

Fiscal Impact (if any):

STIP applications are rated based upon the leveraging of local funds. The Public Works Department has identified \$0.5 million in developer mitigation funds to support the local match funds for the Camino Tassajara Project in the event it is awarded funds. If the Appian Way Project is awarded funds, \$0.7 million is identified in Local Road Funds to provide the local match funds.

Attachments

Camino Tassajara Project Exhibit

Appian Way Project Exhibit

Grant Summary Table

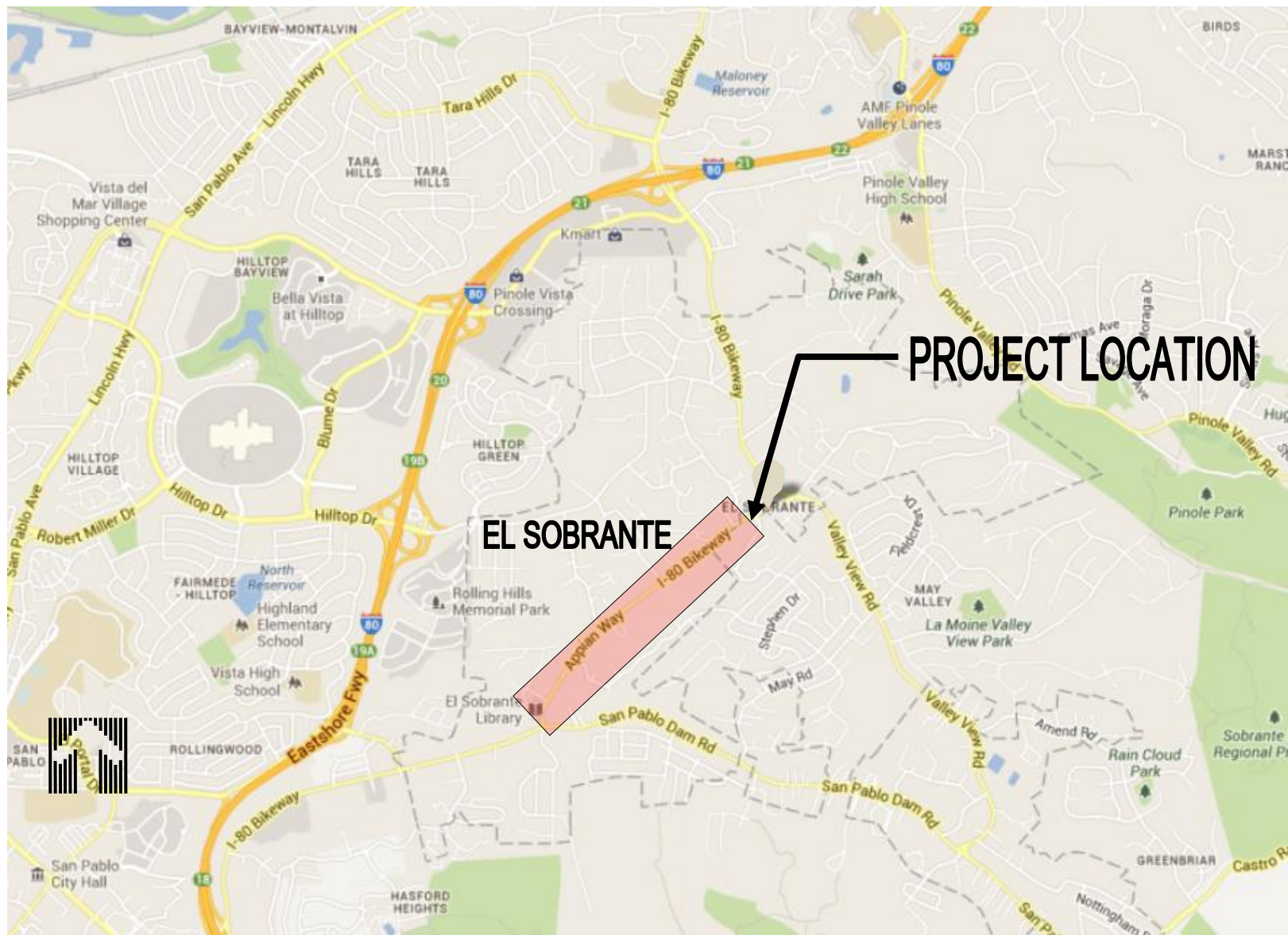
Camino Tassajara Bike Lane Gap Closure Project

Proposed project includes sections 1-4.



LEGEND:

- No Shoulders
- Shoulders < 4'
- Standard Bike Lane
- Projects Currently Under Construction



Contra Costa County
Public Works
Department

255 GLACIER DRIVE, MARTINEZ, CA 94553 PH: (925)313-2000 FAX: (925)313-2333

PROJECT VICINITY MAP

Appian Way Complete Street Project

TWIC Packet Page Number 20 of 167

DB: TC CB:

DATE: May 2015

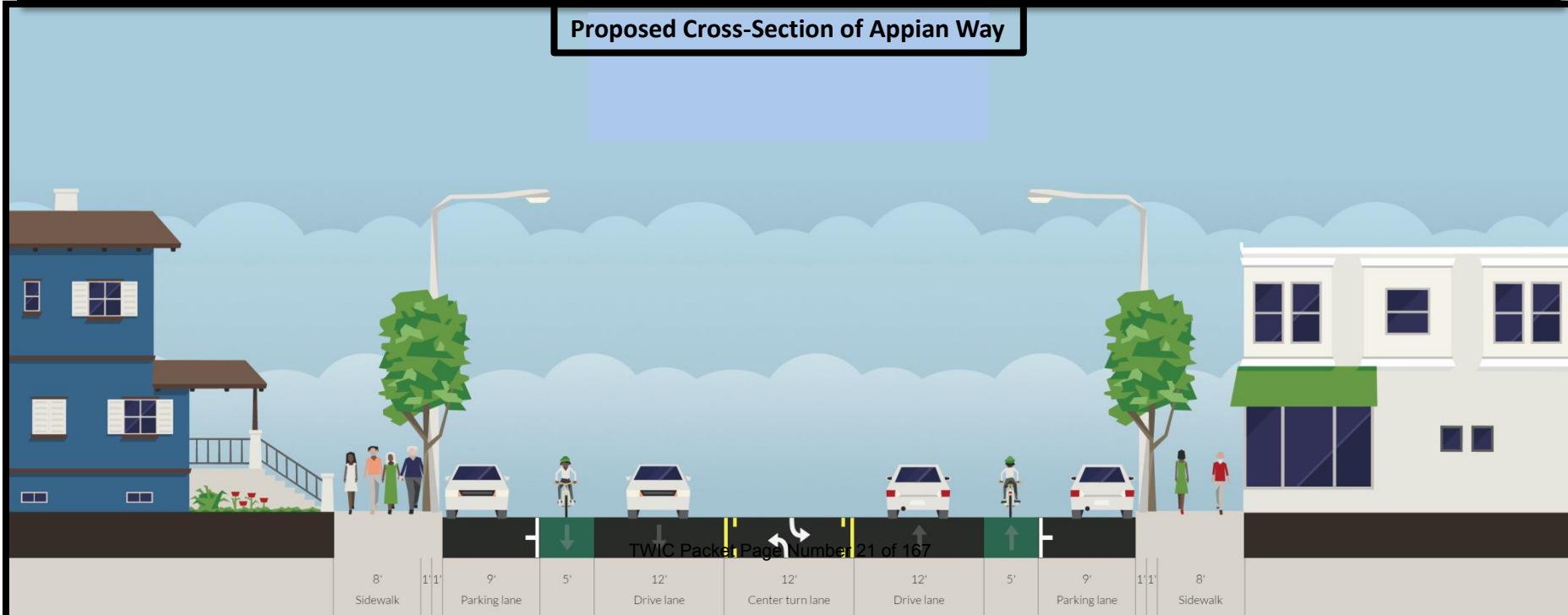
SHEET 1 OF 1

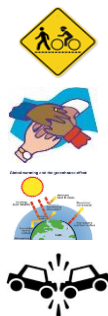
Appian Way



Existing Condition of Appian Way

Proposed Cross-Section of Appian Way



																				7/1/2015
SUMMARY - GRANT APPLICATION OPPORTUNITIES 2011-2015																				
PROGRAM	ATP	CDBG	CMAQ	HBP	HSIP	LSRS	OBAG	Reg SR2S	PROP 1B	SRTS	SR2S	SR2T	STIP-TE	TDA	TIGER	TLC	TOTAL FROM EACH DISTRICT	% of total grant opportunities	Road Miles by District	Road Miles by District
																				
DISTRICT																				
1	3	4	1	1	1	3	2		4	0		1	2	4		1	27	21%	118	18%
2	0				1	3	1		1	0			0	2		1	9	7%	98	15%
3	0			6	4	3	1		16	0			3	3	4		40	31%	211	33%
4	0		1	1	1	3	1	1	2	0	1		2	2	1		16	12%	40	6%
5	6	1		1	1	2	3	1	8	2	1	2	2	6	1	1	38	29%	181	28%
TOTAL SUBMITTED TO EACH PROGRAM	9	5	2	9	8	14	8	2	31	2	2	3	9	17	6	3	130	100%	647	100%

ATP	Active Transportation Program -	Applications are rated on being bike and pedestrian friendly, potential to reduce GHG, location within a disadvantaged community, and high collision rate
CDBG	Community Development Block Grant -	Applications are rated on benefits provided to a disadvantaged community.
CMAQ	Congestion Mitigation and Air Quality Improvement -	Rated on anticipated reduction in vehicle miles traveled
HBP	Highway Bridge Program	Rated on federal highway bridges in need of structural repair
HSIP	Highway Safety Improvement Program	Rated on locations with high collision rates and the ability for proposed counter measures to economically address issue
LSR	Local Streets and Roads	Rated on need of road maintenance and repair
OBAG	One Bay Area Grant	Rated on location within a PDA and community of concern, project readiness, community involvement, connectivity
Regional SR2S	Regional Safe Route 2 School	Rated on bike & ped safety improvements near schools and preference to disadvantaged communities
Prop 1B	Proposition 1B	Discretionary funds utilized this past decade as local match for grant opportunities or surface treatment
SRTS	Safe Route to School	(Federal) - Rated on bike & ped safety improvements near schools and preference to disadvantaged communities
SR2S	Safe Route 2 School	(State) - Rated on bike & ped safety improvements near schools and preference to disadvantaged communities
SR2T	Safe Route to Transit	Rated on bike & ped safety improvements near transit stations and preference to disadvantaged communities
STIP	State Transportation Improvement Program	Rated on congestion reduction and safety improvements. Project must have a PSR equivalent completed
TDA	Transportatin Development Act	Rated on bike & pedestrian benefits
TIGER	Transportation Investment Generating Economic Recovery	Economic development, safe & affordable transportation, improved connection to employment, and community revitalization
TLC	Transportation for Liveable Communities	Rated upon potential to encourage bicycle, pedestrian and transit options & revitalize communities






Grant program for bike and pedestrian infrastructure

Grant program benefits Disadvantaged Communities

Grant program encourages reduction in Emissions

Grant rating based upon collision data



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

6.

Meeting Date: 07/16/2015

Subject: UPDATE on proposed new municipal National Pollutant Discharge Elimination System stormwater permit.

Submitted For: Julia R. Bueren, Public Works Director/Chief Engineer

Department: Public Works

Referral No.: 5

Referral Name: REVIEW issues associated with the health of the San Francisco Bay and Delta, including but not limited to Delta levees, flood control, dredging, drought planning, habitat conservation, and water quality, supply, and reliability.

Presenter: Cece Sellgren, Department of Public Works **Contact:** Cece Sellgren
(925)313-2296

Referral History:

The County Watershed Program has brought the “Trash” portion of the National Pollutant Discharge Elimination System (NPDES) Permit before the Transportation, Water & Infrastructure Committee (TWI Committee) twice (March 6, 2014 and June 5, 2014) and the Board of Supervisors once (February 3, 2015). However, it has not discussed the NPDES permit in its entirety within the last five years.

Referral Update:

Over the last five years, Contra Costa County, along with 75 other cities, counties, and flood protection districts, has implemented the first Municipal Regional Permit (MRP) for the Bay Area by the Regional Water Quality Control Board. This permit required substantial investment in treating the quality (and sometimes the quantity) of stormwater from new and redevelopment projects, the initiation of the litter/trash abatement program, and several demonstration projects to examine the feasibility of treating stormwater to remove pollutants of concern, such as Poly-Chlorinated-Biphenyls (PCBs) and Mercury. This was in addition to the ongoing NPDES programs of Municipal Operations, Commercial, Industrial, and Construction site controls, Public Outreach and Education, and Integrated Pest Management.

Over the last year, municipal staff and consultants have met numerous times with Regional Water Board staff to discuss development of the next Municipal Regional Permit (MRP 2.0). On February 11, 2015, the Regional Board shared an “Administrative Draft” of the new NPDES Permit. Negotiations became more frequent, focused, in depth, and detailed. On May 11, 2015, the Regional Board released the Tentative Order for MRP 2.0.

The proposed MRP 2.0 will require Contra Costa County to continue to implement most of the

existing NPDES Permit requirements at current levels. In addition, the County will need to reduce trash rates in unincorporated communities by an additional 30% (to a total reduction of 70%) by 2017. This will require the County to treat all parcels with “very high” or “high” trash rates to a “medium” trash rate, as well as reduce the trash rates from a substantial percent of the parcels with a “medium” trash rate to a “low” trash rate.

The County will be required to develop a plan within one year to treat stormwater from roads. This plan, called the Green Infrastructure (GI) Plan, will expand stormwater treatment from private development to require treatment of stormwater from existing roads. The GI planning area will focus on areas with historic and current industrial uses, as well as residential and commercial areas built between 1945 and 1980. This includes significant portions of west and central County communities.

The GI Plan will need to begin implementation quickly in order to achieve mandated numeric reductions in PCBs and Mercury in stormwater. Costs to build and maintain facilities identified in the GI Plan have not been identified or provided. We assume these monies will either come from the Stormwater Utility Assessments, the General Fund, or the Road Fund. If road funds are used, this will create a conflict with other road fund uses, such as pavement management, repair of transportation facilities, and road improvements. At least one GI project will need to be completed during MRP 2.0. However, in reality, several will need to be constructed in areas with high PCB/Mercury concentrations in order to help meet the PCB and Mercury load reduction requirements.

The County will also need to vigilantly enforce illicit discharge of PCB and Mercury tainted sediment coming from private properties and conduct enhanced municipal operations, including street sweeping (where feasible), storm drain inlet and pipe cleaning (where existing), and/or ditch cleaning. The County may want to consider amending the County’s stormwater ordinance to increase financial penalties and/or develop an ability to place penalties on properties that refuse to abate sediment discharges. The County can also refer these sites to the Regional Water Board. However, they have a poor record for acting quickly and decisively.

The County, along with the other 70 cities and counties, will need to develop and implement a program to prevent caulk (used in the building industry) from entering into stormwater during the renovation or demolition of buildings. This program would ideally be handled at the state level, similar to programs to abate lead paint and asbestos. Collectively, all of the cities and counties will need to develop a study to explore the potential of PCB containing caulk, used to seal storm drains, entering into stormwater. The results of this study will influence the requirements in the next MRP.

On June 10 and July 8, 2015, the Regional Water Board held hearings and took testimony on the proposed MRP 2.0. Testimony was given by many municipal staff, a few elected officials, including Supervisor Gioia, as well as staff and volunteers from several nonprofit organizations. Written comments were received through July 10, 2015.

Recommendation(s)/Next Step(s):

Receive the report from County staff on the proposed NPDES permits and provide recommendations on negotiations and/or implementation.

Fiscal Impact (if any):

The County Watershed Program estimates \$500,000/year to \$750,000/year (or more) to implement the Trash Management Plan to achieve 70% trash reduction levels by 2017 and up to \$1,000,000 over a five-year period to develop the GI Plan. These costs are in addition to costs to administer the ongoing NPDES programs. All costs will be funded through Stormwater Utility Assessments.

Costs to implement the GI Plan will be borne by transportation funds (gas tax, VLF fees, etc.) and grants (if available). The remainder of the NPDES permit is expected to cost roughly the same to implement as MRP 1.0 (\$1.5 million/year). The County Watershed Program was able to transfer the costs associated with General Drainage Maintenance from Stormwater Utility Funds to the General Fund. This should free up most of the funds needed to increase trash reduction efforts and develop the GI Plan.

Attachments

Table of County Watershed Priorities

C.3.j. GI Planning & Implementation

Trash

PCB's

Requested Adjustments to Improve Efficiency in the Municipal Regional Permit, Including Elimination of “Less Beneficial Tasks”

Provision	Task or Requirement	Requested Adjustments
C.2.f.	Corporation Yard inspection requirements.	Eliminate this requirement, as it duplicates the requirements for inspections already included in the Stormwater Pollution Prevention Plans (SWPPPs) for these same facilities.
C.3.b.i.	Eliminates grandfathering of Regulated Projects with vested tentative maps approved prior to advent of C.3 requirements	Allow municipalities flexibility to require these applicants to implement stormwater treatment requirements only to the extent not in conflict with state law and existing development agreements.
C.3.b.ii.(4)	Certain Roads Projects are Regulated Projects under Provision C.3	Delete this requirement as the intent is superseded by the Green Infrastructure requirements in Provision C.3.j.
C.3.b.ii.(1)(c)	Requires projects where 50% or more of existing impervious area is redeveloped to provide treatment for entire area.	Delete this requirement as the intent is superseded by the Green Infrastructure requirements in Provision C.3.j.
C.3.e.ii.	Special Projects—allowance to use non-LID treatment on smart growth development projects that meet specified location and gross density criteria.	To avoid a disincentive for including pedestrian amenities, allow public plazas to be omitted from calculation of project gross density.
C.3.e.v.(1)	Requires Permittees to track Special Projects that have been identified (application submitted) but not approved.	Delete this requirement, as the number of projects, and amount of impervious area, has proven to be small.
C.3.e.v.(2)	Requires Permittees to conduct and document an analysis of the feasibility of LID treatment for Special Projects.	Delete this requirement, as it creates considerable additional effort for applicants and Permittees without any expected water-quality benefit.
C.3.g.vii.	Requires Contra Costa municipalities (through CCCWP) to submit a technical report describing how Contra Costa will implement current Permit hydromodification management requirements.	Delete requirement to submit a technical report. CCCWP submitted a 2013 report on the results of a multi-year monitoring study that concluded current policies and criteria meet these requirements.
C.3.g.iv.	Allows Permittees to propose a different method for sizing hydromodification management facilities that is not biased against Low Impact Development, but requires a Permit amendment before using the method.	Delete requirement for a Permit amendment before the method is used. Note: the Fact Sheet accompanying the Tentative Order states that Water Board Executive Officer approval would be required, not a Permit amendment.
C.3.h.ii.(6)(b) and	Requires Permittees to inspect 20% of Regulated	Delete the annual requirement to allow flexibility in scheduling

Comment [CS1]: I doubt the County has legal authority to impose additional conditions on approved developments or those w/ vested tentative maps.

Provision	Task or Requirement	Requested Adjustments
(c)	Projects annually, as well as every project at least once every 5 years.	inspections.
C.3.j.i.(1)	Requires each Permittee to prepare and implement a Green Infrastructure Plan (framework for Plan due in 12 months; Plan due in 2019)	Extend the time for submittal of the required framework to a minimum of 20 months.
C.4, C.5, C.6	For inspections of businesses and construction sites, and for response to illicit discharges, requires that corrective actions of "actual or potential non-stormwater discharges" be implemented before the next rain event, but no longer than 10 business days after potential or actual non-stormwater discharges are discovered.	Delete references that specify types of corrective actions and timeframes for implementation, as these create a disincentive for identifying minor problems and create unproductive administrative work.
C.5.e.iii.	Requires Permittees to report a list of mobile cleaners operating in their jurisdiction.	Delete, as this information is unavailable.
C.5.e.iii.	Requires Permittees to report a list and summary of specific outreach events and education conducted to the different types of mobile businesses	Delete and clarify that requirements to inspect mobile businesses and abate discharges is covered by existing requirements elsewhere in Provisions C.4 and C.5.
C.7.a.	Permittees are required to mark and maintain "no dumping" markings on storm drain inlets.	Move this task to Provision C.2.
C.7.b.	Requires Permittees to participate in or contribute to "advertising" campaigns on specified subjects and assess results.	Change "advertising" to "outreach" to make explicit that a variety of methods, including social media, may be used. Delete references to specific subjects. Allow more flexibility.
C.9.c.	Requires Permittees to observe pesticide applications by their contractors.	Delete requirement.
C.10.a.i.a.	Requires Permittees to achieve a 70% load reduction by July 1, 2017	Extend this compliance date to 2018.
C.10.a.ii.b.	Requires Permittees to ensure private properties plumbed directly to municipal storm drains are equipped with full trash capture devices or to verify "low" trash generation rate. Requires Permittees to investigate and map these properties.	Delete the mapping requirement and integrate inspections and enforcement into Provision C.4 (Commercial and Industrial Inspections).
C.10.b.1.a.	Specifies maintenance frequencies for full trash capture devices based on trash generation rates.	Set minimum frequency of 1x/year for all devices, to be adjusted based on maintenance experience. Required maintenance frequency

Comment [CS2]: This will be a very big effort. Not sure we could get it done in even 20 months.

Comment [CS3]: Better to tie requirement to where business license is obtained (if they get one).

Comment [CS4]: Splitting efforts & money btwn 2 or more short term campaigns leads to failure. Better to have long term branding campaign like "spare the air" or "keep Tahoe blue"

Comment [CS5]: No city/county has maps of private storm drains. Better to "illicit discharge" permit requirements & Enforcement Response Plans to force private properties from discharging trash through their stormdrains.

Provision	Task or Requirement	Requested Adjustments
		is determined mostly by amount of leaf litter and type of device.
C.10.b.1.c.	Requires Permittees to certify that full trash capture systems are maintained to meet standard.	State that systems are maintained, and maintenance program is designed to meet standard.
C.10.b.iv.	Allows a credit of up to 5% toward trash reduction requirement for source control actions such as product bans.	Increase maximum to 20% to fully credit existing product bans and to create incentive for future source control actions.
C.10.e.i.	Creates a formula for crediting trash collected during additional creek and shoreline cleanups toward trash reduction requirement—at a 1:10 ratio, with a 5% maximum credit.	Make the ratio 1:3 and increase maximum credit to 10%.
C.10.e.	Credits on-land cleanups and litter reduction only if visual assessments show a categorical change (e.g., from “very high” to “high” trash)	Allow interim credit for demonstrated actions intended to achieve categorical change.
C.10.a.iii.	Requires bioretention facilities to be equipped with a screen to qualify as full-trash-capture facilities.	Specify that these facilities qualify as full trash capture. Screens could cause flooding.
C.10.b.iv.	Requires observations of creeks and shorelines to determine whether trash control actions have prevented trash from discharging to receiving waters.	Restate purpose of observations, as it is not possible to determine that trash originated from storm drains.
C.10.e.ii.	Provides 1:10 ratio up to 10% maximum credit for actions to reduce direct discharge of trash (e.g. dumping, encampments).	Increase ratio to 1:3, with no maximum, as in some locations this is the predominant source of trash.
C.10.f.ii.	Produce an updated trash generation map each year.	Tie updated maps to compliance dates (for 70% and 100%).
C.11.a&b./C.12.a&b	Requires Countywide Programs to reduce Mercury & PCB load levels in 1 st 2 years of permit, and additional reduction in last 3 years of permit	Develop mutually agreed upon accounting scheme that will allow permittees to meet permit requirement
C.11.c/12.c	Implement sufficient “green infrastructure” projects to reduce Mercury & PCB loads to meet load reqs	Give cities/counties more time to plan & implement GI projects
C.11.f/12.f	Manage PCBs during building renovation & demolition	Work with State Agencies to develop programs at State level similar to lead paint and asbestos building materials

Comment [CS6]: Diff trash capture devices req diff rates of cleaning. Our Maint crews know best.

Comment [CS7]: Will lose 8% of trash reduction (of 40% req'd reduction) based on 13-14 annual report if they keep the 1:10 ratio

Comment [CS8]: Allow permittees to take some credit even if doesn't change trash rate category

Comment [CS9]: Will lose 8% of trash reduction (of 40% req'd reduction) based on 13-14 annual report

Comment [CS10]: This is a huge effort! Should only require this when % reduction goals must be met (i.e. 2017)

Comment [CS11]: Current scheme sets cities/Counties to fail. This need much more work.

Comment [CS12]: 12 months to prepare new road drainage in most of unincorp County. We don't even have a good stormdrain GIS layer.

Comment [CS13]: This does NOT belong at the local level. State needs to take the lead. Cities/counties to implement, like w/ asbestos & lead paint.

- Direct roof runoff onto vegetated areas.
- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
- Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.
- Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.²

This provision applies to all development projects that require approvals and/or permits issued under the Permittee's planning, building, or other comparable authority.

- ii. **Reporting** – On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

C.3.j. Green Infrastructure Planning and Implementation

The Permittees shall complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements.

The plan is intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that urban runoff Total Maximum Daily Load (TMDL) wasteload allocations (e.g., for the San Francisco Bay mercury and PCBs TMDLs) will be met, and to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters. For this Permit term, the Plan is being required, in part, as an alternative to expanding the definition of Regulated Projects prescribed in Provision C.3.b to include all new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface areas and road projects that just replace existing impervious surface area. It also provides a mechanism to establish and implement alternative or in lieu compliance options for Regulated Projects and to account for and justify Special Projects in accordance with Provision C.3.e.

Over the long term, the plan is intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.

The plan shall also identify means and methods to prioritize particular areas and projects within each Permittee's jurisdiction, at appropriate geographic and time

scales, for implementation of green infrastructure projects. Further, it shall include means and methods to track the area within each Permittee's jurisdiction that is treated by green infrastructure controls and the amount of directly connected impervious area. As appropriate, it shall incorporate plans required elsewhere within this Permit, and specifically plans required for the monitoring of and to ensure appropriate reductions in trash and PCBs, mercury, and other pollutants.

The Permittees may comply with any requirement of this Provision through a collaborative effort.

i. Green Infrastructure Program Plan Development

Each Permittee shall:

- (1) Prepare a framework (i.e., a plan containing specific tasks and timeframes) for development of its Green Infrastructure Plan and have the framework approved by the Permittee's governing body, mayor, city manager, or county manager within 12 months of the Permit effective date. At a minimum, the plan shall include a statement of purpose, tasks and timeframes to complete the elements listed in Provision C.3.j.i, and appropriately-detailed descriptions regarding tools that have been selected or are proposed to be selected, the specific plans, policies, and specifications that are proposed to be updated, and, as appropriate, other related information. Prepare a Green Infrastructure Plan that contains the following elements:
 - (a) A mechanism (e.g., SFEI's GreenPlanIT tool) to prioritize and map areas for potential projects and planned projects, on a drainage-area-specific basis, for implementation over the following time schedules:
 - (i) Within 2 years of the Permit effective date;
 - (ii) Within 7 years of the Permit effective date (5-year horizon); and
 - (iii) Within 12 years of the Permit effective date (10-year horizon).The mechanism shall include criteria for prioritization (e.g., specific logistical constraints, water quality drivers (e.g., TMDLs), opportunities to treat runoff from private parcels in retrofitted street right-of-way, etc.) and outputs (e.g., maps, project lists, etc.) that can be incorporated into Permittees' long-term planning and capital improvement processes.
 - (b) Outputs from the mechanism described above, including, but not limited to, the prioritization criteria, maps, lists, and all other information, as appropriate. Individual project-specific reviews completed using these mechanisms are not required to be submitted with the Plan, but shall be made available upon request.
 - (c) Targets for the amount of impervious surface within the Permittees' jurisdiction to be retrofitted over the following time schedules:
 - (i) Within 2 years of the Permit effective date;
 - (ii) Within 7 years of the Permit effective date (5-year horizon);

- (iii) Within 12 years of the Permit effective date (10-year horizon)
- (iv) Within 27 years of the Permit effective date (25-year horizon);
and
- (v) Within 52 years of the Permit effective date (50-year horizon).
- (d) A process for tracking and mapping completed projects, and making the information publically available (e.g., SFEI's GreenPlanIT tool).
- (e) General guidelines for overall streetscape and project design and construction so that projects have a unified, complete design that implements the range of functions associated with the projects. For example, for streets, these functions include, but are not limited to, street use for stormwater management, including treatment, safe pedestrian travel, use as public space, for bicycle, transit, vehicle movement, and as locations for urban forestry. The guidelines should call for the Permittee to coordinate, for example, street improvement projects so that related improvements are constructed simultaneously to minimize conflicts that may impact green infrastructure.
- (f) Standard specifications and, as appropriate, typical design details and related information necessary for the Permittee to incorporate green infrastructure into projects in its jurisdiction. The specifications shall be sufficient to address the different street and project types within a Permittee's jurisdiction, as defined by land use and transportation characteristics.
- (g) Requirement(s) that projects be designed to meet the treatment and hydromodification sizing requirements in Provision C.3.d. Permittees may, collectively, propose a single approach with their Green Infrastructure Plans for how to proceed should project constraints preclude fully meeting the C.3.d sizing requirements. Such an approach shall identify the specific constraints that would preclude meeting the sizing requirements and the design approach(es) to take in that situation, consider whether broad effort to incorporate hydromodification controls into green infrastructure, even where not otherwise required, could significantly improve creek health and whether such implementation may be appropriate, plus all other information, as appropriate (e.g., how to account for load reduction for the PCBs or mercury TMDLs).
- (h) A summary of the planning documents the Permittee has updated or otherwise modified to appropriately incorporate green infrastructure requirements, such as: General Plans, Specific Plans, Complete Streets Plans, Active Transportation Plans, Storm Drain Master Plans, Pavement Work Plans, Urban Forestry Plans, Flood Control or Flood Management Plans, and other plans that may affect the future alignment, configuration, or design of impervious surfaces within the Permittee's jurisdiction, including, but not limited to, streets, alleys, parking lots, sidewalks, plazas, roofs, and drainage infrastructure. Permittees are expected to complete these modifications as a part of

- completing the Green Infrastructure Plan, and by not later than the end of the permit term.
- (i) To the extent not addressed above, a workplan identifying how the Permittee will ensure that green infrastructure and low impact development measures are appropriately included in future plans (e.g., new or amended versions of the kinds of plans listed above).
 - (j) A workplan to complete prioritized projects identified as part of a Provision C.3.e Alternative Compliance program or part of Provision C.3.j Early Implementation.
 - (k) An evaluation of prioritized project funding options, including, but not limited to: Alternative Compliance funds; grant monies, including transportation project grants from federal, state, and local agencies; existing Permittee resources; new tax or other levies; and other sources of funds.
- (2) Adopt policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this provision.
- (3) Conduct outreach and education in accordance with the following:
- (a) Conduct public outreach on the requirements of this provision, including outreach coordinated with adoption or revision of standard specifications and planning documents, and with the initiation and planning of infrastructure projects. Such outreach shall include general outreach and targeted outreach to and training for professionals involved in infrastructure planning and design.
 - (b) Train appropriate staff, including planning, engineering, public works maintenance, finance, fire/life safety, and management staff on the requirements of this provision and methods of implementation.
 - (c) Educate appropriate Permittee elected officials (e.g., mayors, city council members, County Supervisors, District Board Members, etc.) on the requirements of this provision and methods of implementation.
- (4) Report on Green Infrastructure Planning as follows:
- (a) Each Permittee shall submit documentation that the its framework for development of its Green Infrastructure Plan was approved by its governing body, mayor, city manager, or county manager by 12 months after Permit effective date, , with the XX Annual Report.
 - (b) Each Permittee shall submit its completed Green Infrastructure Plan with the 2019 Annual Report.
 - (c) Each Permittee shall submit documentation of its legal mechanisms to ensure implementation of its Green Infrastructure Plan with the 2019 Annual Report.
 - (d) Each Permittee shall submit a summary of its outreach and education efforts in each Annual Report.

ii. Early Implementation of Green Infrastructure Projects (No Missed Opportunities)

Each Permittee shall:

- (1) Prepare and maintain a list of green infrastructure projects that are already planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures.
- (2) Submit the list with each Annual Report and a summary of planning or implementation status for each green infrastructure project, and a summary of how each infrastructure project with green infrastructure potential will be implemented will include green infrastructure measures to the maximum extent practicable during the permit term. Where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

iii. Participate in Processes to Promote Green Infrastructure

- (1) The Permittees shall, individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, state, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Issues to be addressed include coordinating the timing of funding from different sources, changes to standard designs and design criteria, ranking and prioritizing projects for funding, and implementation of cooperative in-lieu programs.
- (2) In each Annual Report, Permittees shall report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.
- (3) In the 2019 Annual Report, Permittees shall submit a plan and schedule for new and ongoing efforts to participate in processes to promote green infrastructure.

iv. Tracking and Reporting Progress

- (1) The Permittees shall, individually or collectively, develop and implement regionally-consistent methods to track and report implementation of green infrastructure measures including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions. The methods shall also address tracking needed to provide reasonable assurance that wasteload allocations for TMDLs, including the San Francisco Bay PCBs and mercury TMDLs, and reductions for trash, are being met.

- (2) In each Annual Report, Permittees shall report progress on development and implementation of the tracking methods.
- (3) In the 2019 Annual Report, Permittees shall submit the tracking methods and report implementation of green infrastructure measures including treated area, and connected and disconnected impervious area on both public and private parcels within their jurisdictions.

Draft

C. 10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.2 and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems in accordance with the requirements of this provision. Flood management agencies are not subject to these trash reduction requirements except for continued implementation of requirements for trash full capture systems and Trash Hot Spot cleanups, as specified in subsections C.10.b.i and C.10.c.

C.10.a.Trash Reduction Requirements

Permittees shall implement trash load reduction control actions in accordance with the following schedule and trash generation area management requirements, including mandatory minimum full trash capture systems.

- i. **Schedule** - Permittees shall reduce trash discharges from 2009 levels, described below, to receiving waters in accordance with the following schedule:
 - a. 70 percent by July 1, 2017; and
 - b. 100 percent or no adverse impact to receiving waters from trash by July 1, 2022.

In addition, Permittees should achieve the following reductions: 60 percent reduction by July 1, 2016, and 80 percent by July 1, 2019. These are not mandatory deadlines, but should be used as performance guidelines to meet the mandatory July 1, 2017, and July 1, 2022, deadlines above. Permittees that do not attain a performance guideline shall submit documentation of a plan and schedule of implementation of additional trash load reduction control actions that will attain the subsequent mandatory deadline.

- ii. **Trash Generation Area Management** - Permittees shall demonstrate attainment of the C.10.a.i trash discharges percentage-reduction requirements by management of mapped trash generation areas within their jurisdictions delineated on Trash Generation Area Maps included with their Long Term Trash Reduction Plans, submitted in February 2014, in accordance with the requirements and accounting set forth in this provision herein. The February 2014 maps provide the 2009 trash levels and delineate trash generation areas within Permittees' jurisdictions into the following trash generation rate categories:

Low = less than 5 gal/acre/yr;
Moderate = 5-10 gal/acre/yr;
High = 10-50 gal/acre/yr; and
Very High = greater than 50 gal/acre/yr.

Permittees also designated trash management areas on their February 2014 maps encompassing one or more trash generation areas, within which they will implement trash control actions. Permittees shall have an opportunity to correct and/or revise, based on improved information, the 2009 trash levels and trash generation areas in their February 2014 maps by submitting the correction and/or revision no later than the 2016 Annual Report deadline.

- a. Permittees shall implement trash prevention and control actions, including full trash capture systems or other trash management actions, or combinations of actions, with trash discharge control equivalent to or better than full trash capture systems, to reduce trash generation to a Low trash generation rate or better. Actions equivalent to full trash capture means actions that send no more trash down the storm drain system than a full trash capture device would allow, which is essentially no trash discharge except in very large storm flows. The C.10.a.i percent reductions shall be demonstrated by percent of 2009 Very High, High, and Moderate trash generation areas reduced to lower trash generation categories or Low trash generation by the C.10.a.i mandatory deadlines.
- b. Permittees shall ensure that lands that they do not own or operate but that are plumbed directly to their storm drain systems in Very High, High, and Moderate trash generation areas are equipped with full trash capture systems or are managed with trash discharge control actions equivalent to or better than full trash capture systems. The efficacy of the latter shall be assessed with visual assessments in accordance with C.10.b.ii. If there is a full trash capture device downstream of these lands, no other trash control is required. Permittees shall map all such lands greater than 5000 ft² that are plumbed directly to their storm drain systems by 2018, including the trash control status of these areas. This information shall be retained by the Permittees for inspection upon request.
- iii. **Mandatory Minimum Full Trash Capture Systems** - Permittees shall install and maintain a mandatory minimum number of full trash capture devices, to treat runoff from an area equivalent to 30 percent of retail/wholesale land area, as documented by the Association of Bay Area Governments, which drains to the storm drain system within their jurisdictions. A city Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2000, is exempt from this full trash capture requirement. Table 2 in Attachment E contains the minimum amount of drainage areas that must be treated with full trash capture devices by each city or county Permittee, and the minimum number of trash capture devices required to be installed and maintained by flood management agency Permittees.

A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area or designed to carry at least the same flow as the storm drain connected to the inlet. The device(s) must also have a trash reservoir large enough to contain a reasonable amount of trash safely without overflowing trash into the overflow outlet between maintenance events. Types of systems certified by the State Water Resources Control Board are deemed full capture systems. A stormwater treatment facility implemented in accordance with Provision C.3 is also deemed a full capture systems if the system is maintained to prevent off site movement of accumulated trash and overflow from the system is appropriately screened to meet the full trash capture screening specification for storm flows up to the full trash capture hydraulic specification (C.10.a.iii.).

C.10.b. Demonstration of Trash Reduction Outcomes

- i. **Full Trash Capture Systems** – Permittees shall maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each of their full trash capture systems, including the mapped location and drainage area served by each system.

- a. **Maintenance** - The maintenance of each full capture device shall be adequate to prevent plugging, flooding, or a full condition of the device's trash reservoir and bypassing of trash.
- (i) Storm drain inlet type full trash capture devices in Low or Moderate trash generation areas shall be maintained a minimum of once per year.
 - (ii) Storm drain inlet type full trash capture devices in High trash generation areas shall be maintained a minimum of twice per year.
 - (iii) Storm drain inlet type full trash capture devices in Very High trash generation areas will be maintained a minimum of 3 times per year.
 - (iv) All other full trash capture devices shall be maintained a minimum of one time per year.

If any such device is found plugged or full of trash during a maintenance event, the maintenance frequency shall be increased so that the device is neither plugged nor full of trash by the next maintenance event.

- b. **Maintenance Records** - Permittees shall retain device specific maintenance records, including, at a minimum: the date(s) of maintenance, the capacity condition of the device at the time of maintenance (full and overflowing or with storage capacity remaining), any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing overflow, damage reducing function, or other negative conditions. A summary of this information shall be reported in each Annual Report which may be limited to the number of full capture devices maintained that exhibited a plugged, full or overflowing condition upon maintenance.
- c. **Certification** - Permittees shall certify annually that each of their full trash capture systems is operated and maintained to meet full trash capture system requirements. Drainage areas served by an adequately maintained full trash capture system will be considered equivalent to or better than a Low trash generation area.

- ii. **Other Trash Management Actions** - Permittees shall maintain, and provide for inspection and review upon request, documentation of non-full trash capture system trash control actions that verifies implementation of each action. Permittees shall also conduct assessment of the action that verifies effectiveness of the action or combination of actions and maintain, and provide for inspection and review upon request, documentation of assessments.

- a. **Implementation Documentation** - Permittees shall maintain documentation of trash control actions that describes each action or combination of actions, the level of implementation, the timing and frequency of implementation, standard operating procedures if applicable, location(s) of implementation including mapped location(s) and drainage area(s) affected, tracking and enforcement procedures if applicable, and

other information relevant to effective implementation of the action or combination of actions.

b. **Visual Assessment of Outcomes of Other Trash Management Actions** - Permittees shall conduct visual on-land assessment, including photo documentation, or other acceptable assessment method (see C.10.b.ii.(v.)), of each trash generation area within which it is implementing other trash management actions or combination of actions other than full trash capture, to determine or verify the effectiveness of the action or combination of actions. Permittees may assess and account for one or more trash generation areas in a single trash management area within which a control action or combination of control actions is implemented. The visual on-land assessment method used shall meet or exceed the following criteria:

- (i) Conduct observations within a trash management area of the sidewalk, curb and gutter, or locations associated with trash generation sources.
- (ii) Conduct observations at randomly selected locations covering at least ten percent of a trash management area's street miles; or conduct observations at strategic locations with justification they are representative of trash generation in the management area and they will represent the effectiveness of the control action(s) implemented or planned in the management area.
- (iii) Conduct observations at a frequency consistent with known or estimated trash generation rate(s) within a trash management area and the time frequency of implementation of the control action(s) implemented or planned in the management area. Conduct observations for effectiveness approximately at the halfway point of the interval between instances of recurring trash control actions such as street sweeping and on-land cleanup.
- (iv) Permittees may put forth substantial evidence that certain management actions or sets of management actions when performed to a specified performance standard yield a certain trash reduction outcome reliably. If this evidence is presented and accepted by the Executive Officer, Permittees may claim a similar trash reduction outcome by demonstrating that they have performed these trash reduction actions within certain trash management areas to the same performance standard accepted by the Executive Officer.

iii. **Percentage Discharge Reduction** - Percentage discharge reduction from 2009 from Very High generation areas reduced to High, Moderate, and Low, High generation areas reduced to Moderate and Low, and Moderate trash generation areas reduced to Low trash generation category to meet the required total percent reduction (%Reduction) shall be calculated based on the following formula:

$$\% \text{ Reduction} = 100 [(12A_{\text{VH}(2009)} + 4A_{\text{H}(2009)} + A_{\text{M}(2009)}) - (12A_{\text{VH}} + 4A_{\text{H}} + A_{\text{M}})] \\ / (12A_{\text{VH}2009} + 4A_{\text{H}2009} + A_{\text{M}2009})$$

where:

$A_{\text{VH}(2009)}$ = total amount of the 2009 very high trash generation category jurisdictional area
 $A_{\text{H}(2009)}$ = total amount of the 2009 high trash generation category jurisdictional area

$A_{M(2009)}$	=	total amount of the 2009 moderate trash generation category jurisdictional area
A_{VH}	=	total amount of very high trash generation category jurisdictional area in the reporting year
A_H	=	total amount of high trash generation category jurisdictional area in the reporting year
A_M	=	total amount of moderate trash generation category jurisdictional area in the reporting year
12	=	Very High to Moderate weighing ratio
4	=	High to Moderate weighing ratio
100	=	fraction to percentage conversion factor

- iv. **Source Control** – Permittee jurisdiction-wide actions to reduce trash at the source, particularly persistent trash items, may be valued toward trash load reduction compliance by up to five percent load reduction total for all such actions. To claim a load percentage reduction value, Permittees must provide substantial evidence that these actions reduce trash by the claimed value. A Permittee may reference studies in other jurisdictions if it provides evidence that the implementation of source control in its jurisdiction is similarly implemented as the source control assessed in the reference studies.
- v. **Receiving Water Observations** - Permittees shall conduct receiving water observations downstream from trash generation areas that have been converted from Very High, High, or Moderate to Low trash generation rates, or at other locations for which receiving water monitoring over time will produce useful trash management information.
- The observations shall be sufficient to determine whether a Permittee's trash control actions have effectively prevented trash from discharging into receiving waters, whether additional actions may be necessary associated with sources within a Permittee's jurisdiction, or whether there are ongoing sources outside of the Permittee's jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s).
 - The observations shall be conducted a minimum of twice per year until the no trash in receiving water determination has been observed and then confirmed with a subsequent observation, after which the frequency may be reduced to once per year.
 - A C.10.c Trash Hot Spot cleanup site downstream of a trash management area may serve as a receiving water observation site.

C.10.c. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of abatement of impacts and to learn more about the sources and transport routes of trash loading.

- Trash Hot Spot Cleanup and Definition** – The Permittees shall clean selected Trash Hot Spots to a level of “no visual impact” at least one time per year for the term of the permit. Trash Hot Spots shall be at least 100 yards of creek length or 200 yards of shoreline length.
- Trash Hot Spot Selection** – Permittees shall maintain the same number of trash hot spots identified in the previous permit term, which are included in Attachment E. Permittees

may select new trash hot spot locations if past locations are no longer trash hotspots or if other locations may better align with trash management areas.

- iii. **Trash Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup and attempt to identify sources to the extent readily feasible. Documentation of the cleanup activity to be retained by the Permittee shall include the trash condition before and after cleanup of the entire hot spot using photo documentation with a minimum of one photo per 100 feet of hot spot length and the total volume of trash and litter removed from the hot spot. Permittees shall report the volume removed for the most recent five years of hot spot cleanup in each Annual Report, or if a new trash hot spot location is selected, Permittees shall report the volume removed for the years of cleanup of that hotspot.

C.10.d. Trash Load Reduction Plans

Each Permittee shall maintain, and provide for inspection and review upon request, a Trash Load Reduction Plan, including an implementation schedule to meet the C.10.a Trash Load Reduction requirements. A summary of any new revisions to the Plan shall be included in the Annual Report. The Plan shall describe trash load reduction control actions being implemented or planned and the trash generation areas or trash management areas where the actions are or will be implemented, including jurisdiction-wide actions, such as source control ordinances

The Plans may include actions to control sources outside of the Permittee's jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s). Permittee's who choose to implement such control actions may account for them towards meeting the C.10.a Trash Load Reduction requirements as long as they can demonstrate the controls will be sustained and they quantify the sustained load reduction benefit relative to control actions in the trash generation areas or trash management areas in their jurisdiction that drained to the affected receiving water.

C.10.e. Optional Trash Load Reduction Offset Opportunities

- i. **Additional Creek and Shoreline Cleanup** – A Permittee may offset part of its provision C.10.a trash load percent reduction requirement by conducting additional cleanup of creek and shoreline areas beyond trash hot spot cleanups required by C.10.c if the additional cleanup efforts are conducted at a frequency of at least twice per year and sufficient to demonstrate sustained improvement of the creek or shoreline area. The maximum offset that may be claimed is five percent.

A Permittee may claim a load reduction offset of one percent for each total of trash volume removed from additional cleanups that is ten percent of the Permittee's 2009 trash load volume estimates, based on its trash generation maps and average categorical trash generation rates (see C.10.a.ii), in accordance with the following formula:

$$1\% \text{ Reduction Offset (Volume)} = (12 A_{VH(2009)} + 4 A_{H(2009)} + A_{M(2009)}) OF$$

where:

$A_{VH(2009)}$ = total amount of 2009 very high trash generation category jurisdictional area

$A_{H(2009)}$ = total amount of 2009 high trash generation category jurisdictional area
 $A_{M(2009)}$ = total amount of 2009 moderate trash generation category jurisdictional area
12 = Very High to Moderate weighing ratio
4 = High to Moderate weighing ratio
 OF = offset factor equal to (7.5×0.1) , where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.1 is the ten to one offset ratio.

- ii. **Direct Trash Discharge Controls**– A Permittee may offset an additional part of its provision C.10.a trash load percent reduction requirement by implementing a comprehensive plan approved by the Executive Officer for control of direct discharges of trash to receiving waters from non-storm drain system sources. The maximum offset that may be claimed is ten percent using the C.10.e.i formula. The plan shall be submitted with the 2016 Annual Report and shall include the following:
- a. description of sources of the directly discharged trash;
 - b. description of control actions that will be implemented during the permit term to prevent or reduce direct discharge trash loads;
 - c. map of the affected receiving water area and associated watershed; and
 - d. description of how effectiveness of controls will be assessed, including documentation of controls, quantification of trash volume controlled, and assessment of resulting improvements to receiving water conditions.

C.10.f. Reporting

Each Permittee shall provide the following in each Annual Report:

- i. A summary of trash control actions within each trash management area, including the types of actions, levels of implementation, areal extent of implementation, and whether the actions are ongoing or new, including initiation date.
- ii. An updated trash generation area map or maps and associated trash management areas including the locations and associated drainage areas of full trash capture systems and non-full trash capture system trash control actions, and the location of Trash Hot Spots, with highlight or other indication of any revisions or changes from the previous year map(s). These maps are separate and distinct from corrections and/or revisions of the 2009 trash levels in the February 2014 maps and shall illustrate progress toward achieving the trash reduction requirements in C.10.a.i.
- iii. Certification that each of its full trash capture systems is operated and maintained to meet full trash capture system requirements, and describe any systems that did not meet full trash capture system requirements (e.g., due to plugging or overflowing), and corrective actions taken.
- iv. An accounting of its non-full trash capture system trash control actions assessments by providing a summary description of assessments in each of its trash management areas, including the number and dates of observations.

- v. An accounting of progress toward or attainment of C.10.a.i trash discharge reduction performance guidelines and mandatory deadlines using the C.10.a.ii trash generation area mapping methodology and formula.
 - a. If a Permittee cannot demonstrate attainment of a performance guideline, it shall submit a detailed plan and schedule of implementation of additional trash load reduction control actions that will attain the subsequent mandatory deadline.
 - b. If a Permittee cannot demonstrate attainment the 2017 mandatory deadline, it shall submit a report of non-compliance with the Annual Report, or in advance of the Annual Report, that describes actions to comply with the mandatory deadline in a timely manner, including thorough consideration of additional full trash capture systems.
- vi. C.10.b.v. receiving water observations, including the locations and times of observations and associated determinations.
- vii. The volume removed for the most recent five years of hot spot cleanup for each of its trash hot spots, or for the years of cleanup if a new trash hot spot location has been selected.
- viii. For Permittees claiming a C.10.e.i offset, based on additional cleanup of creek and shoreline areas, a summary description of the additional cleanup actions.
- ix. For Permittees claiming a C.10.e.ii offset, based on non-storm drain system trash controls, a summary description of control actions receiving water assessment results, quantification of trash volume controlled, and assessment of resulting improvements in receiving water condition, the claimed offset and documentation of information used in the C.10.e.i formula.

C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control program for PCBs. The Permittees shall implement PCBs control measures (source control, treatment control, and pollution prevention strategies) in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the PCBs TMDL. Permittees shall reduce PCBs loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan. The allocation, on an aggregate and regionwide basis, of 2 kg/yr (representing a load reduction from all urban runoff sources of approximately 18 kg/yr compared to loads estimated using data collected in 2003), is to be achieved by March 2030. The Permittees may comply with any requirement of this Provision through a collaborative effort.

C.12.a. Implement Control Measures to Achieve PCBs Load Reductions.

- i. **Task Description** – Permittees shall implement PCBs source and treatment control measures and pollution prevention strategies to achieve PCBs load reductions in Table 12.1 throughout the area covered by the permit.
- ii. **Implementation level** – To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds in which PCBs control measures are currently being implemented and those in which new control measures will be implemented during the term of this permit.
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed, and
 - (3) Submit a schedule of control measure implementation.
 - (4) Implement sufficient control measures to achieve county-specific load reduction performance criteria shown in Table 12.1 and demonstrate achievement of these load reductions by using the accounting methods described in the Permit Fact Sheet and documented according to provision C.12.b. Load reductions from control measures implemented prior to the effective date of this permit may be counted toward the required reductions of this permit term if these control measures were established or implemented during the last permit term, but load reductions from the activity were not realized or credited during the last permit term (e.g., they were implemented after the load reduction accounting was submitted).

For all Permittees combined, these county-specific average annual PCBs load reduction performance criteria shall total 0.5 kg/yr during each of the first two years of the permit and 3.0 kg/yr during each of the final three years of the permit. The 0.5 kg/yr reduction (and county-specific portions thereof) shall be assessed for compliance at the end of year 2 and shall be computed as the average of the year 1 and year 2 load reduction. Similarly, the 3.0 kg/yr reduction (and county-specific portions thereof) shall be computed as the average of years 3-5 and shall be assessed for compliance at the end of year 4

(year 5 load reductions will be estimated according to the predicted benefit of control measures which Permittees commit to implement in year 5). The Permit Fact Sheet stipulates the amount of PCBs load reduction benefit associated with a unit of activity for a number of control measures. Permittees will be in compliance with the numeric load reduction performance criteria if they implement sufficient control measures such that the total stipulated benefit of the control measures actually implemented equals or exceeds the numeric load reduction performance criteria shown in Table 12.1 below.

The Countywide Urban Runoff Programs are responsible for specific portions of the Permit-wide load reduction shown in Table 12.1. These county-specific load reduction performance criteria allocate responsibility for load reductions to individual county programs according to the same proportions used to establish county-specific wasteload allocations (and corresponding load reductions) in the PCBs TMDL.

Load reduction opportunities will likely vary by jurisdiction. Some jurisdictions (e.g., those with a higher proportion of old industrial land use) may have more PCBs-contaminated sites, and hence, greater potential opportunities to implement control measures to reduce loads. Further, the total PCBs load reduction across the entire area covered under this permit is relevant to the recovery of San Francisco Bay. Therefore, all Permittees will be in compliance with the load reduction performance criteria as long as the total load reductions for the entire area covered by this permit (500 g/yr for years 1-2 and 3 kg/yr for years 3-5) are achieved.

If the area-wide total load reduction criteria (i.e., 500 g/yr and 3000 g/yr) are not achieved, the Permittees in counties meeting the county-level load reduction criteria from Table 12.1 will be deemed in compliance with this Provision. If neither the area-wide total load reduction criteria nor the county-specific load reduction criteria are achieved, those Permittees will be deemed in compliance if they have achieved load reductions consistent with their appropriate proportion of the county total. Permittees shall report on their method for assigning Permittee-specific load fractions by April 2016 (see C.12.b(1) below). As a default, the Permittee share of the county load reduction performance criteria will be allocated by the proportion of county population in each municipality.

Table 12.1 PCBs Load Reductions Performance Criteria by County

County Program	PCBs load reduction (g/yr) during first two years of permit	PCBs Load Reduction (g/yr) for final 3 years of permit
Alameda	160	940
Contra Costa	90	560
San Mateo	60	370
Santa Clara	160	940
Suisun City, Vallejo, Fairfield	30	190
Totals	500	3000

iii. Reporting

- (1) The Permittees shall report by February 1, 2016 a list of the watersheds (or portions therein) where PCBs control measures are currently being implemented and those in which control measures will be implemented (C.12.a.ii(1)) during the term of this permit as well as the monitoring data and other information used to select these watersheds. This list should include watersheds containing contaminated sites referred to the Water Board as well.
- (2) The Permittees shall report in their 2016 Annual Report the specific control measures (C.12.a.ii(2)) that are currently being implemented and those that will be implemented in watersheds identified under C.12.a.iii(1) and an implementation schedule (C.12.a.ii(3)) for these control measures. This report shall include:
 - a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. The identity and description of the contaminated sites referred to the Water Board during permit term;
 - c. The description, scope, and start date, of pollution prevention measures;
 - d. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural controls or other relevant implementation milestones for structural controls and non-structural BMPs) and a schedule for milestone achievement; and
 - e. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.12.a.iii(1).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.12.a.iii(2) as necessary to account for new control measures implemented but not described in the 2016 Annual Report.

C.12.b. Assess PCB Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall develop, document, and implement an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of any and all pollution prevention, source control and treatment control efforts required by the provisions of this permit or load reductions achieved through other relevant efforts not explicitly required by the provisions of this permit. The Permittees shall use the assessment methodology to demonstrate progress toward the interim load reduction milestones to be achieved during the term of the permit and demonstrate progress toward attainment of the program area allocations. A reasonable foundation for the load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in December 2013 in

the Integrated Monitoring Report for the previous permit. This task element consists of documenting the approach described in the Fact Sheet, updating and refining the accounting system to account for new information, justifying assumptions and selected parameters used to quantify the load reduction benefit for each type of control measure, and indicating what information will be collected and submitted to confirm the load reduction benefit for each unit of activity.

- ii. **Implementation Level** – The Permittees shall adequately quantify the PCBs load reductions achieved through implementing pollution prevention, source control, and treatment control efforts.

iii. **Reporting**

- (1) The Permittees shall submit, by April 1, 2016, a full description of an adequate measurement and estimation methodology and rationale for the approaches used to assess PCBs load reductions achieved through PCBs source control, stormwater treatment, green infrastructure projects, and other stormwater management measures implemented during the term of this permit. This methodology shall justify the choices for parameters used to estimate load reduction benefits and identify the data that will be collected and submitted in support of any claim of load reduction benefit associated with implemented control measures.

For control measures that become operational at any time during year 5 of the permit term, the estimated load reduction credited to the Permittee for this control measure shall be the estimated PCBs load removed during one full year of operation. For control measures requiring construction or installation of new infrastructure that are under construction but not fully operational as of the end of the permit term, one-half (50%) of the estimated PCBs yearly load reduction shall be counted in year 5 with the remaining 50% load reduction credited during the future year that the infrastructure element is fully operational.

Permittees shall submit Permittee-specific proportions of load reduction responsibilities and supporting data. This can be determined by the counties and may be different from one county to the next. Examples of bases that could be used to determine Permittee-specific load reduction responsibility include the Permittee's proportion of county population or of total county industrial land use.

- (2) Beginning with the 2016 Annual Report, Permittees shall report annually the loads reduced using the approved estimation methodology to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.12.a.

- (3) In their 2018 and subsequent Annual Reports the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess PCBs load reductions in the subsequent permit.

C.12.c. Plan and Implement Green Infrastructure to reduce PCBs loads

- i. **Task Description** – Permittees shall implement green infrastructure projects during the term of the permit to achieve PCBs load reductions of 120 g/year over the final three years of the permit term. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and Fact Sheet) to demonstrate quantitatively that PCBs load reductions of at least 3 kg/yr throughout the Permit area will be achieved by 2040 through implementation of green infrastructure plans required by Provision C.3.j.

- ii. **Implementation Level**

- (1) Permittees shall implement sufficient green infrastructure projects to achieve county-specific load reduction performance criteria shown in Table 12.2 and demonstrate achievement of these load reductions by using the accounting methods established according to provision C.12.b.ii(1). PCBs load reductions achieved through implementation of green infrastructure may be counted as part of the overall load reductions required during this permit term under C.12.a.ii(4). Load reductions from green infrastructure projects implemented prior to the effective date of this permit may be counted toward the required green infrastructure reductions of this permit term if these projects were established and implemented during the last permit term, but load reductions from the activity were not realized or credited during the last permit term.

For all Permittees combined, these county-specific average annual PCBs load reductions from green infrastructure projects total 120 g/yr during each of the final three years of the permit. The green infrastructure load reduction shall be assessed for compliance at the end of year 4 and shall be computed as the average load reduction of years 3-5 (year 5 load reductions will be estimated according to the predicted benefit of control measures which Permittees commit to implement in year 5).

The Fact Sheet contains land use yield information that allows one to calculate the amount of PCBs load reduction benefit associated with a unit of activity of green infrastructure control measure implementation. Permittees will be in compliance with the numeric load reduction performance criteria if they implement sufficient control measures such that the total stipulated benefit of the control measures actually implemented equals or exceeds the numeric load reduction criteria in Table 12.2. The Countywide Urban Runoff Programs are responsible for the specific portions of these Permit area totals shown in Table 12.2 below.

Green infrastructure implementation opportunities in PCBs-contaminated areas will likely vary by jurisdiction. Therefore, all Permittees will be in compliance with the green infrastructure load reduction performance criteria as long as the total load reduction for the entire area covered by this permit (120 g/yr for years 3-5) is achieved.

If the area-wide total load reduction (i.e. 120 g/yr) performance criterion is not achieved, the Permittees in counties meeting the county-level load reduction criteria from Table 12.2 will be deemed in compliance with this Provision. If both the area-wide total load reduction criterion and county-specific load reduction criterion are not achieved, those Permittees will be deemed in compliance if they have achieved load reductions consistent with their proportion of the county total established under C.12.b.ii(1).

Table 12.2 PCBs Load Reduction Performance Criteria via Green Infrastructure Implementation by County

County Program	PCBs Load Reduction (g/yr) for final 3 years of permit through green infrastructure
Alameda	37
Contra Costa	23
San Mateo	15
Santa Clara	37
Suisun City, Vallejo, Fairfield	8
Totals	120

- (2) Permittees shall prepare a reasonable assurance analysis of future PCBs load reductions by doing the following:
- Quantify the relationship between areal extent of green infrastructure implementation and PCBs load reductions, taking into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies.
 - Estimate the amount and characteristics of land area that will be treated through green infrastructure future years 2020, 2030, and 2040.
 - Estimate the amount of PCBs load reductions that will result from green infrastructure implementation by future years 2020, 2030, and 2040.
 - Quantitatively demonstrate that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects.
 - Ensure that the calculation methods, models, model inputs and modeling assumptions used to fulfill C.12.c.ii.(2)a.-d. have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2017 Annual Report, as part of reporting for C.12.b.ii(1), the quantitative relationship between green infrastructure implementation and PCBs load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2019 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by future years 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2019 Annual Report a reasonable assurance analysis to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.12.b.ii(2), beginning with their 2019 Annual Report an estimate of the amount of PCBs load reductions resulting from green infrastructure implementation during the term of the permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.

C.12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations

- i. **Task Description** – Permittees shall prepare a plan and schedule for PCBs control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations by 2030.
- ii. **Implementation level** – Permittees shall prepare a PCBs control measures implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in PCBs load reductions sufficient to attain the PCBs TMDL wasteload allocations by 2030. The plan must:
 - (1) Identify all technically and economically feasible PCBs control measures to be implemented (including green infrastructure projects); and
 - (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
 - (3) Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure

efficiency and significant environmental impacts resulting from their implementation.

iii. Reporting

Permittees shall submit the plan and schedule in the 2019 Annual Report.

C.12.e. Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way

- i. **Task Description** – Permittees shall collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. PCBs are most likely present in material applied during the 1970s so the focus of the investigations should be on structures installed during this era.

ii. Implementation Level

Permittees shall collect at least 20 composite samples (throughout the Permit area) of the caulks and sealants used in storm drains or roadway infrastructure in public rights-of-way and analyze this material for PCBs in such a way as to be able to detect a minimum PCBs concentration of 200 parts per billion. This sampling and analysis will count toward partial fulfillment of the monitoring effort aimed at finding PCBs sources (see management information need in C.8.f).

iii. Reporting

Permittees shall report on the results (including all data gathered) of this investigation no later than the 2017 Annual Reports.

C.12.f. Manage PCB-Containing Materials and Wastes During Building Demolition Activities

- i. **Task Description** – Permittees shall develop or cause to be developed a framework for managing PCB-containing materials in applicable structures at the time such structures undergo demolition. Permittees shall implement or cause to be implemented the PCB management framework so that PCBs are not likely to be released off the site during or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

Applicable projects shall include, at a minimum, commercial and industrial structures constructed or remodeled between the years 1950 and 1980. Wood frame structures are exempt.

ii. Implementation Level

- (1) During years one, two, and three of the permit term, the Permittees shall develop a framework, to include establishing any necessary authority, for managing PCBs-containing materials in applicable structures at the time such structures undergo demolition.

At the start of the fourth year of the permit term and thereafter, the Permittees shall implement or cause to be implemented the PCBs management framework so that PCBs are not likely to be released off the site during or after demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

iii. Reporting

- (1) In their 2016, 2017, and 2018 Annual Reports, the Permittees shall summarize the steps they have taken to begin implementing this requirement, which could include working with state and local agencies on inter-agency coordination regarding building demolitions, developing ordinances or policies, obtaining information materials, updating or supplementing permit application materials, developing a tracking tool for potential PCB-containing structures, and training relevant staff as needed to comply with this sub-provision.
- (2) Beginning with their 2019 Annual Report and thereafter, the Permittees shall list all applicable structures that have applied for a demolition permit, with the structure's address, project proponent contact information, and dates of permit application and issuance for each project.

C.12.g. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins

- i. **Task Description** – The Permittees shall conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas.
- ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.
- iii. **Reporting** – The Permittees shall submit in their 2016 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2017 Annual Report. The Permittees shall report in the March 15, 2019, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.12.h. Implement a Risk Reduction Program

- i. **Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of PCBs in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and

potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the previous permit term, which funded community based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.

ii. Implementation Level

- (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
- (2) In year four of the permit term, Permittees shall evaluate the effectiveness of their risk reduction program.

iii. Reporting – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2019 Annual Report.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

7.

Meeting Date: 07/16/2015
Subject: CONSIDER Report on Local, State and Federal Transportation Related Legislative Issues and take ACTION as appropriate.
Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,
Department: Conservation & Development
Referral No.: 1
Referral Name: REVIEW Legislative Matters on Transportation, Water and Infrastructure.
Presenter: John Cunningham, DCD **Contact:** John Cunningham (925)674-7833

Referral History:

This is a standing item on the Transportation, Water and Infrastructure Committee (TWIC) referral list and meeting agenda.

Referral Update:

In developing transportation related legislative issues and proposals to bring forward for consideration by TWIC, staff receives input from the Board of Supervisors (BOS), references the County's adopted Legislative Platforms, coordinates with our legislative advocates, partner agencies and organizations, and consults with the Committee itself.

Recommendations are summarized in the Recommendation(s)/Next Step(s) section at the end of this report and specific recommendations are underlined in the report below. This report includes three sections, 1) LOCAL, 2) STATE, and 3) FEDERAL.

1) LOCAL

The Contra Costa Transportation Authority's (CCTA) is in the process of developing both the 2014 Countywide Transportation Plan (CTP) and a Transportation Expenditure Plan (TEP). A TEP is a statutorily required component of a transportation sales tax. These items are standing item for the foreseeable future. New material below is shown *italics*.

As the TWIC has discussed at past meetings, the development of the CTP resulted in a dialog regarding the need for additional revenue. The outcome of those discussions was to initiate the process to go to the ballot in November 2016 with a new transportation sales tax. The CCTA Board approved this activity at their March, 2015 meeting.

At previous TWIC meetings we have discussed the basis on which CCTA is developing the plan, the process, and schedule. For background purposes that material is available at the links below.

June 1, 2015 TWIC

http://64.166.146.155/docs/2015/TWIC/20150601_557/567_06-01-15%20TWIC%20Agenda%20Packet.pdf#page=41

May 4, 2015 TWIC

http://64.166.146.155/docs/2015/TWIC/20150504_556/566_566_05-04-15_1530_AGENDApacket.pdf#page=83

Staff has initiated an an internal coordination process which includes meetings of all District office staff and relevant Department Directors and updates to the Board of Supervisors. That process was initiated using the BOS's October 21, 2014 letter to the Contra Costa Transportation Authority as a starting point for policy discussions.

That letter can be seen here:

http://64.166.146.155/docs/2014/TWIC/20141204_373/384_12-04-14_1201_AGENDApacket.pdf#page=56

A verbal update will be given at the July TWIC meeting on the TEP process, internal coordination, and when to bring the matter to the full Board of Supervisors for discussion.

One issue being discussed with the TEP process potentially crosses over to the State discussion below. The amount of maintenance funding in a new measure may be affected by actions at the state.

In theory, if substantial new state transportation revenues are generated, that could relieve local jurisdictions of some maintenance burden. However, issues related to timing (20+ year local measure vs. 5 year state solution), revenue protection (to prevent the state from raiding transportation funds to resolve cash flow problems), and the scale of the maintenance backlog (deferred maintenance forecasts may still exceed the additional, proposed increases) would need to be reconciled when considering this state/local dynamic.

RECOMMENDATION: Discuss CCTA's CTP and TEP processes, internal coordination and DIRECT staff as appropriate.

2) STATE

Legislation

As with last month, the July state report will be largely be verbal, legislative activities are currently too fluid to make a written report practical.

Recent reports from Mark Watts, the County's legislative advocate are attached. Most relevant is the July 8th report which discusses how the Special Session on transportation finance is proceeding. Staff will provide a verbal update on the status of the Special Session at the July TWIC meeting. At the time of submission of this report, activities are largely informational and related to reaffirming the need for transportation infrastructure investment.

Also attached to this report are two related pieces of communication, **1)** the "Go Big" letter from the state's large Metropolitan Planning Organizations (including our Metropolitan Transportation Commission) to both houses regarding transportation finance, and **2)** the Contra Costa County BOS's letter to our legislative delegation on the same topic (draft, authorized by the BOS on 7/7/15).

A complete table of tracked legislation is attached to this report to facilitate any dialog necessary. A high-priority subset of the complete list is also attached.

Iron Horse Corridor

On July 8, 2015 the County's legislative advocate, Mark Watts, met with Caltrans staff regarding the requirements in grant agreements relative to the Southern Pacific Rail Road Property, currently in use as the Iron Horse Trail. Caltrans had been exploring options internally with Budget Office grant administrators and the legal division related to addressing the aged grant requirements.

Caltrans understands 1) the corridor is and has been in use as a viable, effective transportation facility, 2) is being maintained by the County as such, and 3) is directly supportive and consistent with new state and local policies relative to greenhouse gas reduction, active transportation, safe routes to school, policies that were not in place at the time the original grant was made.

They have concluded that the grant requirements in question can only be relieved fully by California Transportation Commission (CTC) action, although as the grant administrators, they could enter into a negotiated settlement with the County.

Recognizing that it is in the public interest to relieve the County of the grant obligations, the approach called for is to directly seek CTC action for full relief. The question is what mechanism will be used to pursue that relief through the CTC. Mr. Watts is recommending that a small delegation from Contra Costa County meet with state representatives to discuss the situation in the very near future.

If available, additional information will be provided verbally at the July TWIC meeting. TWIC should be prepared

to discuss members of a Contra Costa delegation to meet with Caltrans on this issue in Sacramento.

RECOMMENDATION: The Committee should DISCUSS state legislative activities of interest to the County and take ACTION as appropriate.

3) FEDERAL

Expiration of MAP-21 AND Continuing Resolutions: The current federal transportation funding authorization expires on July 31 of this month. In late June, the Senate Environment and Public Works Committee approved the *'Developing a Reliable and Innovative Vision for the Economy'* Act (DRIVE) highway bill (S. 1647). The bill includes a few new programs but largely extends MAP-21 for six years. The DRIVE bill does not include any new revenue which the Senate Finance Committee will need to identify.

Of note to the County are the increases in funding and prioritization for bridges listed in the DRIVE Act summary available at the link below:

http://www.epw.senate.gov/public/_cache/files/436cfe2b-bda3-4c01-aa31-7edb72aa2f82/20150622driveactsummary.pdf

S.1626 - Railroad Reform, Enhancement, and Efficiency Act: Staff is working with Paul Schlessinger, the County's federal legislative advocate, to determine if S.1626 would provide funds to study and address rail needs in the northern waterfront area. A verbal update and recommendation by staff will be provided at the meeting.

RECOMMENDATION: DISCUSS that status of federal transportation funding legislation and take ACTION as appropriate.

Recommendation(s)/Next Step(s):

CONSIDER Report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of specific recommendations in the report above.

Fiscal Impact (if any):

There is no fiscal impact.

Attachments

[June 22 2015 State Legislative Report](#)

[June 26 2015 State Legislative Report](#)

[July 8 2015 State Legislative Report](#)

[MPO Letter TransPackage AssemblyGoBig](#)

[7-7-15 BOS Ltr Re Transportation Finance](#)

[Positions of Legislation of Interest - 2015](#)

[Tracked Legislation](#)

Smith, Watts & Company, LLC.

Consulting and Governmental Relations

June 22, 2015

MEMORANDUM

To: Transportation Clients

From: Mark Watts

Subject: Legislative Report

State Budget

On June 15, the Legislature approved AB 93, the 2015 State Budget Act. The overall state General Fund expenditure plan for 2015-16 reflected in the bill amounts to \$117 Billion.

But, in a disagreement with the governor, the legislative general fund budget was based on a higher level of revenue estimates for the fiscal year than the Governor's Department of Finance has estimated and dedicated the additional revenues to additional program funding.

Although it was anticipated that negotiations between the Governor and legislative leadership would take more than a week to conclude an agreement on modifications to the core budget negotiations resulted in significant changes to the budget act that were approved by the Legislature on June 20, along with related trailer bills.

Special Session On Transportation and Infrastructure

In addition to announcing the budget agreement, the governor also announced two Special Sessions of the Legislature to address (1) how California pays for roads, highways and other infrastructure and (2) Medi-Cal. These would run concurrent with the regular legislative session.

The Governor's proclamation calls for the Legislature to enact permanent and sustainable funding to maintain and repair the state's transportation and critical

infrastructure, improve the state's key trade corridors and complement local infrastructure efforts.

The Governor's call for a Special Session on Transportation last week was acted upon by the Legislature this past Friday, with the adoption of Special Session Joint Rules by the Senate and the introduction of SCAX1 1(Huff), the first Special Session bill to be introduced. With both Houses meeting Monday, June 20, it is anticipated that additional Special Session legislation may be introduced as well; in fact, it appears that Senator Beall will be moving forward with legislation to be introduced today.

In a related development, CalSTA Secretary Brian Kelly conducted a conference call with Transportation stakeholders with the following the key points he made regarding the Special Session:

- The Administration's initial focus will be to reach out to the legislative leadership;
- The Administration's overarching objective remains to seek new funding under a "fix it first" theme to address the state's long-standing deferred maintenance crisis;

The Secretary did also underscore that the Special Session proclamation calls for action to streamline project delivery.

Transportation Budget Items

In addition to the Budget Act, the Legislature approved four trailer bills on June 15, as well, including AB 95 (related to transportation). AB 95 includes several items of interest to the transportation community:

Development of CT highway preservation "Shelf" of projects. The budget includes 25 positions to create a \$500 million project shelf for the State Highway Operations and Preservation Program (SHOPP).

AMTRAK Funding for Intercity rail. The budget fully funds Amtrak contract changes, pursuant to federal government requirements for intercity rail services.

Intercity Rail Reporting. Caltrans is required to report, by April 1, 2016, to the Legislature on potential benefits to safety, greenhouse gas reduction, service levels, and operating costs by improving grade separations at key intersections, as defined by the Federal Railroad Administration, along the state's intercity rail system.

State Transit Assistance Eligibility Funding. A one-year extension of an exemption to allow transit operators whose cost increases have exceeded the Consumer Price Index to continue using State Transit Assistance funding for both operating and capital expenditures is included in the budget trailer bill.

Cap on Clean Air Vehicle Program. Increases the cap on the "green sticker" Clean Air Vehicle program from 70,000 to 85,000. This program allows low-emission and energy-efficient vehicles with a single occupant to use high-occupancy vehicle lanes

Cap and Trade Funding

The Budget Conference Committee final spending plan incorporated into the final budget sent to the Governor includes staff resources necessary to continue existing workload related to cap-and-trade expenditures, but rejects all of the discretionary expenditure proposals. This conforms to the announced legislative intent that discussions will continue to further refine the state's expenditure plan for the 40 percent of the cap-and-trade revenues that are not continuously appropriated according to statute enacted last year.

However, the existing statutory continuous appropriations remain, so sixty percent of revenue in 2015-16 will be allocated to High Speed Rail, Affordable Housing and Sustainable Communities, Low Carbon Transit Operations, and the Transit and Intercity Rail Capital Program, pursuant to current law.

Transportation Loan Repayments

The Budget Conference Committee previously added language into their version of the budget related to Pre-Prop 42 loans. These loans have not been characterized by the Governor as part of the state's "Wall of Debt" and had remained withheld over the past decade due to state budget pressures.

The final budget agreement identifies \$842 million in Pre-Prop 42 borrowing from 2000-01 as "general fund borrowing" which would qualify the loans for repayment from the Proposition 2 "Rainy Day" funds in a future legislative action.

Assembly Transportation Funding Plan

Assembly Transportation Committee chair, Jim Frazier is expected to disclose the Assembly plans for legislation to address the state and local road systems repair needs. This follows the release of an initial legislative concept by the Speaker last February.

While the Senate has moved SB 16 (Beall) through the committee process and the bill, which generates about \$3.5 billion, annually for 5 years, is pending consideration on the Senate floor, the Assembly Democratic leadership has worked together and with their caucus to develop their version to provide funding for roads.

Smith, Watts & Company, LLC.

Consulting and Governmental Relations

MEMORANDUM

TO: Transportation Clients

FROM: Mark Watts

DATE: June 26, 2015

SUBJECT: Special Session #1 Report –
Everything you need to know about the Special Session

Legislature

Special Session

The Governor called two special sessions last week: Infrastructure and Healthcare. The Transportation & Infrastructure special session is referred to as the First Extraordinary Session.

Call of the Special Sessions:

The wording in the proclamation by the Governor is important because the Legislature is limited, in the special session, to the consideration of the matters specified in the Governor's Proclamation (*Art. IV, Sec. 3(b)*). This is referred to as the "call of the special session".

"Call" in Transportation Infrastructure Special Session:

Legislation to enact pay-as-you-go, permanent and sustainable funding to:

- a. Adequately and responsibly maintain and repair the state's transportation and other critical infrastructure; and
- b. Improve the state's key trade corridors; and
- c. Complement local efforts for repair and improvements of local transportation infrastructure

Also, to consider and act upon legislation necessary to:

- a. Establish clear performance objectives measured by the percentage of pavement, bridges and culverts in good condition; and
- b. Incorporate project development efficiencies to expedite project delivery or reduce project costs.”

Committees Created:

Yesterday, both the Senate and Assembly announced the committees that will hear special session bills. No committee hearings have been scheduled at this time.

Senate Special session #1 Committees

Transportation and Infrastructure Development (13 members): Beall (Chair), Cannella (Vice Chair), Allen, Bates, Berryhill, Gaines, Hertzberg, Leyva, Liu, McGuire, Mendoza, Pavley, and Wieckowski.

Appropriations (7 members): Lara (Chair), Bates (Vice Chair), Beall, Hill, Leyva, Mendoza, and Nielsen.

Assembly Special Session #1 Committees

Transportation And Infrastructure Development (13 members): Frazier (Chair), Achadjian (Vice Chair), Alejo, Burke, Chiu, Dodd, Eggman, Gatto, Hadley, Kim, Linder, Nazarian, and O'Donnell.

Finance (9 members): Gomez (Chair), Bigelow (Vice Chair), Bloom, Jones–Sawyer, McCarty, Melendez, Obernolte, Ting, and Weber.

Special Session Procedures

Some unique aspects of special sessions include:

- Bills do not need to wait 30 days in print to be heard.
- Extraordinary session bills are exempt from the four/two day file notice requirement, so committees can be scheduled rapidly, as needed.
- Majority vote special session bills take effect 91 days after the final adjournment of that special session (Con. Art. IV, Sec. 8(c)(1)) unless they are urgency measures.
- Taxes still require a 2/3rds vote

Special Session #1 bills Introduced

Senate

SB X1 1 (Beall):

Senator Beall reintroduced his regular session \$4 billion roadway repair funding bill proposal (SB 16) in the Transportation Special Session

SCAX1 1 (Huff):

This bill would constitutionally guarantee that the transportation taxes paid by California drivers annually are only used for transportation purposes and is a reintroduction of SCA 7 in the Regular session.

SB X1 2 (Huff):

This bill would dedicate cap and trade taxes paid from putting gasoline production under the cap to improving California's streets and roads. SB X1 2 would direct how approximately \$1.9 billion in revenues would be spent.

Assembly

AB X1 1 (Alejo)

This bill is a reintroduction of Mr. Alejo's AB 227 from regular session. It would transfer truck weight fees back from Prop 1B debt Service to state highway purposes and would also accelerate repayment of outstanding loans back from the General fund.

AB X1 2 (Perea)

This bill is a reintroduction of Mr. Perea's AB 1265 relating to Public Private partnerships (P3).

Smith, Watts & Company, LLC.

Consulting and Governmental Relations

MEMORANDUM

TO: John Cunningham

FROM: Mark Watts

DATE: July 8, 2015

SUBJECT: Special Session #2 Report – Update on Activities

Recent Developments

Senator Beall introduced 2 new Special Session bills on July 7. They are both “spot” bills, expressing legislative intent to enact legislation to address permanent and sustainable new transportation revenues.

Informational Hearings

Senate Hearing, July 2:

The Senate Transportation and Infrastructure Development Committee heard testimony from the Legislative Analyst’s Office, Transportation Secretary Kelly, City and County representatives and Commissioner Madaffer of the CTC. I provided testimony on public attitudes that Transportation California has developed through focus groups conducted in partnership with the California Alliance for Jobs and subsequent survey research.

Most of the testimony emphasized the infrastructure needs for the state’s roads and bridges. Options for where funding for these projects would come from was a major point of discussion and included increasing existing taxes and fees, charging new taxes, and use of other existing revenues.

Committee members expressed interest too in public transit as being part of the

solution to aging infrastructure by taking automobiles off the roads. However, transit also needs significant funding and investment to improve and so far, transit has not been included in the proposed transportation funding legislation.

Assembly Hearing, July 6:

The Assembly hearing was more broadly informational, ranging from the basics of transportation finance in California, an overview of the adequacy of the state's present funding levels, and concluding with presentations by stakeholders. The most prominent development in this hearing was MTC director Heminger's submittal of a joint letter from the executives of the state's 4 largest MPO's setting out their principles for the legislature, calling for (1) a significant new revenues base, (2) protection of the new revenues, (3) sharing of the new revenues equally between state and locals, and (4) addressing the annual price-based excise tax adjustment, among others.

Special Session #1 bills Introduced

Senate

SB X1 1 (Beall):

Senator Beall reintroduced his regular session \$4 billion roadway repair funding bill proposal (SB 16) in the Transportation Special Session

SCAX1 1 (Huff):

This bill would constitutionally guarantee that the transportation taxes paid by California drivers annually are only used for transportation purposes and is a reintroduction of SCA 7 in the Regular session.

SB X1 2 (Huff):

This bill would dedicate cap and trade taxes paid from putting gasoline production under the cap to improving California's streets and roads. SB X1 2 would direct how approximately \$1.9 billion in revenues would be spent.

SB X1 3(Vidak):

The measure would repurpose outstanding Prop 1A, High speed bonds to be used to make debt service payments and to establish new program to fund state and local road repairs. The bill excludes from the repurposing funds dedicated for the “bookend” and the Connectivity projects.

SB X1 4 (Beall), *new bill*

This “spot” bill declares the intent of the Legislature to enact legislation to establish permanent, sustainable sources of transportation funding to maintain and repair the state’s highways, local roads, bridges, and other critical transportation infrastructure.

SBX1 5 (Beall), *new bill*

This “spot” bill declares the intent of the Legislature to enact legislation to establish permanent, sustainable sources of transportation funding to maintain and repair the state’s highways, local roads, bridges, and other critical transportation infrastructure.

Assembly

AB X1 1 (Alejo)

This bill is a reintroduction of Mr. Alejo’s AB 227 from regular session. It would transfer truck weight fees back from Prop 1B debt Service to state highway purposes and would also accelerate repayment of outstanding loans back from the General fund.

AB X1 2 (Perea)

This bill is a reintroduction of Mr. Perea’s AB 1265 relating to Public Private partnerships (P3).

Looking Ahead

At present, although there is background discussion alluding to possible additional hearings, the official schedule available now does not indicate anything scheduled at present.

The Special Session is anticipated to recess along with the Regular Legislative Session for one month on July 17.



July 6, 2015

Dear Chairman Frazier & Assembly Transportation & Infrastructure Development Committee Members:

As the executive directors for the metropolitan planning organizations representing approximately 80 percent of the state's population, we applaud Governor Brown for calling the Legislature into a special session to address California's ailing transportation infrastructure.

We respectfully urge this committee to take action this summer to put the state on a path to providing well maintained highways, local roads and public transit systems that meet the needs and expectations of our residents and businesses.

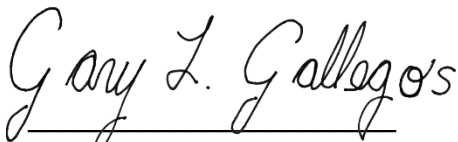
As you begin consideration of the key elements needed in a transportation funding package, Senator Beall's SB X1-1 serves as an excellent starting point for discussions. We share eight policy priorities that we respectfully ask you to keep in mind in your deliberations.

1. **Make a significant investment.** Any solution must provide an investment large enough to demonstrate tangible benefits to the traveling public. This requires going big. Recent focus group efforts and polling conducted by the California Alliance for Jobs and Transportation California suggests that voters are willing to tax themselves to the tune of at least \$3 billion a year, as long as there are accountability provisions and assurances that funds will be dedicated to transportation purposes.
2. **Ensure transportation revenues are protected.** Time and time again (Proposition 42, 2002; Proposition 1A, 2006; Proposition 22, 2010), voters have overwhelmingly supported dedicating and constitutionally-protecting transportation dollars for transportation purposes. Focus group and polling efforts confirm that voters fear that new revenues will be diverted. Therefore, the transportation package should include protections against using new transportation revenue for other purposes.
3. **Share revenue equitably between local and state roadway systems.** Cities, counties and the state are all facing tremendous funding shortfalls for the maintenance of their respective streets, roads and highways. We support sharing revenue for roadway maintenance equally between the state and cities and counties.
4. **Achieve a state of good repair.** One of the caveats voters support when polled on transportation taxes is that new revenues should be prioritized for repairs to the existing transportation system. Funding should be made available not just to the state and local roadway system, but also to address the immense rehabilitation needs of many of our public transit systems.
5. **Support focus on operational improvements.** Any legislation to increase funding for roadway maintenance should also focus on operational improvements. Operational projects are key to maximizing current infrastructure efficiencies, highly cost-effective and can deliver tremendous benefits on local streets and roads as well as the state highway system.

6. **Adopt a program of at least 10 years.** Given the difficulty of enacting new taxes and fees, we urge you to adopt a new transportation funding program with a minimum duration of 10 years. A five-year plan is simply not long enough to have a significant impact on the local road and state highway maintenance backlog.
7. **Address state's critical goods movement needs.** We support the dedication of a portion of a new transportation funding package to the Trade Corridor Improvement Fund, as proposed in SBX1-1 but at a funding level substantially higher than the approximately \$52 million/year proposed therein.
8. **Fix the annual price-based excise tax adjustment.** Due to the Gas Tax Swap of 2010, a portion of the state's excise tax on gasoline is adjusted once a year to take into account the forecast of gasoline and consumption for the subsequent fiscal year so as to maintain revenue neutrality relative to a gasoline sales tax. Given the high volatility and loss of revenue resulting from this policy, we support eliminating this annual adjustment and instead indexing the tax to the Consumer Price Index or, at a minimum, enacting legislation to smooth out the ups and downs as proposed in SB 321 (Beall).

We stand with you in advocating for a long-overdue focus on rebuilding California's aging transportation system and look forward to working with you to achieve this investment for the betterment of future generations of Californians.

Thank you for your service and leadership at this critical time.



Gary L. Gallegos
Executive Director, SANDAG



Steve Heminger
Executive Director, MTC



Hasan Ikhrata
Executive Director, SCAG



Mike McKeever
Chief Executive Officer, SACOG

cc: The Honorable Senate President Pro Tempore Kevin de Leon
The Honorable Assembly Speaker Toni Atkins
The Honorable Bob Huff, Senate Minority Leader
The Honorable Kristin Olsen, Assembly Minority Leader
Mr. Brian Kelly, Secretary, California State Transportation Agency

The Board of Supervisors

County Administration Building
651 Pine Street, Room 106
Martinez, California 94553

John Gioia, 1st District
Candace Andersen, 2nd District
Mary N. Piepho, 3rd District
Karen Mitchoff, 4th District
Federal D. Glover, 5th District

Contra Costa County



David Twa
Clerk of the Board
and
County Administrator
(925) 335-1900

July 7, 2015

Assembly Member Jim Frazier
State Capitol
P.O. Box 942849, Room 3091
Sacramento, CA 94249-0011

Dear Assembly Member Frazier,

On behalf of the County of Contra Costa, I write to urge you to take action to avert the looming transportation crisis in the State of California and your district by working to find a bipartisan solution in 2015. California has more than 50,000 miles of state highways, 143,000 local streets and roads, and 24,000 bridges. In unincorporated Contra Costa County alone, we own and operate **660** miles of paved roads and **111** vehicle and pedestrian bridges. California's economic vitality and the mobility of all Californians both depend upon a first-class, multi-modal transportation network. In spite of this fact, the stagnant level of investment into our shared transportation infrastructure has resulted in significant unmet maintenance and rehabilitation needs on both the state and local transportation systems.

The 2014 California Statewide Local Streets and Roads Needs Assessment Report found that counties and cities are short \$79.3 billion over the next 10 years just to bring the system into a state of good repair, which would minimize future maintenance costs. In Contra Costa County, we currently have \$25 million in deferred maintenance. We currently do not have adequate revenues to address our failing local infrastructure. This includes bike lanes, sidewalks, traffic signal lights, traffic signage and striping, and road drainage that are not only critical to active transportation options, but also for the safety of the travelling public. California's transit operators also rely on local streets and roads as their primary right-of-way. The state highway system is also facing \$59 billion in deferred maintenance costs over the next decade.

The primary sources of revenue to maintain, preserve, repair, and rehabilitate highways and local roads and bridges are state and federal gasoline excise taxes (gas taxes). Neither the state nor federal gas tax has been increased in more than 20 years. Neither gas tax is adjusted for inflation or increases in the cost of construction.

Increases in fuel efficiency, which are critical to reduce costs to motorists and meet our environmental goals, mean that vehicles are travelling more yet paying less for use of the transportation system. Making matters even worse, the recent short-lived decline in the price of gas, while good for consumer pocketbooks, will result in a year-to-year reduction of \$885 million in transportation revenues.

The California Transportation Commission is currently studying alternatives to the state gas tax such as a road user charge that would more accurately charge drivers for their use of the system, but the results of that study are years away. That is why the County of Contra Costa is asking you to take bold action this year to find interim solutions to begin to make much needed improvements in the transportation system.

The bottom line is that the longer we wait to address our failing transportation infrastructure, the more it will cost in the long run. We need an immediate solution in 2015 to ensure the problem doesn't get worse and to bridge the gap while California considers whether to implement longer-term options to replace the gas tax.

Sincerely,

John M. Gioia, Chair
Contra Costa County Board of Supervisors
Supervisor, District I

c: Contra Costa County Legislative Delegation
The Honorable Edmund G. Brown Jr., Governor, State of California
The Honorable Kevin de Leon, President Pro Tem, California State Senate
The Honorable Bob Huff, Minority Leader, California State Senate
The Honorable Toni Atkins, Speaker, California State Assembly
The Honorable Kristin Olsen, Minority Leader, California State Assembly

Adopted Positions on Legislation of Interest – 2015

(Information Updated from Last Month is in ***bold/italics***)

Bill	Status	CC County	ABAG	BAAQMD	CCTA	CSAC	LofC	MTC	Other	Notes
AB 2 (Alejo) <i>Community Revitalization Authority</i>			Staff Recommendation: Watch			Pending	Support			
AB 148 (Holden) <i>School Facilities: General Obligation Bond Measure</i>						Pending				
SB 8 (Hertzberg) <i>Taxation</i>						Pending	Watch			
AB 4 (Linder) <i>Vehicle Weight Fees: Transportation Bond Debt Service</i>						Watch	Watch	Support & Seek Amendment		
AB 6 (Wilk) <i>Bonds: Transportation: School Facilities</i>						Watch	Watch			
AB 8 (Gatto) <i>Emergency Services: Hit-and-Run Incidents</i>						Pending	Watch			
AB 21 (Perea) <i>California Global Warming Solutions Act of 2006: Emissions Limit: Scoping Plan</i>			Staff Recommendation: Watch			<i>(Martinson) Pending; (Keene) Pending</i>	Watch			
AB 23 (Patterson) <i>California Global Warming Solutions Act of 2006: Market-Based Compliance Mechanisms: Exemption</i>			Staff Recommendation: Watch	Staff Recommendation: Oppose		<i>(Martinson) Pending; (Keene) Pending</i>	Watch			
AB 33 (Quirk) <i>California Global Warming Solutions Act of 2006: Scoping Plan</i>						<i>(Martinson) Pending; (Keene) Pending</i>	Watch			
AB 157 (Levin) <i>Richmond-San Rafael Bridge</i>			<i>Staff Recommendation: Watch</i>		<i>Staff Recommendation: Support</i>		Watch	Support & Seek Amendment		
SB 1 (Gaines) <i>California Global Warming Solutions Act of 2006: Market-Based Compliance Mechanisms: Exemption</i>			Staff Recommendation: Watch	Staff Recommendation: Oppose		<i>(Martinson) Pending; (Keene) Pending</i>	Watch			
SB 5 (Vidak) <i>California Global Warming Solutions Act of 2006: Market-Based Compliance Mechanisms: Exemption</i>			Staff Recommendation: Watch	Staff Recommendation: Oppose		<i>(Martinson) Pending; (Keene) Pending</i>	Watch			
SB 9 (Beall) <i>Greenhouse Gas Reduction Fund: Transit and Intercity Rail Capital Program</i>			<i>Staff Recommendation: Watch</i>			Watch	Watch			

Bill	Status	CC County	ABAG	BAAQMD	CCTA	CSAC	LofC	MTC	Other	Notes
SB 32 (Pavley) <i>California Global Warming Solutions Act of 2006: Emissions Limit</i>				Support		(Martinson) Pending; (Keene) Pending	Watch			
SB 39 (Pavley) <i>Vehicles: High-Occupancy Vehicle Lanes</i>						Watch	Watch	Oppose		
SB 40 (Gaines) <i>Air Quality Improvement Program: Vehicle Rebates</i>						Pending	Watch			
SB 114 (Liu) <i>Education facilities: Kindergarten Through Grade 12 Public Education Facilities Bond Act of 2016</i>		Staff Recommendation of Watch					Watch			
SB 16 (Beall) <i>Transportation funding</i>			Staff Recommendation: Watch			Support	Support	Staff Recommendation: Support and Seek Amendments		
SB 632 (Cannella) <i>Vehicles: prima facie speed limits: schools.</i>		Support				Support	Watch			Legislation based on CCC proposal
SB 654 (De Leon) <i>Hazardous waste: facilities permitting</i>						Watch	Watch			
CA ACA 4 (Frazier) <i>Local government transportation projects: special taxes: voter approval</i>			Staff Recommendation: Watch		Staff Recommendation: Support	(Holzem) Pending; (Buss) Support	Support	Staff Recommendation: Support		
SB 313 (Galgiani) <i>Local government: zoning ordinances: school districts</i>		Support				Support	Watch			
AB 1344 (Jones) <i>County office of education: charter schools</i>		Staff Recommendation of Oppose				Oppose	Oppose			
AB 194 (Frazier) <i>High-occupancy toll lanes</i>					Staff Recommendation: Support	Watch	Watch	Support		
AB 227 (Alejo) <i>Transportation funding</i>						Watch	Watch	Support		
AB 518 (Frazier) <i>Department of Transportation</i>						Watch	Watch			
AB 1284 (Baker) <i>Bay Area state-owned toll bridges: Toll Bridge Program Oversight Committee</i>			Staff Recommendation: Watch				Watch			

Bill	Status	CC County	ABAG	BAAQMD	CCTA	CSAC	LofC	MTC	Other	Notes
SB 491 (Committee on Transportation and Housing) <i>Omnibus bill</i>			Staff Recommendation: Watch			Watch	Watch			
SB 1 a (Beall) <i>Transportation funding</i>						Support	Watch			
SCA 7 (Huff) <i>Motor vehicle fees and taxes: restriction on expenditures</i>						(Holzem) Watch; (Buss) Watch				
SCA 1 a (Huff) <i>Motor vehicle fees and taxes: restriction on expenditures.</i>							Watch			
AB 227 (Alejo) <i>Transportation funding</i>						Watch	Watch			
AB 1 a (Alejo) <i>Transportation funding</i>							Watch			
AB 2a (Perea) <i>Transportation projects: comprehensive lease agreements</i>							Watch			
AB 1265 (Perea) <i>Transportation projects: comprehensive development lease agreements</i>							Watch	Support		

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CA AB 2	AUTHOR:	Alejo [D]
	TITLE:	Community Revitalization Authority
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	12/01/2014
	LAST AMEND:	06/16/2015
	DISPOSITION:	Pending
	COMMITTEE:	Senate Transportation and Housing Committee
	HEARING:	07/14/2015 1:30 pm
	SUMMARY:	Authorizes certain local agencies to form a community revitalization authority with a community revitalization and investment area to carry out provisions of the Community Redevelopment Law in that area for infrastructure, affordable housing, and economic revitalization and to provide for the issuance of bonds serviced by tax increment revenues. Requires the authority to adopt a community revitalization plan. Provides for periodic audits. Requires funds in a specified fund to be for housing needs.
	STATUS:	
	06/16/2015	In SENATE. Read second time and amended. Re-referred to Committee on TRANSPORTATION AND HOUSING.
CA AB 148	AUTHOR:	Holden [D]
	TITLE:	K-14 School Investment Bond Act of 2016
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	01/15/2015
	LAST AMEND:	05/06/2015
	DISPOSITION:	Pending
	LOCATION:	Assembly Appropriations Committee
	SUMMARY:	Reduces the minimum amount that a school district must set aside for ongoing and major maintenance of school buildings in a fiscal year. Authorizes a grant for new construction or modernization to be used for seismic mitigation. Requires an interagency plan to streamline the school facilities construction application and review process. Enacts the K-14 School Investment Bond Act of 2016 to provide funds for the construction and modernization of education facilities.
	STATUS:	
	05/28/2015	In ASSEMBLY Committee on APPROPRIATIONS: Held in committee.
CA AB 325	AUTHOR:	Wood [D]
	TITLE:	Community Development Block Grant Program
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	02/13/2015
	LAST AMEND:	07/01/2015
	DISPOSITION:	Pending
	COMMITTEE:	Senate Transportation and Housing Committee
	HEARING:	07/07/2015 1:30 pm
	SUMMARY:	Relates to the Community Development Block Grant Program. Requires the

Department of Housing and Community Development to enter into a grant agreement with the applicant. Provides for a list of activities and procedures to receive a grant. Authorizes the Department to make changes to the final list of activities if the applicant makes changes to the original application or the federal government or the Legislature requires changes.

STATUS:

07/07/2015 From SENATE Committee on TRANSPORTATION AND HOUSING: Do pass to Committee on APPROPRIATIONS.

CA AB 1362

AUTHOR: Gordon [D]
TITLE: Local Government Assessments Fees and Charges
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
DISPOSITION: Pending
LOCATION: Assembly Local Government Committee
SUMMARY:

Defines stormwater for purposes of the Proposition 218 Omnibus Implementation Act to mean any system of public improvements or service intended to provide for the quality, conservation, control, or conveyance of waters that land on or drain across the natural or man-made landscape.

STATUS:

03/23/2015 To ASSEMBLY Committee on LOCAL GOVERNMENT.

CA SB 8

AUTHOR: Hertzberg [D]
TITLE: Taxation
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 02/10/2015
DISPOSITION: Pending
LOCATION: Senate Governance and Finance Committee
SUMMARY:

Expands the Sales and Use Tax Law to impose a tax on the gross receipts from the sale in the State or, or the receipt of the benefit in the State of services at a specified percentage rate.

STATUS:

02/19/2015 Re-referred to SENATE Committee on GOVERNANCE AND FINANCE.

File name: TWI-TransLeg

CA AB 1

AUTHOR: Brown [D]
TITLE: Drought: Local Governments: Fines
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 06/16/2015
DISPOSITION: To Governor
LOCATION: To Governor
SUMMARY:

Prohibits a city, county, or city and county from imposing a fine under any ordinance for a failure to water a lawn or having a brown lawn during a period for which the Governor has issued a proclamation of a state of emergency

based on drought conditions.

STATUS:

07/01/2015 *****To GOVERNOR.

CA AB 4

AUTHOR: Linder [R]
TITLE: Vehicle Weight Fees: Transportation Bond Debt Service
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
DISPOSITION: Pending
LOCATION: Assembly Second Reading File
SUMMARY:

Prohibits weight fee revenues from being transferred from the State Highway Account to the Transportation Debt Service Fund, the Transportation Bond Direct Payment Account, or any other fund or account for the purpose of payment of the debt service on transportation general obligation bonds. Prohibits loans of weight fee revenues to the General Fund.

STATUS:

06/02/2015 Withdrawn from ASSEMBLY Committee on TRANSPORTATION.

06/02/2015 In ASSEMBLY. Ordered to second reading.

CA AB 6

AUTHOR: Wilk [R]
TITLE: Bonds: Transportation: School Facilities
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
DISPOSITION: Pending
LOCATION: Assembly Transportation Committee
SUMMARY:

Provides that no further bonds shall be sold for high-speed rail purposes pursuant to the Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century. Requires the net proceeds of other bonds to be made available to fund construction of school facilities for K-12 and higher education.

STATUS:

04/20/2015 In ASSEMBLY Committee on TRANSPORTATION: Failed passage.

04/20/2015 In ASSEMBLY Committee on TRANSPORTATION: Reconsideration granted.

CA AB 8

AUTHOR: Gatto [D]
TITLE: Emergency Services: Hit-And-Run Incidents
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 07/06/2015
DISPOSITION: Pending
LOCATION: Senate Public Safety Committee
SUMMARY:

Authorizes a law enforcement agency to issue a Yellow Alert if a person has been killed or has suffered serious bodily injury due to a hit-and-run incident and the law enforcement agency has specified information concerning the suspect or the suspect's vehicle.

	STATUS:	
	07/06/2015	In SENATE. Read second time and amended. Re-referred to Committee on PUBLIC SAFETY.
CA AB 21	AUTHOR:	Perea [D]
	TITLE:	Global Warming Solutions Act of 2006: Scoping Plan
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	12/01/2014
	LAST AMEND:	05/05/2015
	DISPOSITION:	Pending
	FILE:	121
	LOCATION:	Senate Third Reading File
	SUMMARY:	
		Requires the State Air Resources Board in preparing its scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas reduction, to consult with specified State agencies regarding matters involving energy efficiency and the facilitation of the electrification of the transportation sector.
	STATUS:	
	06/30/2015	In SENATE. Read second time. To third reading.
CA AB 23	AUTHOR:	Patterson [R]
	TITLE:	Global Warming Solutions Act of 2006: Compliance
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	yes
	INTRODUCED:	12/01/2014
	DISPOSITION:	Pending
	LOCATION:	Assembly Natural Resources Committee
	SUMMARY:	
		Exempts categories of persons or entities that did not have a compliance obligation under a market-based compliance mechanism from being subject to that market-based compliance mechanism.
	STATUS:	
	03/23/2015	In ASSEMBLY Committee on NATURAL RESOURCES: Failed passage.
	03/23/2015	In ASSEMBLY Committee on NATURAL RESOURCES: Reconsideration granted.
CA AB 28	AUTHOR:	Chu [D]
	TITLE:	Bicycle Safety: Rear Lights
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	12/01/2014
	LAST AMEND:	04/22/2015
	DISPOSITION:	Pending
	FILE:	122
	LOCATION:	Senate Third Reading File
	SUMMARY:	
		Requires that a bicycle operated during darkness upon a highway or a sidewalk be equipped with a red reflector, a solid red light, or a flashing red light on the rear that is visible for a specified distance to the rear when directly in front of lawful upper beams of headlamps on a motor vehicle.

	STATUS: 06/30/2015 In SENATE. Read second time. To third reading.
CA AB 33	AUTHOR: Quirk [D] TITLE: Global Warming Solutions Act: Energy Council FISCAL COMMITTEE: yes URGENCY CLAUSE: no INTRODUCED: 12/01/2014 LAST AMEND: 06/23/2015 DISPOSITION: Pending COMMITTEE: Senate Energy, Utilities and Communications Committee HEARING: 07/07/2015 9:30 am SUMMARY: Establishes the Energy Sector Emissions Reduction Advisory Council to recommend strategies for the electricity sector for incorporation into the scoping plan prepared by the State Air Resources Board, based on specified analysis including various strategies that could be implemented to reduce emissions of greenhouse gases from the electricity sector and integrate increasing amounts of renewable energy into the grid.
	STATUS: 07/07/2015 From SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS: Do pass to Committee on ENVIRONMENTAL QUALITY.
CA AB 157	AUTHOR: Levine [D] TITLE: Richmond-San Rafael Bridge FISCAL COMMITTEE: no URGENCY CLAUSE: yes INTRODUCED: 01/20/2015 LAST AMEND: 06/25/2015 DISPOSITION: Pending COMMITTEE: Senate Transportation and Housing Committee HEARING: 07/07/2015 1:30 pm SUMMARY: Requires the lead agency to complete the design work for the project simultaneously with the environmental review conducted pursuant to the California Environmental Quality Act if the Metropolitan Transportation Commission and the Department of Transportation develop a project to open the third lane on the Richmond-San Rafael Bridge to automobile traffic on the eastbound level and to bicycle traffic on the westbound level.
	STATUS: 07/07/2015 From SENATE Committee on TRANSPORTATION AND HOUSING: Do pass to Committee on ENVIRONMENTAL QUALITY.
CA AB 227	AUTHOR: Alejo [D] TITLE: Transportation Funding FISCAL COMMITTEE: yes URGENCY CLAUSE: no INTRODUCED: 02/03/2015 LAST AMEND: 04/15/2015 DISPOSITION: Pending LOCATION: Assembly Budget Committee

SUMMARY:

Retains weight fee revenues in the State Highway Account. Deletes the provisions relating to the reimbursement of the State Highway Account for weight fee revenues and relating to the making of loans to the General Fund, thereby providing for the portion of fuel excise tax revenues that is derived from increases in the motor vehicle fuel excise tax in 2010 to be allocated to the State Transportation Improvement Program, to the State Highway Operation Program, and to city and county roads.

STATUS:

04/15/2015 In ASSEMBLY. Read second time and amended.
Re-referred to Committee on BUDGET.

CA AB 323

AUTHOR: Olsen [R]
TITLE: Environmental Quality Act: Exemption
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/13/2015
ENACTED: 07/06/2015
DISPOSITION: Enacted
LOCATION: Chaptered
CHAPTER: 52
SUMMARY:

Amends the California Environmental Quality Act that exempts a project or an activity to repair, maintain, or make minor alterations to an existing roadway, if the project of activity is carried out by a city or county with a specified population to improve public safety and meets other specified requirements, to extend that exemption to a specified date.

STATUS:

07/06/2015 Signed by GOVERNOR.
07/06/2015 Chaptered by Secretary of State. Chapter No. 52

CA AB 327

AUTHOR: Gordon [D]
TITLE: Public Works: Volunteers
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/13/2015
ENACTED: 07/06/2015
DISPOSITION: Enacted
LOCATION: Chaptered
CHAPTER: 53
SUMMARY:

Extends the provisions of existing law that provides governing public works does not apply to specified work performed by a volunteer, a volunteer coordinator, or a member of the California Conservation corps or a community conservation corps.

STATUS:

07/06/2015 Signed by GOVERNOR.
07/06/2015 Chaptered by Secretary of State. Chapter No. 53

CA AB 464

AUTHOR: Mullin [D]
TITLE: Transactions and Use taxes: Maximum Combined Rate
FISCAL COMMITTEE: no
URGENCY CLAUSE: no

INTRODUCED: 02/23/2015
LAST AMEND: 06/17/2015
DISPOSITION: Pending
FILE: 74
LOCATION: Senate Third Reading File
SUMMARY:

Amends existing law that authorizes cities and counties, and if specifically authorized, other local government entities, to levy a transactions and use tax for general purposes, in accordance with the procedures and requirements set forth in the Transactions and Use Tax Law, including a requirement that the combined rate of all taxes imposed in the county to not exceed a specified percentage. Increases the maximum combined rate.

STATUS:

06/17/2015 In SENATE. Read second time and amended. To third reading.

CA AB 518

AUTHOR: Frazier [D]
TITLE: Department of Transportation
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/23/2015
DISPOSITION: Pending
LOCATION: Assembly Transportation Committee
SUMMARY:

Amends existing law authorizing a local agency to enter into an agreement with the appropriate transportation planning agency to use its own funds to develop, and construct a project within its own jurisdiction. Deletes a provision requiring the department to compile information and report to the Legislature.

STATUS:

03/05/2015 To ASSEMBLY Committee on TRANSPORTATION.

CA AB 1088

AUTHOR: O'Donnell [D]
TITLE: Education Facilities: Bond Act: Greene Act
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 05/06/2015
DISPOSITION: Pending
LOCATION: Assembly Appropriations Committee
SUMMARY:

Repeals provisions requiring the existing school building capacity for a high school district to be calculated without regard to multitrack year-round school considerations. Requires a workgroup to recommend changes to shorten and streamline the construction or modernization of schools process. Requires regulation recommendations regarding designing facilities. Requires baseline eligibility for modernization funding. Enacts a specified facilities bond act.

STATUS:

05/06/2015 In ASSEMBLY. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

CA AB 1098

AUTHOR: Bloom [D]
TITLE: Transportation: Congestion Managment
FISCAL COMMITTEE: yes

URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 03/26/2015
DISPOSITION: Pending
LOCATION: Assembly Transportation Committee
SUMMARY:

Deletes traffic level of service standards as an element of a congestion management program and deletes related requirements, including a requirement that a city or county prepare a plan when highway or roadway level of service standards are not maintained. Requires performance measures to include vehicle miles traveled, air emissions, and bicycle, transit, and pedestrian mode share. Requires an evaluation of how a congestion management program contributes to achieving a greenhouse gas reduction target.

STATUS:

03/26/2015 To ASSEMBLY Committees on TRANSPORTATION and LOCAL GOVERNMENT.
03/26/2015 From ASSEMBLY Committee on TRANSPORTATION with author's amendments.
03/26/2015 In ASSEMBLY. Read second time and amended. Re-referred to Committee on TRANSPORTATION.

CA AB 1119

AUTHOR: Rendon [D]
TITLE: Public Utilities: Rights of Way
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 05/11/2015
DISPOSITION: Pending
COMMITTEE: Senate Governance and Finance Committee
HEARING: 07/08/2015 9:30 am
SUMMARY:

Requires a municipal corporation, before using any right of way within any other municipal corporation or county, to request the entity that has control of such right of way to agree with it upon the location of the use and the terms and conditions to which the use shall be subject. Authorizes the proposing municipal corporation to bring an action against the county if they are unable to agree on the terms and conditions and location of the use. Repeals related provisions.

STATUS:

06/16/2015 From SENATE Committee on ENERGY, UTILITIES AND COMMUNICATIONS: Do pass to Committee on GOVERNANCE AND FINANCE. (10-0)

CA AB 1265

AUTHOR: Perea [D]
TITLE: Transportation Projects: Comprehensive Development
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 04/29/2015
DISPOSITION: Pending
LOCATION: Assembly Appropriations Committee
SUMMARY:

Relates to existing law which authorizes the Department of Transportation and regional transportation agencies to enter into comprehensive lease agreements.

Provides that a lease agreement shall not be entered into under these provisions on or after a specified date. Includes within the Definition of regional transportation agency, the Santa Clara Valley Transportation Authority, thereby authorizing the authority to enter into public-private partnerships.

STATUS:

05/06/2015 In ASSEMBLY Committee on APPROPRIATIONS: To
Suspense File.

CA AB 1284

AUTHOR: Baker [R]
TITLE: Bay Area State-Owned Toll Bridges
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 04/08/2015
DISPOSITION: Pending
FILE: 29
LOCATION: Senate Second Reading File
SUMMARY:

Provides that the Toll Bridge Program Oversight Committee is subject to the Bagley-Keene Open Meeting Act.

STATUS:

07/07/2015 In SENATE. Read second time. To Consent Calendar.

CA AB 1344

AUTHOR: Jones [R]
TITLE: County Office of Education Charter Schools
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 04/06/2015
DISPOSITION: Pending
LOCATION: Assembly Education Committee
SUMMARY:

Extends the authorization of a governing board of a school district to render a city or county zoning ordinance inapplicable to a proposed use of school district property, except when the proposed use is for nonclassroom facilities to the governing board of a county office of education. Prohibits a county office from rendering such ordinance inapplicable to a charter school facility, unless the school is physically within the jurisdiction of the office.

STATUS:

04/22/2015 In ASSEMBLY Committee on EDUCATION: Not heard.

CA AB 1347

AUTHOR: Chiu [D]
TITLE: Public Contracts Claims
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
LAST AMEND: 07/06/2015
DISPOSITION: Pending
LOCATION: Senate Appropriations Committee
SUMMARY:

Establishes for state and local public contracts a claim resolution process applicable to all claims by contractors in connection with public works. Defines a claim. Provides the procedures that are required of a public entity, upon receipt

of a claim sent by registered mail. Provides an alternative claim procedure if the public entity fails to issue a statement. Requires the claim deemed approved in its entirety. Authorizes nonbinding mediation. Provides a public works contractor claim procedure.

STATUS:

07/06/2015 In SENATE. Read second time and amended. Re-referred to Committee on APPROPRIATIONS.

CA ACA 4

AUTHOR: Frazier [D]
TITLE: Local Government Transportation Projects: Special Taxes
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/27/2015
DISPOSITION: Pending
COMMITTEE: Assembly Revenue and Taxation Committee
HEARING: 07/13/2015 1:30 pm
SUMMARY:

Provides that the imposition, extension, or increase of a special tax for the purpose of providing funding for local transportation projects requires the approval of 55% of its voters voting on the proposition.

STATUS:

04/27/2015 From ASSEMBLY Committee on TRANSPORTATION: Be adopted to Committee on REVENUE AND TAXATION. (10-5)
Alert: Xpress

CA SB 1

AUTHOR: Gaines T [R]
TITLE: Global Warming Solutions Act of 2006: Compliance
FISCAL COMMITTEE: yes
URGENCY CLAUSE: yes
INTRODUCED: 12/01/2014
DISPOSITION: Pending
LOCATION: Senate Environmental Quality Committee
SUMMARY:

Amends the State Global Warming Solutions Act of 2006. Authorizes the State Air Resources Board to include the use of market-based compliance mechanisms. Exempts categories of persons or entities that did not have a compliance obligation under a market-based compliance mechanism from being subject to that market-based compliance mechanism. Requires all participating categories of persons or entities to have a compliance obligation beginning on a specified date.

STATUS:

01/15/2015 To SENATE Committee on ENVIRONMENTAL QUALITY.

CA SB 5

AUTHOR: Vidak [R]
TITLE: Global Warming Solutions Act of 2006: Compliance
FISCAL COMMITTEE: yes
URGENCY CLAUSE: yes
INTRODUCED: 12/01/2014
DISPOSITION: Pending
LOCATION: Senate Environmental Quality Committee
SUMMARY:

Relates to the State Global Warming Solutions Act of 2006. Authorizes the State Air Resources Board to include the use of market-based compliance

mechanisms. Exempts categories of persons or entities that did not have a compliance obligation under a market-based compliance mechanism from being subject to that market-based compliance mechanism through a specified date.

STATUS:

04/15/2015 In SENATE Committee on ENVIRONMENTAL QUALITY:
Failed passage.

04/15/2015 In SENATE Committee on ENVIRONMENTAL QUALITY:
Reconsideration granted.

CA SB 9

AUTHOR: Beall [D]
TITLE: Greenhouse Gas Reduction Fund: Transit/Intercity Rail
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 07/02/2015
DISPOSITION: Pending
COMMITTEE: Assembly Natural Resources Committee
HEARING: 07/13/2015 1:30 pm
SUMMARY:

Modifies the purpose of the Transit and Intercity Rail Capital Program. Provides for the funding of defined, transformative capital improvements. Updates project selection criteria under the program to projects that reduce greenhouse emissions and expand transit service. Requires estimates of funding available under the program. Allows the issuance of a no prejudice letter to allow an applicant to utilize its own moneys on a project subject to reimbursement from program moneys for eligible expenditures.

STATUS:

07/02/2015 In ASSEMBLY. Read second time and amended.
Re-referred to Committee on NATURAL RESOURCES.

CA SB 16

AUTHOR: Beall [D]
TITLE: Transportation Funding
FISCAL COMMITTEE: yes
URGENCY CLAUSE: yes
INTRODUCED: 12/01/2014
LAST AMEND: 06/01/2015
DISPOSITION: Pending
FILE: 60
LOCATION: Senate Third Reading File
SUMMARY:

Creates the Road Maintenance and Rehabilitation Program and a related fund for deferred highway and local road maintenance. Provides for an increase in motor vehicle fuel tax, a vehicle registration fee, commercial vehicle weight fees. Transfers a portion of the diesel fuel tax increase to the Trade Corridors Investment Fund. Increases the vehicle license fee for transportation bond debt service. Relates to petroleum storage taxes. Relates to allocation for supplemental project allocation requests.

STATUS:

06/01/2015 In SENATE. Read second time and amended. To third reading.

CA SB 32

AUTHOR: Pavley [D]
TITLE: Global Warming Solutions Act of 2006: Emissions Limit

FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 06/01/2015
DISPOSITION: Pending
COMMITTEE: Assembly Natural Resources Committee
HEARING: 07/13/2015 1:30 pm
SUMMARY:

Requires the State Air Resources Board to approve a specified statewide greenhouse gas emission limits that are the equivalent to a specified percentage below the 1990 level to be achieved by 2030 and another percentage below the 1990 level by 2050. Authorizes the Board to adopt an interim emissions level target to be achieve by 2040. Makes conforming changes.

STATUS:

06/15/2015 To ASSEMBLY Committee on NATURAL RESOURCES.

CA SB 39

AUTHOR: Pavley [D]
TITLE: Vehicles: High-Occupancy Vehicle Lanes
FISCAL COMMITTEE: yes
URGENCY CLAUSE: yes
INTRODUCED: 12/01/2014
LAST AMEND: 04/08/2015
DISPOSITION: Pending
LOCATION: Assembly Transportation Committee
SUMMARY:

Increases the number of vehicle identifiers that the Department of Motor Vehicle is authorized to issue for HOV lane usage.

STATUS:

05/22/2015 To ASSEMBLY Committee on TRANSPORTATION.

CA SB 40

AUTHOR: Gaines T [R]
TITLE: Air Quality Improvement Program: Vehicle Rebates
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 12/01/2014
LAST AMEND: 04/06/2015
DISPOSITION: Pending
LOCATION: Senate Transportation and Housing Committee
SUMMARY:

Requires incentives for qualifying zero-emission, battery-electric passenger vehicles under the Clean Vehicle Rebate Project of the Air Quality Improvement Program to be limited to vehicles in that category with a manufacturer's suggested retail price of a specified amount. Requires the rebate for certain vehicles to be a specified sum, subject to the availability of funds.

STATUS:

04/06/2015 From SENATE Committee on TRANSPORTATION AND HOUSING with author's amendments.

04/06/2015 In SENATE. Read second time and amended. Re-referred to Committee on TRANSPORTATION AND HOUSING.

CA SB 114

AUTHOR: Liu [D]
TITLE: Education Facilities: Kindergarten Through Grade 12
FISCAL COMMITTEE: yes

URGENCY CLAUSE: yes
INTRODUCED: 01/13/2015
LAST AMEND: 06/03/2015
DISPOSITION: Pending
FILE: 61
LOCATION: Senate Third Reading File
SUMMARY:

Revises the definition of modernization under the Leroy F. Greene School Facilities Act of 1998 to include replacement facilities. Requires a school district to certify that it has a certain school facilities master plan consistent with a certain sustainable communities strategy. Makes changes concerning evaluation of certain costs, eligibility, a statewide school facilities inventory, grants for seismic mitigation purposes, funding of joint-use facilities. Enacts a facilities-related bond Act.

STATUS:

06/04/2015 In SENATE. Read second time. To third reading.
Alert: Xpress

CA SB 119

AUTHOR: Hill [D]
TITLE: Protection of Subsurface Installations
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 01/14/2015
LAST AMEND: 07/01/2015
DISPOSITION: Pending
LOCATION: Assembly Judiciary Committee
SUMMARY:

Relates to excavation. Makes changes relating to a regional notification center and subsurface installations. Provides for delineation of areas to be excavated, preservation of certain plans, excavator damages for improperly inaccurate field mark, pipeline safety, an exemption for certain residential property owners using hand tools, the creation of an advisory committee, and the use of moneys collected as a result of the issuance of citations. Creates a complaint authority.

STATUS:

07/06/2015 From ASSEMBLY Committee on UTILITIES AND COMMERCE:
Do pass to Committee on JUDICIARY.

CA SB 194

AUTHOR: Cannella [R]
TITLE: Vehicles: High-Occupancy Vehicle Lanes
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/10/2015
DISPOSITION: Pending
LOCATION: Senate Rules Committee
SUMMARY:

Makes technical, nonsubstantive changes to existing law that authorizes local authorities and the Department of Transportation to establish exclusive or preferential use of highway lanes for high-occupancy vehicles on highways under their respective jurisdictions.

STATUS:

02/19/2015 To SENATE Committee on RULES.

CA SB 313

AUTHOR: Galgiani [D]

TITLE: Local Government: Zoning Ordinances: School Districts
FISCAL COMMITTEE: no
URGENCY CLAUSE: no
INTRODUCED: 02/23/2015
LAST AMEND: 05/12/2015
DISPOSITION: Pending
FILE: A-1
LOCATION: Senate Inactive File
SUMMARY:

Conditions the authorization to render a city or county zoning ordinance inapplicable to a proposed use of school district property upon compliance with a notice requirement regarding a schoolsite on agricultural land. Requires the governing board of a district to notify a city or county of the reason the board intends to take a specified vote. Requires the vote to be based upon findings that such an ordinance fails to accommodate the need for renovation or expanding an existing school, or for a new school.

STATUS:

06/02/2015 In SENATE. To Inactive File.

CA SB 321

AUTHOR: Beall [D]
TITLE: Motor Vehicle Fuel Taxes: Rates: Adjustments
FISCAL COMMITTEE: yes
URGENCY CLAUSE: yes
INTRODUCED: 02/23/2015
LAST AMEND: 05/27/2015
DISPOSITION: Pending
COMMITTEE: Assembly Revenue and Taxation Committee
HEARING: 07/13/2015 1:30 pm
SUMMARY:

Relates to motor fuel tax rates. Requires the State Board of Equalization to adjust the rate in a manner as to generate an amount of revenue equal to the amount of revenue loss attributable to an exception that reflects the combined average of the actual fuel price over previous fiscal years and the estimated fuel price for the current fiscal year. Relates to revenue neutrality for each year.

STATUS:

06/15/2015 To ASSEMBLY Committee on REVENUE AND TAXATION.

CA SB 491

AUTHOR: Beall [D]
TITLE: Transportation: Omnibus Bill
FISCAL COMMITTEE: yes
URGENCY CLAUSE: no
INTRODUCED: 02/26/2015
LAST AMEND: 06/29/2015
DISPOSITION: Pending
LOCATION: Assembly Transportation Committee
SUMMARY:

Provides provisions regarding transportation to include vehicle registration fees for air quality, transit security, hazardous materials license endorsement, commercial driver cargo security, commercial motor vehicle speedometers, use of flags and lighting on oversized loads, placing a lighted fusee to a vehicle, truck tractor wheel service breaks, use of saddle mounts or tow-bars, securing vehicles from fumes and hazards, earphones prohibition, bikeways, highway descriptions, and vehicle accident reports.

	STATUS:	
	06/29/2015	From ASSEMBLY Committee on TRANSPORTATION with author's amendments.
	06/29/2015	In ASSEMBLY. Read second time and amended. Re-referred to Committee on TRANSPORTATION.
CA SB 564	AUTHOR:	Cannella [R]
	TITLE:	Vehicles: School Zone Fines
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	02/26/2015
	DISPOSITION:	Pending
	LOCATION:	Assembly Transportation Committee
	SUMMARY:	
		Requires that an additional fine be imposed if a certain violation occurred when passing a school building or school grounds and the highway is posted with a standard warning sign and an accompanying sign notifying motorists that increased penalties apply for traffic violations that are committed within that school zone. Requires the funds from additional fines be deposited in the State Highway Account for funding school zone safety projects within the Active Transportation Program.
	STATUS:	
	05/22/2015	To ASSEMBLY Committee on TRANSPORTATION.
CA SB 595	AUTHOR:	Cannella [R]
	TITLE:	Vehicles: Prima Facie Speed Limits: Schools
	FISCAL COMMITTEE:	no
	URGENCY CLAUSE:	no
	INTRODUCED:	02/27/2015
	DISPOSITION:	Pending
	LOCATION:	Senate Rules Committee
	SUMMARY:	
		Makes technical nonsubstantive changes to existing law concerning the prima facie speed limit when approaching or passing a school.
	STATUS:	
	03/12/2015	To SENATE Committee on RULES.
CA SB 632	AUTHOR:	Cannella [R]
	TITLE:	Vehicles: Prima Facie Speed Limits: Schools
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	02/27/2015
	DISPOSITION:	Pending
	LOCATION:	Senate Transportation and Housing Committee
	SUMMARY:	
		Allows a city or county to establish in a residence district, on a highway with a posted speed limit of 30 miles per hour or slower, a 15 miles per hour prima facia limit when approaching at a distance of less than 500 feet from, or passing, a school building or the grounds thereof, contiguous to a highway and posted with a school warning sign that indicates a speed limit of 15 miles per hour, while children are going to or leaving the school, either during school hours or during the noon recess period.
	STATUS:	

	04/14/2015	In SENATE Committee on TRANSPORTATION AND HOUSING: Not heard.
	Alert:	Xpress
	Priority:	High
CA SCA 1	AUTHOR:	Lara [D]
	TITLE:	University of California: Legislative Control
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	12/04/2014
	DISPOSITION:	Pending
	LOCATION:	Senate Education Committee
	SUMMARY:	
		Proposes an amendment to the Constitution to repeal the constitutional provisions relating to the University of California and the regents. Requires the university and the regents to be continued in existence subject to legislative control as may be provided by statute. Requires the Legislature from enacting any law that restrains academic freedom or imposes educational or curricular requirements on students.
	STATUS:	
	01/15/2015	To SENATE Committees on EDUCATION and ELECTIONS AND CONSTITUTIONAL AMENDMENTS.
CA SCA 7	AUTHOR:	Huff [R]
	TITLE:	Motor Vehicle Fees and Taxes:Restriction on Expenditure
	FISCAL COMMITTEE:	yes
	URGENCY CLAUSE:	no
	INTRODUCED:	04/09/2015
	LAST AMEND:	05/28/2015
	DISPOSITION:	Pending
	LOCATION:	Senate Transportation and Housing Committee
	SUMMARY:	
		Proposes an amendment to the Constitution to prohibit the Legislature from borrowing revenues from fees and taxes imposed by the State on vehicles or their use or operation, and from using those revenues other than as specifically permitted by a specified Article. Provides that none of those revenues may be pledged or used for the payment of principal and interest on bonds or other indebtedness. Revises the use of specified fuel tax revenues for mass transit purposes and for boating-related activities.
	STATUS:	
	05/28/2015	From SENATE Committee on TRANSPORTATION AND HOUSING with author's amendments.
	05/28/2015	In SENATE. Read second time and amended. Re-referred to Committee on TRANSPORTATION AND HOUSING.
CA AB 2 a	AUTHOR:	Perea [D]
	TITLE:	Transportation Projects: Comprehensive Lease Agreements
	INTRODUCED:	06/25/2015
	DISPOSITION:	Pending
	LOCATION:	ASSEMBLY
	SUMMARY:	
		Amends existing law that authorizes the Department of Transportation and regional transportation agencies to enter into comprehensive development lease

agreements with public and private entities for certain transportation projects. Extends this authorization indefinitely and includes within the definition of regional transportation agency the Santa Clara Valley Transportation Authority.
STATUS:

06/25/2015 INTRODUCED.

CA SB 1 a

AUTHOR: Beall [D]
TITLE: Transportation Funding
INTRODUCED: 06/22/2015
DISPOSITION: Pending
LOCATION: Senate Rules Committee
SUMMARY:

Creates the Road Maintenance and Rehabilitation Program to address deferred maintenance on the state highway system and the local street and road system. Provides for an increase the motor vehicle fuel and diesel fuel excise tax, the vehicle registration fees, the redirection of commercial vehicle weight fees for transportation bonds and transportation loans repayment, the breakout of road maintenance funds, an increase in the vehicle license fee for bond debt service, and funding for state highways.

STATUS:

07/01/2015 Withdrawn from SENATE Committees on TRANSPORTATION
AND HOUSING and GOVERNANCE AND FINANCE.

07/01/2015 Re-referred to SENATE Committee on RULES.

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Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

8.

Meeting Date: 07/16/2015
Subject: RECEIVE Report on the Olympic Corridor Trail Connector Study
Submitted For: John Kopchik, Director, Conservation & Development Department
Department: Conservation & Development
Referral No.: Multiple
Referral Name: Multiple
Presenter: John Cunningham, DCD **Contact:** John Cunningham (925)674-7833

Referral History:

The Transportation, Water, and Infrastructure Committee (TWIC) received an update in August 2014. The Study is now in its draft final stage and staff is returning to TWIC requesting additional comment/direction and providing recommendations.

Referral Update:

Subsequent to the last report to TWIC on this study in August 2014, there has been an additional stakeholder meeting, and two public meetings (one to discuss details of the alignment options, and one to present the draft study).

In addition to these public meetings, there have been numerous internal meetings to discuss process, design, and engineering issues. The project has received substantial support from the public, both during public meetings and independent, direct communication with staff as well as expressed support from the relevant Regional Transportation Planning Committees (RTPCs).

The subject study is attached, critical issues and steps are highlighted below.

Preferred Alignment

In summary, this study recommends that a "low-stress" facility be constructed in the majority of the corridor. This type of facility is often referred to as a "protected bicycle lane" or "cycle track" (3). This low-stress facility would connect the Lafayette-Moraga Trail (LMT) to the Iron Horse Trail (IHT). This type of facility is critical for several reasons:

1. Protected bicycle facilities or cycle tracks have been shown to be one of the best, if not the best, investments you can make to increase the number of people riding bikes (1),
2. (related to #1 above) Contra Costa County has the lowest trips-by-bike-bike rate in the Bay Area(2). Investments such as the study's preferred alignment are shown to be extremely effective in increasing the number of people riding bikes(1).
3. If Class I facilities could be considered freeways for cyclists, this project would be considered the equivalent of connecting State Route 24 to Interstate 680. Consistent with this analogy, this corridor already experiences substantial demand. However, due to the constrained nature of the current route, users of the corridor are limited to the "Strong & Fearless" type of rider (5). The preferred design would expand corridor users to "Enthusied & Confident" and "Interested but Concerned" riders.

The attached report describes the preferred alignment in substantial detail starting on page 5.1 (Page 12 of the .pdf). In textual summary, the route is as follows:

- Starting at the termination of the LMT (at the Olympic Blvd Staging Area) in the western end of the corridor,
- the alignment would head east along Olympic Boulevard to California Boulevard,
- south on California Boulevard to Newell Avenue,
- east on Newell Avenue towards the IHT, and
- Connect to the IHT at the eastern end of the corridor at the intersection of S. Broadway & Newell Avenue, near Macy's and Whole Foods.

Comments on the Plan

Comments collected on the plan are detailed in Appendix A. As indicated in the introductory paragraphs to this report, the report had had consistent support with constituents engaged in the process. Staff and the prime consultant on the project, Alta

Planning + Design, have been able to respond to the majority of comments and concerns raised during this process. As indicated in the Next Steps section below, this study is starting point and will spawn subsequent, smaller implementation projects. Some concerns, traffic and parking, are going to be best responded to at the time of specific project implementation.

Next Steps

This planning level study is a starting point for more detailed design which includes different projects in different jurisdictions: **Geographically and Jurisdictionally**, this project spans the County and two Cities, Lafayette and Walnut Creek. **Regionally**, this project is now included in the Contra Costa Transportation Authority's TEP. **Sub-regionally**, this project spans the SWAT and TRANSPAC RTPCs, both of which have included the project in their TEP project lists.

The recommendations section includes direction to continue coordination and project development with appropriate entities. The agencies and committees listed above would be included in this coordination effort.

Funding

As described in the Funding Sources section of the report on Page 6-7 (page 49 of the .pdf) the project is eligible for numerous federal, state, and local funding sources. The recommendations sections include direct to staff to pursue funding opportunities.

Consistent with the Board of Supervisors position as expressed to the Contra Costa Transportation Authority on the Countywide Transportation Plan in October 2014 (4), staff has been working through the appropriate Regional Transportation Planning Committees, SWAT (Southwest Area Transportation Committee), and TRANSPAC (Transportation and Partnership Committee) to include the subject project in the Transportation Expenditure Plan (TEP). As TWIC has previously discussed, the Contra Costa Transportation Authority is in the process of developing a TEP for a potential transportation sales tax measure in 2016.

(1) In the two U.S. cities that first started building modern protected bike lanes, New York and Washington D.C., bike commuting doubled from 2008 to 2013.

US Census - *NYC and DC, protected lane pioneers, just doubled biking rates in 4 years*

<http://www.peopleforbikes.org/blog/entry/nyc-and-dc-protected-lane-pioneers-just-doubled-biking-rates-in-4-years>

62 percent of people who live near protected lane projects *"would be more likely to ride a bicycle if motor vehicles and bicycles were physically separated by a barrier."*

Monseré, C., et al., 2014 - Lessons from the Green Lanes (National Institute for Transportation and Communities)

http://trec.pdx.edu/research/project/583/Lessons_from_the_Green_Lanes:_Evaluating_Protected_Bike_Lanes_in_the_U.S._

The average protected bike lane sees bike counts increase 75 percent in its first year alone.

Monseré, C., et al., 2014 - Lessons from the Green Lanes (National Institute for Transportation and Communities)

<http://www.peopleforbikes.org/blog/entry/everywhere-they-appear-protected-bike-lanes-seem-to-attract-riders>

NYC's Prospect Park West protected bike lane saw a 190 percent increase in weekday ridership, with 32 percent of those biking under age 12.

NYC DOT, 2012 - Prospect Park West: Traffic Calming & Bicycle Path

http://www.nyc.gov/html/dot/downloads/pdf/2012_ppw_trb2012.pdf

After a protected bike lane was installed on Chicago's Kinzie Street: Bicycle ridership on increased 55 percent, according to morning rush hour counts; Forty-one percent of respondents changed their usual route to take advantage of the new lane; Bicyclists accounted for a majority of all eastbound traffic (53 percent) and more than one third (34 percent) of total street traffic during a CDOT traffic count conducted during morning rush hour in August 2011.

Chicago DOT, 2011 - Initial Findings: Kinzie Street Protected Bike Lane

http://www.chicagobikes.org/pdf/Kinzie_Initial_Findings.pdf

(2) Regional Bicycle Plan for the San Francisco Bay Area - 2009 Update

Table 3.3: Average Bay Area total weekly bicycle trips (weekdays+weekends; 2000)

Contra Costa County % of all trips by bicycle = 0.6%, next highest is Solano and Sonoma at 1.0%, the highest is San Francisco at 2.1%.

http://www.mtc.ca.gov/planning/bicyclespedestrians/MTC_Regional_Bicycle_Plan_Update_FINAL.pdf#page=22

(3) From the National Association of City Transportation Official's *Urban Bikeway Design Guide*:

<http://nacto.org/publication/urban-bikeway-design-guide/cycle-tracks/>

*A **cycle track** is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed cycle tracks are located to the curb-side of the parking (in contrast to bike lanes).*

Cycle tracks may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the cycle track from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or bollards. By separating cyclists from motor traffic, cycle tracks can offer a higher level of security than bike lanes and are attractive to a

wider spectrum of the public.

(4) October 21, 2014 Letter from the Contra Costa County Board of Supervisors to the Contra Costa Transportation Authority re: the 2014 Countywide Transportation Plan

"Major Projects & Emerging Planning Initiatives

*A comprehensive response on project priorities can be seen in the attached list. This list includes the Board of Supervisor's high priority projects including, but not limited to, TriLink (SR239), North Richmond Truck Route, I-680 HOV Gap Closure, **Iron Horse/Lafayette-Moraga Trail Connector**, Kirker Pass Road Truck Climbing Lane, Vasco Road Safety Improvements, and Northern Waterfront Goods Movement Infrastructure Projects."*

(5) From: *FOUR TYPES OF CYCLISTS? Testing a Typology to Better Understand Bicycling Behavior and Potential*. Jennifer Dill, Ph.D, Nathan McNeil, Portland State University August 2012:

Strong & Fearless: Very comfortable without bike lanes

Enthusied & Confident: Very comfortable with bike lanes

Interested but Concerned: Not very comfortable, interested in biking more. Not very comfortable, currently cycling for transportation but not interested in biking more

No Way No How: Physically unable. Very uncomfortable on paths. Not very comfortable, not interested, not currently cycling for transportation

http://web.pdx.edu/~jdill/Types_of_Cyclists_PSUWorkingPaper.pdf#page=9

Recommendation(s)/Next Step(s):

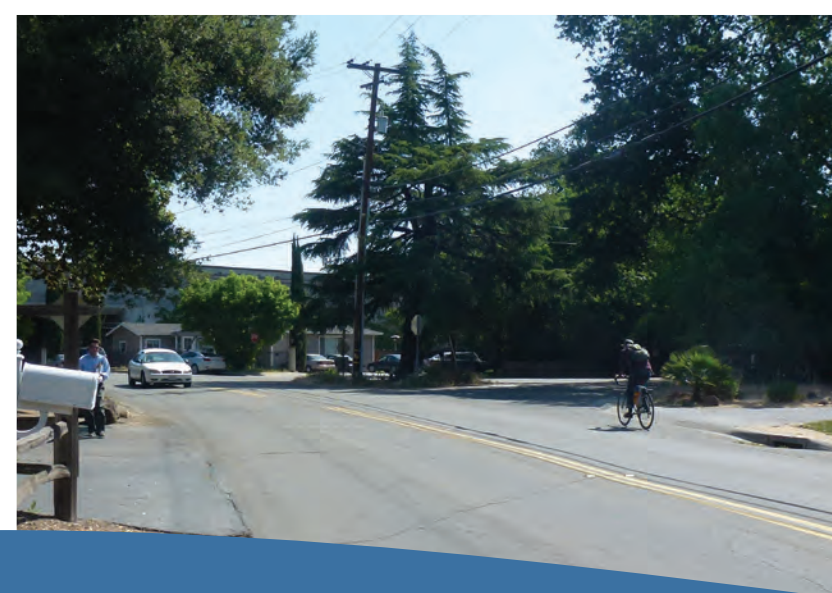
CONSIDER the report, provide COMMENT, and DIRECT staff as appropriate including 1) bringing the Olympic Corridor Trail Connector Study to the full Board of Supervisors for approval, 2) continue coordination and project development in conjunction with appropriate entities as described in this report, and 3) pursue funding opportunities as described in the study and as directed by the Committee.

Fiscal Impact (if any):

None.

Attachments

Olympic Connector Preferred Alignment Final



Olympic Corridor Trail Connector Study

Preferred Alignment Report

June 2015

PREPARED BY:
Alta Planning + Design

IN ASSOCIATION WITH:
DKS Associates, Inc.
Harrison Engineering Inc.
The Environmental Collaborative

PREPARED FOR:
Contra Costa County
City of Lafayette
City of Walnut Creek

This project is funded through a grant from the Contra Costa County Transportation Authority



Acknowledgements

Technical Advisory Committee

- Brad Beck, Senior Transportation Planner, Contra Costa Transportation Authority
- Jeremy Lochirco, Senior Planner, City of Walnut Creek
- Jerry Fahy, Civil Engineer, Contra Costa County Public Works Department
- Jim Townsend, Manager Trails Development Program, East Bay Regional Park District
- John Cunningham, Principal Planner, Contra Costa County Department of Conservation and Development
- Leah Greenblat, Transportation Planner, City of Lafayette
- Mary Halle, Associate Civil Engineer, Contra Costa County Public Works Department
- Mike Carlson, Civil Engineer, Flood Control/Clean Water Contra Costa County Public Works Department

Consulting Team

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- Jennifer Donlon Wyant, Project Manager
- Kristin Maravilla, Designer
- Emily Tracy, Planner

Harrison Engineering

- Randell Harrison, PE, QSD
- T. Ryan O’Kane, PE

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- James. A. Martin

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1. Introduction

The Olympic Boulevard Corridor Trail Connector Study is an investigation to connect two well-used, multi-use regional trails in Contra Costa County – the Lafayette-Moraga Trail and the Iron Horse Regional Trail – with low stress, convenient, and family friendly bicycle and pedestrian facilities.

The communities along the corridor envision a trail connector that will help them connect, become healthier, and support thriving communities. Attractive and low stress facilities such as this vision for the Olympic Boulevard Corridor Trail Connector (Connector) are attractive and welcoming to the broad community and contribute to economic development.

The Connector will provide many benefits to the communities of Lafayette, Contra Costa County, and Walnut Creek. These benefits include:

- Connecting community members to work
- Connecting community members to recreation activities
- Connecting community members to schools
- Connecting community members to shopping
- Supporting economic activity
- Supporting active living through walking or bicycling
- Supporting community development by slower travel by walking or bicycling

This Report describes the preferred alignment and types of facilities that will serve community members of all ages and abilities.

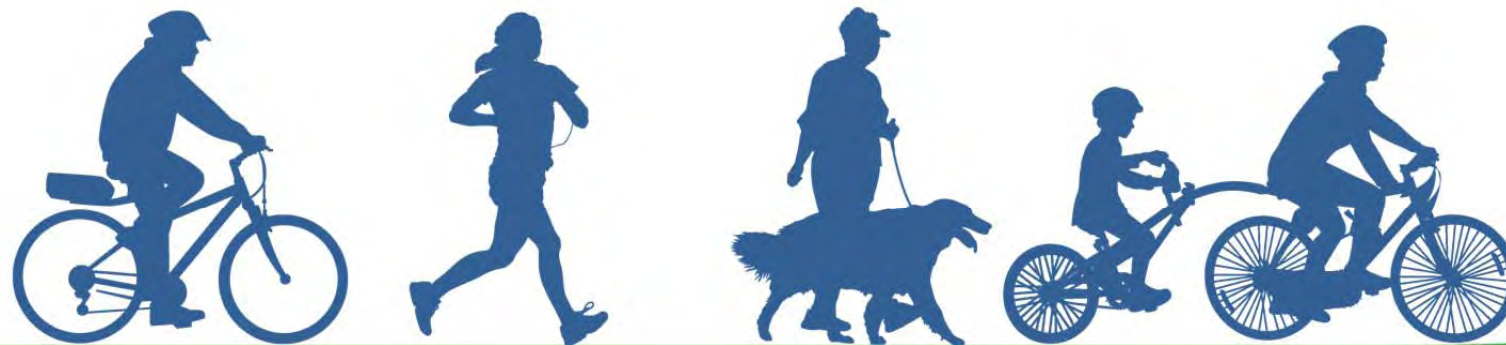


Figure 2-1: Study Area

2. Background and Context

2.1 Study Overview

The Olympic Boulevard Corridor Trail Connector Study (Study) assessed several potential alignments for improved pedestrian and bicycle facilities in the Olympic Boulevard Corridor, connecting two paved multi-use regional trails in Contra Costa County: the Lafayette-Moraga Trail (LMT) and the Iron Horse Trail (IHT). The LMT connects the cities of Lafayette and Moraga and the community of Canyon. The IHT extends from Concord to Dublin, following the Southern Pacific Railroad right-of-way (ROW). The Study objective is to identify the best alignment or combination of alignments to connect the two trails.

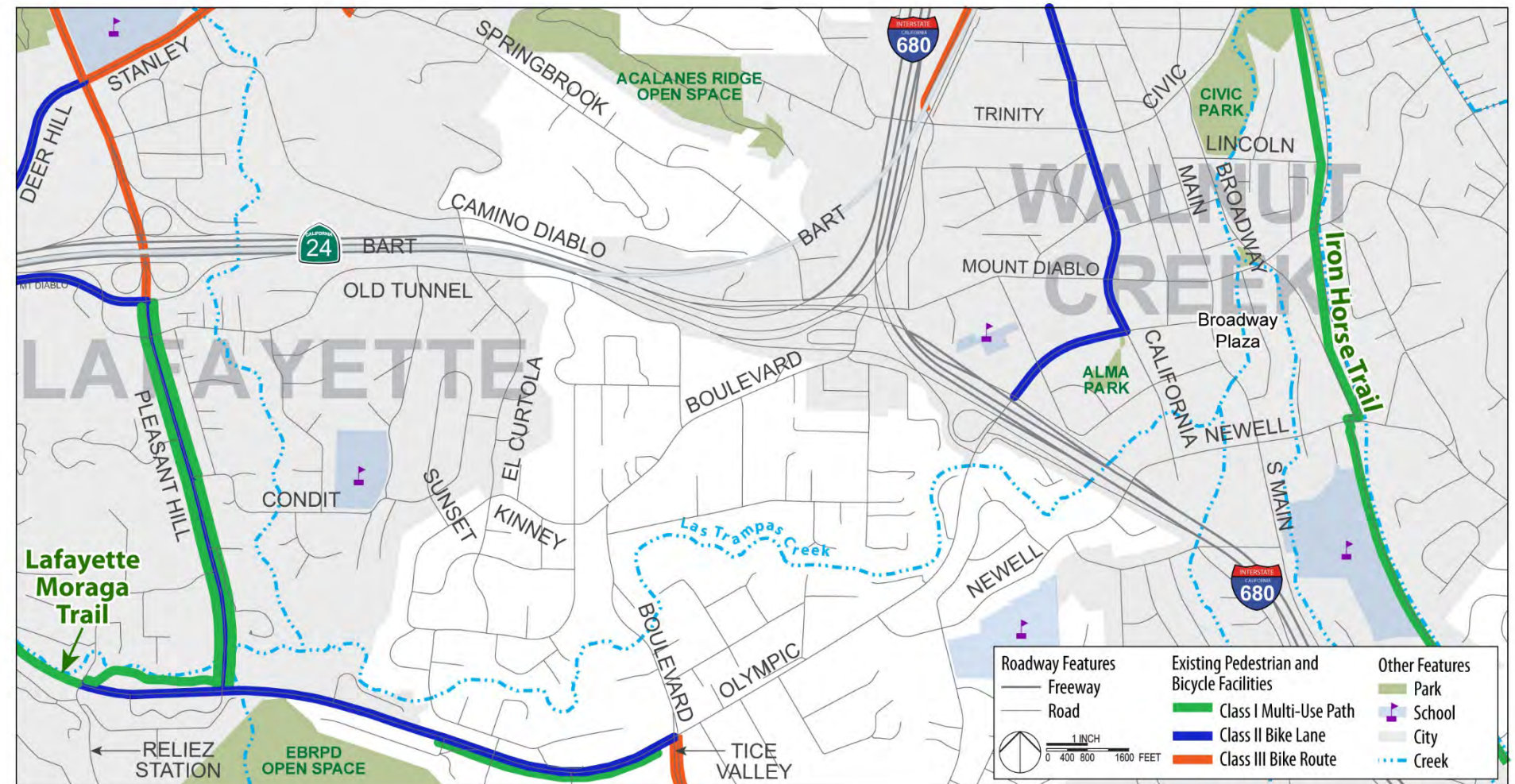
This Study is funded by Contra Costa Measure J (2004) Transportation for Livable Communities grant administered by the Contra Costa Transportation Authority (Authority). Consistent with the grant program description in the voter approved Measure J, the trail connector will improve walking and bicycling access to housing, schools, job centers, and transit by:

- Providing a high-quality non-motorized facility connecting housing and jobs, services, and retail areas including Mt. Diablo Boulevard and St. Mary's College in Lafayette and Downtown Walnut Creek;
- Providing a high-quality non-motorized facility(s) connecting housing to schools;
- Providing an improved bicycle and pedestrian connections to transit in Lafayette and downtown Walnut Creek; and
- Improving access to the IHT which, in turn, provides additional non-motorized, countywide access to retail, recreational areas, and job centers.

2.1.1 Scope and Study Area

The Study began in spring 2013 and examined several possible alignments and identified a draft preferred alignment connecting the LMT and the IHT. The Study Area spans three jurisdictions including the City of Lafayette, unincorporated Contra Costa County, and the City of Walnut Creek (Figure 2-1).

The Study recommends improvements which could be implemented in phases, in addition to geographic phasing of improvements. The recommendations include short-term/low-cost improvements as well as longer term/larger scale projects that would require substantial reconstruction of road corridors and travel lanes, or collaboration with private property owner's regarding potential modification of private frontage improvements. In any case, these improvements are intended to provide a connector between the LMT and IHT, which would significantly improve safety and accessibility for pedestrians and bicyclists along the corridor.



2.1.2 Existing Conditions Report

An Existing Conditions Report, provided as a separate document, includes detailed background information for and analysis of potential alignment options. It describes the relevant background, policies, conditions, issues, objectives, and potential challenges in the Study Area for each possible alternative. Review of these alternatives through a Technical Advisory Committee (TAC), local Stakeholders Group, and a general public workshop resulted in the preferred/recommended alternatives presented here.

2.1.3 Technical Advisory Committee

The Technical Advisory Committee (TAC) for the project consisted of staff from Contra Costa County, the cities of Walnut Creek and Lafayette, the East Bay Regional Park District, and the Contra Costa Flood Control District (CCFCD). The TAC provided valuable input on previous and current planning efforts, identified opportunities and challenges, and guided the alignment selection.

The TAC met through a series of meetings between 2013-2015.

2.1.4 Stakeholder Meetings and Public Input

A Stakeholder meeting was held on August 15, 2013. The purpose of this meeting was to gather input from representative groups on existing conditions, opportunities, and challenges for the Connector Trail. Groups invited to participate included:

- | | |
|---|--|
| ■ Acalanes School District | ■ Lafayette Unified School District |
| ■ Bike East Bay | ■ Parkmead Association |
| ■ Bike Walnut Creek | ■ Parkmead Elementary |
| ■ Broadway Shopping Center | ■ Saranap Association |
| ■ Caltrans | ■ Sierra Club |
| ■ Greenbelt Alliance | ■ Sun Valley Swim Club |
| ■ Hall Equities Group | ■ Supervisor Andersen's Office |
| ■ Kaiser Permanente | ■ Supervisor Mitchoff's Office |
| ■ Lafayette Bicycle Pedestrian Advisory Committee | ■ Sustainable Lafayette |
| ■ Lafayette Chamber of Commerce | ■ Walnut Creek Chamber of Commerce |
| ■ Lafayette Circulation Commission | ■ Walnut Creek Downtown Business Association |
| ■ Lafayette Homeowners Association: Olympic Oaks | ■ Walnut Creek School District |
| ■ Lafayette Homeowners Association: Pleasant Hills and Valley | ■ Walnut Creek Watershed Council |
| ■ Lafayette Homeowners Council | ■ White Pony Preschool |
| ■ Lafayette Park, Recreation and Trails Commission | |

Following the stakeholder meeting, a public meeting was held on December 5, 2013 where approximately 35 community members attended. Similar to the stakeholder meeting, this meeting focused on existing conditions, opportunities, and challenges. A public meeting to share the Draft Study was held on September 16, 2014 where approximately 30 community members attended and provided input on the recommendations.

In addition to the formal meetings, Bike East Bay organized a bike ride of route alternatives on October 12, 2013. County and consultant staff participated.



Parent riding to the Lafayette Moraga Trail

3. Connector Development Vision, Goals and Objectives

3.1 Vision Statement

The Olympic Boulevard Corridor Trail Connector will close a major gap in the Central Contra Costa County trail network. This gap closure will link the Lafayette-Moraga and Iron Horse Regional Trails creating a network of comfortable, convenient off-street trails and on-street bike and pedestrian facilities connecting to area schools, employment centers, transit hubs, shopping districts, neighborhoods, community facilities, parks, and open spaces. This Connector, along with the Lafayette-Moraga and Iron Horse Regional Trails and the Contra Costa Canal Trail, which joins the Iron Horse Regional Trail 1.5 miles to the north, will connect the majority of Central Contra Costa cities with the off-street trail network.

This vision statement was developed with input from a variety of stakeholders, including Contra Costa County and the cities of Lafayette and Walnut Creek. Residents were invited to share their vision for the Connector during several public events.

The ideal vision for the Connector expressed in the public participation process is a separated, buffered “cycle track” facility (see Section 5.3 for descriptions of a cycle track and other facility types), ideally with a separate path or sidewalk for pedestrians. This type of facility accommodates the broadest range of users with the highest degree of comfort and safety.

Some parts of the Olympic Boulevard Corridor already have a well-separated shared use path that may be an appropriate comparable facility for a suburban setting. The study team carefully evaluated the opportunities, challenges and requirements to create a continuous separated shared-use or bicycle-oriented path through the entire corridor.

3.2 Goals and Objectives

This Study identifies the following goals and objectives for the Connector based on County, Walnut Creek, and Lafayette planning document goals and objectives for the Connector or pedestrian and bicycle facilities in general:

- Goal: The project should improve bicycle and pedestrian safety and connectivity in Contra Costa County by meeting the following objectives:
 - Provide an enjoyable, low-stress¹ experience along the route that is similar to the experience of using the LMT and IHT and away from the noise and fumes from local roads and highways where feasible.
 - Ensure that the facility offers a direct route and meets or exceeds best practices for pedestrian and bicycle facility design.
 - Provide links and improve access to connect pedestrian and bicycle facilities and important destinations along the corridor (e.g., employment and shopping centers, transit hubs, schools, parks, and open spaces).
 - Improve safety conditions for bicyclists and pedestrians in the corridor by minimizing potential conflicts with motor vehicles and different user groups.
 - To maximize the range of potential users, consider the needs and capabilities of each user group and users of all ages and abilities in the trail design.
 - Maximize the functional aspects of any recommendation in terms of convenience, gradients, directness, cost, and connectivity to major destinations, while minimizing negative impacts to traffic operations.
 - Design a project that is within the financial resources of the County and cities to construct and maintain.
 - Design the project to be consistent with local, state, and federal standards, policies, and goals on pedestrian and bicycle facilities including ADA.
- Goal: The project should minimize impacts to the existing environment by meeting the following objectives:
 - Design the project to avoid significant adverse impacts to the environment.
 - Avoid or minimize impacts to private property.

3.3 Design Guidelines

The Connector, or other pedestrian and bicycle improvements, should conform to California design standards. Pathway design in California is governed by many design documents, the most important of which include the Caltrans Highway Design Manual (HDM), the California Manual of Uniform Traffic Control Devices (MUTCD), and the Access Board Draft Final Accessibility Guidelines for Outdoor Developed Areas. The *Urban Bikeway Design Guide* of the National Association of City Transportation Officials (NACTO) is an important reference for the latest techniques.² The 2001 Contra Costa County Trail Design Resource Handbook supplements the HDM by providing guidance on when and how to exceed the HDM minimum standards for Class I bikeways. The cities of Lafayette and Walnut Creek do not have specific design standards for paved trails and defer to Caltrans standards.



The Iron Horse Trail at South Broadway and Newell Avenue

¹ As used in this Study, a low stress facility is a facility that meets Level of Stress (LTS) 1 or 2 of four levels as defined by Mekuria, Furth & Nixon in “Low-Stress Bicycling and Network Connectivity” (Mineta Transportation Institute, May 2012). LTS 1 is considered suitable for almost all bicyclists, including children trained to safely cross intersections. LTS 2 is suitable to most adult bicyclists but demanding more attention than might be expected from children.

² Caltrans endorsed the NACTO Urban Bikeway Design Guide and the Urban Street Design Guide in April 2014.

4. Alignments Considered

4.1 Alignment Selection Criteria and Environmental Challenges Considered

Alignment Selection Criteria

The criteria used to guide the development of the preferred alignment were informed by the Contra Costa Countywide Bicycle and Pedestrian Plan's evaluation criteria for prioritizing projects as well as input from the TAC, Stakeholder Group, and the community. The criteria include:

- **Range of Users:** The Connector should attract and meet the needs of a broad array of distinct groups of users, including school children, students, seniors, the disabled, families, commuters, and recreationalists.
- **User Experience:** The Connector should provide a low-stress, family-friendly experience that functions for the intended and likely user groups, and addresses potential conflicts between user groups: pedestrians, bicyclists, and persons with disabilities.
- **Neighborhood Compatibility:** The Connector should strive to maintain neighborhood character and may provide traffic calming.
- **Public Support:** The Connector should have public and local jurisdiction support.
- **Destinations:** The Connector should strive to serve key existing and planned activity centers such as shopping areas, employment centers, transit centers, stations or stops, civic buildings, parks, schools, libraries, and other community facilities.
- **Feasibility:** The options should meet basic tests of cost vs. benefit, with cost considerations including environmental impact, right-of-way acquisition, and construction cost, and benefits including the ability of the facility to accommodate a wide range of users.
- **Right-of-Way:** The Connector should include minimal requirement to secure additional ROW and/or agreements from other parties to complete the trail improvements.
- **Environmental Issues:** The Connector should have minimal potential to adversely impact geologic stability, storm drainage, biological or cultural resources, aesthetics, noise, water quality, or other factors typically addressed during the state or federal environmental review process.



South California Boulevard, Walnut Creek
Photo courtesy of John Cunningham

Engineering Challenges

In order to achieve a low-stress, family-friendly connection for a wide range of users, several challenge points in the Study Area were considered and addressed, such as:

- **Use of available ROW and functional allocation of space:** There is little opportunity to acquire additional ROW in this highly-developed corridor. There are heavy, often fast traffic flows, and many complicated intersections and turn movements.
- **Transitions from Class I Bikeways to Class II or Class III facilities:** Ideally, the most appropriate facility can be planned for any given situation, but transitions between paths and bike lanes or routes may create challenges for how bicyclists can safely cross the street, along with wayfinding/directional issues.
- **Connection through downtown Walnut Creek/the Broadway Plaza area:** Downtown Walnut Creek is one of the premier retail and entertainment attractions in the county. It is walkable for pedestrians, but has no well-defined east-west route for bicyclists.
- **Crossings of and connections to busy roads:** This will be critical to the safety and utility of the potential improvements.
- **I-680 undercrossings:** Each of the identified alignments has a constrained undercrossing of I-680. Sidewalks are present, but are currently too narrow for a shared bicyclist and pedestrian facility.
- **Creek alignments:** These alignments are challenging due to lack of public ROW, potential conflicts with adjacent land uses, resources, and flood control operations.

Specific solutions to these challenges are described in Chapter **Error! Reference source not found.** Proposed Preferred Alignment.

A number of constraints, such as limited ROW and cost concerns, may warrant consideration of an interim phase before an ultimate alignment can be implemented.



The study strives to avoid significant adverse impacts to the environment

Biological Challenges

The study corridor is largely developed, which limits the likelihood for occurrence of sensitive biological resources. Based on the field reconnaissance, sensitive resources appear to be limited to regulated trees and the jurisdictional waters associated with Las Trampas and San Ramon Creeks. The potential for occurrence of special-status species along most of the Connector alignment is considered highly unlikely. The two exceptions to this are 1) the possible presence of a number of special-status species in the natural habitat along the creek corridors at bridge crossings, and 2) the possibility that nests of birds are in active use in trees along the trail alignment. Special-status species possibly associated with the aquatic and riparian habitat of the creek corridors could be addressed through conduct of preconstruction surveys by a qualified biologist, worker training and construction exclusion, and appropriate monitoring. Any active nests regulated under State Fish and Game Code and the federal Migratory Bird Treaty Act could be addressed through controls on timing of vegetation removal, preconstruction surveys by a qualified biologist, and appropriate avoidance until young birds have successfully fledged if an active nest has been located within the vicinity of improvements.

The crossings of Las Trampas Creek at South California Boulevard and San Ramon Creek at Newell Avenue would require new bridge structures through regulated habitat. Based on the assumed alignment, the new bridge structures would require removal of mature native trees and affect the banks at both crossings. The extent of disturbance would depend on bridge design, including the need for any support footings, removal of existing vegetation, and other variables. Both streams are perennial and construction may require temporary dewatering of the active channel, again depending on design. Authorizations would be required by both the California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB), and if disturbance below the ordinary high water mark is required (including temporary dewatering during construction) then authorization would also be required by the U.S. Army Corps of Engineers (USACE). Involvement from these agencies would focus on minimizing project-related impacts to areas in their various jurisdictions and potential mitigation efforts including creating, restoring, or enhancing wetlands to compensate for those affected. Given that jurisdictional waters would be affected (new bridges over Las Trampas and San Ramon Creeks in the long-term options) and agency authorizations would be required, this would be considered a significant impact of the project with a high level environmental constraint.

The potential impacts of the project on tree resources will depend on final improvement designs. Based on a preliminary review, however, a considerable number of regulated trees could be removed. A survey of tree trunk location, size, and species would be necessary to accurately assess potential impacts on regulated tree resources. Tree loss would occur along some roadway segments and at the new bridge crossings of Las Trampas Creek on South California Boulevard and San Ramon Creek at Newell Avenue. Given the proximity of tree trunks and root systems to the existing roadway prism, careful construction practices would be critical to minimizing damage and decline of trees to be retained along the Connector alignment. Given that regulated trees would be lost and affected, this would be considered a significant impact of the project with a high level of environmental constraint.

4.2 Eliminated Route Alternatives

This Study reviewed all the public roads that provide significant east-west connections between the two regional trails as well as portions of the Las Trampas Creek corridor that have maintenance roads or are in public ownership and connecting streets or other public corridors between the alternative routes that might be used to create a complete connection.

This section describes routes that were initially considered, but were eliminated through the technical and public review process. These are shown on Figure 4-1. A more detailed analysis of the eliminated route alternatives is provided in the Existing Conditions Report.

Connections to the Olympic Boulevard Route (orange):

Fatal Flaws: Steep hills and environmental challenges

Paulson Lane is a connection within the City of Walnut Creek from Olympic Boulevard southeast via Paulson Lane, a buffer strip in the I-680 ROW, a trail and bridge along and across Las Trampas Creek (discussed in more detail under the Las Trampas Creek Route below) and another buffer strip in I-680 ROW to Newell Avenue (alternative to the western part of Newell Avenue). Paulson Lane should be considered for further study or future connections.

I-680 Off-Ramp / ROW is a connection within the City of Walnut Creek south along the I-680 off-ramp from Olympic Boulevard to Newell Avenue (uses same bridge across Las Trampas Creek).

Alpine Road / Botelho Drive / S. California Boulevard is a connection within the City of Walnut Creek from Olympic Boulevard east of I-680 south on Alpine Road, east on Botelho Drive, and south on S. California Boulevard to Newell Avenue.

Boulevard Way / Mt. Diablo Boulevard Route (blue):

Fatal Flaws: Steep hills, poor sight distance, narrow streets, relatively circuitous route, challenge of navigating under the 24/680 interchange and ramps, and the heavy traffic on Mt Diablo Boulevard.

Boulevard Way in unincorporated Contra Costa County runs from the Olympic Boulevard/Tice Valley Road intersection north and east to the City of Walnut Creek at Mt. Diablo Boulevard then following Mt. Diablo Boulevard east to the IHT. An alternative to using the north-south portion of Boulevard Way was also evaluated.

Condit Road / Leland Drive / Meek Place / Sunset Loop / Kinney Drive is a connection from Olympic Boulevard north along Pleasant Hill Road, then east via Condit Road, Leland Drive, Meek Place, and Sunset Loop in the City of Lafayette, and Kinney Drive to Boulevard Way in unincorporated Contra Costa County.

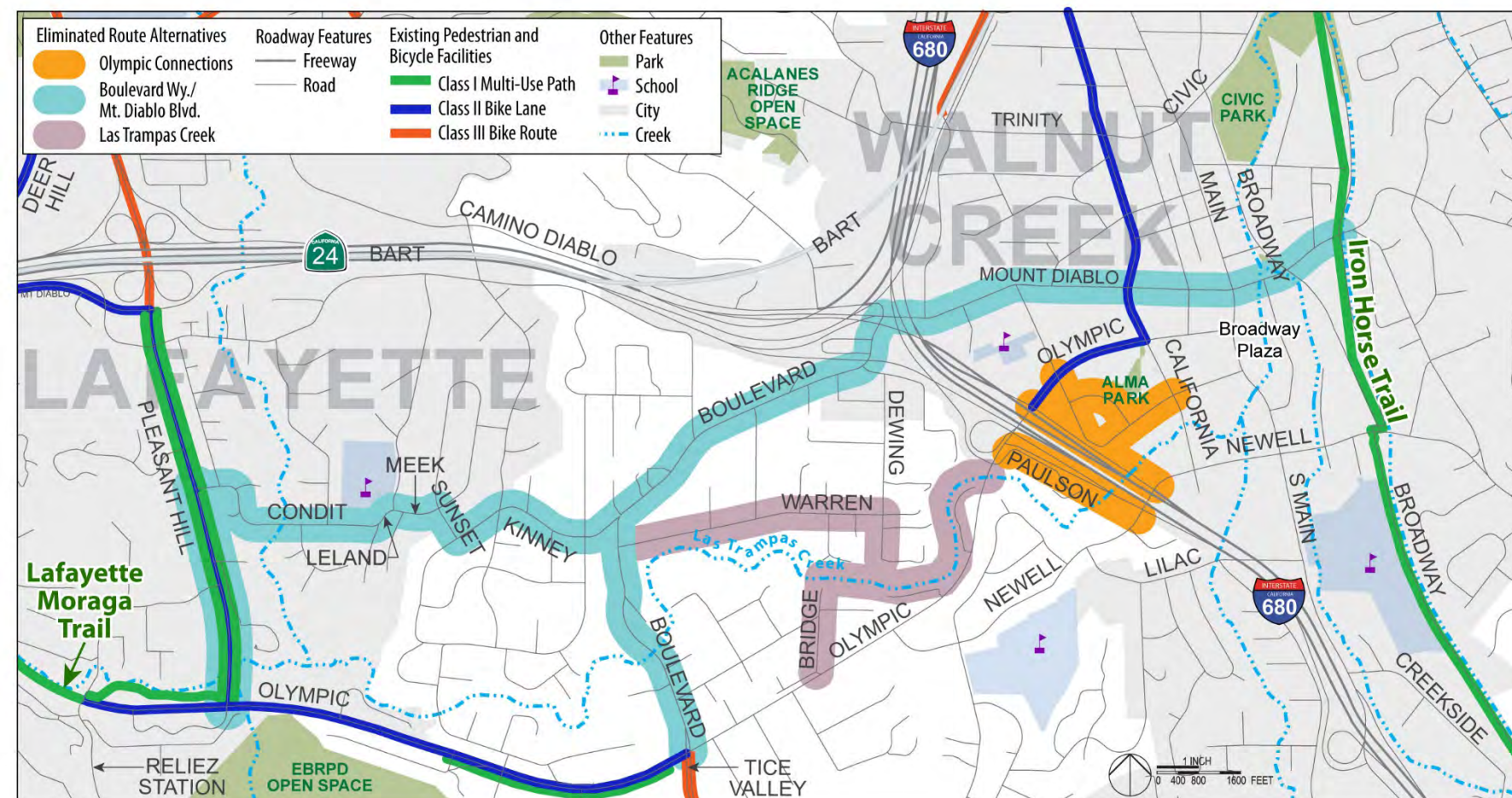
Las Trampas Creek Route (purple):

Fatal Flaws: Indirect connections with the roadway network, limited right-of-way, and potential conflict with adjacent residences.

Most of *Las Trampas Creek* is in private ownership and has residences abutting the creek. However, the portion of the creek from Bridge Road east to Olympic Boulevard in unincorporated Contra Costa County has creek access roads and easements owned by the Contra Costa Flood Control and Water Conservation District, and portions of the creek under and east of I-680 within the City of Walnut Creek are in public ownership by Caltrans. Potential routes to extend or connect to the Creek Route included:

- *Warren Road and Dewing Lane* in unincorporated Contra Costa County from Boulevard Way to Olympic Boulevard (if a bridge is implemented), and;
- *Bridge Road* in unincorporated Contra Costa County from Warren Road to Olympic Boulevard, would require construction of a new pedestrian bridge over the creek.

Figure 4-1: Eliminated Route Alternatives



5. Proposed Preferred Alignment

5.1 Alignment Overview

The preferred route shown in Figure 5-1 is based on the initial review process and identified community preference.

Preferred Route: from the LMT along Olympic Boulevard to California Boulevard, south on California Boulevard to Newell Avenue; Newell Avenue east to the IHT.

Strengths: Primary existing route for bicycle and walking trips, most direct route, most opportunity for low-stress facility improvement, and most popular alignment identified by community members and stakeholders.

Olympic Boulevard is the main east-west arterial connecting downtown Walnut Creek to the Rossmoor community and to Lafayette. This is also the primary existing route for bicycle and pedestrian connections: it is the most direct route, has significant existing facilities, and the most opportunity for improvement toward the goal of a pathway facility separated from traffic – ideally with separate space for pedestrians and bicyclists.

Starting at Reliez Station Road in the City of Lafayette, the route continues east along Olympic Boulevard through unincorporated Contra Costa County to the City of Walnut Creek west of I-680.

The first portion of the route includes improved segments of pathways separated from the roadway west of Tice Valley Boulevard and a “sidepath” adjacent to the roadway extending from Tice Valley Boulevard to Olympic Boulevard at Newell Avenue.

The eastern portion of Olympic Boulevard, starting with the I-680 interchange, has very heavy traffic and constrained width, as does California Boulevard and the portion of Newell Avenue east of California Boulevard.

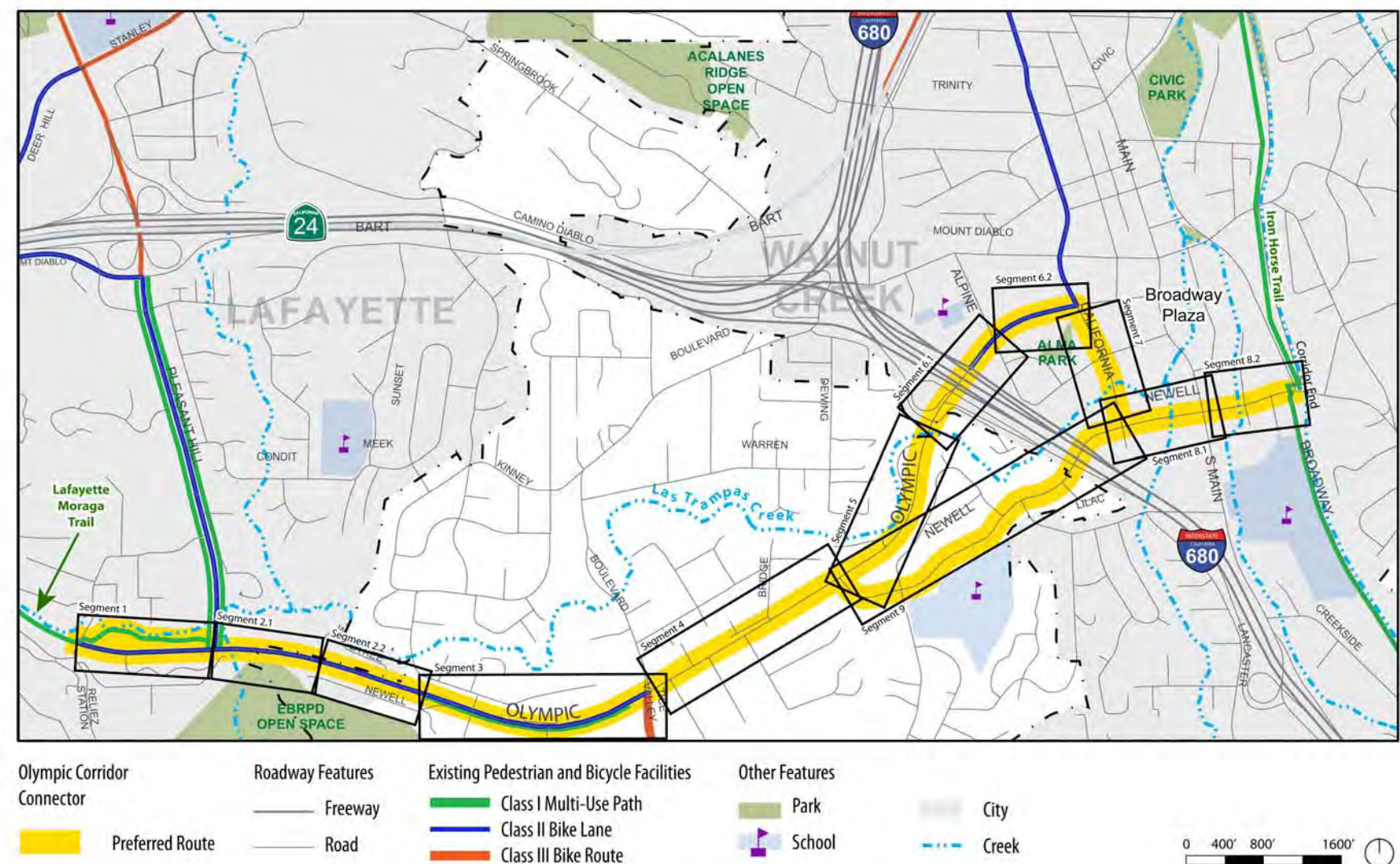
The western portion of Newell Avenue provides an alternative to the eastern portion of the preferred Connector alignment. This portion of Newell Avenue is a narrow, winding, tree-lined residential street. Vehicle turns into Newell Avenue from Olympic Boulevard are blocked to deter through vehicle traffic. There is very limited space for bicycle or pedestrian facility improvements, but Newell Avenue will inevitably continue to be an important bicycle and pedestrian connection, especially to the southern portion of the City of Walnut Creek. This is already a popular route for bicyclists and an important route to Parkmead Elementary School and the Dorris-Eaton School on the west side of I-680 and Las Lomas High School on the east.

The eastern portion of Newell Avenue is a heavily travelled 4 to 6 lane connector through office and commercial areas and serves the busy Kaiser Hospital and adjacent parking structures.

5.2 Chapter Organization

Short and long-term alternatives for improvement of the Connector alignment are presented moving west to east. The route is divided into a series of 14 maps (see Figure 5-1) in order to show sufficient detail. The maps are grouped into 10 segments reflecting changes and similarities of conditions along the route. Maps are accompanied by a series of cross-sections and descriptions of potential short-term and long-term improvements. In some cases there are alternative approaches for how space can be secured to construct the Connector improvements.

Figure 5-1: Preferred Route Alignment



5.3 Preferred Alignment and Improvement Types

5.3.1 Preferred Alignment

Table 5-1 summarizes the improvement concepts for the preferred alignment. This study provides further detail on the potential scope of improvements that could occur given the opportunities, constraints, prior and current plans and policies, and the expressed interests of the community.

Table 5-1: Summary of Recommended Improvements				
Segment		Jurisdiction	Potential Improvement	Related Plans, Efforts
1	Olympic Blvd.: Reliez Station Rd. to Pleasant Hill Rd.	Lafayette	Short Term: Convert existing bike lanes to buffered bike lanes by narrowing vehicle lanes; extend existing path on S. side; signing and marking improvements at crossing of Reliez Station Rd.; wayfinding improvements at Pleasant Hill Rd. intersection Long Term: None – there is already a separate trail	Pending study by City of Lafayette. City of Lafayette is planning to implement a traffic signal at Reliez Station Rd and roundabout at Pleasant Hill Rd.
2.1	Olympic Blvd.: Pleasant Hill Rd. to Windtree Ct.	Lafayette	Short Term: Create buffered bike lanes as above Long Term: Widen existing path on north side to create 10 foot sidepath (requires retaining wall tapering up to 10 feet tall, and median narrowing with tree replacement)	
2.2	Olympic Blvd.: Windtree Ct. to Newell Ct.	Lafayette & CC County	Short Term: Create buffered bike lanes Long Term: Widen existing path on north side to create 14 foot sidepath (requires narrowing median and lane shift to S. at east end; redesign of Newell Ct. intersection and connections	
3	Olympic Blvd.: Newell Ct. to Boulevard Way/ Tice Valley Rd.	CC County	Short Term: Create buffered bike lanes; connect existing Class I path on S. side to Tice intersection; provide bike pockets and crossing improvements at intersection Long Term: Extend continuous path or sidewalks along N. side (requires approx. 4 foot lane shift to the south)	
4	Olympic Blvd.: Boulevard Way/ Tice Valley Rd. to Newell Ave.	CC County	Short Term: Create continuous bike lanes; improve existing sidepath; improve crosswalks to Newell Ave.; improve right turn for bikes from EB Olympic Blvd. to SB Newell Ave. Long Term: Continue the sidepath approximately 100 feet to connect to Newell Ave. (may be included w/ Segment 5)	
5	Olympic: Newell Ave. to I-680	CC County	Short Term: Create bike lanes in constrained portions at turn pockets; buffered bike lanes on other portions Long Term: Expand the existing sidewalks fronting the Villa townhome complex to create a 10 to 12 foot wide sidepath by narrowing lanes and wide portions of medians, eliminating up to 8 curbside parking spaces out of 30. At one location it may be necessary to shift the south side curb 2 feet south to create needed space, involving tree removal.	
6.1	Olympic Blvd.: I-680 to Alpine Road	Walnut Creek	Short Term: Create bike lanes on S. side; bike pockets on N side Long Term: Create a sidepath along the south side of Olympic from Paulson Ln. to Alpine Rd. by constructing retaining walls. Provide enhanced crossing improvements.	City of Walnut Creek has submitted a grant application for improvements at I-680 undercrossing
6.2	Olympic Blvd.: Alpine Rd. to S. California Blvd.	Walnut Creek	Short Term: Convert existing bike lanes to buffered bike lanes by narrowing vehicle lanes Long Term: Add a bike path north of the existing sidewalk on the south side. Create space either by removing a vehicle lane or shifting the roadway 10 to 12 feet north in conjunction with future redevelopment of the properties on the north side	

Segment		Jurisdiction	Potential Improvement	Related Plans, Efforts
7	S. California Blvd.: Olympic Blvd. to Newell Ave.	Walnut Creek	Short Term: Add “sharrows” with green backing to designate lanes as shared with bikes Long Term: On first block convert existing wide sidewalk/plaza on E. side to separate bike path on curb side and sidewalk on inside with street tree, light, and utility space in between. On second block create sidepath by eliminating 2 parking spaces S. of Botelho and 3 to 4 parking spaces on W. side S. of creek and shifting lane W.s, extending curb, and installing bicycle/pedestrian bridge over creek	
8.1	Newell Ave: S. California Blvd. to S. Main St.	Walnut Creek	Short Term: Add green backing to existing “sharrows” designating lanes as shared with bikes; create bike lanes from S. California Blvd. west on Newell Ave. to I-680 undercrossing Long Term: Create sidepath on N. side by narrowing lanes and extending north side curb; OR add a bike path to south of existing sidewalk (create space either by removing a vehicle lane OR narrowing lanes and acquiring 5 – 6 feet of ROW on the south side and shifting roadway south); OR create an all-new sidewalk and bike path in conjunction with future redevelopment of the properties on the north side	City has concept plan for a mid-block crosswalk at Kaiser that might conflict with long-term options
8.2	Newell Ave: S. Main St. to Broadway and IHT	Walnut Creek	Short Term: Add green backing to existing “sharrows” designating lanes as shared with bikes Long Term: Add a bike path to south of existing sidewalk (create space either by removing a vehicle lane) OR create an all-new sidewalk and bike path by narrowing lanes and acquiring 5 – 6 feet of ROW beyond the existing sidewalk on north side; OR create an all-new sidewalk and bike path in conjunction with future redevelopment of the properties on the north. Install a bicycle/pedestrian bridge over creek; sidepath or sidewalk plus bike path continued to Broadway as part of mall redevelopment project; crossing improvements at Broadway intersection to connect to IHT	Broadway Plaza redevelopment plan includes plan for shared use path along Newell Ave. City has concept plan for adding a lane on this portion – reflected in long-term concept. Sidepath shown is not as wide as improvement concept
9	Newell Ave.: west of I-680	CC County	Wayfinding and marking of route	County working with residents on traffic calming concepts
10	Southern connections to the Iron Horse Trail	Walnut Creek	Provide wayfinding signage to aid in connections to/from Olympic/Newell Connector	

5.3.2 Design Concepts

The Indianapolis Cultural Trail is an 8-mile, world-class urban bike and pedestrian path in downtown Indianapolis, Indiana. It was mentioned by public participants in the current study as a good example of a major trail facility. It seamlessly connects neighborhoods, cultural districts, and entertainment amenities while serving as the downtown hub for central Indiana's vast greenway system. The Cultural Trail was made possible by a large public and private collaboration led by Central Indiana Community Foundation, the City of Indianapolis, and several not-for-profit organizations.



Indianapolis Cultural Trail

Preferred Design Concept 1: Bike path or "cycle track" with separate sidewalk or pedestrian path

One configuration of the preferred bicycle/pedestrian facility is illustrated in Figure 5-2. This would include a bike path or "cycle track," ideally 10 to 12 feet wide depending on adjacent obstacles, and separated from motor vehicle lanes by a buffer such as a landscape or decorative pavement strip and/or curb, pylons, or low barrier. A barrier of railing height would not be desirable because bicyclists could hit it and fall into the vehicle lanes. The inner side, away from the curb, would be occupied by a sidewalk with 5 to 8 feet of clear space, depending on the setting and density of anticipated pedestrian traffic. The street trees, street lights, and utilities such as power poles, boxes, signals, and signal controller equipment that typically occupy the outer few feet of the sidewalk space would occupy a 3 to 5 foot zone between the sidewalk and the bike path. Note that this concept is not compatible with bus stops; additional space for the bus stop would need to be provided in the street outside the bike path, or the bus stop would need to be located on a portion of the route that had a shared use path as described under Design Concept 2.

Design Concept 1 is recommended as a long-term improvement in portions of downtown Walnut Creek where there is sufficient space or the space could be created by future lane reduction or private property redevelopment.

Figure 5-2: Preferred Design Concept 1 – Bike path or "cycle track" with separate sidewalk (on left)

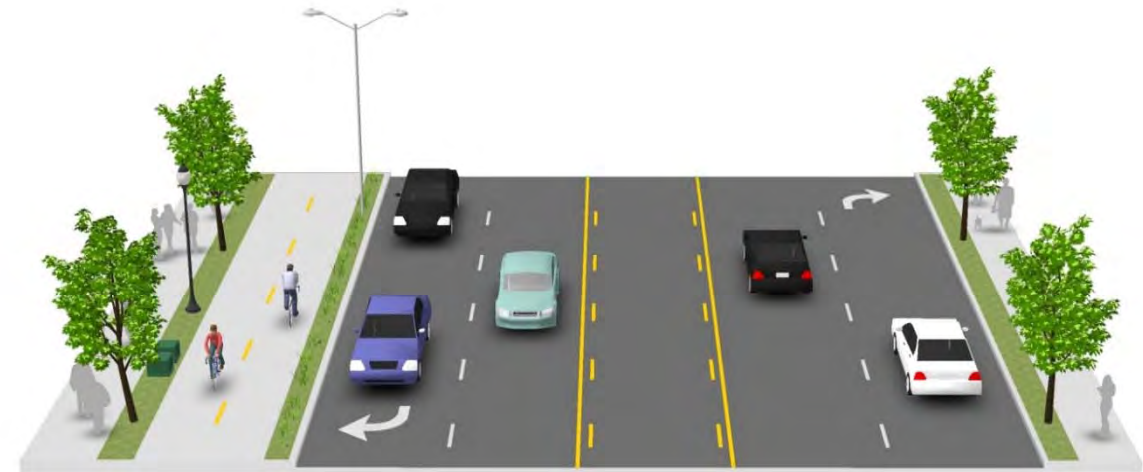
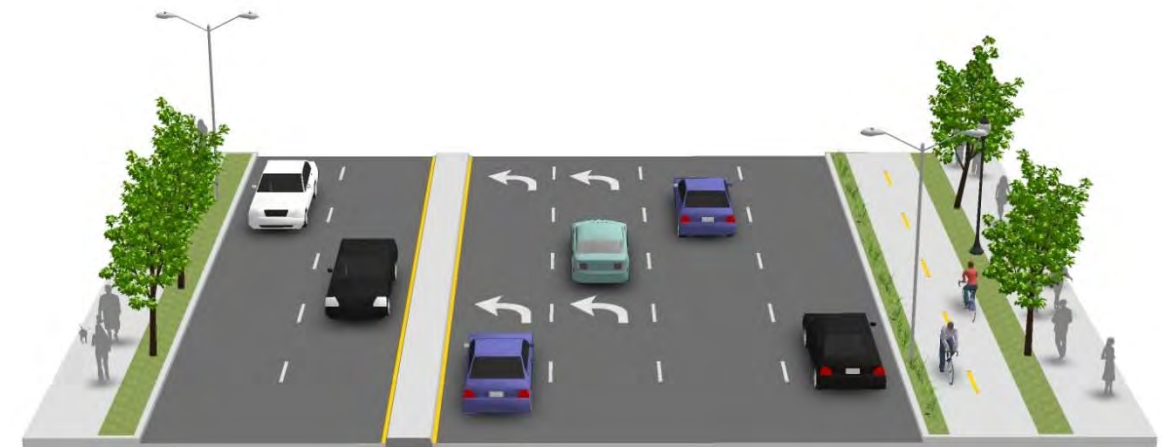


Figure 5-3: Preferred Design Concept 1 – Bike path or "cycle track" with separate sidewalk (on right)

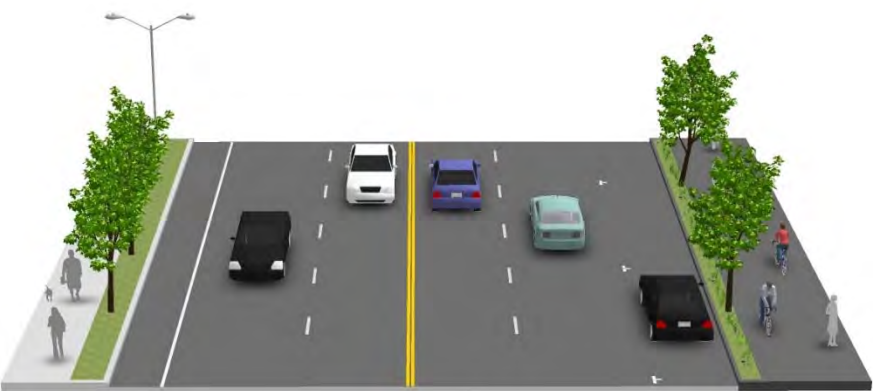


Preferred Design Concept 2: Shared use side path with bike lanes

Where there is not enough room to create a bike path with separate sidewalk, or in some cases to provide on-street dedicated bicycle space, the preferred design concept is a side path. A sidepath is defined in this case as a 10 to 14 foot wide path shared by bicyclists and pedestrians. Typically it is located in the public right-of-way, and takes the place of a sidewalk on that side of the road. It may or may not qualify as a Caltrans Class I Bike Path, which must meet geometric standards defined in Section 1000 of the Caltrans Highway Design Manual. This could be due to lack of 5-foot separation from a roadway or a vertical treatment between the path and roadway, less than standard width, or other departure from Caltrans standards.

Many portions of the existing preferred route have bike lanes – defined as a 5 foot or wider striped shoulder space which ideally will be marked and signed as a bike lane. These are preferred to shared use paths by many bicyclists, and the study recommends that they be preserved in conjunction with other improvements – ideally adding a 2 foot buffer between vehicle lanes and the bike lanes to create “buffered bike lanes.” In no case are existing bike lanes recommended to be removed to create space for a side path or bike path.

Figure 5-4: Preferred Design Concept 2 – Shared use “sidepath” with bike lanes (on right)



Special Considerations for Driveway Crossings

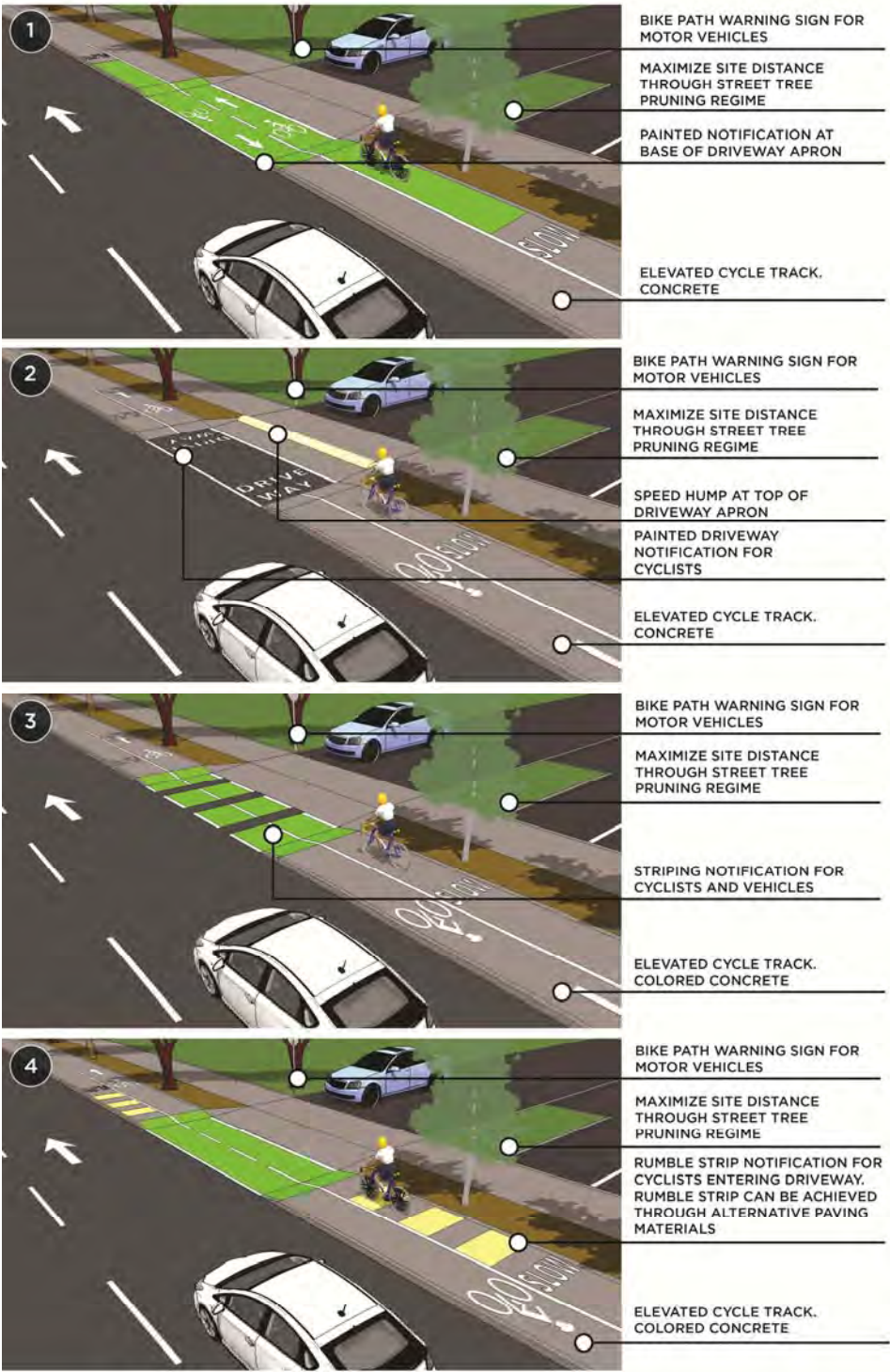
Special design measures are needed at locations where a bike path/sidewalk or sidepath crosses a driveway to minimize conflict and ensure visibility and awareness. These challenges have been addressed on cycletracks and paths throughout the nation, as illustrated by the example below from Seattle. Driveway crossings are varied in their existing configuration. The following guidelines and the design concepts in Figure 5-5 are provided for use in addressing potential conflicts with vehicles at driveways during future more detailed stages of design.

- If raised, maintain the height of the cycle track/bike path through the crossing, requiring automobiles to cross over.
- Prohibit curbside parking 30 feet prior the crossing.
- Use colored pavement markings, colored pavement and/or shared lane markings through the conflict area.
- Place warning signage to identify the crossing



Driveway crossings on Broadway Cycle Track, First Hill Streetcar, Seattle, WA

Figure 5-5: Driveway Crossing Guidance



5.3.3 Design Guidelines

The conceptual plans on the following pages include a number of treatments which are described below in greater detail.

High Visibility Crosswalks

There are a number of different marked crosswalk types, including the high-visibility, continental-style as shown to the right. These types of crosswalks are more visible to drivers and are generally recommended at locations with high pedestrian activity, where slower pedestrians are expected (such as near schools), and where high numbers of pedestrian related collisions have occurred.

In addition to using striping to increase visibility of crosswalks, there are a number of recommended textured crosswalks at key gateway areas.

Advance Stop Lines

Advance stop lines are a painted stripe in the roadway set back from the crosswalk, directing drivers to stop at least 4 feet before the crosswalk. On multi-lane roads advance stop lines increase pedestrian visibility for drivers in other travel lanes, especially important around schools, as students are harder to see than adults. Advance stop lines also discourage encroachment upon the crosswalk at a red light, leaving more free space for pedestrians to cross.

Community Wayfinding

A wayfinding system consists of comprehensive signing to guide roadway users to their destinations along preferred routes. The system can be supplemented with pavement markings that primarily benefit bicyclists. There are three general types of wayfinding signs: confirmation signs, turn signs, and decision signs. Confirmation signs indicate to bicyclists they are on a designated roadway. Turn signs indicate where a route turns from one street onto another. Decision signs mark the junction of two or more routes, inform roadway users of key destinations, and indicate the destination, distance, and direction.

Rectangular Rapid Flashing Beacons

Rectangular rapid flashing beacons (RRFB) are pedestrian actuated devices mounted adjacent to the roadway. The beacon lights are rectangular LED lights installed below a pedestrian crosswalk sign that flash in an alternating pattern when activated. The beacon is dark when not activated. Caltrans has received approval from the Federal Highway Administration (FHWA) for use of RRFBs on a blanket basis at uncontrolled pedestrian crosswalk locations in California including State highways and all local jurisdictions' roadways.

Bike Pocket

A bike pocket is a bike lane between a through lane and a dedicated right turn lane that helps bicyclists traveling straight through an intersection position themselves correctly and minimize right-hook conflicts with vehicles.

Crossbike

A crossbike is a crossing treatment for bicyclists similar to a pedestrian crosswalk. It alerts motorists that there may be bicyclists crossing at this location, and encourages cyclists to cross in these predictable, marked locations.



High Visibility Crosswalk



Advance Stop Lines



Community Wayfinding



RRFB



Crossbike

Side Paths

A side path is a wide sidewalk or path, typically shared by bicyclists and pedestrians. It may or may not qualify as a Caltrans Class I Bike Path due to lack of 5-foot separation from a roadway or a vertical treatment between the path and roadway, less than standard width, or other departure from Caltrans standards. Special consideration should be made to minimize conflict and ensure visibility and awareness at intersections and driveways.

Buffered Bike Lanes

A buffered bike lane is a bike lane that is buffered by a striped "shy zone" between the bike lane and the moving vehicle lane. With the shy zone, the buffered lane offers a more comfortable riding environment for bicyclists who prefer not to ride adjacent to traffic. This design has a number of benefits including:

- Provides greater shy distance between cars and bicyclists
- Provides space for bicyclists to pass each other
- Provides greater space for the bicycle travel lane without making the lane appear so wide that it may be mistaken for car use
- Appeals to not just experienced bicyclists, but people who bicycle on occasion and those new to bicycling

The recommended buffered bike lane design is the same design as a recently implemented Caltrans buffered bikeway on Sloat Boulevard in San Francisco, and is a modified version of the design guidance presented in the NACTO Urban Bikeway Design Guide. The key difference is the proposed design has an inner dashed stripe; this will permit vehicles to cross when necessary, for example to enter or exit driveways.

Green Bike Lanes Through Conflict Areas

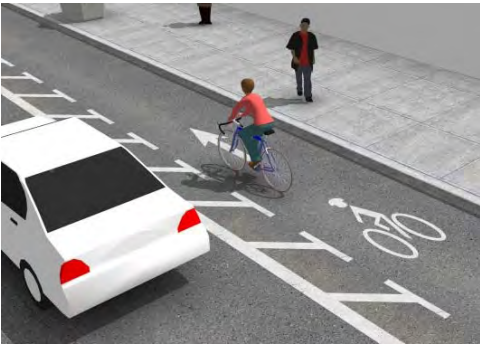
Green bike lanes through conflict areas is the application of green coloring applied to pavement in conflict zones. Benefits of this treatment include:

- Alerts roadway users to expect bicyclists
- Assigns the right of way to bicyclists

The FHWA (Federal Highway Administration) has provided blanket approval for green colored pavement and Caltrans has also approved this treatment.



Sidepath Type Treatment



Buffered Bike Lane



Green Bike Lanes Through Conflict Areas

Two-Stage Turn Boxes

Two-stage turn boxes assist bicyclists with making left turns at multi-lane intersections. This treatment is typically applied on multi-lane streets with high traffic speeds and/or volumes. A two-stage turn box helps a bicyclist make an L-shaped left turn by crossing one leg of the intersection at a time. It provides a number of benefits including:

- Improves bicyclist comfort
- Provides formal waiting area for bicyclists making left turns outside of the crosswalk

This treatment is not a Caltrans approved traffic control device, however the City of Walnut Creek can apply to Caltrans for approval to experiment.

A bicyclist’s path of travel through a two-stage left turn box is illustrated in the panels at right.

1. Bicyclists and motorists travel through the intersection on a green signal.
2. Bicyclists turning left stop in the two-stage turn box and wait.
3. A red signal stops all users and the intersection clears of traffic.
4. Bicyclists are highly visible in the two-stage turn box and are positioned to travel through.
5. On the green signal, waiting bicyclists travel forward into the bikeway.
6. Motorists behind the box proceed when clear.



Two Stage Turn Box

Gateway Treatments

This conceptual plan includes recommendations for a number of gateway treatments. Gateways communicate to drivers they are entering a community and often include physical and texture treatments such as markers and textured crosswalks. Example gateway treatments are presented below; however, specific recommendations for treatments along the Connector are not included as part of this Report.



Stamped Asphalt Crosswalk



Gateway Marker

5.4 Segment 1: Olympic Boulevard, Lafayette Moraga Trail to Pleasant Hill Road

Existing Conditions:

- Reliez Station Road Intersection: This is a stop-controlled T-intersection for motorists, and trail users on the LMT have a stop sign before they exit the trail. The primary vehicle movements are turning to and from Reliez Station Road, which creates conflicts for bicyclists, especially for bicyclists transitioning to and from the existing bike lanes. Northbound motorists turning east onto Olympic Boulevard and westbound motorists turning south onto Reliez Station Road often don't look to the west for bicyclists or pedestrians coming off of the trail.
 - Existing Class I LMT enters the Olympic Boulevard/Reliez Station Road intersection from the west, transitioning to bike lanes along Olympic Boulevard or a Class I path through an East Bay Regional Park District open space corridor (immediately adjacent to Las Trampas Creek) and past two parking lots and one parking lot driveway that serve users of the LMT.
 - An approximately 5 foot wide asphalt walkway exists on the south side of the road, but it gradually transitions to an informal path to the east.
- Pleasant Hill Road Intersection: Crosswalks are present at all approaches to the stop-controlled Pleasant Hill Road intersection, including across the channelized right-turn lanes on the southbound and westbound approaches.

Short-Term Improvement Concept: Provide crossing improvements at Reliez Station Road, add buffered bike lanes, improve and extend existing walkway on south side of Olympic Boulevard, and provide improved route wayfinding.

- The existing conventional bike lanes can be converted to buffered bike lanes by narrowing the existing vehicle lanes and potentially shifting the center stripe. In at least one location the existing pavement is up to 2 feet narrower than the cross-section shown. This would necessitate widening on the north side, which could conflict with the roots of a non-native black acacia and a medium-sized live oak.
- Reliez Station Road Intersection: Crossing signing and striping improvements will help reduce the conflict for bicyclists transitioning between the LMT and the existing bike lanes. These include 'trail crossing' signage, enhanced crossbike markings, and advance stop bars for motorists (Figure 5-7a). Relocating an existing asphalt curb will facilitate a smoother trail-to-road connection.
- Pleasant Hill Road Intersection:
 - Install additional wayfinding signs.
 - Implement single-lane roundabout, studied in the 2015 Olympic Boulevard and Reliez Station Road Corridor Traffic Study, with consideration for bicyclist merge conflicts and reduced pedestrian crossing distances.

Tree Impact: Potential impact on roots of 2 trees due to widening.

Figure 5-6: Olympic Boulevard Station 7+50 (facing east)

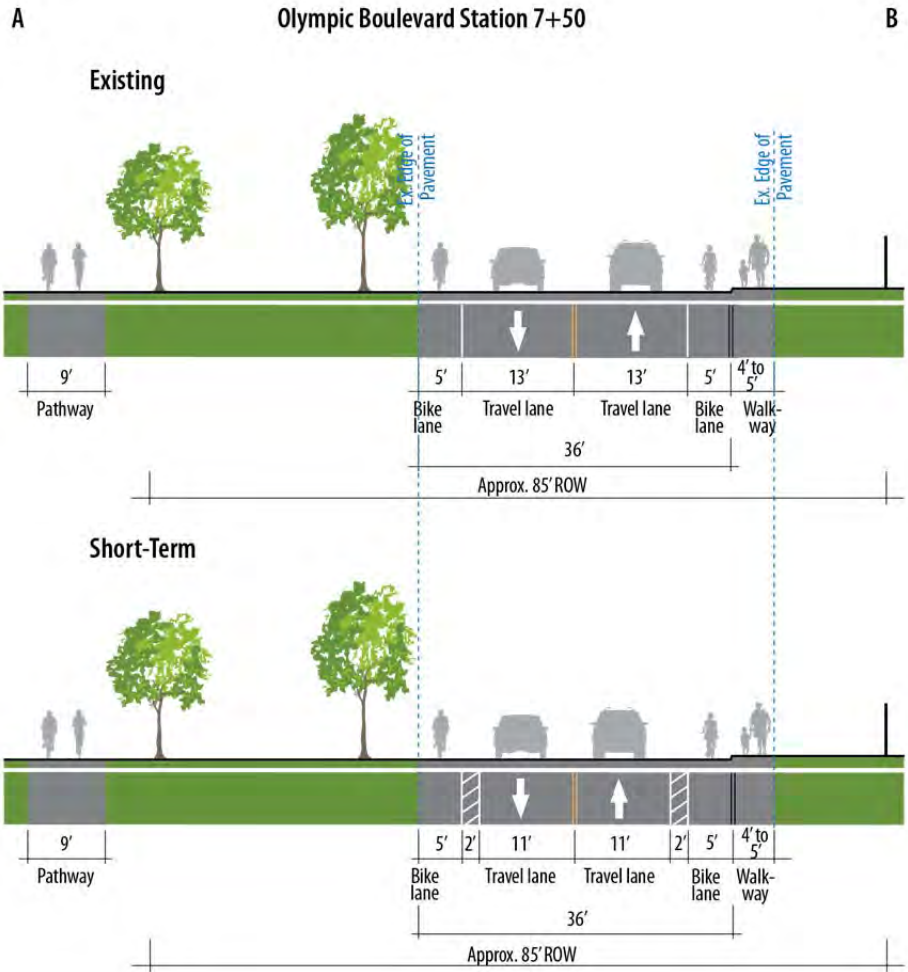
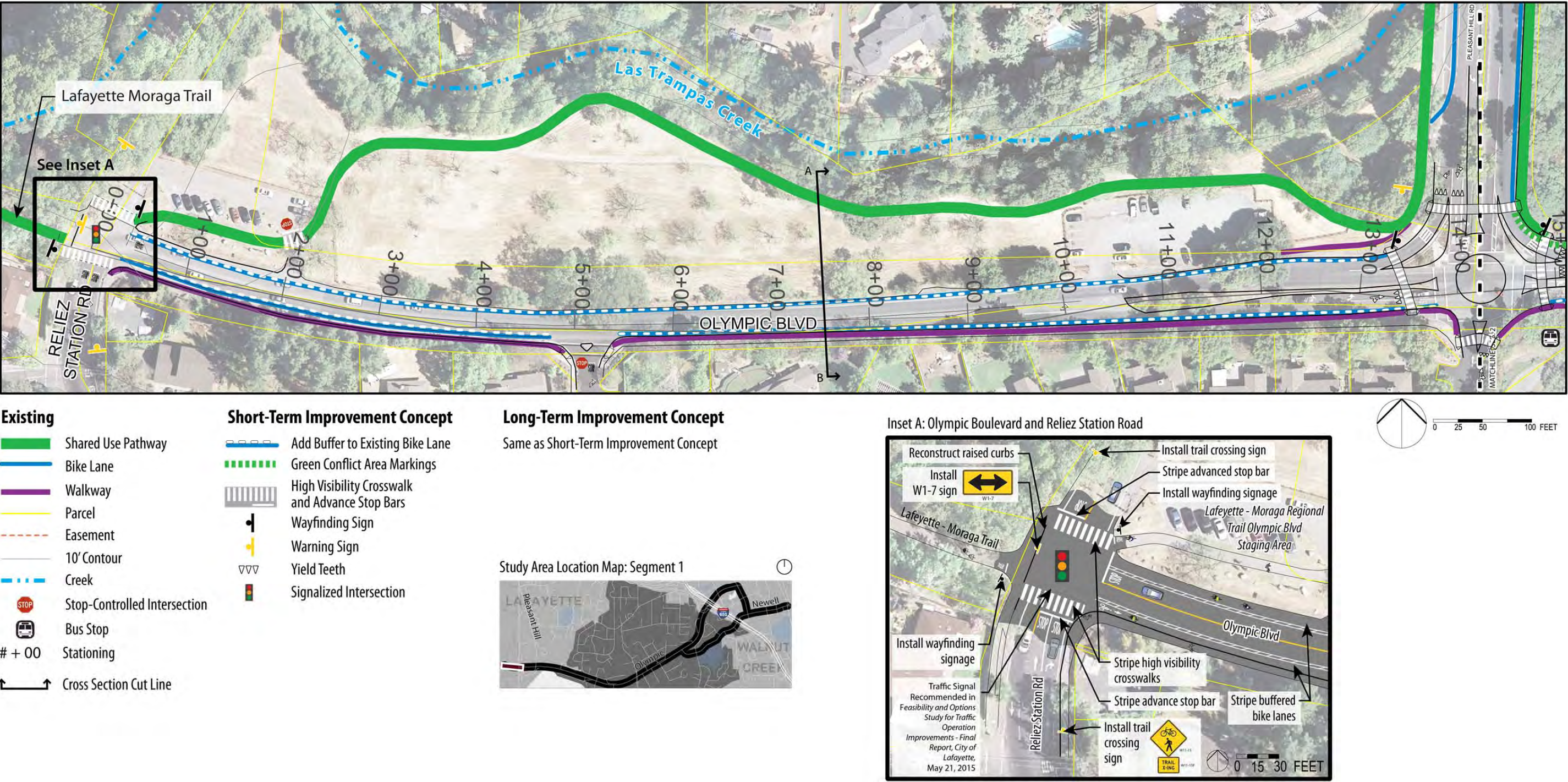


Figure 5-7: Segment 1 – Olympic Boulevard, Lafayette Moraga Trail to Pleasant Hill Road



5.5 Segment 2: Olympic Boulevard, Pleasant Hill Road to Newell Court

5.5.1 Segment 2.1: Olympic Boulevard, Pleasant Hill Road to Windtree Court

Existing Conditions:

- The western portion of this segment has a landscaped median 4 feet wide at the turn lane and 14 to 15 feet wide with street trees to the east, followed by a 14 to 15 foot painted median, which transitions to turn pockets at Windtree Court.
- There are steep cut slopes on both sides of the road, starting at approximately Sta. 17+00 and extending to 19+00 on the north side. A short retaining wall separates an existing 4 foot path from the rocky slope on the north side.

Short-Term Improvement Concept: Provide buffered bike lanes.

- Buffered bike lanes can be created by narrowing the existing vehicle lanes and painted medians.

Long-Term Improvement Concept: Widen and improve the existing path on the north side as a shared use path while retaining the buffered bike lanes.

- A separated sidepath 10 feet wide with a 3 foot buffer could be created by reducing the width of the median to 10 feet, replacing existing trees, and constructing a taller retaining wall on the north side – tapering up to approximately 10 feet high.
- Fire hydrants, signs, utility poles, mature oaks, and other trees would intrude into the pathway space, reducing clear width to as little as 8 feet in some locations.

Tree Impact (Long-Term Concept): No trees removed. Some leaning tree limbs and vegetation would be trimmed along the sidepath.

Figure 5-8: Olympic Boulevard Stations 16+50, 17+50, and 21+50 (all facing east)

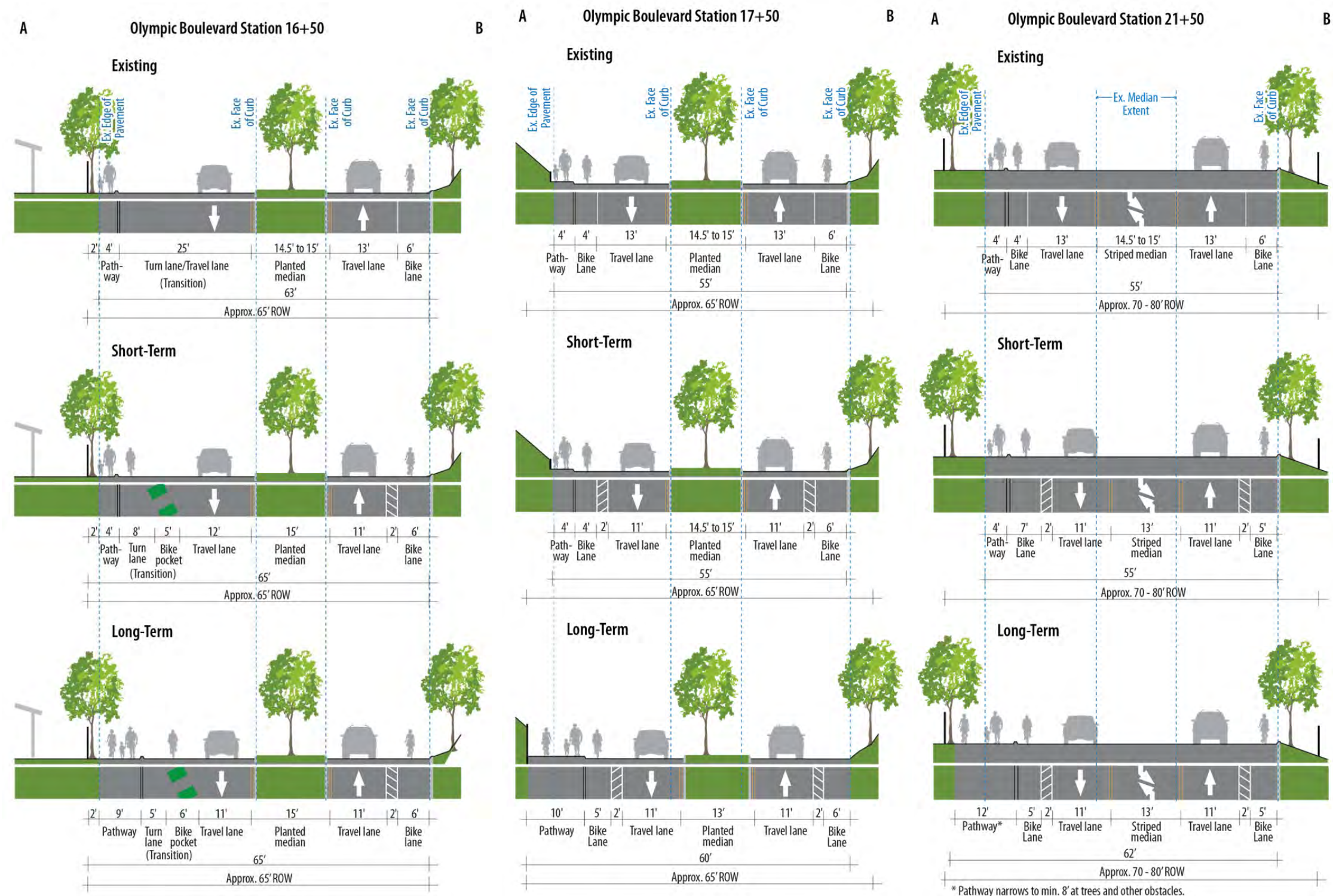
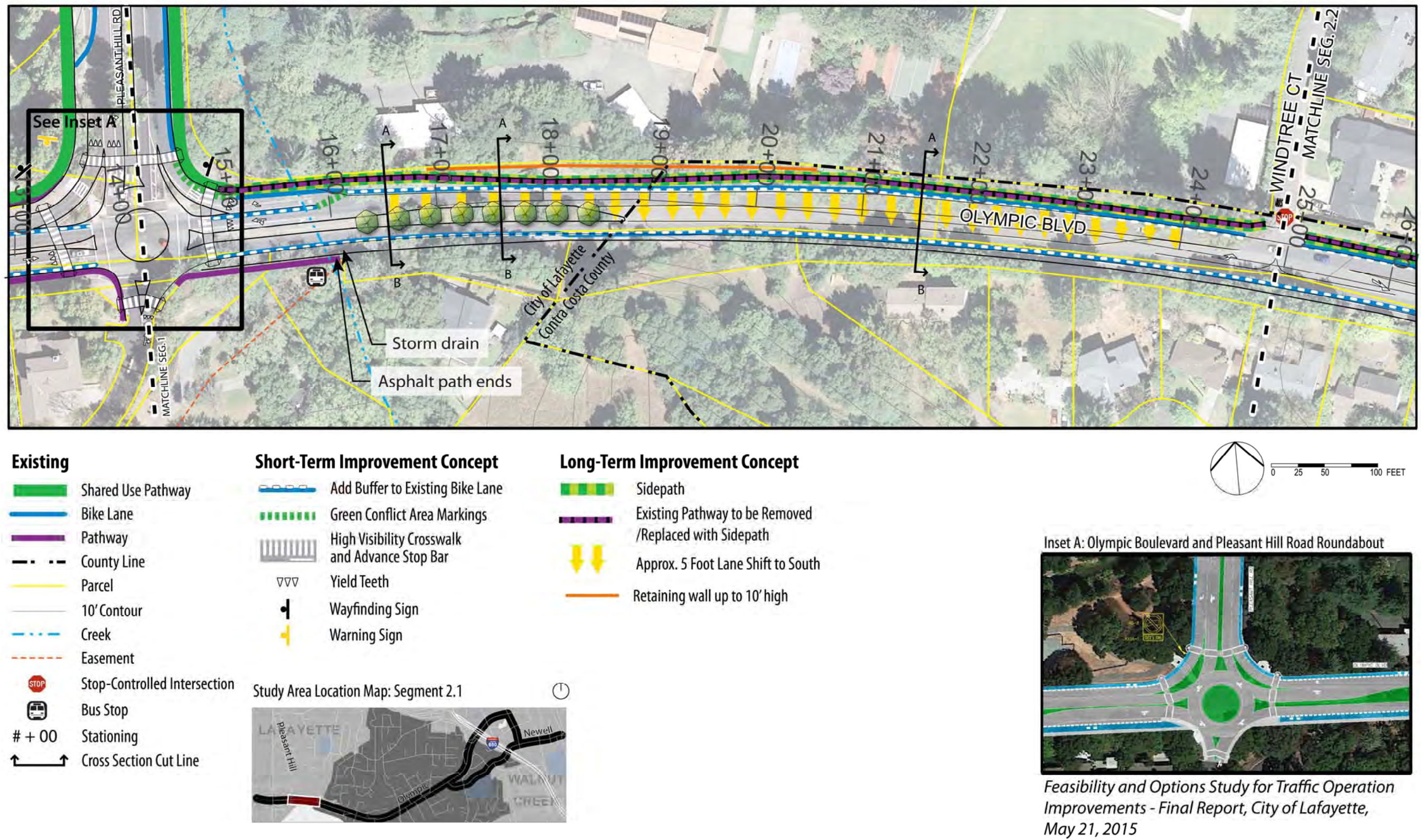


Figure 5-9: Segment 2.1- Olympic Boulevard, Pleasant Hill Road to Windtree Court



5.5.2 Segment 2.2: Olympic Boulevard, Windtree Court to Newell Court

Existing Conditions:

- A 4 to 6 foot wide pedestrian path exists on north side, separated from bike lane by an asphalt curb. The space between the curb and the adjacent property line is as wide as 12 feet at the west end, although hedges and other private improvements intrude into it.
- The roadway includes 5 to 8 foot wide bike lanes, and the existing striped median is 14.5 to 15 feet wide.
- Beyond Sta. 29+00, two properties extend out further and narrow the available right-of-way, and native trees further reduce space that would otherwise be available for a path – which narrows to 4 feet at this point (see section Sta. 28+80).
- Near the intersection with Newell Court, the space between the curb and fence/ROW line is approximately 6 feet and the median narrows to approximately 5 feet at the intersection. A path on the south side of Olympic Boulevard connects with a crosswalk at the Newell Court signalized intersection. The median is 5 feet wide, and the distance beyond the northern curb and property line is only approximately 6 feet.

Short-Term Improvement Concept: Provide buffered bike lanes.

- Buffered bike lanes can be created by narrowing the vehicle lanes and median.

Long-Term Improvement Concept: Widen and improve the existing path on the north side as a shared use path.

- A separated sidepath 10 feet wide could be created by reducing the median to 5 feet and shifting the north side lane approximately 10 feet south between Sta. 26+80 and 28+80.
- West of Sta. 27+00 there are turn pockets for Windtree Court that would prevent narrowing the median more than approximately a foot, but the separated sidepath could be created using the 12 foot wide frontage and an additional 1 or 2 feet from median and lane.
- East of the second property that intrudes into the right-of-way alignment, the curb and path are set back and there is a tapering space extending approximately 150 feet that could accommodate the sidepath.
- The space to continue the separate path and the buffered bike lanes can be created by shifting the lanes south approximately 8 feet, which would require realignment on the east side of the intersection to transition back to the current alignment. This would require realignment of the existing Class I path that connects to the southeast corner of the intersection, including relocation of the signals and controller box.
- Hedges, vines, and trees growing along the north edge of the existing path would reduce the clear space to as little as 10 feet – particularly at a mature oak at approximately Sta. 32+50.
- The sidepath would end at the east side of the intersection where it would connect south to the existing Class I path that continues east.

Tree Impact (Long-Term Concept): No trees removed – minor trimming.

Figure 5-10: Olympic Boulevard Station 28+80 (facing east)

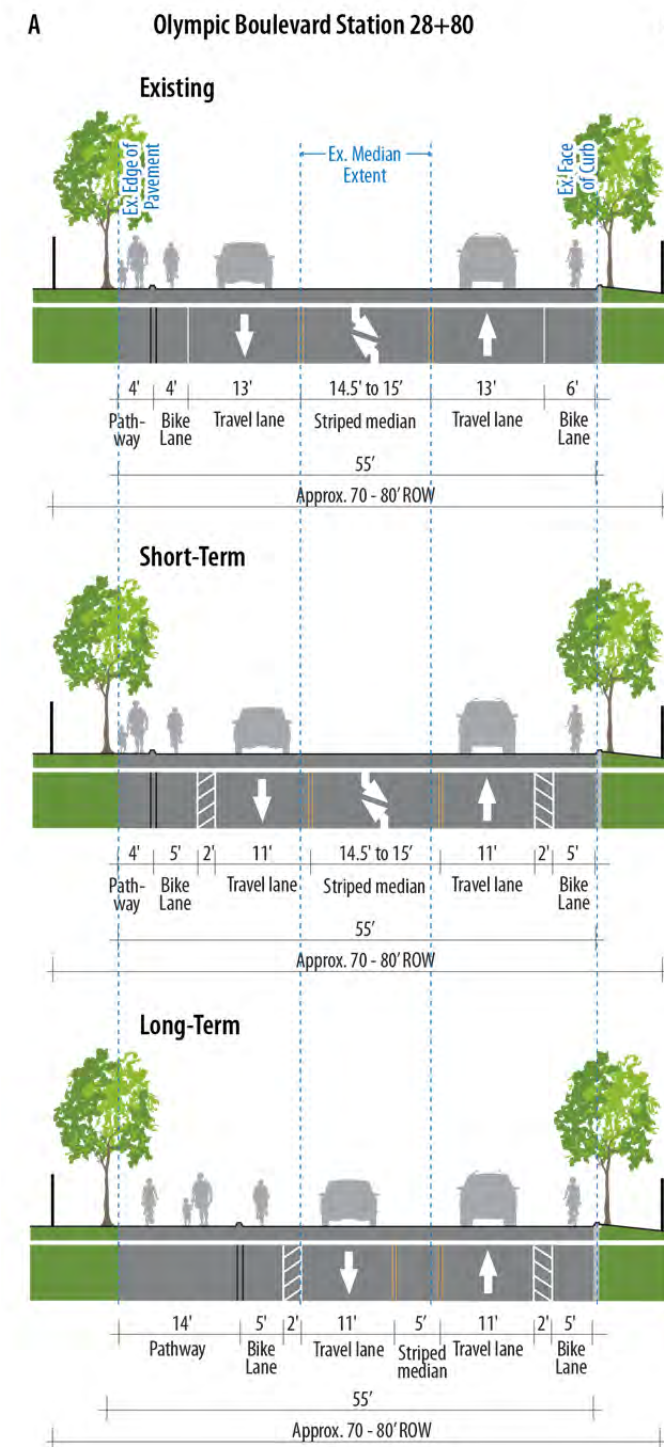
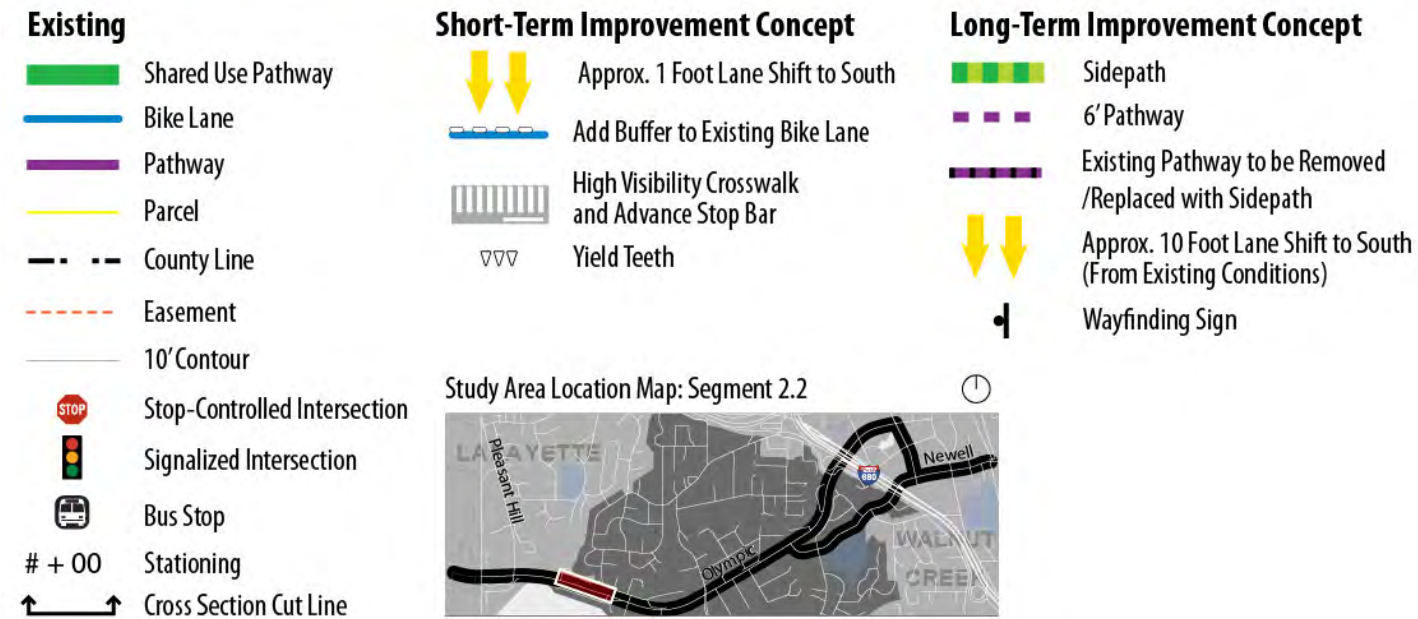
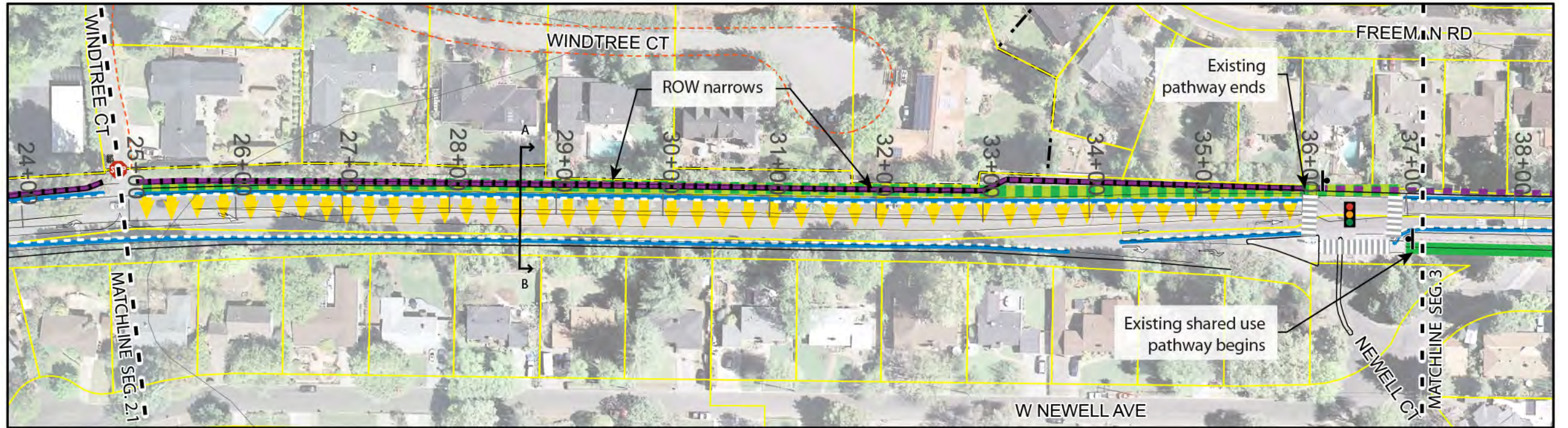
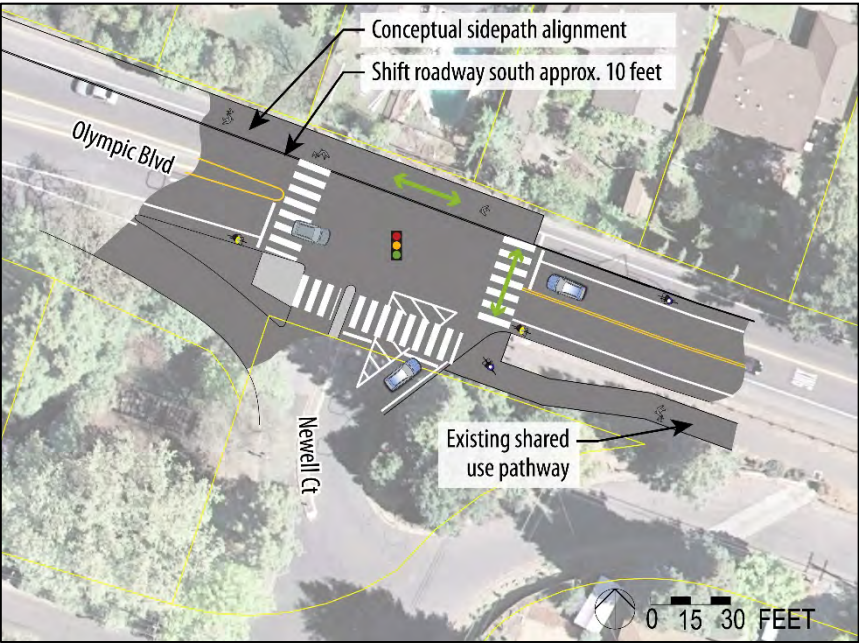


Figure 5-11: Segment 2.2 – Olympic Boulevard, Windtree Court to Newell Court



Inset A: Olympic Blvd / Newell Ct Intersection Detail



5.6 Segment 3: Olympic Boulevard, Newell Court to Tice Valley Boulevard/ Boulevard Way

Existing Conditions:

- Olympic Boulevard between Newell Court and Tice Valley Boulevard/Boulevard Way is a two lane roadway that includes bike lanes. On-street parking is not allowed.
- A 10 foot wide paved Class I path exists on the south side. It has a wood post and rail barrier fence and 11 foot wide mulched and planted shoulders on either side.
- A sidewalk exists on the north side at the east end of the segment, and a short segment of sidewalk exists in the center.

Short-Term Improvement Concept: Create buffered bike lanes, connect the existing Class I path to Boulevard Way/Tice Valley Road intersection, and provide intersection crossing improvements.

- An improved pedestrian crossing signal at Bridgefield Road would facilitate connections from residences on the north side to the Class I path on the south side and the adjacent bus stop.
- Buffered bike lanes can be created by narrowing vehicle lanes and providing green conflict zone markings and a striped bike pocket at the intersection.

Long-Term Improvement Concept: Provide a continuous pedestrian sidewalk or path at least 4 feet wide on the north side.

- There are space constraints for creation of a continuous path. From near Newell Court to approximately Sta. 38+00, there are many mature trees including native oaks as well as vines and street signs occupying the approximately 4 foot wide space between the curb and the fence.
- The existing Class I path on the south side can be connected to the intersection by extending the path past the gas station at the corner by widening the sidewalk and reducing the right lane width.
- Removal of the existing pork chop islands and addition of high visibility crosswalks are recommended to connect the path to the north and east where an existing sidepath continues.

To create the additional space for the sidewalk without removing all the trees, the north side curb and the roadway could be shifted approximately 2 feet to the south, encroaching into the existing 10 foot space between the roadway and the Class I on the south side. This may require relocation of the existing split trail fence.

Tree Impact (Long-Term Concept): No trees removed – minor trimming.

Figure 5-12: Olympic Boulevard Stations 46+00 and 51+50 (facing east)

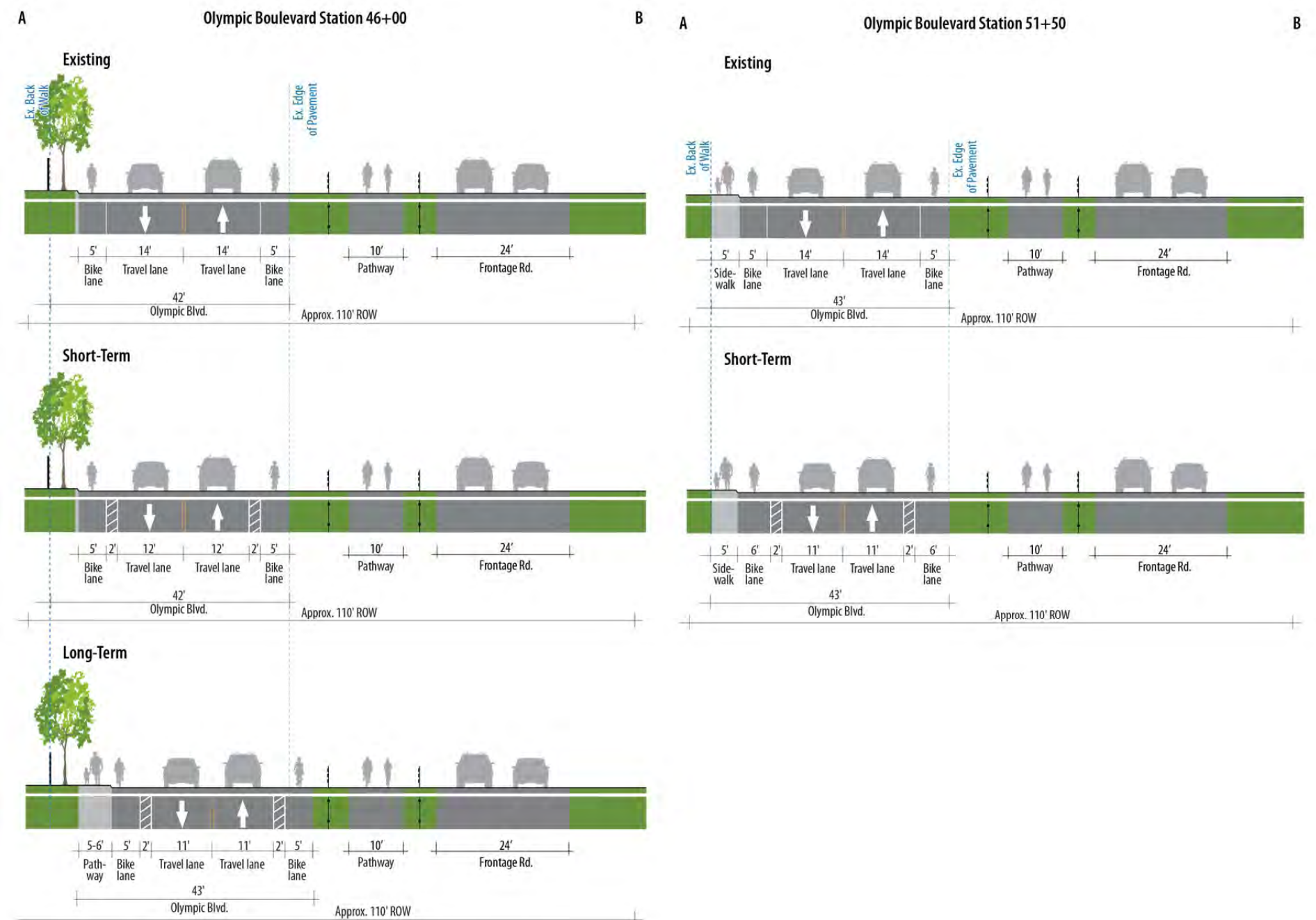
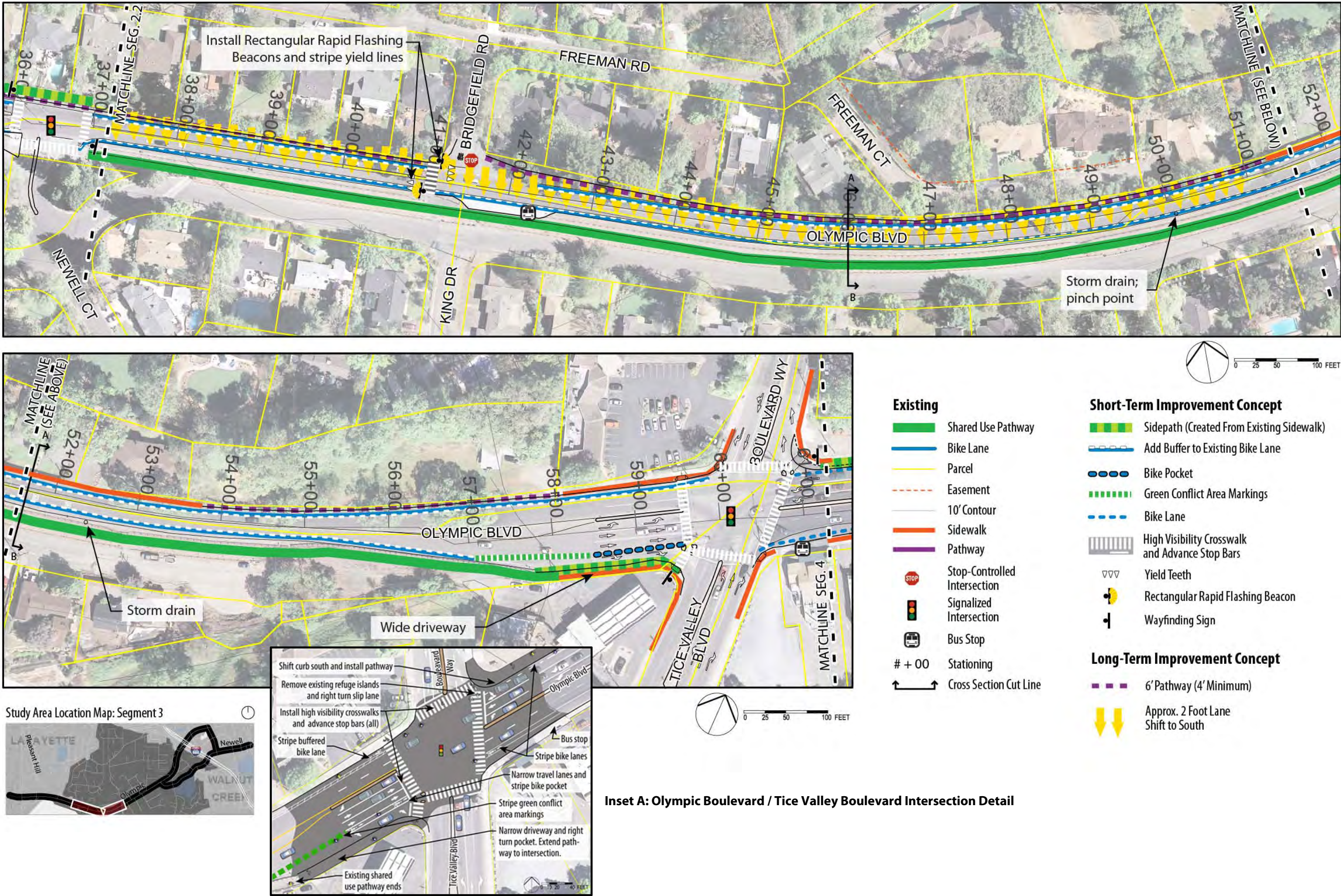


Figure 5-13: Segment 3 – Olympic Boulevard, Newell Court to Tice Valley Boulevard



5.7 Segment 4: Olympic Boulevard, Boulevard Way/Tice Valley Boulevard Intersection to Newell Avenue

Existing Conditions:

- An existing paved path extends along the north side in a 12 to 14 foot wide space, mostly bordered by fences that separate Olympic Boulevard from the adjacent parallel Cottage Lane, which provides access to several residences along two disconnected segments to the east and west. In between are some residences that take direct access from Olympic Boulevard.
- Parking is allowed along the south side where commercial buildings and a series of single and multi-family residences take access directly off Olympic Boulevard. Removing this parking is not seen to be a viable alternative.

Short-Term Improvement Concept: Provide bike lanes and an improved sidepath on the north side.

- An improved separated path could be created by providing 10 feet of pavement with a 3 foot planting strip at the curb. Mature trees and other obstructions would narrow the path by as much as 2 feet at some points. There is not sufficient continuous space to provide a Caltrans-compliant Class I path, which requires 5 feet of separation from the roadway.
- Space for bike lanes could be created by narrowing the existing lanes, but even if the existing 5 foot wide medians were narrowed there is not enough space to create buffered bike lanes.
- The existing narrow drainage opening – where the right turn from EB Olympic Boulevard to SB Newell Avenue has been blocked off – should be widened to accommodate bike right turns or a connecting path could be constructed across the corner.

Long-Term Improvement Concept: Extend the sidepath to Newell Avenue intersection.

- The improved pathway could be continued to Newell Avenue (the current pathway ends west of the Villa condominiums) by utilizing some of the space from a very wide bus pullout and a portion of landscaped street frontage near the intersection.
- High visibility crosswalks are recommended across Olympic Boulevard at this point to facilitate connections to Newell Avenue.

Tree Impact (Long-Term Concept): No trees removed. There is one mature oak on the north side near Sta. 64+00 that would reduce the clear path space to approximately 8 feet, and two ornamental trees near Sta. 81+50 that would reduce the clear space to 9 feet.

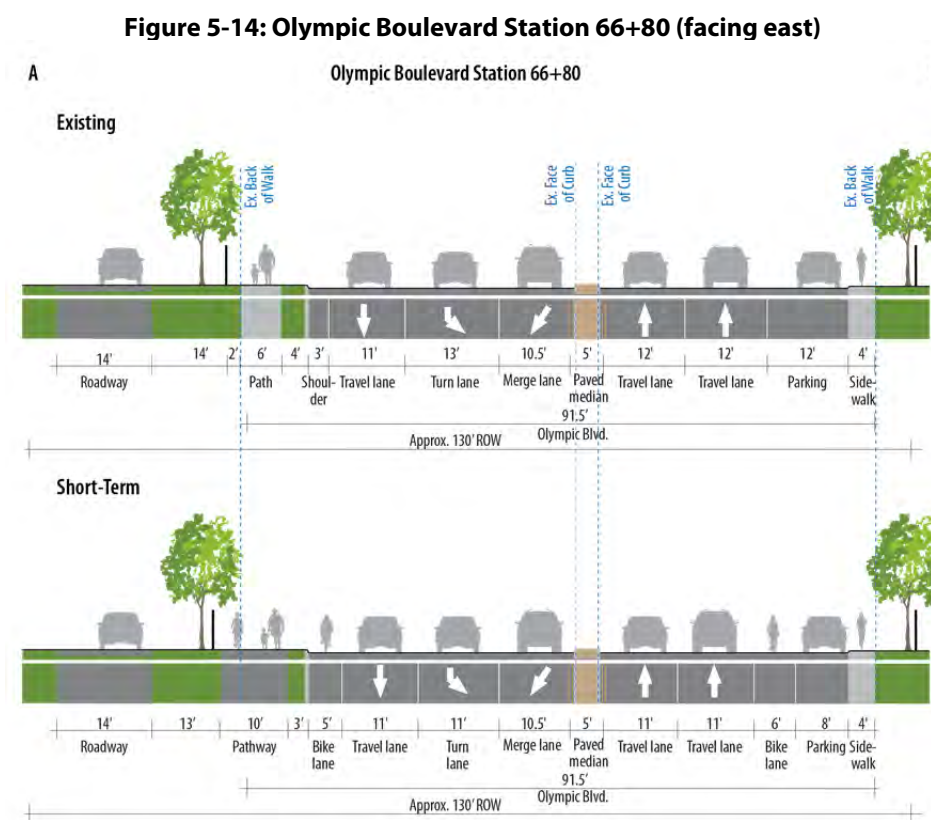


Figure 5-15: Olympic Boulevard/Newell Avenue Intersection Detail

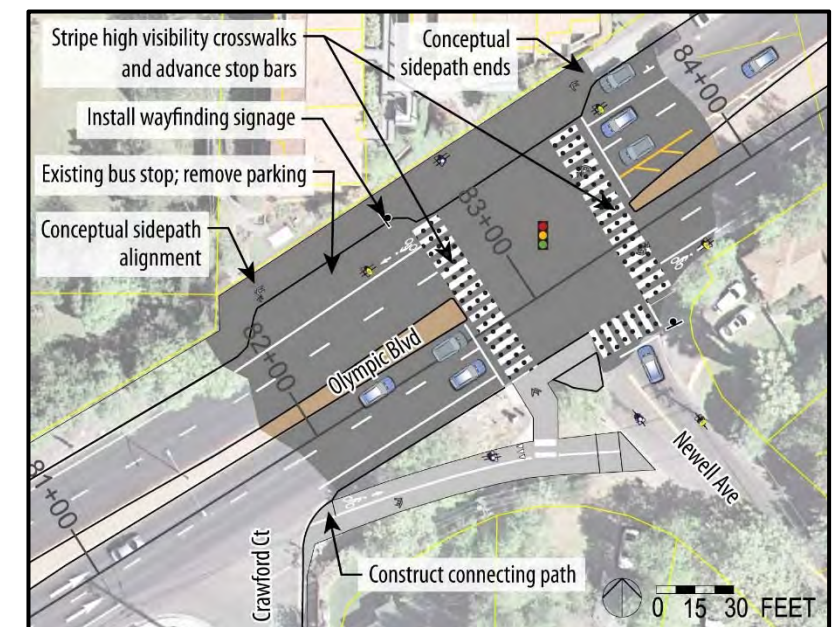
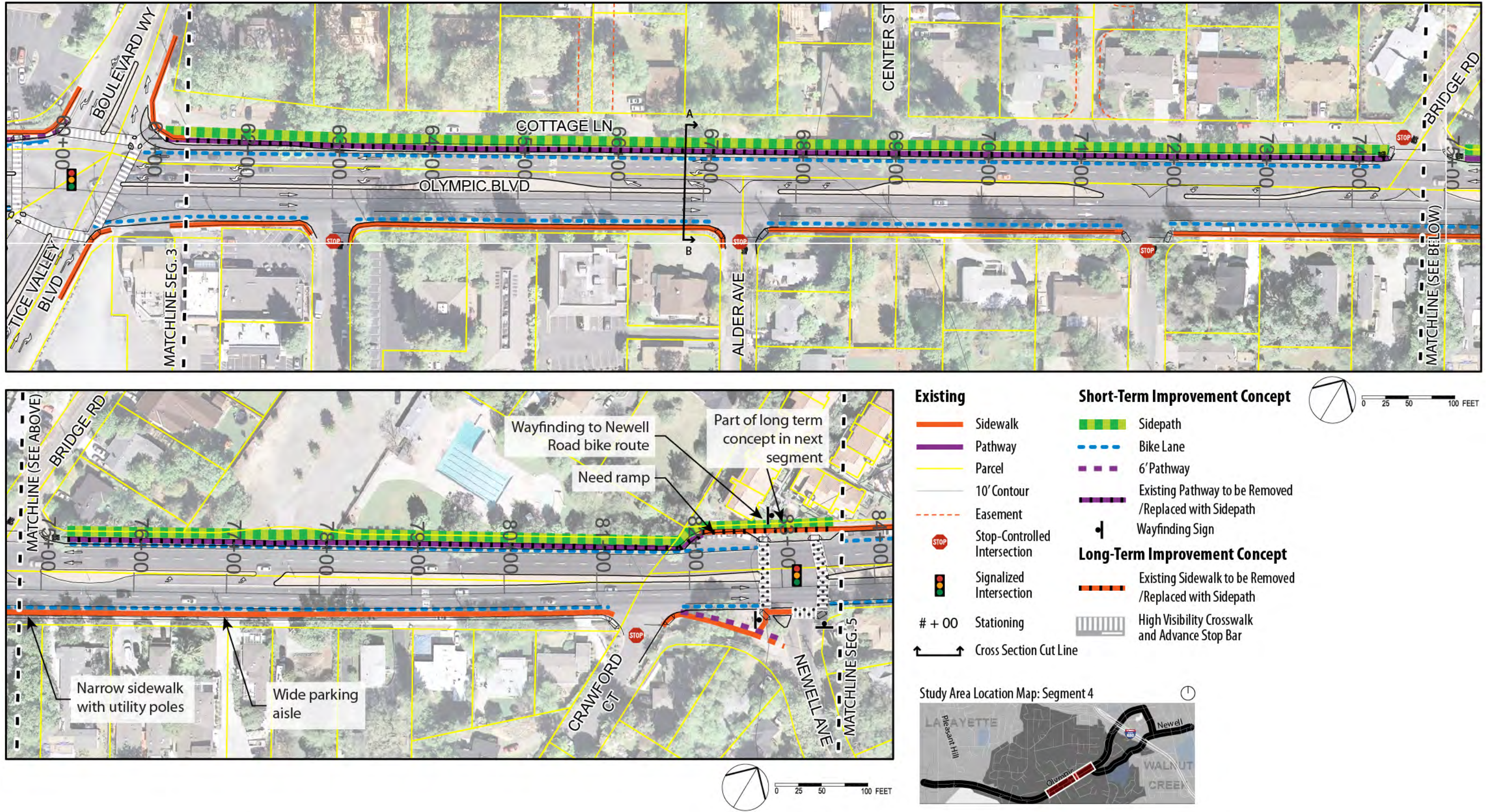


Figure 5-16: Segment 4 – Olympic Boulevard, Boulevard Way/Tice Valley Boulevard Intersection to Newell Avenue



5.8 Segment 5: Olympic Boulevard, Newell Avenue to S.B. I-680 On/Off Ramps

Existing Conditions:

- A seven foot sidewalk, or a 5 foot sidewalk with 2 foot planting strip, exists on the north side of Olympic fronting the Villa condominium complex along with curbside parking for residents and visitors.
- There are raised paved medians as wide as 16.5 feet and as narrow as 5 feet. There are no existing bike lanes. There is no sidewalk on the south side, or any space for one due to the presence of trees within the approximate 4 foot space between the curb and residential backyard fences.

Short-Term Improvement Concept: Create bike lanes with buffered bike lanes provided where space allows.

- Bike lanes could be created on portions with wide medians by restriping the existing lanes (see Sta. 85+00). At the two turn pocket areas and on the eastern portion where the median is narrow bike lanes could be created by restriping the existing lanes, but they would be a minimal 4 feet (see Sta. 96+50).
- At the eastern end at the bridge over Las Trampas Creek the buffered bike lanes can be created by restriping the existing lanes (see Sta. 101+00).

Long-Term Improvement Concept: Create a 10 foot wide sidepath on the north side with a 2 foot buffer between the bike lane and parked cars.

- Implementation would require that all lanes are narrowed to 11 feet, the medians shifted one foot south, the wide medians narrowed to 10 feet, and the 5 foot medians narrowed to 3 feet.
 - To minimize impacts to homes on the east side of the corridor, a wall or other physical barrier should be considered, although this may not be consistent with existing vegetation and aesthetics.
- In order to minimize loss of parking, there would be a 4 foot off-set between the lane alignment at the left turn pockets and the alignment beyond them, with a suitable transition between alignments (see Figure 5-19).
- 7 or 8 of the current 30 curbside parking spaces would be lost.
- In the vicinity of cross-section at Sta. 96+50 the ROW and roadway narrows. Creating space for a 10 foot wide sidepath would require shifting the south side curb approximately 2 feet into the approximately 4 foot wide space between the curb and the fence. This could potentially remove or impact up to 6 mature trees, including 4 native oaks.

Tree Impact (Long-Term Concept): Potential removal of or impact on up to 6 mature trees, including 4 medium-sized native oaks.

Figure 5-17: Olympic Boulevard Stations 85+00 and 88+00 (facing east)

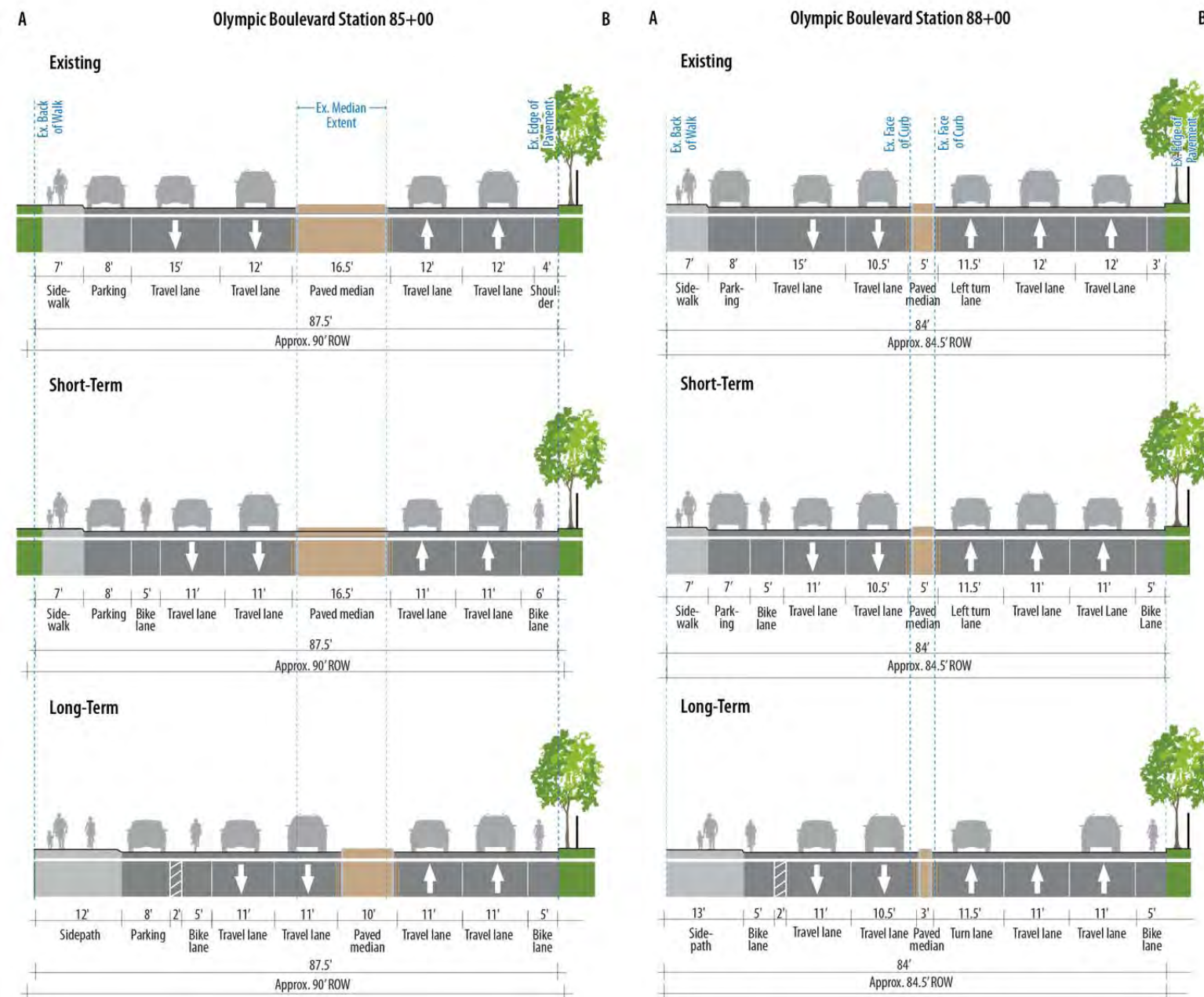


Figure 5-18: Olympic Boulevard Stations 96+50, 98+50, and 101+00 (facing east)

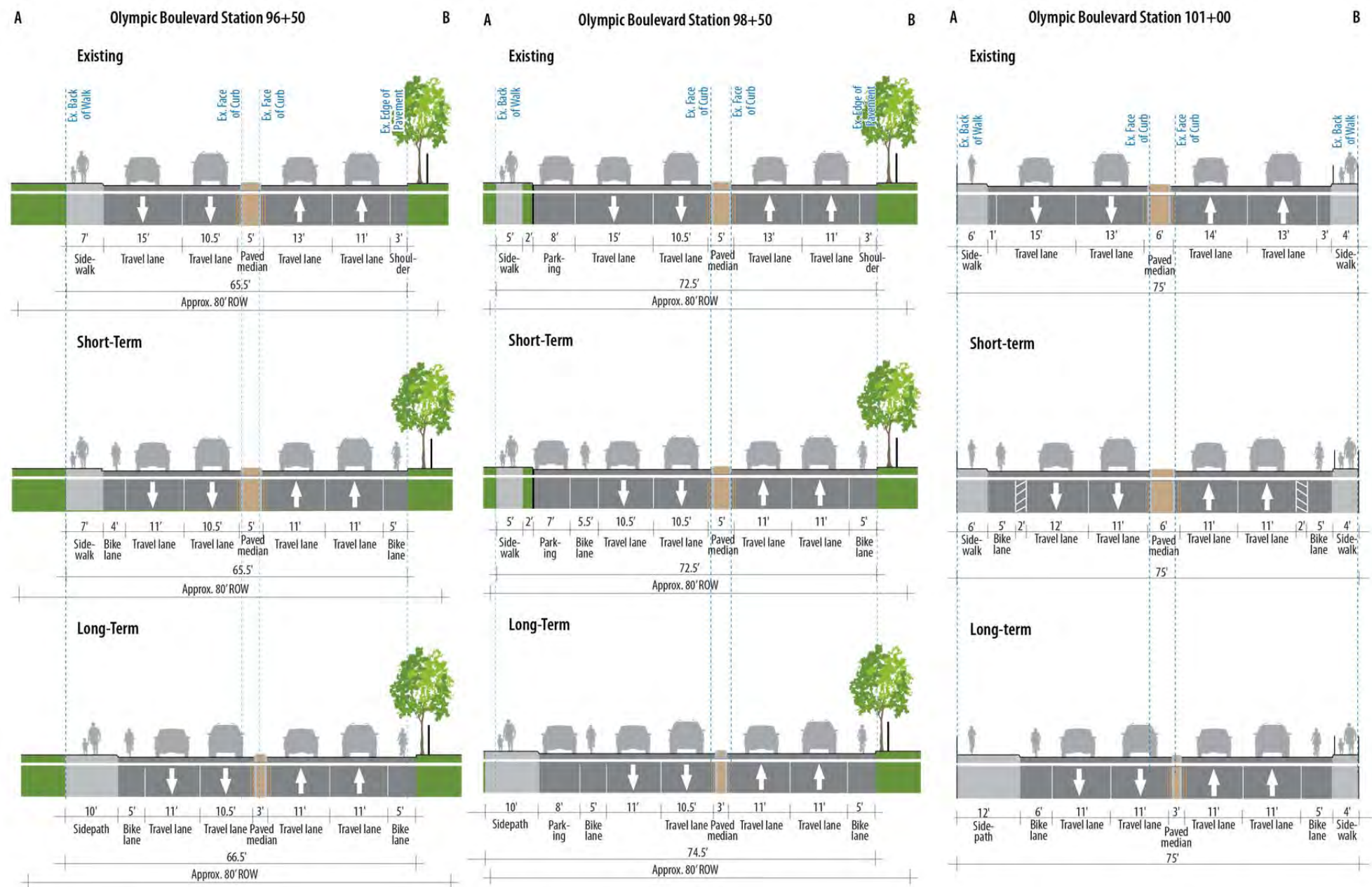
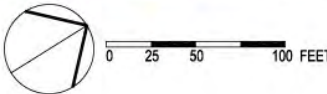
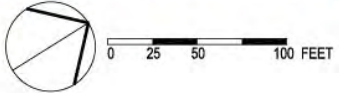
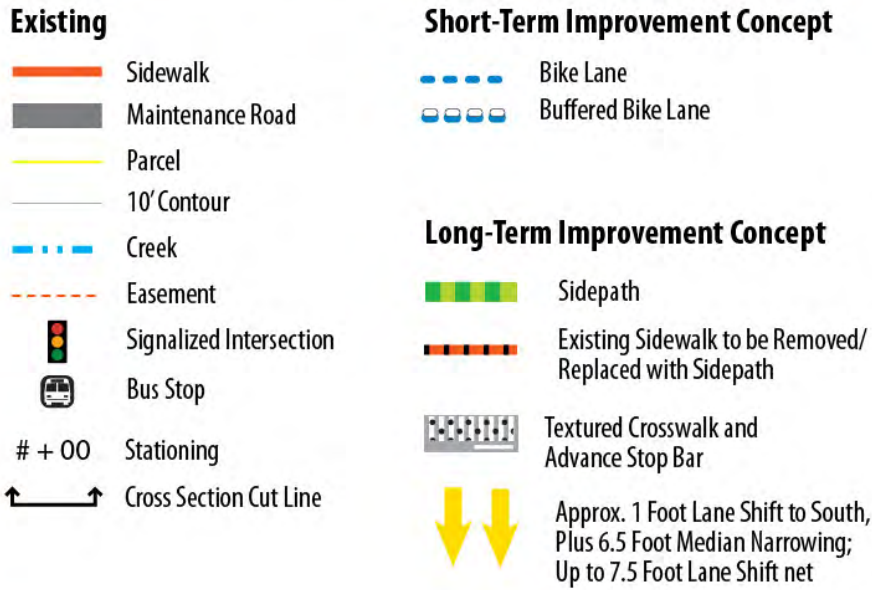
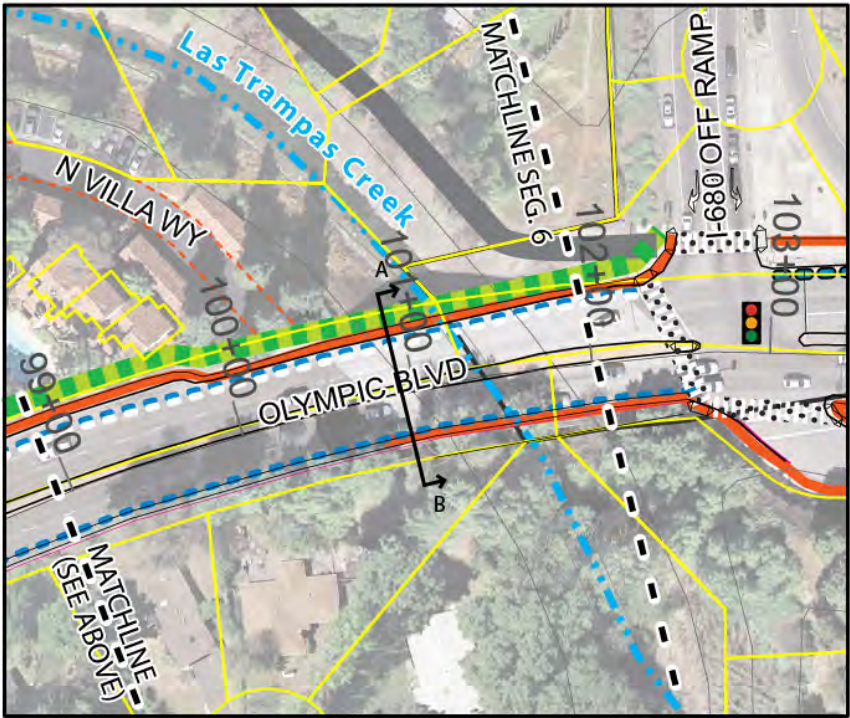
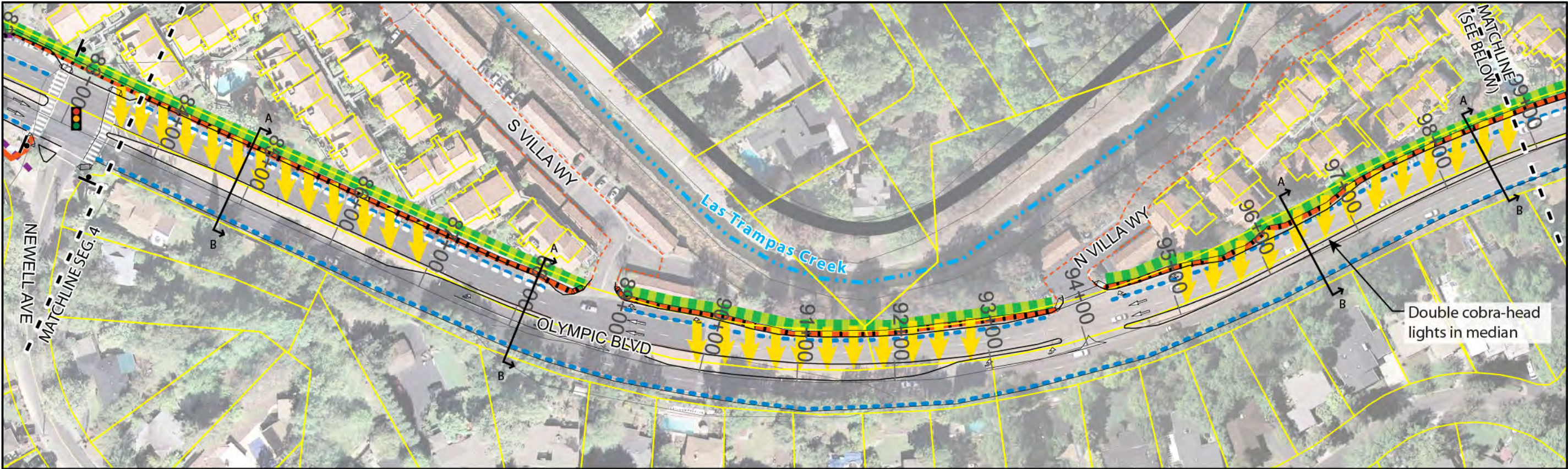


Figure 5-19: Segment 5- Olympic Boulevard, Newell Avenue to SB I-680 Ramps



5.9 Segment 6: Olympic Boulevard, S.B. I-680
On/Off Ramps to S. California Boulevard

5.9.1 Segment 6.1: Olympic Boulevard, S.B. I-680 On/Off
Ramps to Alpine Road

Existing Conditions:

- This segment has very heavy traffic, especially at commute and shopping/after hours times with vehicles accessing the I-680 on and off-ramps.
- The City of Walnut Creek has developed a grant application to improve the undercrossing by widening the sidewalk on the south side to 10 feet by building a retaining wall into the existing embankment and adding lighting.

Short-Term Improvement Concept: Provide bike lane on south side and bike pocket on north side.

- Narrowing the lanes would provide enough space to stripe bike lanes, but due to the heavy right turn traffic to the I-680 on-ramps on the north side it would be safer to create a “bike pocket” – a five foot wide through bike lane between the right turn lanes and the through lane.
- Crosswalk and/or bike lane striping improvements would be needed at the Paulson Lane on- and off-ramps and at Alpine Road to support the bike lanes and bike pocket.

Long-Term Improvement Concept: Create a Class I path or sidepath at least 10 feet wide on the south side of Olympic Boulevard.

- The proposed sidepath on the north side of Olympic Boulevard through Segment 5 could connect across Olympic via an improved crosswalk west of the intersection at Paulson Lane and the north side ramps to/from I-680.
- With the extension of the existing retaining wall and a slight lane shift, a Class I path could be extended along the south side of Olympic Boulevard adjacent to Paulson Lane to connect to the path proposed on the south side of the underpass by City of Walnut Creek. Signs and devices to encourage bicyclists to stop before crossing the ramp, especially when eastbound, would help make the crossing safer.
- The current City of Walnut Creek concept for the path under I-680 shows a 10 foot width. A 12 foot width, created with a slightly higher retaining wall, is recommended to provide additional space for this important connection.
- Beyond I-680 (see Sta. 110+50), the path could be continued on the south side to Alpine Road by constructing a taller retaining wall within the ROW of the first office building on the south side. This would allow the existing 6’ sidewalk to be widened to 10 feet. This appears to be feasible within the available ROW.
- Crossing Alpine Road with the path at this point would be an engineering challenge due to the steep slope of the side street.

Tree Impact (Long-Term Concept): Creating the sidepath at Sta. 110+50 by constructing a taller wall 4 feet further back will require removal/replacement of up to 3 mature ornamental trees.

Figure 5-20: Olympic Boulevard Stations 107+00 and 110+50 (facing east)

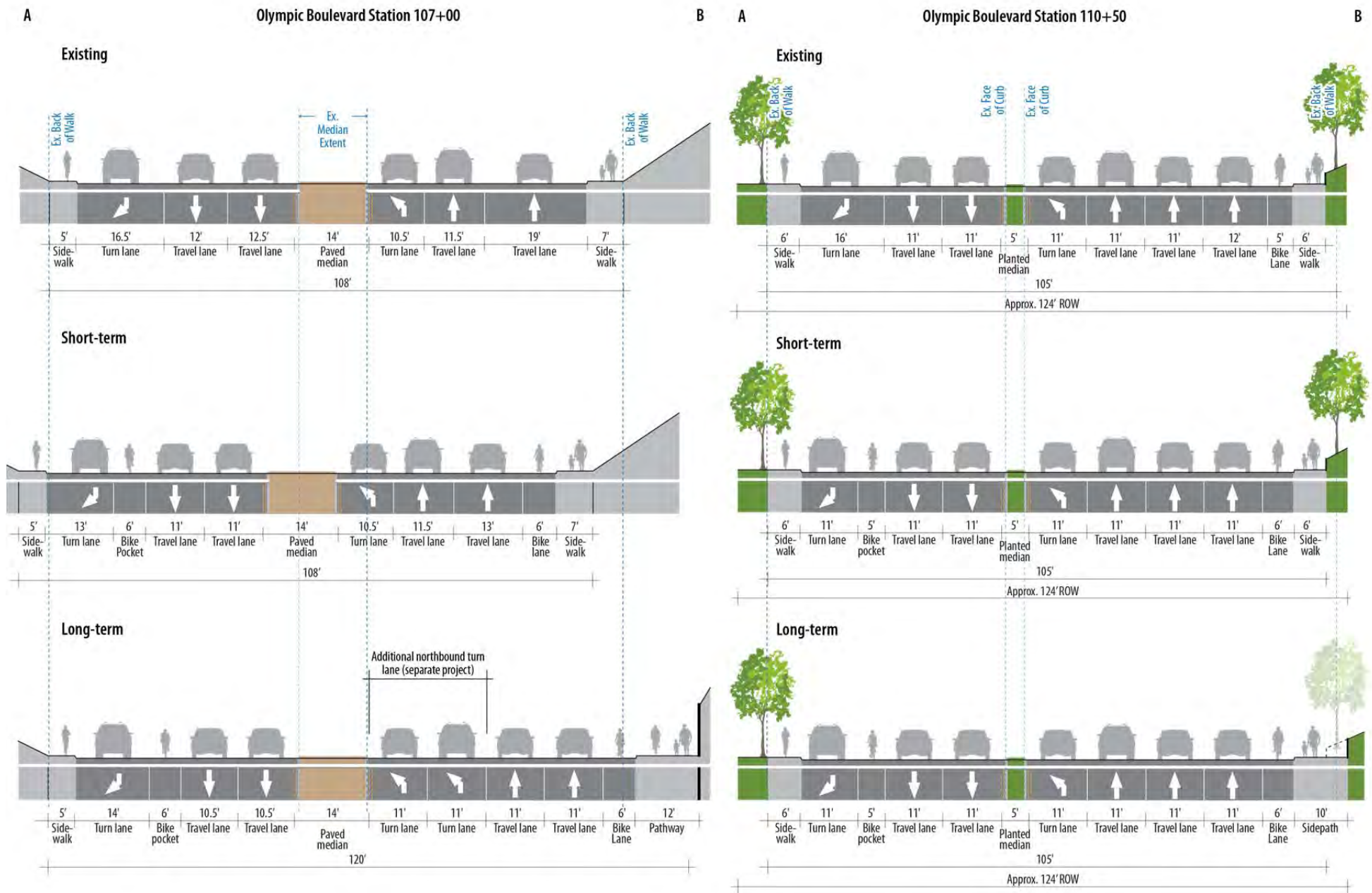


Figure 5-21: Segment 6.1 – Olympic Boulevard, S.B. I-680 On/Off Ramps to Alpine Road



5.9.2 Segment 6.2: Olympic Boulevard, Alpine Road to S. California Boulevard

Existing Conditions:

- Bike lanes exist on both sides of the roadway between Alpine Road and S. California Street. Office structures are immediately adjacent to the back of sidewalk on the south central portion; the remainder is fronted by commercial parking lots.

Short-Term Improvement Concept: Provide buffered bike lanes.

- Conventional bike lanes can be widened into buffered bike lanes if vehicle lanes are narrowed to 11 feet.

Long-Term Improvement Concept: Create a cycle track/bike path on the south side. The 6 foot sidewalk/pedestrian space on the south would be retained adjacent to the property line and a cycle track or bike path would be created, requiring 10 to 12 feet on the curb side with a street tree, light, and utility zone between the two. The existing trees, lights, and utilities could potentially be left in place. There are 2 scenarios under which the additional space needed for the Cycle Track/Bike Path Alternative could be created:

- 1) **Future Redevelopment:** Create the required space on the north side in conjunction with future redevelopment of the shopping center and office parking areas on the north side. The path would be created on the south side, incorporating the existing 6 foot sidewalk. The existing roadway configuration would be shifted to the north.
- 2) **Lane removal:** Create the required space by removing one vehicular lane. Recognizing that this would have a significant impact on traffic in this very heavily-used corridor, this alternative would be a strong statement in support of bicycle and pedestrian access as major transportation alternatives. Other cities (San Francisco, Oakland) have made this tough choice and demonstrated that the increased bicycle access helps offset the reduced motor vehicle traffic capacity.

Tree Impact (Long-Term Concept): The lane removal alternative could potentially be implemented without tree removal. The redevelopment alternative could potentially involve removal and replacement of all the trees on the north side – approximately 15 relatively small ornamental street trees – and 3 large pines in the median.

Figure 5-22: Olympic Boulevard Station 115+50 (facing east)

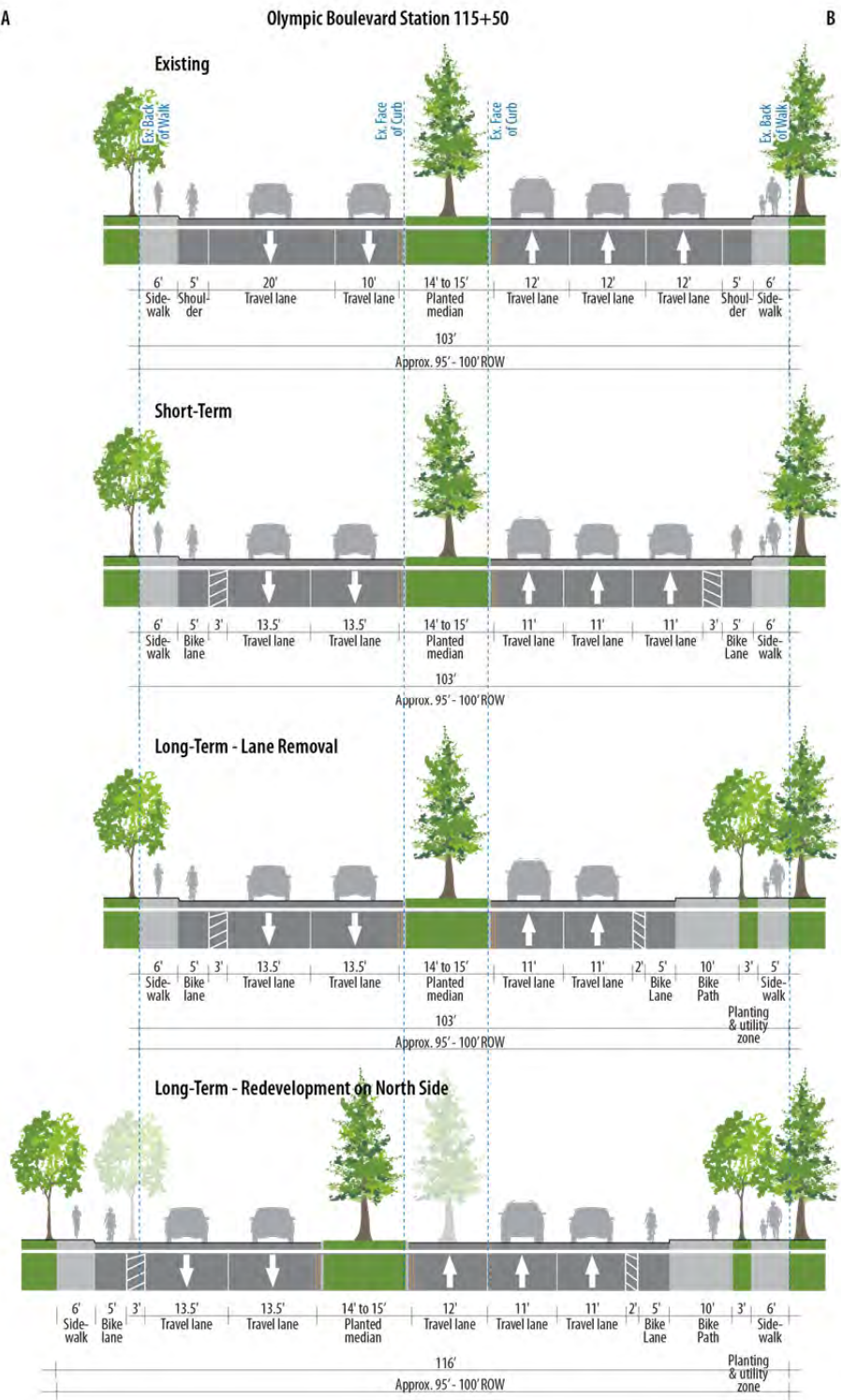
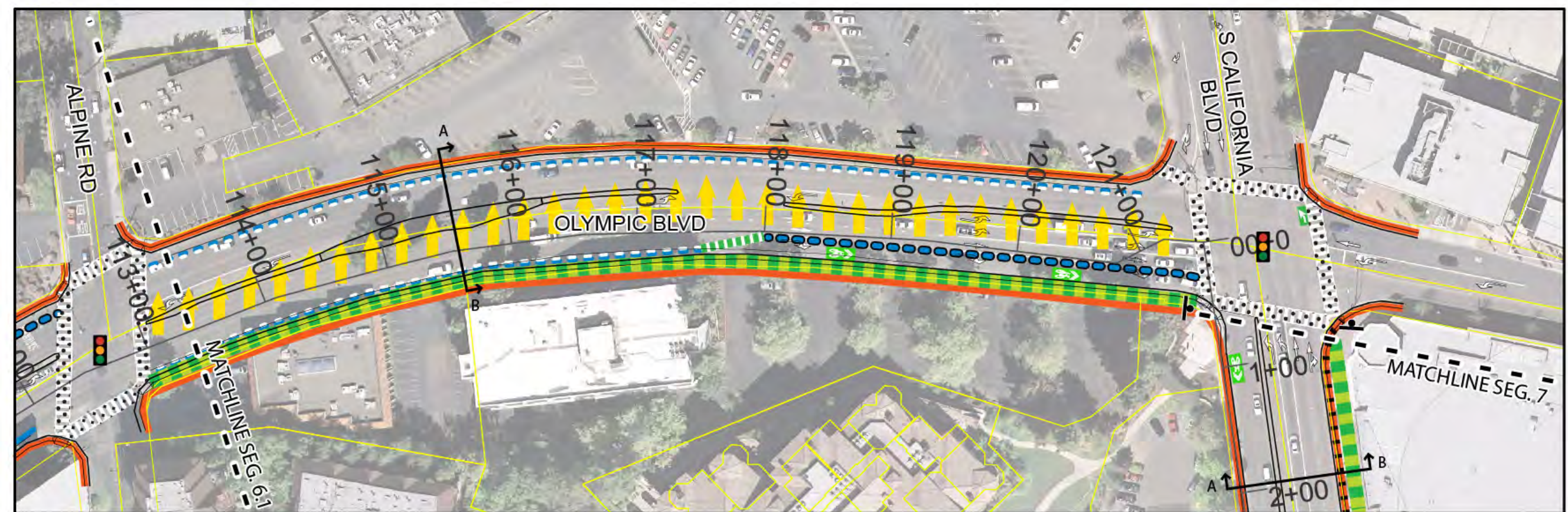


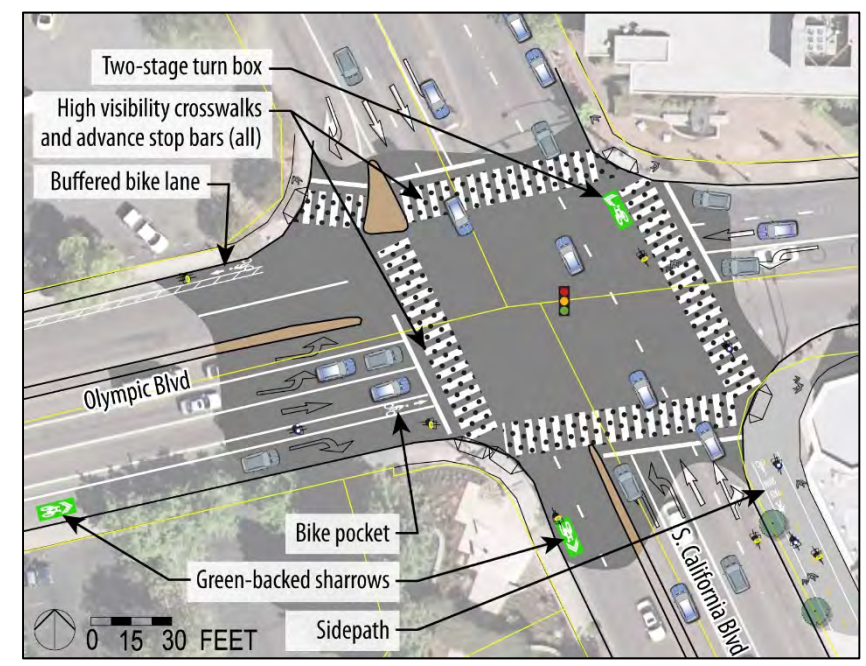
Figure 5-23: Segment 6.2- Olympic Boulevard, Alpine Road to S California Boulevard



- | Existing | Short-Term Improvement Concept | Long Term Improvement Concept |
|-------------------------|---|---|
| Sidewalk | Buffered Bike Lane | Sidepath |
| Parcel | Bike Pocket | Possible 14 Foot Lane Shift to North |
| 10' Contour | Green-Backed Sharrow | Existing Sidewalk to be Removed/ Replaced with Sidepath |
| Signalized Intersection | Two-Stage Turn Box | |
| # + 00 Stationing | Green Conflict Area Markings | |
| Cross Section Cut Line | Textured Crosswalk and Advance Stop Bar | |
| | Wayfinding Sign | |



Inset A: Olympic Boulevard / S. California Boulevard Intersection Detail



5.10 Segment 7: S. California Boulevard, Olympic Boulevard south to Newell Avenue

Existing Conditions:

- This segment has narrow lanes and median. There is no curbside parking up to Botelho Drive; thereafter there is limited curbside parking. There is insufficient space to construct bike lanes.

Short-Term Improvement Concept: Add sharrows with green backing. There is insufficient space to construct bike lanes.

- The existing lanes are narrow and the medians are approximately 4 feet wide. Even if the median was reduced to a barrier, there would not be enough space gained to create the 10 feet needed for bike lanes.
- In theory the curbs could be moved back on one or both sides and the sidewalk narrowed, but this would be more expensive and disruptive than the conceptual long-term solution.

Long-Term Improvement Concept: Create a cycle track or bike path on the east side by utilizing a portion of the wide sidewalk space.

- Although there is 20 feet of space from the curb to the structures on the east side of California Boulevard in the portion from Olympic Boulevard to Botelho Drive, only approximately 10 feet from the face of curb is in the public ROW; only this portion should be used for bicycle space.
- Currently the curbside 4-5 feet is occupied by trees, plantings, street lights, and utilities such as signal controller boxes, conflicting with space for bicyclists.
- The conceptual solution is to move the tree, light, and equipment zone between the bike path and the pedestrian space.
- The conceptual solution for the bus shelter located in the bike space near Botelho Drive is to relocate the shelter to the south side of Botelho Drive where the path will be a shared use facility, rather than separate bike and pedestrian space.
- Warning signs and buffers would be needed at building exits (which occur only at the north and south corners) and the garage driveway crossing and pedestrian entrance.
- Improved crosswalks are recommended at the Olympic Boulevard/ S. California Boulevard intersection to connect to the proposed path on the southwest corner.
- The sidepath can be created south of Botelho Drive by eliminating two on-street parking spaces and extending the curb line out.
- A bicycle/pedestrian bridge (presumably prefab) would be needed at Las Trampas Creek, approximately 130 feet long; requiring the removal of at least one tree – a native live oak. Access to the bridge would require a small encroachment onto the adjacent private parcels and the bridge would require the permission of the Contra Costa County Water Agency.
- The sidepath could be continued south by widening the existing 10 foot wide sidewalk fronting Trader Joe’s to 16 feet by eliminating up to 4 curbside spaces on the west side of the street and shifting/retaining the 7 curbside spaces on the east side. This would require moving or replacing street trees, street furniture, and utilities.

Tree Impact (Long-Term Concept): 7 medium-sized street trees would be removed and replaced in the reorganized sidewalk space between Olympic Boulevard and Botelho Drive. One medium sized native oak would be removed on the south side of the proposed bridge over Las Trampas Creek.

Figure 5-24: California Boulevard Stations 2+00 and 9+00 (facing north)

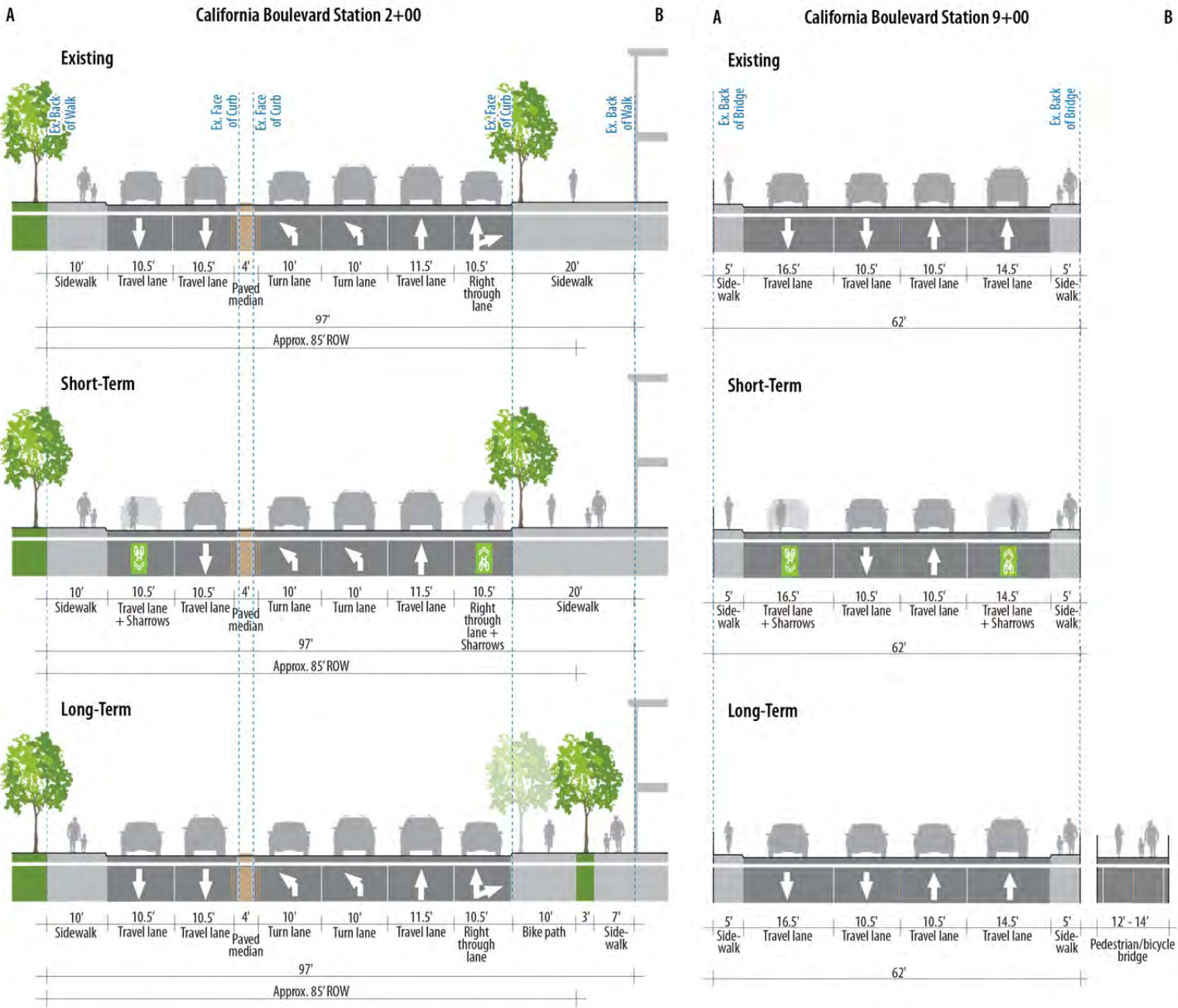


Figure 5-25: California Boulevard Station 11+00 (facing north)

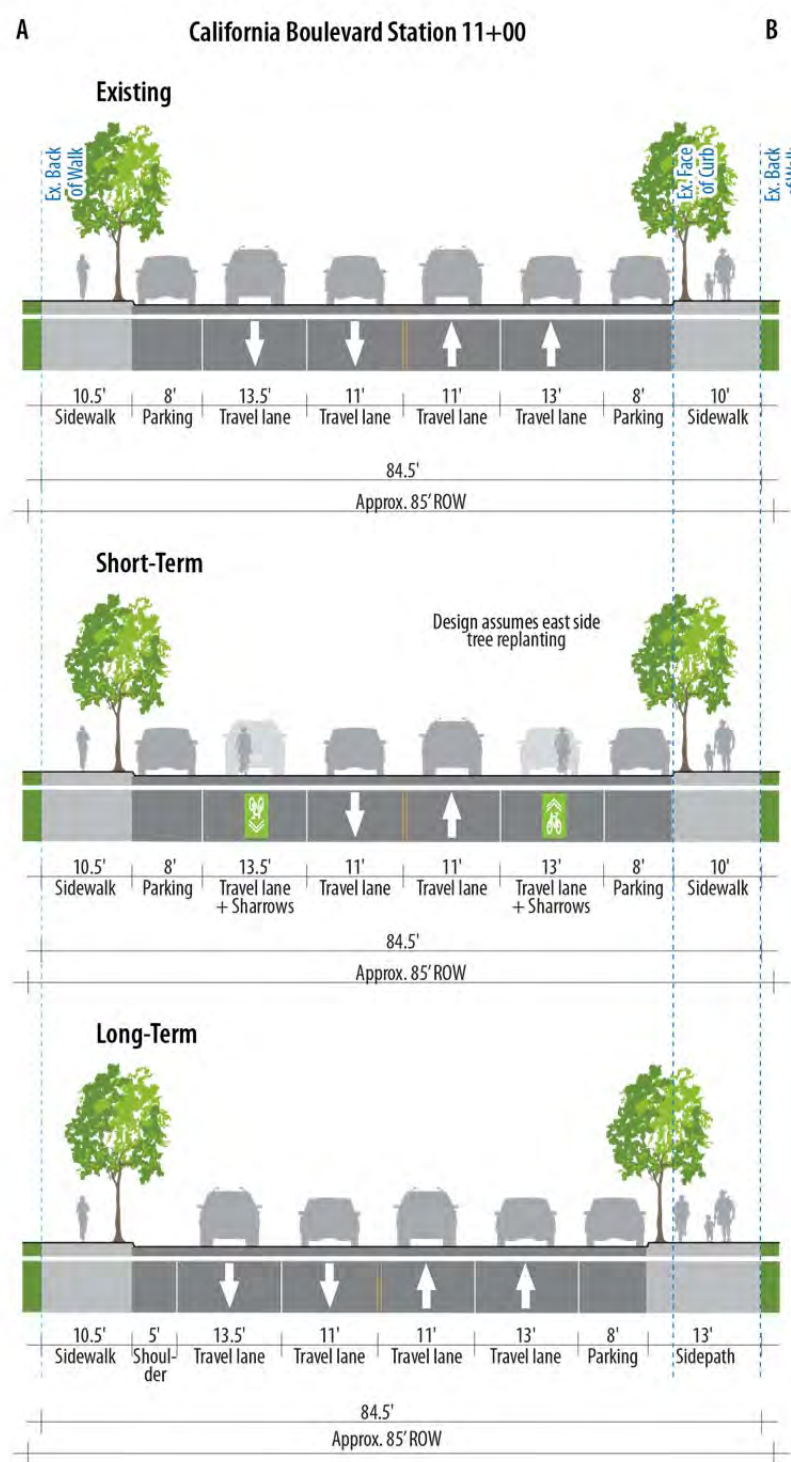
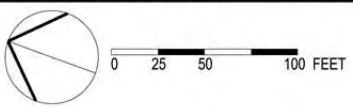
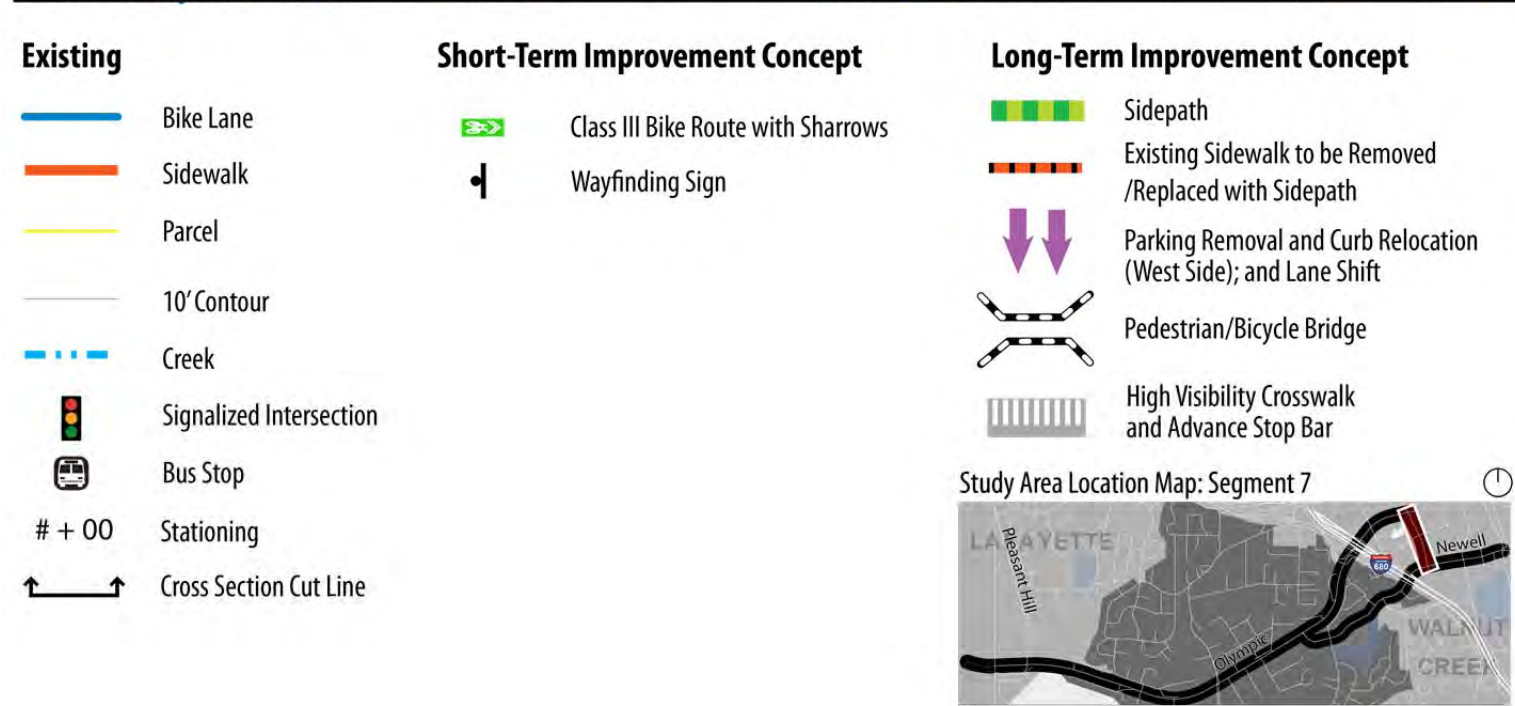
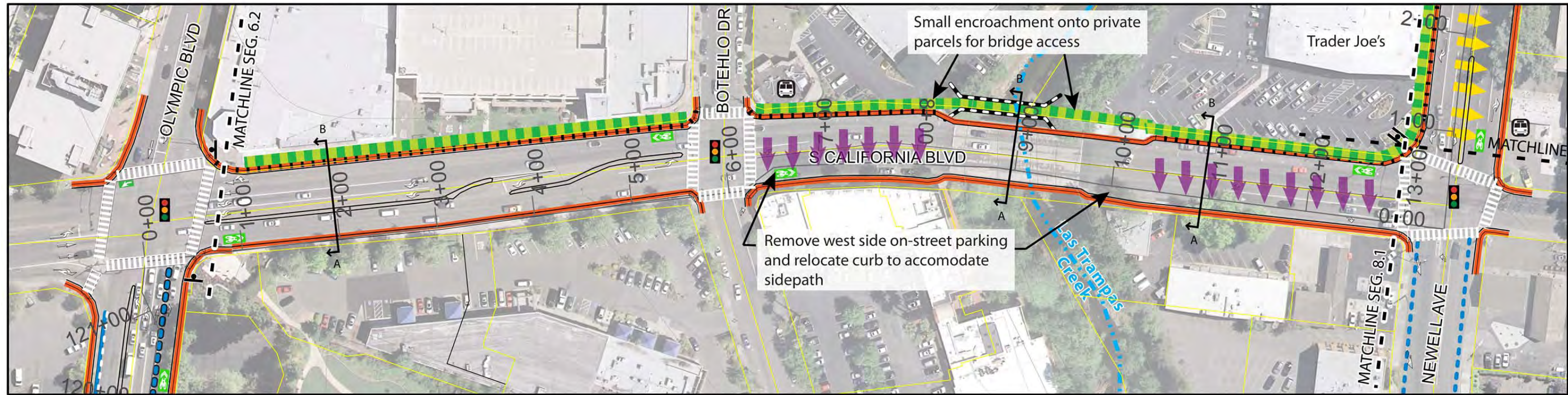


Figure 5-26: Segment 7 – South California Boulevard, Olympic Boulevard to Newell Avenue



5.11 Segment 8: Newell Avenue, S. California Boulevard to Broadway

5.11.1 Segment 8.1: Newell Avenue, S. California Boulevard to Main Street

Existing Conditions:

- The sidewalk along the north side is 8 feet wide, but street lights, street trees with gates, power poles, and projecting planters reduce clear path to as little as 4 feet.
- The mixed residential and commercial project at 1500 Newell Avenue, currently under construction at the northwest corner of Newell Avenue and Main Street, will have a 10 foot wide sidewalk along Newell Avenue.
- Kaiser Hospital and its' associated parking structure are located on the south side, where there is an 8 foot or wider sidewalk, a bus stop with pullout, and a landscaped frontage with large mature pines and an oak.

Short-Term Improvement Concept: There is insufficient space to construct bike lanes. Sharrows are already in place (not shown). Even if the lanes were narrowed to 11 feet, and the median reduced to a barrier, there would not be enough space gained to create the 10 feet needed for bike lanes. Add sharrows with green backing.

Long-Term Improvement Concept: Construct a sidepath or add a bike path or "cycle track" adjacent to the sidewalk on the north side. A sidepath with a shared bicycle/pedestrian space of a net 9 to 10 feet is not necessarily adequate to accommodate the significant use anticipated on this segment, which joins the Newell Avenue west segment and the California Boulevard segment. Consistent with the vision for the Connector, a concept for the more desirable separate facilities is presented:

- Sidepath Alternative:** Six feet could be added to the existing 8 foot sidewalk on the north side by narrowing the lanes to 11 feet and relocating and narrowing the adjacent 4 foot median to 3 feet. The street trees, street lights, and utilities would need to be relocated to near the new curb to provide space for the shared use path.
- Cycle Track/Bike Path Alternative:** The 8 foot sidewalk/pedestrian space on the north would be retained adjacent to the property line, and a cycle track or bike path would be created, requiring 10 to 12 feet on the curb side with a street tree, light, and utility zone between the two. The existing trees, lights, and utilities could potentially be left in place. This alternative would require some reconstruction of the new frontage of 1500 Newell Avenue, but only in the public ROW. There are 3 scenarios under which the additional space needed for the Cycle Track/Bike Path Alternative could be created:

- Redevelopment Alternative:** Wait for the properties on the north side to be redeveloped, affording the opportunity to provide more space and build the path (as is occurring to the east with Broadway Plaza). The Newell Promenade shopping center is an older facility and economics could warrant its' reconstruction over a medium-term horizon, but Trader Joe's is a high-performing use that is not likely to be redeveloped, and the Village at 1500 Newell Avenue is currently being reconstructed, and while additional sidewalk space is being provided, a Class I path facility was not envisioned.

- Additional ROW Alternative:** Acquire (presumably by willing-seller negotiation) approximately 5 feet of right-of-way along the frontage of the gas station and Kaiser Hospital, and shift the lanes to the south to provide room for the trail facility on the north. This would involve:
 - relocating the canopy over the gas pumps
 - demolishing and reconstructing part of the Kaiser landscape areas and planters; sidewalks and pedestrian plazas with associated lighting and amenities and a bus stop;
 - removing a heritage-size pine tree

- Lane Removal Alternative:** Remove one of the vehicle lanes on Newell Avenue to provide space for the trail. This would have a significant impact on a major connector that already experiences level of service F. This alternative would be a strong statement in support of bicycle and pedestrian access as major transportation alternatives. Other cities (San Francisco, Oakland) have made this tough choice, and demonstrated that the increased bicycle access helps offset the reduced motor vehicle traffic capacity.

- There is a current City proposal to construct a mid-block crosswalk with a curb extension (see Figure 5-28) to accommodate Kaiser employees and visitors. Although this would be a desirable accommodation for bicyclist and pedestrian connectivity, it would also have to be reconstructed if the street shift and/or trail construction occurred.

Tree Impact (Long-Term Concept): If the sidepath was created by lane narrowing, or the cycle track/bike path was created in conjunction with redevelopment of the properties to the north, 5 street trees (small and in poor condition) would need to be removed and replaced. If additional space was created by removing a lane, there would be no tree impact. If the space was created by acquiring frontage to the south, one heritage-sized Italian stone pine, three mature street trees, and one small street tree would need to be removed and replaced.

Figure 5-27: Newell Avenue Station 2+50 (facing east)

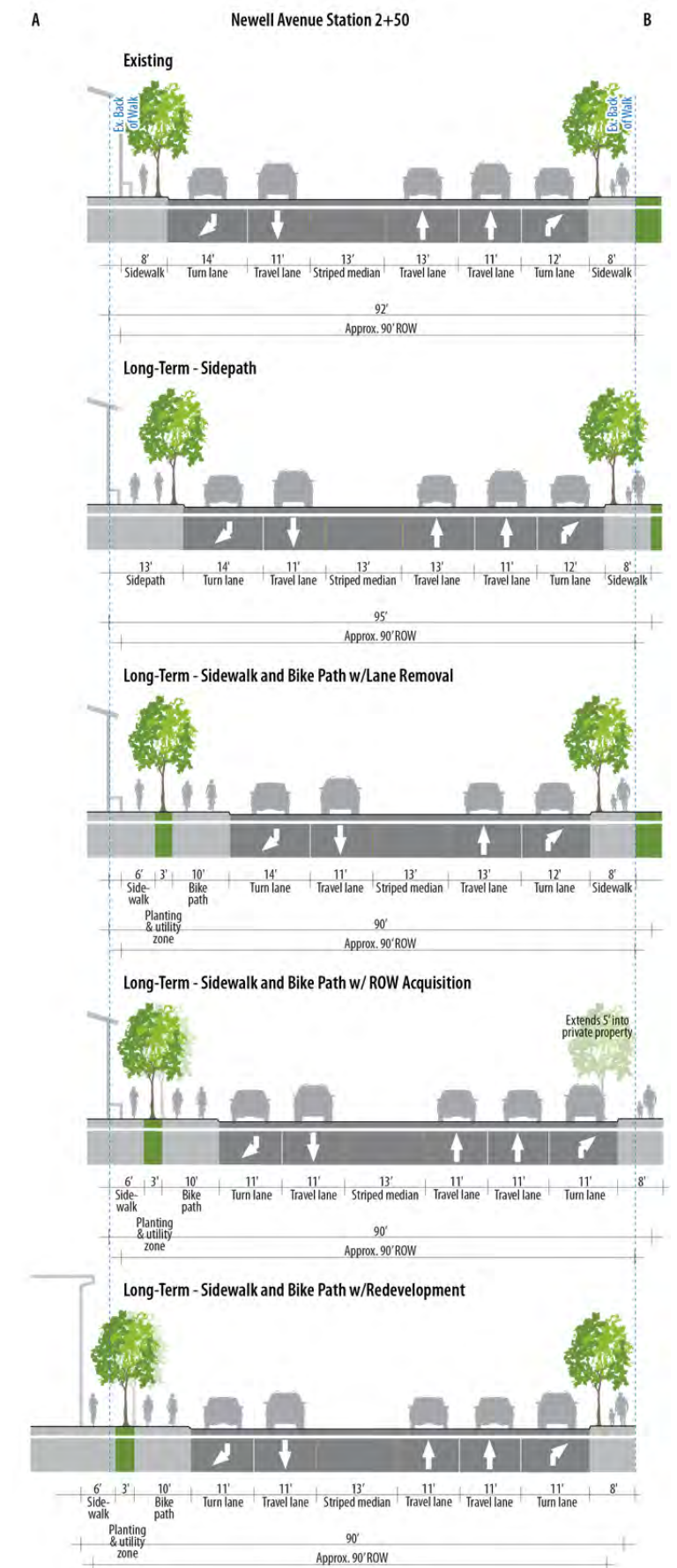
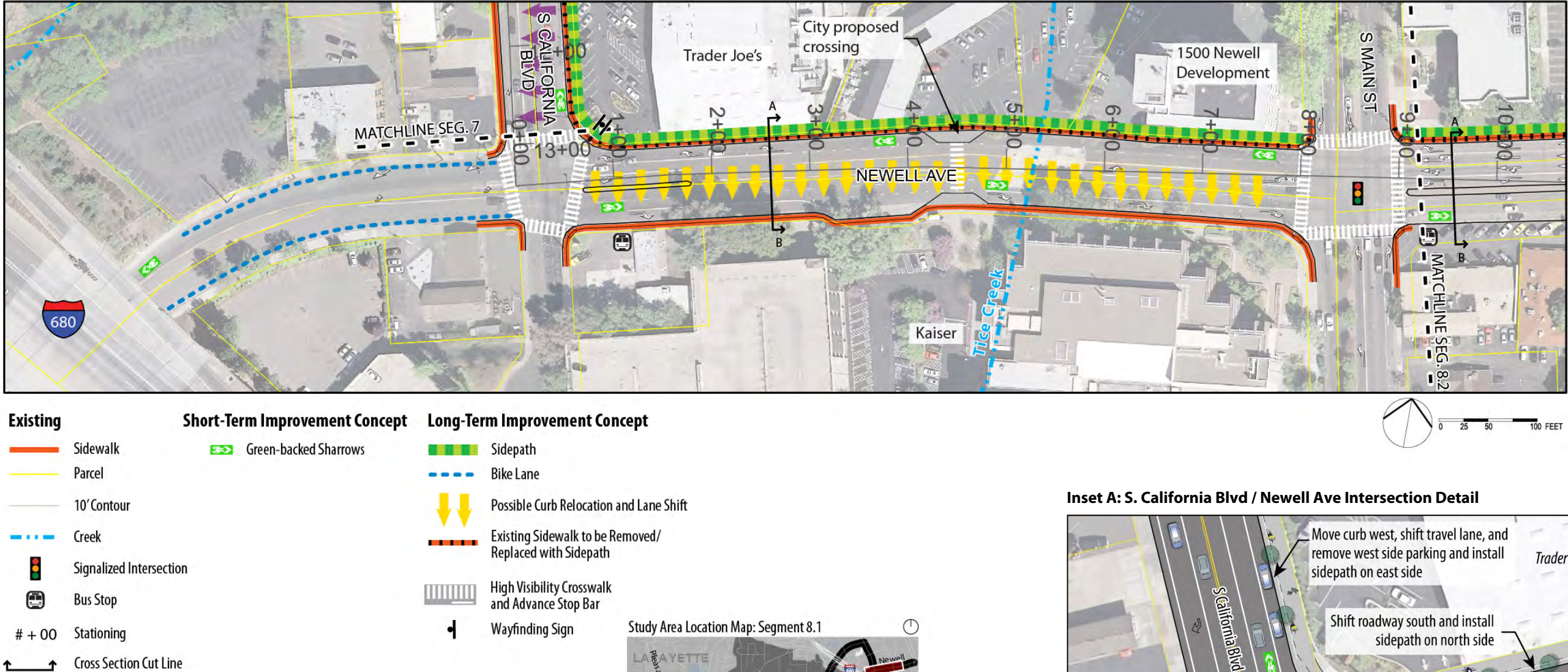
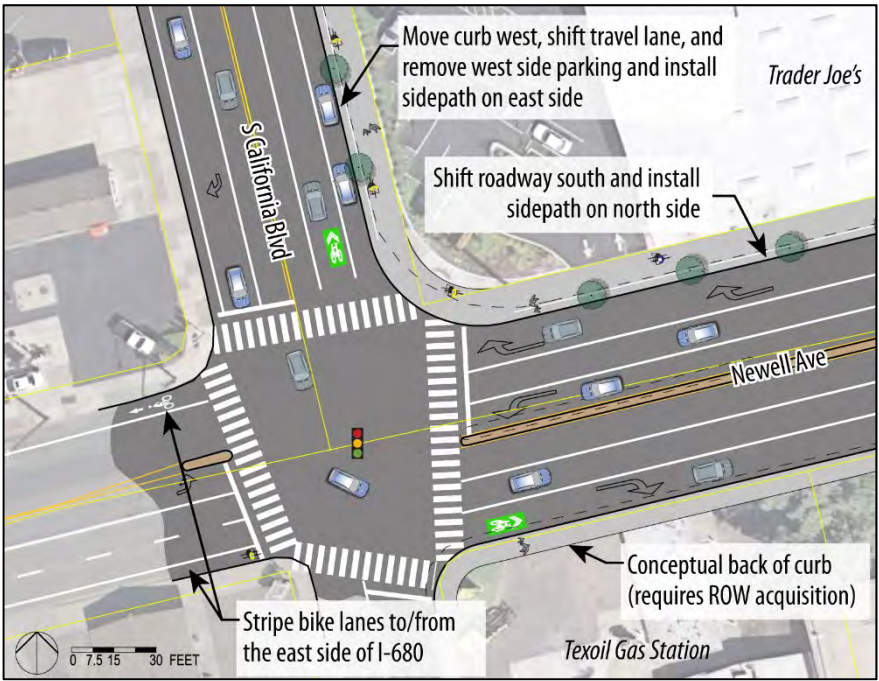


Figure 5-28: Segment 8.1- Newell Ave, S California Blvd to Capwell St



Inset A: S. California Blvd / Newell Ave Intersection Detail



5.11.2 Segment 8.2: Newell Avenue, Main Street to Broadway and the IHT

Existing Conditions:

- The existing lanes and median in this segment are already relatively narrow. There is a 6 foot wide raised median along the left turn pocket from WB Newell Avenue to SB Main Street. A maximum of approximately 3 feet could be gained by narrowing the median. There is not sufficient space to add bike lanes.

Short-Term Improvement Concept: None. There is insufficient space to construct bike lanes and sharrows are already present.

- Even if the lanes were narrowed to 11 feet and the median reduced to a barrier, there would not be enough space to create the 10 feet needed for bike lanes.

Long-Term Improvement Concept: Construct a sidepath or add a bike path or “cycle track” adjacent to the sidewalk on the north side. A sidepath with a shared bicycle/pedestrian space of a net 9 to 10 feet is not really adequate to accommodate the use anticipated on this segment. Consistent with the vision for the Connector, a concept for the more desirable separate facilities is presented:

- **Sidepath Alternative:** 4 feet could be added to the existing 10 foot sidewalk on the north side by narrowing travel lanes to 11 feet and relocating/narrowing the adjacent 6.5 foot median to 4.5 feet. The trees, street lights, and utilities would need to be relocated to near the new curb to provide space for the path. A bike/pedestrian bridge (presumably prefab) would be needed at San Ramon Creek, (about 130 feet long) requiring the removal of at least two trees. Bridge access would require a small encroachment onto adjacent private parcels and the bridge would require permission of the Contra Costa County Water Agency.
- **Cycle Track/Bike Path Alternative:** The 8 foot sidewalk on the would be retained adjacent to the property line, and a cycle track or bike path would be created, requiring 10 to 12 feet at curb side, with a tree, light, and utility zone between the two. The existing trees, lights, and utilities could potentially be left in place. This would require some reconstruction of the new frontage of 1500 Newell, but only in the public ROW. There are 3 scenarios under which the additional space needed could be created:
 - 1) **Redevelopment Alternative:** The Broadway Plaza property is currently being redeveloped, and a Class I path is part of the proposal. If the Chase Bank Building at 1390 Main Street is also redeveloped opportunity may be presented to complete the cycle track/bike path connection.
 - 2) **Additional ROW Alternative:** Acquire (presumably by negotiation) approximately 5 feet of right-of-way at the back of sidewalk along the frontage of the Chase Bank building to provide room for the trail facility on the north, utilizing the existing 10 foot wide sidewalk on the north side.
 - 3) **Lane Removal Alternative:** Remove one of the vehicle lanes on Newell Avenue to provide space for the path. This would have an impact on a major connector that already experiences level of service F (the City is currently planning to add a lane in conjunction with the Broadway Plaza redevelopment project, as shown in the section for Sta. 16+50). This alternative would be a strong statement in support of bicycle and pedestrian access as major transportation alternatives. Other cities (San Francisco, Oakland) have made this tough choice and demonstrated that increased bicycle access helps offset the reduced motor vehicle capacity.
- The sidepath east of the creek anticipated to be constructed as part of the Broadway Plaza redevelopment project. If the sidewalk with cycle track/bike path alternative is pursued, the Broadway Plaza plans would need to be amended to reflect this as the improvements would extend approximately 7 additional feet into the property.
- Crosswalks and ramps on north and west sides of intersection would be improved to accommodate the pathway connections to the north and south IHT segments.

Tree Impact (Long-Term Concept): Unless the path was created in conjunction with lane removal, 5 street trees (small and in poor condition) would need to be removed and replaced. Up to 7 mature ornamental trees near the back of the sidewalk might have to be removed and replaced.

Figure 5-29: Newell Avenue Stations 9+50 and 16+50 (facing east)

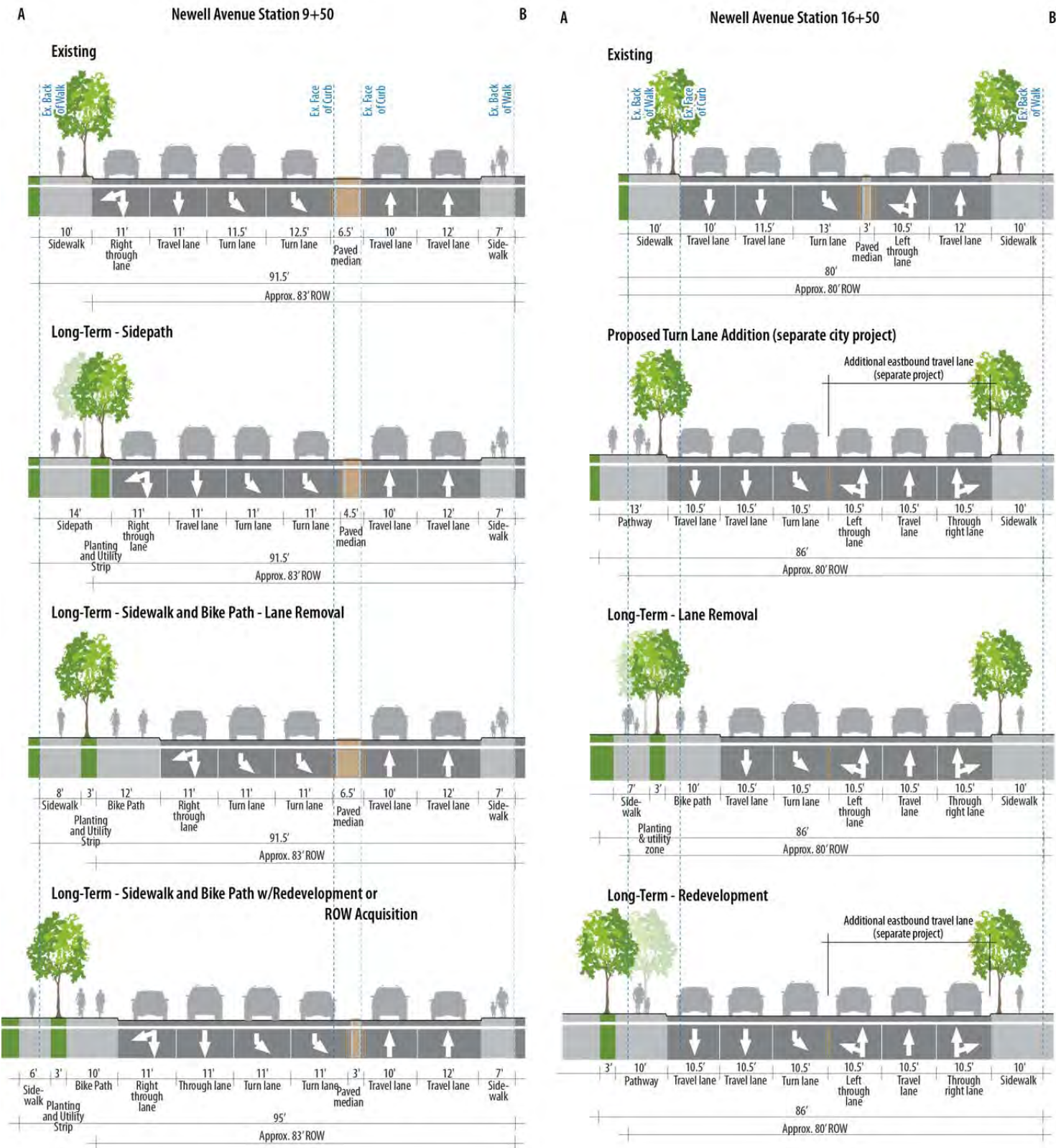
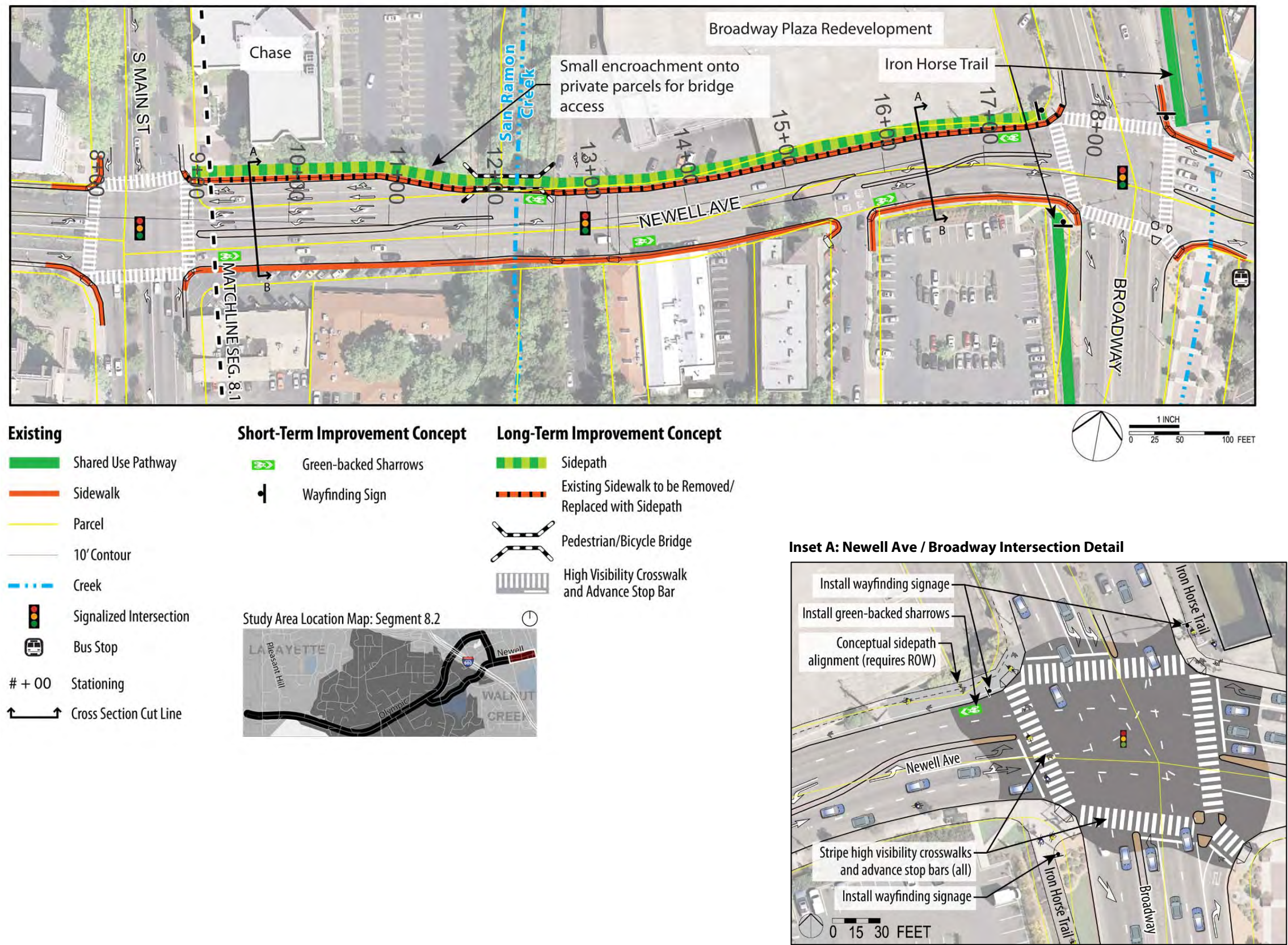


Figure 5-30: Segment 8.2- Newell Avenue, Capwell Street to the Iron Horse Trail



5.12 Segment 9: Newell Ave West of I-680

West of I-680, Newell Avenue is a winding, two-lane roadway with a ROW width of 50 feet through a residential neighborhood. The pavement width is approximately 25 feet. Newell Avenue provides access to Parkmead Elementary School as well as three other schools. Relatively low vehicle volume and speed makes this portion of Newell Avenue more comfortable for bicyclists and pedestrians than other busier roads. Newell Avenue is a popular route with weekend bicyclists, many of whom are headed to the IHT or other routes south to Mt. Diablo, and it is recommended that this route is designated as an option for reaching the IHT. It would be the most low-stress, family-friendly option except that it leads to the eastern portion of Newell Avenue, which won't be a low-stress route until the long term improvements are implemented. In the interim, Lilac Drive and the other existing connections to the south, described under Segment 10, are the best connections to the IHT.

Improvements at the west and east ends of the segment are covered under Segments 4 and 8.1. Significant physical improvements to better accommodate pedestrians and bicyclists are not feasible or necessary in this setting. The existing narrow sidewalks are blocked in many locations by landscaping or resident-installed features and, though reportedly prohibited, parked cars often block the path. Coordination with individual property owners to correct these conditions is recommended.

Short-Term Improvement Concept: Provide wayfinding signage and maps to clarify for bicyclists on Olympic Boulevard and Newell Avenue/downtown Walnut Creek that Newell Avenue west is a connecting route and that Lilac Drive, Lancaster Road and other routes to the south are optional connections to the IHT.

Long-Term Improvement Concept: Provide wayfinding signage and maps to designate that Newell Avenue west is an option to the primary connector route, and that it merges back into the main route at California Boulevard.

5.13 Segment 10: Southern Connections to IHT

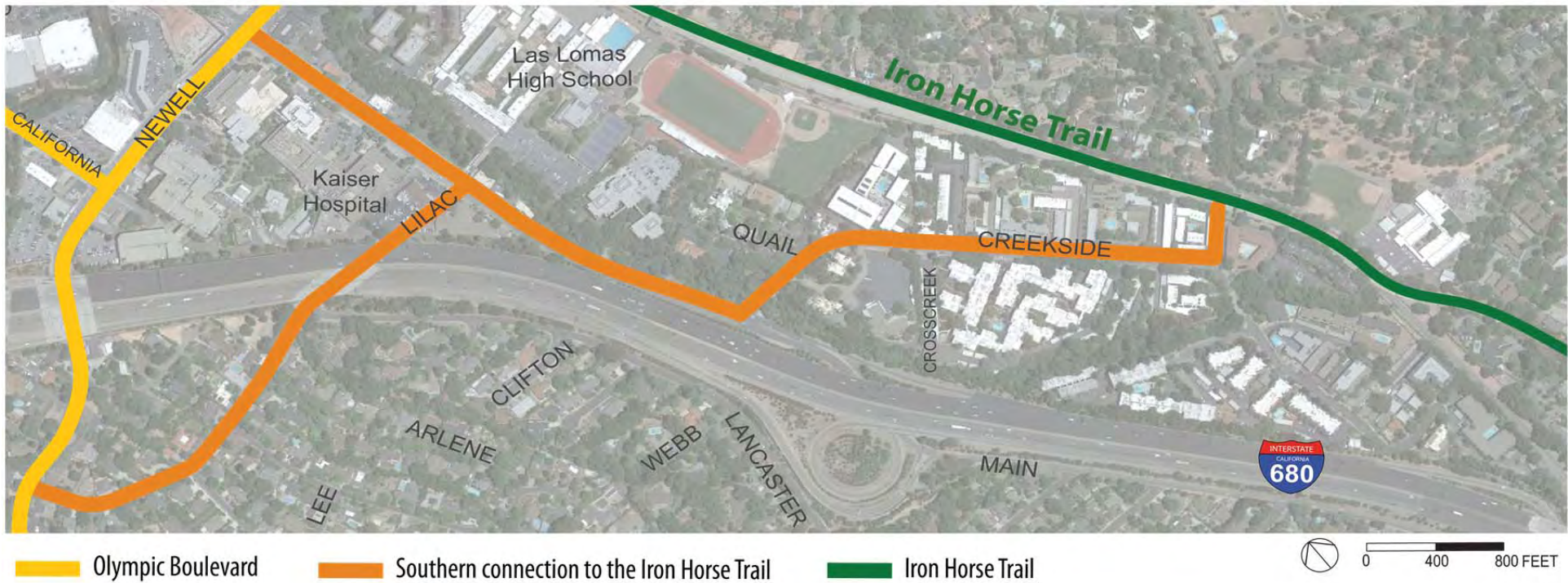
Many bicyclists currently use Olympic Boulevard, Newell Avenue, Lilac Drive, Lancaster Road, Castle Hill Road, Danville Boulevard, and other roadways to connect south to the IHT and bicycling destinations in the Danville-San Ramon area, including Mt. Diablo. Parts of these southern connections may also have benefits for access to Las Lomas High School, Kaiser Hospital, high-density residential areas, and other destinations. These connections are not considered for physical improvements, but additional wayfinding would benefit users of the Olympic Boulevard/Newell Avenue route that want to connect to/from the south.

Short-Term Improvement Concept: Provide wayfinding signage and maps to clarify that these routes are connections from Olympic Boulevard via Newell Avenue west to the IHT and other destinations to the south.

Figure 5-31: Segment 9 – Newell Ave West of I-680



Figure 5-32: Segment 10 – Southern Connections to the Iron Horse Trail



6. Implementation and Phasing

This Study is a bold vision for a bicycle and pedestrian Connector that will provide the region with multiple benefits, including transportation alternatives, healthy recreation, and support for environmental sustainability goals. This chapter outlines an implementation approach including an overview of cost estimates, phasing recommendations, and next steps.

6.1 Cost Estimates

This chapter presents planning-level cost estimates for the proposed short-term and long-term improvement segments. Summaries are presented in **Table 6-1** and **Table 6-2**. The detailed estimates and unit cost assumptions are presented in Appendix B. Planning-level cost estimates require numerous assumptions about the details of construction and associated requirements. The estimate and assumptions reflect the experience of the consultant team based on similar projects.

These cost estimates include all the remaining project implementation steps in addition to “hard” construction costs. This includes costs for surveying, design, technical studies and environmental documentation, as well as construction period engineering and administration. The estimates include cost “placeholders” for each of these stages of project implementation, represented as factors of the construction cost as outlined below.

Cost estimates are summarized in this chapter in two categories:

- Construction Costs
 - o “Hard” construction costs for capital improvements
 - Right-of-way easement acquisition, for some segments where additional right-of-way is necessary for the trail alignment. Acquisition is assumed to be on a willing seller basis, and at a placeholder cost of \$50.00 per square foot. Actual right-of-way costs would be subject to negotiation
 - o Construction overhead (costs the contract typically includes over and above the individual work items – calculated as a percentage of the total project construction cost):
 - Mobilization – 5%
 - General conditions, bonds, and insurance – 2%
 - Erosion control, including Best Management Practices (BMPs), Stormwater Pollution Prevention Plan (SWPPP) and reporting – typically 5%, or 0 for short-term improvements that consist only of signing and striping
 - Traffic control – 10% (most segments will involve significant traffic control)
- Contingency, Survey, Design, Environmental, and Admin Costs – calculated as a percentage of the total project construction cost
 - o Contingency, to account for variations in the level of accuracy of the estimate – 20%
 - o Survey, including boundary and topographic – 5%
 - o Design, including plans, specifications, and estimates – 15%
 - o Environmental – in this study, applies only to long term improvements as short-term improvements such as signing and striping are assumed to be categorically exempt from environmental regulations
 - Analysis, documentation, and related permits – 10%
 - Technical and environmental studies and mitigation, including for geotechnical or hazardous waste investigations – 2.5%
 - o Administration, including construction period engineering and other management tasks – 15%

Table 6-1: Short-Term Project Segments Costs

	Segment	Jurisdiction	Construction	Contingency, Survey, Design, Environmental, and Admin	Total Estimate
1	Olympic Blvd.: Reliez Station Rd. to Pleasant Hill Rd.	Lafayette	\$1,083,489*	\$45,919	\$1,130,000
2.1	Olympic Blvd.: Pleasant Hill Rd. to Windtree Ct.	Lafayette	\$41,240	\$22,682	\$64,000
2.2	Olympic Blvd.: Windtree Ct. to Newell Ct.	CC County/ Lafayette	\$75,759	\$41,667	\$118,000
3	Olympic Blvd.: Newell Ct. to Boulevard Way/ Tice Valley Rd.	CC County	\$143,236	\$78,780	\$223,000
4	Olympic Blvd.: Boulevard Way/ Tice Valley Rd. to Newell Ave.	CC County	\$415,814	\$228,698	\$645,000
5	Olympic Blvd.: Newell Ave. to I-680	CC County	\$103,563	\$56,960	\$161,000
6.1	Olympic Blvd.: I-680 to Alpine Rd.	Walnut Creek	\$92,672	\$50,970	\$144,000
6.2	Olympic Blvd.: Alpine Rd. to S. California Blvd.	Walnut Creek	\$33,521	\$18,437	\$52,000
7	S. California Blvd.: Olympic Blvd. to Newell Ave.	Walnut Creek	\$7,675	&4,221	\$12,000
8.1	Newell Ave.: S. California Blvd. to S. Main St.	Walnut Creek	\$1,053	\$579	\$2000
8.2	Newell Ave.: S. Main St. to Broadway Ave./Iron Horse Trail	Walnut Creek	\$6,458	\$3,552	\$11,000
9	Newell Ave.: west of I-680	CC County	\$9,407	\$5,174	\$15,000
10	Southern connections to the Iron Horse Trail	CC County/ Walnut Creek	\$9,407	\$5,174	\$15,000

**Includes \$1,000,000 estimated for planned improvements at the intersections of Olympic Boulevard with Reliez Station Road and with Pleasant Hill Road. These improvements were identified and cost estimates developed concurrent with but outside the scope of this trail connector alignment study.*

Table 6-2: Long-Term Project Segments Costs

	Segment	Jurisdiction	Construction	Contingency, Survey, Design, Environmental, and Admin	Total Estimate
1	Olympic Blvd.: Reliez Station Rd. to Pleasant Hill Rd.	Lafayette	--	--	--
2.1	Olympic Blvd.: Pleasant Hill Rd. to Windtree Ct.	Lafayette	\$745,880	\$503,469	\$1,250,000
2.2	Olympic Blvd.: Windtree Ct. to Newell Ct.	CC County/ Lafayette	\$292,098	\$197,166	\$490,000
3	Olympic Blvd.: Newell Ct. to Boulevard Way/ Tice Valley Rd.	CC County	\$366,302	\$247,254	\$614,000
4	Olympic Blvd.: Boulevard Way/ Tice Valley Rd. to Newell Ave.	CC County	\$376,859	\$254,380	\$632,000
5	Olympic Blvd.: Newell Ave. to I-680	CC County	\$991,215	\$669,070	\$1,661,000
6.1	Olympic Blvd.: I-680 to Alpine Rd.	Walnut Creek	\$758,157	\$511,756	\$1,270,000
6.2	Olympic Blvd.: Alpine Rd. to S. California Blvd.	Walnut Creek	\$274,498	\$185,286	\$460,000
7	S. California Blvd.: Olympic Blvd. to Newell Ave.	Walnut Creek	\$740,744	\$500,003	\$1,241,000
8.1	Newell Ave.: S. California Blvd. to S. Main St.	Walnut Creek	\$302,243	\$204,014	\$507,000
8.2	Newell Ave.: S. Main St. to Broadway Ave./Iron Horse Trail	Walnut Creek	\$560,039	\$378,027	\$939,000
9	Newell Ave.: west of I-680	CC County	--	--	--
10	Southern connections to the Iron Horse Trail	CC County/ Walnut Creek	--	--	--

6.2 Trail Project Priorities and Phasing Recommendations

The following tables summarize the short-term and long-term projects recommended in the Study, organized by jurisdiction, reflecting logical grouping of adjacent segments with similar construction types. Projects could be undertaken as smaller efforts or combined into larger inter-jurisdictional efforts. This multi-jurisdictional regional project approach is consistent with the objectives of the Active Transportation Program grant funding administered by Caltrans, and will enhance the chances to obtain competitive grant awards for implementation. Projects may also be eligible for regional Measure J funding.

Actual project phasing is likely to be opportunity-driven, based on funding availability, ability to forge agreements and partnerships, and/or opportunities to incorporate improvements into development proposals. It is always advantageous to implement “low hanging fruit” portions of the trail that can be completed with minimal funding and maximum community involvement to demonstrate progress and maintain interest on the overall effort.

Short- and long-term improvement maps of the entire trail connector are shown in **Figure 6-1** and **Figure 6-2**.

Table 6-3: Short-Term Projects and Phases						
Segment		Jurisdiction	Improvement	Notes, Comments	Length	Cost
Lafayette Projects/Phases						
1	Olympic Blvd.: Reliez Station Rd. to Pleasant Hill Rd.	Lafayette	Convert existing bike lanes to buffered bike lanes by narrowing vehicle lanes; extend existing path on S. side; signing and marking improvements at crossing of Reliez Station Rd.; wayfinding improvements at Pleasant Hill Rd.		1323 ft (0.25 mi)	\$1,130,000
2.1	Olympic Blvd.: Pleasant Hill Rd. to Windtree Ct.	Lafayette	Create buffered bike lanes as above	Lafayette jurisdiction only on north side except at west end – coordinate w/ CC Co	1005 ft (0.19 mi)	\$64,000
Contra Costa County Projects/Phases						
2.2	Olympic Blvd.: Windtree Ct. to Newell Ct.	CC County/ Lafayette	Create buffered bike lanes – north western portion	Lafayette jurisdiction on north side for short distance - coordinate	1137 ft (0.21 mi)	\$118,000
3	Olympic Blvd.: Newell Ct. to Boulevard Way/ Tice Valley Rd.	CC County	Create buffered bike lanes; connect existing Class I path on S. side to Tice intersection; provide bike pockets and crossing improvements at intersection		2288 ft (0.43 mi)	\$223,000
4	Olympic Blvd.: Boulevard Wy./ Tice Valley Rd. to Newell Ave.	CC County	Create continuous bike lanes; improve existing sidepath (widen narrow portions); improve crosswalks to Newell Ave.; improve right turn for bikes from EB Olympic Blvd. to SB Newell Ave.		2250 ft (0.42 mi)	\$645,000
5	Olympic: Newell Ave. to I-680	CC County	Create bike lanes in constrained portions at turn pockets; buffered bike lanes on other portions		1874 ft (0.35 mi)	\$161,000
Walnut Creek Projects/Phases						
6.1	Olympic Blvd.: I-680 to Alpine Road	Walnut Creek	Create bike lanes on S. side; bike pockets on N side	Existing bike lane for last 250’ on NB side	1131 ft (0.21 mi)	\$144,000
6.2	Olympic Blvd.: Alpine Rd. to S. California Blvd.	Walnut Creek	Convert existing bike lanes to buffered bike lanes by narrowing vehicle lanes	No existing bike lane for last 385’ on NB side	847 ft (0.16 mi)	\$52,000
7	S. California Blvd.: Olympic Blvd. to Newell Ave.	Walnut Creek	Add “sharrows” with green backing to designate lanes as shared with bikes		1228 ft (0.23 mi)	\$12,000
8.1	Newell Ave: S. California Blvd. to S. Main	Walnut Creek	Add green backing to existing “sharrows” designating lanes as shared with bikes; create bike lanes from S. California Blvd. west on Newel Ave. to I-680 undercrossing		725 ft (0.14 mi)	\$2000
8.2	Newell Ave: S. Main St. to Broadway and IHT	Walnut Creek	Add green backing to existing “sharrows” designating lanes as shared with bikes Work with the Broadway Plaza redevelopment project sponsors to implement design concept recommended in Study		868 ft (0.16 mi)	\$11,000
Joint Projects/Phases						
9	Newell Ave. west of I-680	CC County, Walnut Creek	Provide wayfinding signage for Olympic Connector LMT to IHT			\$15,000
10	Southern connections via Lilac, S. Main, Lancaster, Creekside (tributary routes)	Walnut Creek	Provide wayfinding signage to aid in connections to/from Olympic/Newell Connector			\$15,000

Table 6-4: Long-Term Projects and Phases

Segment	Jurisdiction	Improvement	Notes, Comments	Length	Cost
Lafayette Projects/Phases					
2.1	Olympic Blvd.: Pleasant Hill Rd. to Windtree Ct.	Lafayette/ CC County	Widen existing path on north side to create 10 foot sidepath (requires retaining wall tapering up to 10 feet tall, and median narrowing with tree replacement)	Lafayette jurisdiction only on north side except at west end – coordinate w/ CC Co	1005 ft (0.19 mi) \$1,250,000
Contra Costa County Projects/Phases					
2.2	Olympic Blvd.: Windtree Ct. to Newell Ct.	CC County/ Lafayette	Widen existing path on north side to create 14 foot sidepath (requires narrowing median and lane shift to S. at east end; redesign of Newell Ct. intersection and connections	Lafayette jurisdiction on north side for short distance - coordinate	1137 ft (0.21 mi) \$490,000
3	Olympic Blvd.: Newell Ct. to Boulevard Way/ Tice Valley Rd.	CC County	Extend continuous path or sidewalks along N. side (requires approx. 4 foot lane shift to the south)		2288 ft (0.43 mi) \$614,000
4	Olympic Blvd.: Boulevard Wy./ Tice Valley Rd. to Newell Ave.	CC County	Continue the sidepath approximately 100 feet to connect to Newell Avenue (may be included w/ Segment5)		2250 ft (0.42 mi) \$632,000
5	Olympic: Newell Ave. to I-680	CC County	Expand the existing sidewalks fronting the Villa townhome complex to create a 10 to 12 foot wide sidepath by narrowing lanes and wide portions of medians, eliminating up to 8 curbside parking spaces out of 30. At one location it may be necessary to shift the south side curb 2 feet south to create needed space, involving tree removal.		1874 ft (0.35 mi) \$1,661,000
Walnut Creek Projects/Phases					
6.1	Olympic Blvd.: I-680 to Alpine Road	Walnut Creek	Create a sidepath along the south side of Olympic from Paulson Lane to Alpine Road by constructing retaining walls. Provide enhanced crossing improvements.	City of Walnut Creek has submitted a grant application for improvements at I-680 undercrossing	1131 ft (0.21 mi) \$1,270,000
6.2	Olympic Blvd.: Alpine Rd. to S. California Blvd.	Walnut Creek	Add a bike path north of the existing sidewalk on the south side. Create space either by removing a vehicle lane or shifting the roadway 10 to 12 feet north in conjunction with future redevelopment of the properties on the north side		847 ft (0.16 mi) \$460,000
7	S. California Blvd.: Olympic Blvd. to Newell Ave.	Walnut Creek	On first block convert existing wide sidewalk/plaza on E. side to separate bike path on curb side and sidewalk on inside with street tree, light, and utility space in between. On second block create sidepath by eliminating 2 parking spaces S. of Botelho and 3 to 4 parking spaces on W. side S. of creek and shifting lane W.s, extending curb, and installing bicycle/pedestrian bridge over creek		1228 ft (0.23 mi) \$1,270,000
8.1	Newell Ave: S. California Blvd. to S. Main	Walnut Creek	Create sidepath on N. side by narrowing lanes and extending north side curb; OR add a bike path to south of existing sidewalk (create space either by removing a vehicle lane OR narrowing lanes and acquiring 5 – 6 feet of ROW on the south side and shifting roadway south); OR create an all-new sidewalk and bike path in conjunction with future redevelopment of the properties on the north side	Cost depends on design option and space-creation scenario	725 ft (0.14 mi) \$460,000

Segment	Jurisdiction	Improvement	Notes, Comments	Length	Cost
8.2	Newell Ave: S. Main St. to Broadway and IHT	Walnut Creek	Add a bike path to south of existing sidewalk (create space either by removing a vehicle lane) OR create an all-new sidewalk and bike path by narrowing lanes and acquiring 5 – 6 feet of ROW beyond the existing sidewalk on north side; OR create an all-new sidewalk and bike path in conjunction with future redevelopment of the properties on the north. Install a bicycle/pedestrian bridge over creek to connect to sidepath or sidewalk plus bike path at redeveloped Broadway Plaza	Broadway Plaza redevelopment plan includes plan for shared use path along Newell Ave.	868 ft (0.16 mi) \$1,241,000
Joint Projects/Phases					
1 - 10	Varies	Lafayette, CC County, Walnut Creek	Update wayfinding signage to reflect new/improved Olympic Connector LMT to IHT	N.A.	Varies

Figure 6-1: Short-Term Improvement Concepts

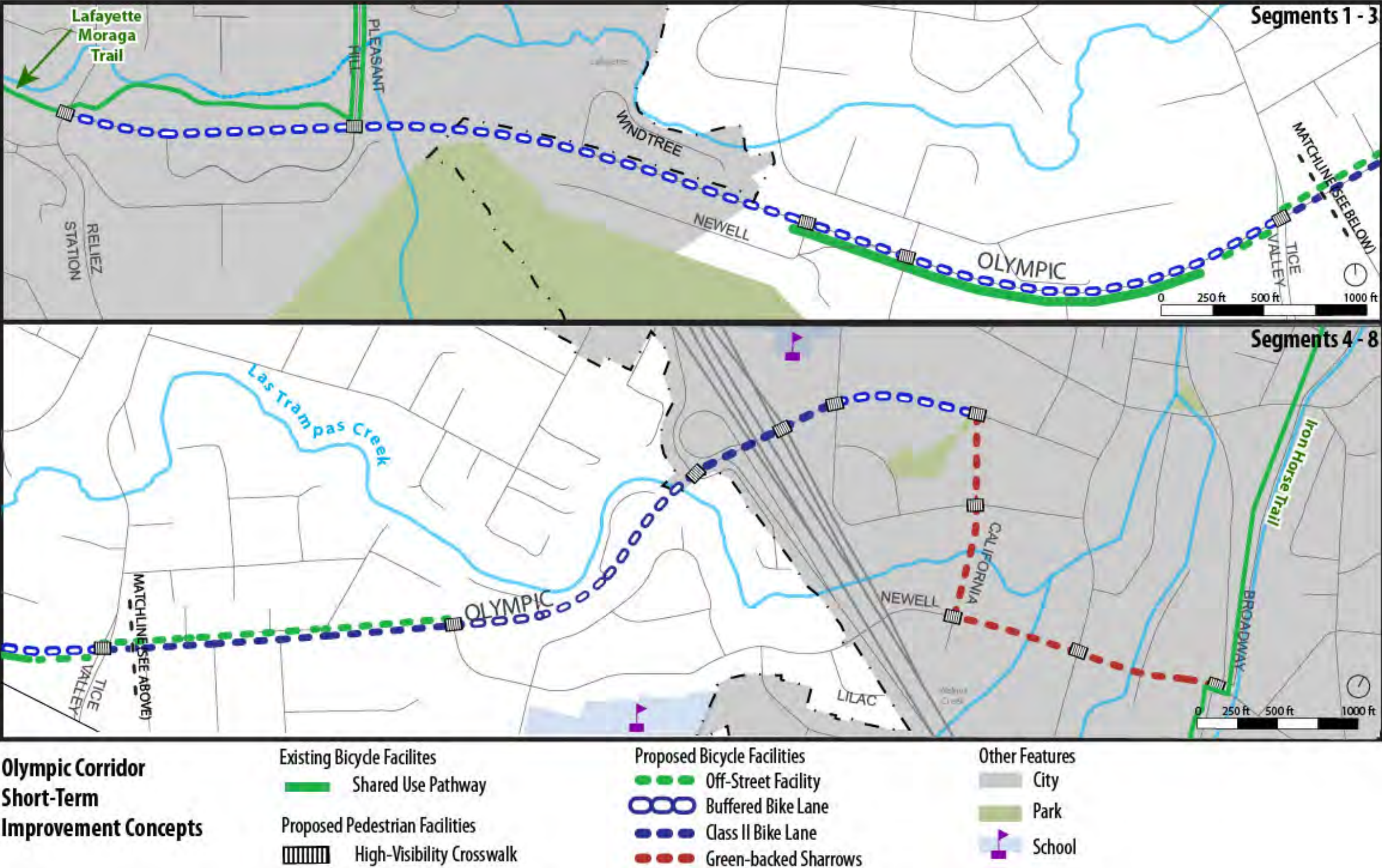
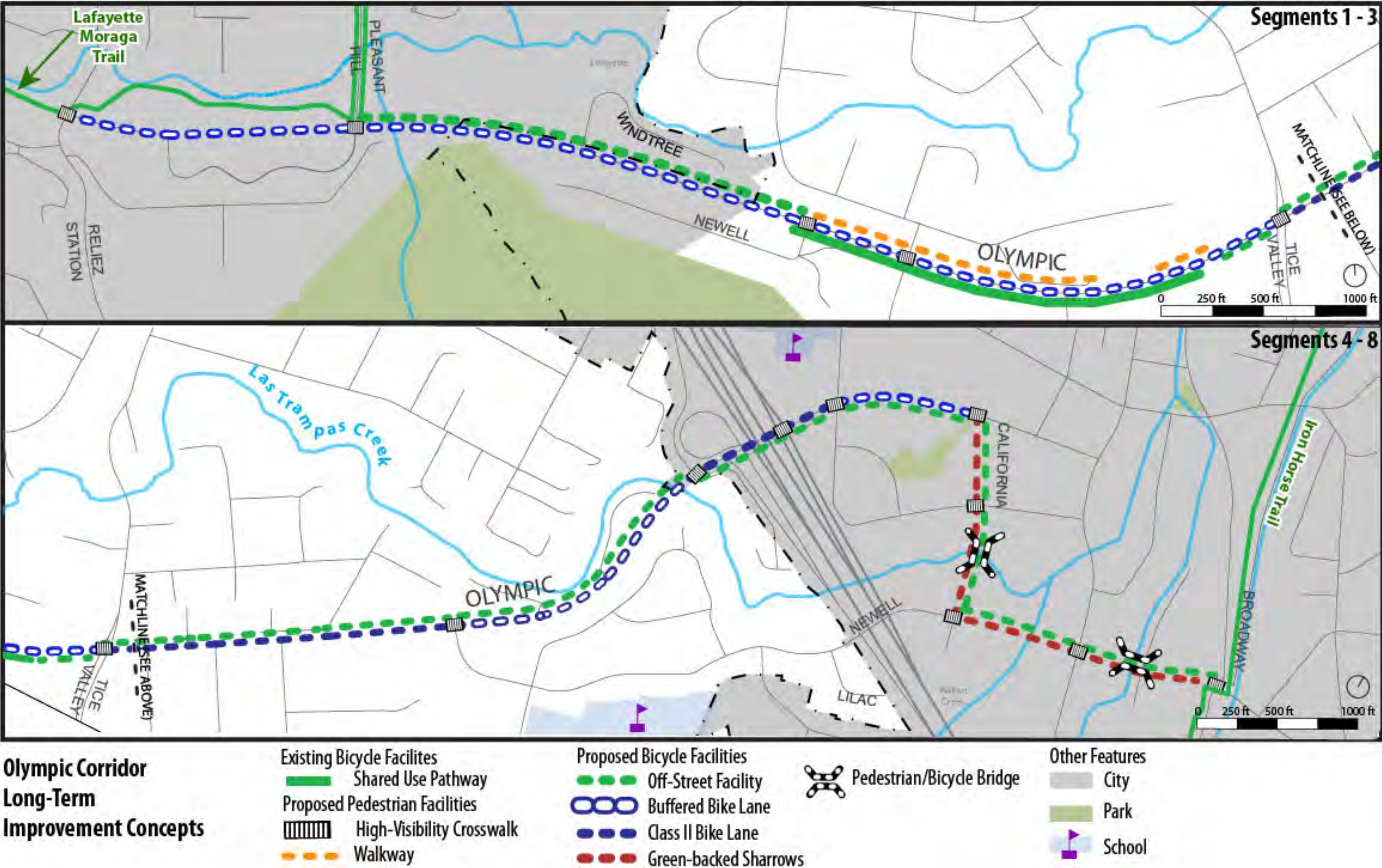


Figure 6-2: Long-Term Improvement Concepts



6.3 Next Steps

This section reviews the steps and documentation anticipated for project planning, design, approval, and implementation, anticipating the particular challenges unique to each project type and location. It describes the typical implementation steps that may be required to take the project from the current concepts through construction. It also describes the permits and approvals that may be required for project implementation.

The Olympic Boulevard Corridor Trail Connector Study accomplished three major milestones: 1) the collection of base data and analysis of opportunities and constraints in the form of maps and descriptions that can be used for more detailed planning and design; 2) the identification of specific community-supported design concepts, and associated cost estimates, consistent with pertinent agencies’ policies and standards; and 3) the establishment of public and stakeholder priorities and strategies for implementing the design concepts.

This planning-level study is of the foundation for further planning and design of the design concepts. Specific and generic next steps toward project implementation are outlined below:

- Coordination between Lafayette, Walnut Creek, Contra Costa County, Caltrans and other relevant public agencies and stakeholders to refine the design concepts, and to update and applicable plans to incorporate the conceptual improvements;
- Coordination between Lafayette, Walnut Creek, and Contra Costa County to pursue funding for implementing the design concepts;
- For preparation of grants and coordination with other projects, utilize the plan maps, improvement cross sections, and initial planning-level cost estimates to advance study of the design concepts;
- Continue public and stakeholder engagement on the development of the design concepts and incorporate study concepts throughout the project development process.

6.3.1 Typical Project Implementation Steps

Once funding is secured for design a project or phase of combined projects can move through the more detailed stages of design, environmental review, agreements and approvals, and into construction. A general description of elements and steps is provided below.

Site Survey - Base Maps and Information

Detailed CAD base maps with ROW/property lines, topography (contour lines and/or spot elevations) and features such as roads, trees, buildings and fences must be prepared by a land surveyor or civil engineer covering the improvements and adjacent areas. The pertinent codes, policies, adjacent plans, utilities, and other background information must be analyzed to prepare specific design parameters for the project.

Project Agreements - Right-of-Way Acquisition/Permission

If acquisition or permission for use of property for the improvements is required, this will need to be secured, at least tentatively, before significant study or design work can begin, and typically must be finalized before preliminary design (when the feasible/desired alignment is defined) or at least before preparation of construction documents.

Preliminary Design

More detailed plans would be developed, with disciplines participating depending on the scope of improvements. These plans would have relatively accurate locations, dimensions, materials and features, to allow a correspondingly detailed preliminary cost estimate, but they would not have all the information required for bidding and constructing the project. The preliminary plans would be the basis for environmental documents and public and agency review of the project.

Environmental Studies and Documentation

State and federal law and nearly all grant programs require environmental studies and findings to comply with the California Environmental Quality Act (CEQA). If federal funds or interests are involved the document may also need to address the National Environmental Policy Act (NEPA), which has slightly different processes and document requirements. The environmental document must review and address a broad range of potential issues. Often the most complex issues to address are special status (rare, threatened, or endangered) plant and animal species that are protected under law.

Technical Studies

Technical studies are often required for design and/or to support environmental documentation. This often includes site-specific studies of biological and cultural resources, bluff retreat, hydrology, traffic, soil borings and geotechnical studies for design or foundations for bridges or other factors critical to design and/or project approval. These may be completed before, during or after Preliminary Design, depending on the purpose and type of study.

Permits

Project sponsors may need to obtain several types of permits and agreements. Potentially required permits are described in detail below. Preparing applications and completing the permitting process in areas with sensitive resources and many legal conditions and constraints can be time-consuming and expensive in settings such as along or across streams and wetlands.

Construction Documents

The preliminary plan drawings and descriptions will need to be translated into detailed construction plans, specifications, and estimate that can be used to obtain permits that require such detail, and for bidding by contractors.

Bidding and Contracting

Contract bid documents for the project must be prepared, and the project must be advertised for public bid. The bids must be analyzed, and the sponsoring agency must award a construction contract to the lowest responsible bidder.

Construction

In addition to the work of the contractor, construction of a public project entails responsible agency and/or consultant staff to oversee the contractor and administer the project, including any grant-imposed procedures or paperwork.

6.3.2 Environmental Permitting and Approvals

Where projects involve work in or near a creek, river, or other jurisdictional wetland area, special environmental permit will be required. This section summarizes the major types of permits that may be required and the basic process for each.

U.S. Army Corps of Engineers (USACE) Permit

A Section 404 Permit application to the USACE for placement of fill, including consultation with the U.S. Fish and Wildlife Service, may be required to satisfy the requirements of Section 404(b)(1) of the Clean Water Act (CWA).

A Jurisdictional Delineation Report, or wetland delineation is part of the technical studies required in any location where there is potential for wetlands to occur. This maps and obtains USACE concurrence on jurisdictional “Waters of the U.S.,” including wetlands (if present), and/or “Waters of the State”.

Section 401 Water Quality Certification - Regional Water Quality Control Board (RWQCB)

The project will be required to prepare a RWQCB CWA Section 401 Water Quality Certification (WQC) notification/application to the local RWQCB, which may include a Storm Water Pollution Prevention Plan (SWPPP). The issuance of the WQC is necessary prior to the issuance of an USACE CWA Section 404(b) (1) permit.

Streambed Alteration Agreement – California Department of Fish and Game (CDFG)

A Section 1602 Notification/Application for a Streambed Alteration Agreement will need to be submitted to CDFG for any work that may impact a stream or related riparian habitat.

Encroachment Permit - Caltrans

Where the project involves work or permanent improvements within the state ROW that would be built or maintained by others, an encroachment permit from Caltrans will be required. This typically requires a maintenance agreement with either a public agency or a non-profit organization to ensure that the facilities in the state ROW will be adequately maintained.

6.4 Funding Sources

This chapter describes various sources of funding available to plan and construct bicycle and pedestrian facilities. The trail connector described in this feasibility study can be funded through multiple sources, and not all sources apply to all segments.

The following sections cover federal, state, regional, and local sources of funding, as well as some non-traditional funding sources that have been used by local agencies to fund bicycle projects.

6.4.1 Federal Sources

Moving Ahead for Progress in the Twenty-First Century (MAP-21)

The largest source of federal funding for bicyclists was the US DOT’s Federal-Aid Highway Program, which Congress reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 for a 2-year period as Public Law 112-141. The Act replaced the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012. SAFETEA-LU contained dedicated programs including Transportation Enhancements, Safe Routes to School, and Recreational Trails, which were all commonly tapped sources of funding to make non-motorized improvements nationwide. MAP-21 combined these programs into a single source called ‘Transportation Alternatives’ programs (TAP).

More information on TAP, including eligible activities, can be found below and at: <http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>

In California (see Section 0 Active Transportation Program), federal monies are administered through the California Department of Transportation (Caltrans) and Metropolitan Planning Organizations (MPOs). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. Regional MPO money from MAP-21 is utilized in the One Bay Area Grant (OBAG) Program grants (see Section 8.3.1 One Bay Area Grant Program).

There are a number of programs identified within MAP-21 applicable to bicycle and pedestrian projects. These programs are discussed below.

More information: <http://www.fhwa.dot.gov/map21/summaryinfo.cfm>

Transportation Alternatives

Transportation Alternatives (TA) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, and rail-trails. TA funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TA does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. MAP-21 provides \$85 million nationally for the RTP. Complete eligibilities for TA include:

1. **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including “on-road and off-road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming

techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.” Infrastructure projects and systems that provide “Safe Routes for Non-Drivers” is a new eligible activity.

For the complete list of eligible activities, visit:

http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2. **Recreational Trails.** TA funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails, including unpaved trails
- Acquisition or easements of property for trails
- State administrative costs related to this program (limited to seven percent of a state’s funds)
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state’s funds)

Under MAP-21, dedicated funding for the RTP continues at FY 2009 levels – roughly \$85 million annually. California will receive \$5,756,189 in RTP funds per year through FY2014.

More information: http://www.fhwa.dot.gov/environment/recreational_trails/funding/apportionments_obligations/recfunds_2009.cfm

3. **Safe Routes to School** In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP). This program consolidated the Federal and California Safe Routes to School programs, which are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so. All projects must be within two miles of primary or middle schools (K-8).

The Safe Routes to School Program funds non-motorized facilities in conjunction with improving access to schools through the Caltrans Safe Routes to School Coordinator.

More information: <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

Eligible projects may include:

- **Engineering improvements.** These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.

- **Education and Encouragement Efforts.** These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
- **Enforcement Efforts.** These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.

4. **Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.** At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

Average annual funds available through TA over the life of MAP-21 equal \$814 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. Projected MAP-21 apportionments for California total \$3,546,492,430 for FY 2013 and \$3,576,886,247 for FY 2014 (<http://www.fhwa.dot.gov/MAP21/funding.cfm>). The 2% set-aside for TA funds in California will be about \$71,000,000 for the next two fiscal cycles. State DOTs may elect to transfer up to 50% of TA funds to other highway programs, so the amount listed above represents the maximum potential funding.

TA funds are typically allocated through MPOs and may require a 20 percent local match.

Surface Transportation Program

The Surface Transportation Program (STP) in the San Francisco Bay Area is rolled into OBAG grants (see Section 8.3.1). A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. Fifty percent of each state’s STP funds are suballocated geographically by population. These funds are funneled through Caltrans to the MPOs in the state. The remaining 50 percent may be spent in any area of the state.

Highway Safety Improvement Program

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides \$2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads HSIP is a data-driven funding program and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state’s Strategic Highway Safety Plan. As of the writing of this Study (December 2014), the state is updating the Strategic Highway Safety Plan.

Last updated in 2006, the California SHSP is located here:
http://www.dot.ca.gov/hq/traffops/survey/SHSP/SHSP_Final_Draft_Print_Version.pdf

Pilot Transit-Oriented Development Planning

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to “facilitate multimodal connectivity and accessibility,” and “increase access to transit hubs for pedestrian and bicycle traffic.”

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities are not eligible.

To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act.

CMAQ funding in the San Francisco Bay Area is included in the OBAG Program (see Section 8.3.1). Examples of eligible projects include enhancements to existing transit services, rideshare and vanpool programs, projects that encourage bicycle and pedestrian transportation options, traffic light synchronization projects that improve air quality, grade separation projects, and construction of high-occupancy vehicle (HOV) lanes.

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to “improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide.” The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure (“Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health”).

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). The City of Vallejo should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: <http://www.epa.gov/smartgrowth/partnership/>

Federal Transit Act

Section 25 of the 1964 Urban Mass Transportation Act states that: “For the purposes of this Act a project to provide access for bicycles to mass transportation facilities, to provide shelters and parking facilities for bicycles in and around mass transportation facilities, or to install racks or other equipment for transporting bicycles on mass transportation vehicles shall be deemed to be a construction project eligible for assistance under sections 3, 9 and 18 of this Act.” The Federal share for such projects is 90 percent and the remaining 10 percent must come from sources other than Federal funds or fare box revenues. Typical funded projects have included bike lockers at transit stations and bike parking near major bus stops. To date, no projects to provide bikeways for quicker, safer or easier access to transit stations have been requested or funded.

TIGER Grants

The Transportation Investment Generating Economic Recovery, or TIGER, Discretionary Grant program of the U.S. Department of Transportation provides a unique opportunity for the DOT to invest in road, rail, transit and port projects that promise to achieve critical national objectives. Since 2009, Congress has dedicated more than \$4.1 billion for six rounds of grants to fund projects that have a significant impact on the Nation, a region or a metropolitan area. A variety of project types have been awarded, including over \$153 million for 12 bicycle and pedestrian projects, including a grant for implementation of a portion of the Napa Valley Vine Trail.

More information: <http://www.dot.gov/tiger>

Community Transformation Grants

Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.

More information: <http://www.cdc.gov/communitytransformation/>

6.4.2 State Sources

Active Transportation Program

In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP). This program is a consolidation of the Federal Transportation Alternatives Program (TAP), California’s Bicycle Transportation Account (BTA), and Federal and California Safe Routes to School (SRTS) programs.

The ATP program is administered by Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs.

The ATP program goals include:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for nonmotorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
- Enhance public health,
- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

Eligible bicycle, pedestrian and Safe Routes to School projects include:

- Infrastructure Projects: Capital improvements that will further program goals. This category typically includes planning, design, and construction.
- Non-Infrastructure Projects: Education, encouragement, enforcement, and planning activities that further program goals. The focus of this category is on pilot and start-up projects that can demonstrate funding for ongoing efforts.
- Infrastructure projects with non-infrastructure components

The minimum request for non-SRTS projects is \$250,000. There is no minimum for SRTS projects.

The local match requirement for non-SRTS projects is 11.47%. There is no local match requirement for projects benefiting a disadvantage community, stand along non-infrastructure projects and SRTS projects.

More info: <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

State Highway Account

Section 157.4 of the Streets and Highways Code requires Caltrans to set aside \$360,000 for the construction of non-motorized facilities that will be used in conjunction with the State highway system. The Office of Bicycle Facilities also administers the State Highway Account fund.

Funding is divided into different project categories. Minor B projects (less than \$42,000) are funded by a lump sum allocation by the CTC and are used at the discretion of each Caltrans District office. Minor A projects (estimated to cost between \$42,000 and \$300,000) must be approved by the CTC. Major projects (more than \$300,000) must be included in the State Transportation Improvement Program and approved by the CTC. Funded projects have included fencing and bicycle warning signs related to rail corridors.

Climate Ready Grant Program - California State Coastal Conservancy

Climate Ready grants are intended to encourage local governments and non-governmental organizations to advance planning and implementation of on-the-ground actions that reduce greenhouse gas emissions and lessen the impacts of climate change on California’s coastal communities. The grant program makes eligible “development of multi-use trails with clearly identified GHG reduction goals; (and) protecting and managing open space lands with clearly identified GHG reduction goals.” A total of \$1,500,000 is available on a competitive basis, with a minimum award of \$50,000 and a maximum of \$200,000. The size of awarded grants will be based on each project’s needs, its overall benefits, and the extent of competing demands for funds.

More info: <http://scc.ca.gov/2013/04/24/grant-opportunities/>

Office of Traffic Safety Grants

Office of Traffic Safety (OTS) grants are supported by Federal funding under the National Highway Safety Act. In California, the grants are administered by the Office of Traffic Safety.

Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants.

The California application deadline is January of each year. There is no maximum cap to the amount requested, but all items in the proposal must be justified to meet the objectives of the proposal.

More info: <http://www.ots.ca.gov/>

6.4.3 Regional & Local Sources

Measure J

Contra Costa County voters approved Measure J in 2004, continuing a countywide half-cent sales tax through 2034. The measure is anticipated to provide approximately \$2.5 billion for countywide and local transportation projects.

Projects included in the Expenditure Plan include a wide range of transportation improvements, including carpool lane gap closures, Bay Area Rapid Transit (BART) track expansions, as well as bicycle, pedestrian, and trail facilities. One and a half percent of revenues from Measure J are set aside for construction of bicycle and pedestrian facilities.

More information: [www.ccta.net/ resources/detail/2/1/](http://www.ccta.net/resources/detail/2/1/)

One Bay Area Grant Program

The One Bay Area Grant Program (OBAG), managed by the Metropolitan Transportation Commission (MTC), establishes program commitments and policies for investing roughly \$800 million over the four-year period that includes fiscal years 2012/13 – 2015/16. The OBAG program is a new funding approach that integrates the region’s federal transportation program with California’s climate law (Senate Bill 375, Steinberg, 2008) and the Sustainable Communities Strategy. Funding distribution to the counties will consider progress toward achieving local land-use and housing policies based on specifically designated allocation areas and design policies (Complete Streets).

The OBAG program allows flexibility to invest in transportation categories such as Transportation for Livable Communities, bicycle and pedestrian improvements, local streets and roads preservation, and planning activities, while also providing specific funding opportunities for Safe Routes to School (SR2S) and Priority Conservation Areas.

While the previous round of OBAG grants funded projects through FY 2015-16, there is the opportunity for MTC to issue a new call for OBAG applications after the 2015-16 financial year.

More information: <http://www.mtc.ca.gov/funding/onebayarea/>

Transportation Fund for Clean Air

In Solano County, the Bay Area Air Quality Management District administers the Bay Area Regional Transportation Fund for Clean Air program (TFCA). Funds are provided by a \$4 surcharge on motor vehicles registered in the Bay Area, which generates approximately \$22 million per year for the program. Projects can be submitted through two channels: the Regional Fund, which administers approximately 60 percent of the TFCA revenue, and the County Program Manager Fund, which administers the remaining 40 percent. Eligible projects include bicycle facility improvements such as bikeways and bicycle parking.

More information: <http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA.aspx>

Restoration

Cable TV and telephone companies sometimes need new cable routes within public rights of way. Recently, this has commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of curb lanes, it may be possible to request reimbursement for affected bicycle facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide new bikeway facilities following the cable trenching, such as shared use of maintenance roads.

Developer Impact Fees

As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class 2 facilities for portions of on street, previously planned routes. They can also be used to provide bicycle parking or shower and locker facilities. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

New Construction

Future road widening and construction projects are one means of providing on street bicycle facilities. To ensure that roadway construction projects provide bike lanes where needed, it is important that the review process includes input pertaining to consistency with the proposed system. In addition, California’s 2008 Complete Streets Act and Caltrans’s Deputy Directive 64 require that the needs of all roadway users be considered during “all phases of state highway projects, from planning to construction to maintenance and repair.”

More information: http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html

6.4.4 Private Sources

Private funding sources can be acquired by applying through the advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations wanting to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources. Below are several examples of private funding opportunities available.

Bikes Belong Grant Program

The Bikes Belong Coalition of bicycle suppliers and retailers has awarded \$1.2 million and leveraged an additional \$470 million since its inception in 1999. The program funds corridor improvements, mountain bike trails, BMX parks, trails, and park access. It is funded by the Bikes Belong Employee Pro Purchase Program.

More information: <http://www.bikesbelong.org/grants/>

Bank of America Charitable Foundation, Inc.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grants program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Programs, and specifically the Program Related Investments. This program targets low and moderate income communities and serves to encourage entrepreneurial business development.

More information: <http://www.bankofamerica.com/foundation>

Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972 and today it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: <http://www.rwjf.org/applications/>

Community Action for a Renewed Environment (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to re-duce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people’s exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and “smart-growth” types of projects are eligible. Grants range between \$90,000 and \$275,000.

More information: <http://www.epa.gov/care/>

Corporate Donations

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation’s donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

6.4.5 Other Sources

Local sales taxes, fees and permits may be implemented as new funding sources for bicycle projects. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi use paths. For example, a local college design class may use such a multi-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can “adopt” a route or segment of one to help construct and maintain it.

7. Maintenance

This chapter provides an overview of general bicycle and pedestrian facility maintenance.

7.1 Introduction

Development of a monitoring and maintenance plan is an important step in developing a successful Connector that becomes an attractive asset to the communities. A well maintained Connector facility provides numerous benefits, but also requires considerable work. A well-maintained connection will benefit Lafayette, Contra Costa County and Walnut Creek residents by:

- Improving user safety
- Providing for a more positive user experience
- Protecting the agencies and resident’s investment in the Connector by identifying and rectifying issues in a cost-effective and timely manner
- Minimizing liability concerns
- Maintaining positive relations with neighbors and the larger community
- Creating more local pride in the regional trails as a positive community resource

This chapter provides an overview of the major considerations in developing a maintenance and monitoring plan for the Connector, and details the specific facilities that would need to be maintained within each jurisdiction.

7.2 Maintenance Requirements

The purpose of the Connector maintenance plan is to outline the specific tasks, priorities, schedules, responsible parties, and budget needed to keep the facility in the desired condition. The plan should be provided to anyone involved in maintaining the facility, including agency staff and individuals involved in working with volunteers on maintenance activities. Maintenance activities are generally classified as either routine maintenance or remedial maintenance.

- Routine maintenance refers to day-to-day and regularly-scheduled tasks, including trash removal, sweeping, trimming or pruning vegetation along the Connector, repairing minor cracks in the pavement surface, and cleaning out drainage channels.
- Remedial maintenance involves tasks that are of a larger scale, and need to be undertaken less frequently, such as resurfacing the facility, replacing a bridge, or stabilizing a stream bank. Anticipating and budgeting for these expenses can be critical to ensuring that the Connector provides a high quality user experience and avoiding the additional costs in deferred maintenance.

While an agency typically assumes the lead role for maintaining bicycle and pedestrian facilities, many communities rely on partnerships between public agencies and community-based organizations, and have experienced positive results:

- Community members tend to develop a greater sense of pride, ownership, and personal investment in the facility;
- Groups have often added new dimensions to bicycle and pedestrian projects, taking a leadership role in raising funds or supplying labor for projects such as community art or gardens; and
- Public costs required for maintenance activities have been reduced, and the quality of the maintenance has been improved.

Maintenance and management needs are a critical factor in the final Connector design, as they will impact the annual and long-term costs associated with the facility, and its overall usefulness and safety. Determining the specific responsible parties for maintenance and management and responding to their equipment and staff capabilities will be key considerations in Connector design.

7.2.1 Components of the Maintenance Plan

The final Connector maintenance plan should include the following:

- List of maintenance tasks and a schedule that reflects maintenance priorities. Approximate frequencies should be included, where appropriate, for regular activities such as tree pruning, trash pick-up, and crack sealing.
- Inventory of features on the Connector that require regular inspection, particularly structures such as bridges, retaining walls, and culverts. The inventory should also include Connector amenities such as restrooms, picnic tables, benches, and information kiosks.
- Goals and standards for the quality of maintenance, so the expectations for the condition of the Connector features will be clearly understood.
- Forms to be completed as part of inspections to document conditions of each item, and the date and time of the inspections.
- Identify the responsible entities for each aspect of maintenance, and provide contact information for each. This is discussed in more detail below.
- Budget for maintenance activities. If the Connector maintenance budget will be incorporated into a larger budget for facility maintenance (e.g. including other trails or parks), this may impact the costs of various items, but the time and materials required for Connector maintenance should be estimated.
- Emergency access and procedures should be developed in close consultation with police and fire departments; this consideration is particularly important in determining whether bollards or some other type of access control is to be used at intersections of the Connector with streets, as well as the spacing between Connector access points. At least once a year, and after any significant emergency or maintenance event, the policies should be reviewed with staff or volunteer groups.
- Evaluation process for the plan. The maintenance plan should not be treated as a static document. Once the Connector is operational, it will be important to periodically evaluate the success of the plan. This will include reviewing the list of maintenance tasks, the schedule for carrying out these activities, and comparing the maintenance budget to what was actually needed over the course of the previous year. Feedback should be solicited from maintenance crews and/or volunteers involved in helping to carry out the plan.

7.3 Estimating Annual Maintenance Costs

Connector maintenance costs can be challenging to estimate because the facilities overlap into the responsibilities of different departments within each agency, as well as multiple agencies in this case, and the maintenance practices and capabilities vary a great deal from agency to agency. Yet it is important that a regional facility like the proposed Connector have a consistent high level of maintenance.

Connector maintenance cost estimates are provided as a guide to potential cost. They should be subject to review and refinement by the responsible parties from the local agencies as the projects move forward. The estimates include maintenance costs only for the added facilities; not for bicycle or pedestrian facilities that pre-existed or for roadway facilities that were modified but without significant areas.

Table 7-1 presents Connector maintenance cost information provided by other jurisdictions that can be used as a “yardstick” for estimating maintenance costs for the Connector. Some of these include, and break out, costs for operation and management, as opposed to maintenance. Because the Connector is almost entirely in the public road right-of-way it presumably will not need special patrol or management, such as by rangers that trails in open space or greenway settings may require.

Table 7-1: Sample Connector Maintenance and Operation Costs from Other Jurisdictions			
Management Entity	Year of Estimate	Estimated Annual Cost	Maintenance and Operation Activities Included in Estimate
City of San Jose ¹	2011	\$12,500/mile	Paved pathway
		\$12,050/acre	Landscaping adjacent to trails
		\$2,000/mile	Trail rangers
East Bay Regional Park District ²	2011	\$25,000/mile	Police patrol, vegetation management, litter pickup and a contribution to a reserve fund for eventual pathway replacement.
City of South Lake Tahoe and the Ski Run Business Improvement District ³	2011	\$14,850 to \$15,350/mile	48 pedestrian lighting heads, electric bills for the lighting, water bills, mowing and fertilizing landscaping, and maintaining a 2-mile multi-use path
City of Cupertino ⁴	2011	\$15,000/pedestrian and bicycle overcrossing	Mary Avenue Bridge: bridge cleaning, graffiti removal, maintenance of electrical devices, and a biennial inspection
Sonoma County Regional Parks ⁵	2013	\$10,281/mile for Class 1 trails	Regular park ranger site patrol, sweeping, removing debris and graffiti, mowing and pruning, and safety repairs

¹ Email correspondence with Yves Zsutty, Acting Division Manager, Department of Parks, Recreation & Neighborhood Services, City of San Jose, January 18, 2011.

² Email correspondence with Jim Townsend, Manager, Trails Development Program, EBRPD, January 13, 2011.

³ Phone call with Gary Moore, Director, Parks and Recreation Department, South Lake Tahoe, July 27, 2009. Costs have been adjusted for inflation.

⁴ Email correspondence with Roger Lee, Assistant Director of Public Works, City of Cupertino, February 3, 2011.

⁵ Sonoma County Regional Parks Board Report, March 13, 2013

7.3.1 Maintenance Costs Per Unit

Bike Lanes and Routes

Class II bike lanes and Class III signed/marked routes are an important part of the Olympic Corridor Trail Connector facilities. In much of the corridor these already exist, but with designation as an important regional route a higher level of maintenance is assumed, which consists of additional sweeping. The International City/County Management Association (ICMA) Center for Performance Measurement collects street sweeping and other maintenance cost data from participants across the United States. Eighty-six participants reported street sweeping expenditures per mile swept with an average of \$47 and a median of \$36 (2010 data report).⁶

A cost of \$52.80 per mile swept was used to adjust for inflation, or \$10 per 1000 L.F. for the additional sweeping of Class II and III facilities on the route.

Lifespan replacement cost of paved area of bike lanes and routes, as well as medians, curbs and gutters, and traffic signals is assumed to be part of normal maintenance of the roadway.

Class I Paths or Sidepaths

Class I maintenance costs for Class I facilities varied between approximately \$10,200 and \$25,000 per mile in the data in **Table 7-1**, but this reflects a wide variation in the elements that were included. Adjusted for inflation and the fact that the Olympic Corridor Trail Connector includes no new lighting, a cost of \$14,000 per mile, or \$2,652 per 1,000 L.F. was assumed for Class I path maintenance.

Lifespan replacement cost of pathways is assumed to be 1/20th of the paving cost per year.

Bridges

Bridges should not require special maintenance, but will require eventual repair and ultimate replacement. An allowance of 1/30th of the bridge construction cost is assumed annually to cover maintenance, repair, and lifespan replacement

Landscaping

Some portions of the route have added landscape strips which also function as stormwater management infiltration swales, a best management practice. These are typically 3 feet wide with low-maintenance, drought-tolerant plants and trees on drip irrigation.

The U. S. Environmental protection Agency’s *Resource Conserving Landscaping Cost Calculator*⁷ estimated a 2005 landscape maintenance cost of \$0.20/S.F.

The cost of maintaining the landscape strip is estimated at \$0.30 per S.F. per year. With a typical width of 3 feet, this equates to \$900 per 1,000 L.F. per year, or \$4,752 per mile per year. This equates to \$13,068 per acre compared to the City of San Jose’s estimated \$12,050 per acre in 2011 to maintain landscaping adjacent to trails.

Signing and Striping

Replacement of signing and striping is assumed to be a factor of 1/10th of the construction cost per year.

⁶ http://icma.org/en/icma/knowledge_network/kn/Question/21663

⁷ <http://www.epa.gov/osw/conserve/tools/greenscapes/tools/landscape.pdf>

7.3.2 Maintenance Requirements for Short-Term Improvements

In most cases the Connector facilities already exist; they would be slightly enhanced by the short-term improvement projects with relocated or added lane striping and wayfinding signage. However, formal designation of the route as an important regional Connector implies that a higher level of maintenance, particularly of existing sidepaths, will be provided than is currently exhibited. This primarily impacts Lafayette and Contra Costa County jurisdictions.

Table 7-2 quantifies the facilities that would be maintained by each jurisdiction after the short-term improvements phase. In some cases the facilities are along residential or commercial frontages where the property owner or tenant is at least partly responsible for maintenance.

Table 7-2: Short-Term Improvements Maintenance Responsibilities

SEG.	DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/ YEAR	TOTAL MAINTENANCE COST/ YEAR
1	Olympic Boulevard, Newell Avenue to S.B. I-680 On/Off Ramps (Lafayette)			Subtotal	\$5,934
	Bicycle Lanes and Bicycle Route Sweeping	5,256	LF	\$10 / 1,000 LF	\$53
	Signs, Striping, and Pavement Markings	\$58,811	IC	INSTALLATION COST / 10	\$5,881
2.1	Olympic Boulevard, Pleasant Hill Road to Windtree Court (Lafayette)			Subtotal	\$2,803
	Bicycle Lanes and Bicycle Route Sweeping	1,850	LF	\$10 / 1,000 LF	\$19
	Signs, Striping, and Pavement Markings	\$27,848	IC	INSTALLATION COST / 10	\$2,785
2.2	Olympic Boulevard, Windtree Court to Newell Court (Lafayette/CC County)			Subtotal	\$4,729
	Bicycle Lanes and Bicycle Route Sweeping	2,200	LF	\$10 / 1,000 LF	\$22
	Signs, Striping, and Pavement Markings	\$47,071	IC	INSTALLATION COST / 10	\$4,707
3	Olympic Boulevard, Newell Court to Tice Valley Boulevard/Boulevard Way (CC County)			Subtotal	\$10,345
	Bicycle Lanes and Bicycle Route Sweeping	3,955	LF	\$10 / 1,000 LF	\$40
	Signs, Striping, and Pavement Markings	\$97,214	IC	INSTALLATION COST / 10	\$9,721
	Sidepath Maintenance	160	LF	\$2652 / 1,000 LF	\$424
	Sidepath Pavement Maintenance	\$3,200	IC	INSTALLATION COST / 20	\$160
4	Olympic Boulevard, Boulevard Way/Tice Valley Boulevard Intersection to Newell Avenue (CC County)			Subtotal	\$16,480
	Bicycle Lanes and Bicycle Route Sweeping	5,138	LF	\$10 / 1,000 LF	\$51
	Signs, Striping, and Pavement Markings	\$39,212	IC	INSTALLATION COST / 10	\$3,921
	Sidepath Maintenance	1,510	LF	\$2652 / 1,000 LF	\$4,005
	Sidepath Pavement Maintenance	\$145,400	IC	INSTALLATION COST / 20	\$7,270
	Landscape Maintenance	1,370	LF	\$900 / 1,000 LF	\$1,233
5	Olympic Boulevard, Newell Avenue to S.B. I-680 On/Off Ramps (CC County)			Subtotal	\$7,690
	Bicycle Lanes and Bicycle Route Sweeping	3,746	LF	\$10 / 1,000 LF	\$37
	Signs, Striping, and Pavement Markings	\$76,528	IC	INSTALLATION COST / 10	\$7,653
6.1	Olympic Boulevard, S.B. I-680 On/Off Ramps to Alpine Road (Walnut Creek)			Subtotal	\$7,244
	Bicycle Lanes and Bicycle Route Sweeping	1,730	LF	\$10 / 1,000 LF	\$17
	Signs, Striping, and Pavement Markings	\$72,267	IC	INSTALLATION COST / 10	\$7,227
6.2	Olympic Boulevard, Alpine Road to S. California Boulevard (Walnut Creek)			Subtotal	\$2,692
	Bicycle Lanes and Bicycle Route Sweeping	1,780	LF	\$10 / 1,000 LF	\$18
	Signs, Striping, and Pavement Markings	\$26,745	IC	INSTALLATION COST / 10	\$2,675
7	S. California Boulevard, Olympic Boulevard south to Newell Avenue (Walnut Creek)			Subtotal	\$656
	Signs, Striping, and Pavement Markings	\$6,560	IC	INSTALLATION COST / 10	\$656
8.1	Newell Avenue, S. California Boulevard to Main Street (Walnut Creek)			Subtotal	\$90
	Signs, Striping, and Pavement Markings	\$900	IC	INSTALLATION COST / 10	\$90
8.2	Newell Avenue, Main Street to Broadway and the IHT (Walnut Creek)			Subtotal	\$552
	Signs, Striping, and Pavement Markings	\$5,520	IC	INSTALLATION COST / 10	\$552
9	Newell Avenue West of I-680 (CC County/Walnut Creek)			Subtotal	\$804
	Signs, Striping, and Pavement Markings	\$8,040	IC	INSTALLATION COST / 10	\$804
10	Southern Connections to IHT (CC County/Walnut Creek)			Subtotal	\$804
	Signs, Striping, and Pavement Markings	\$8,040	IC	INSTALLATION COST / 10	\$804
TOTAL ANNUAL PROJECT MAINTENANCE COST (ROUNDED UP)					\$61,000



Wide sidewalks and shared-lane markings currently provide some accommodation for bicyclists and pedestrians.

7.3.3 Maintenance Requirements for Long-Term Improvements

Long-term improvements primarily consist of converting areas that are currently vehicle lanes or medians to areas of pedestrian sidewalks or paths, bike paths, or shared-used sidepaths. In almost all cases there is already a facility present that requires maintenance; the long-term improvements scenario increases the area of the bike and pedestrian facility, and moves it out of the street. Maintenance requirements will be increased, especially given the higher standard that should apply to a major regional Connector, but an entirely new maintenance responsibility is not created, except at the two proposed bicycle and pedestrian bridges.

Table 7-3 quantifies the facilities that would be maintained by each jurisdiction after the long-term improvements phase. In some cases the facilities are along residential or commercial frontages where the property owner or tenant is at least partly responsible for maintenance.

Table 7-3: Long-Term Improvements Maintenance Responsibilities					
SEG.	DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/ YEAR	TOTAL MAINTENANCE COST/ YEAR
1	Olympic Boulevard, Newell Avenue to S.B. I-680 On/Off Ramps (Lafayette)				No Improvements
2.1	Olympic Boulevard, Pleasant Hill Road to Windtree Court (Lafayette)			Subtotal	\$11,782
	Bicycle Lanes and Bicycle Route Sweeping	2,166	LF	\$10 / 1,000 LF	\$22
	Signs, Striping, and Pavement Markings	\$31,043	IC	INSTALLATION COST / 10	\$3,104
	Sidepath Maintenance	1,083	LF	\$2652 / 1,000 LF	\$2,872
	Sidepath Pavement Maintenance	\$108,300	IC	INSTALLATION COST / 20	\$5,415
	Landscape Maintenance	410	LF	\$900 / 1,000 LF	\$369
2.2	Olympic Boulevard, Windtree Court to Newell Court (Lafayette/CC County)			Subtotal	\$10,625
	Bicycle Lanes and Bicycle Route Sweeping	2,210	LF	\$10 / 1,000 LF	\$22
	Signs, Striping, and Pavement Markings	\$16,752	IC	INSTALLATION COST / 10	\$1,675
	Sidepath Maintenance	1,178	LF	\$2652 / 1,000 LF	\$3,123
	Sidepath Pavement Maintenance	\$116,100	IC	INSTALLATION COST / 20	\$5,805
3	Olympic Boulevard, Newell Court to Tice Valley Boulevard/Boulevard Way (CC County)			Subtotal	\$12,143
	Sidepath Maintenance	1,792	LF	\$2652 / 1,000 LF	\$4,752
	Sidepath Pavement Maintenance	\$147,825	IC	INSTALLATION COST / 20	\$7,391
4	Olympic Boulevard, Boulevard Way/Tice Valley Boulevard Intersection to Newell Avenue (CC County)			Subtotal	\$18,558
	Sidepath Maintenance	2,170	LF	\$2652 / 1,000 LF	\$5,755
	Sidepath Pavement Maintenance	\$217,000	IC	INSTALLATION COST / 20	\$10,850
	Landscape Maintenance	2,170	LF	\$900 / 1,000 LF	\$1,953
5	Olympic Boulevard, Newell Avenue to S.B. I-680 On/Off Ramps (CC County)			Subtotal	\$2,586
	Bicycle Lanes and Bicycle Route Sweeping	1,890	LF	\$10 / 1,000 LF	\$19
	Signs, Striping, and Pavement Markings	\$14,326	IC	INSTALLATION COST / 10	\$1,433
	Sidepath Maintenance	158	LF	\$2652 / 1,000 LF	\$418
	Sidepath Pavement Maintenance	\$14,326	IC	INSTALLATION COST / 20	\$716
6.1	Olympic Boulevard, S.B. I-680 On/Off Ramps to Alpine Road (Walnut Creek)			Subtotal	\$3,963
	Sidepath Maintenance	370	LF	\$2652 / 1,000 LF	\$981
	Sidepath Pavement Maintenance	\$55,500	IC	INSTALLATION COST / 20	\$2,775
	Landscape Maintenance	230	LF	\$900 / 1,000 LF	\$207
6.2	[Lane Removal Alternative] Olympic Boulevard, Alpine Road to S. California Boulevard (Walnut Creek)			Subtotal	\$8,583
	Bicycle Lanes and Bicycle Route Sweeping	850	LF	\$10 / 1,000 LF	\$9
	Signs, Striping, and Pavement Markings	\$6,443	IC	INSTALLATION COST / 10	\$644
	Sidepath Maintenance	936	LF	\$2652 / 1,000 LF	\$2,483
	Sidepath Pavement Maintenance	\$93,640	IC	INSTALLATION COST / 20	\$4,682
	Landscape Maintenance	850	LF	\$900 / 1,000 LF	\$765

SEG.	DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/ YEAR	TOTAL MAINTENANCE COST/ YEAR
7	S. California Boulevard, Olympic Boulevard south to Newell Avenue (Walnut Creek)			Subtotal	\$18,338
	Signs, Striping, and Pavement Markings	\$8,400	IC	INSTALLATION COST / 10	\$840
	Sidepath Maintenance	694	LF	\$2652 / 1,000 LF	\$1,841
	Sidepath Pavement Maintenance	\$104,130	IC	INSTALLATION COST / 20	\$5,207
	Landscape Maintenance	500	LF	\$900 / 1,000 LF	\$450
	Bridge Maintenance	\$300,000	IC	INSTALLATION COST / 30	\$10,000
8.1	[Sidepath Alternative] Newell Avenue, S. California Boulevard to Main Street (Walnut Creek)			Subtotal	\$7,936
	Signs, Striping, and Pavement Markings	\$30,900	IC	INSTALLATION COST / 10	\$3,090
	Sidepath Maintenance	347	LF	\$2652 / 1,000 LF	\$921
	Sidepath Pavement Maintenance	\$67,710	IC	INSTALLATION COST / 20	\$3,386
	Landscape Maintenance	600	LF	\$900 / 1,000 LF	\$540
8.1	[Lane Removal Alternative] Newell Avenue, S. California Boulevard to Main Street (Walnut Creek)			Subtotal	\$8,801
	Signs, Striping, and Pavement Markings	\$19,950	IC	INSTALLATION COST / 10	\$1,995
	Sidepath Maintenance	670	LF	\$2652 / 1,000 LF	\$1,778
	Sidepath Pavement Maintenance	\$100,560	IC	INSTALLATION COST / 20	\$5,028
8.2	[Sidepath Alternative] Newell Avenue, Main Street to Broadway and the IHT (Walnut Creek)			Subtotal	\$13,766
	Signs, Striping, and Pavement Markings	\$60,652	IC	INSTALLATION COST / 10	\$6,065
	Sidepath Maintenance	64	LF	\$2652 / 1,000 LF	\$169
	Sidepath Pavement Maintenance	\$13,350	IC	INSTALLATION COST / 20	\$668
	Landscape Maintenance	220	LF	\$900 / 1,000 LF	\$198
	Bridge Maintenance	\$200,000	IC	INSTALLATION COST / 30	\$6,667
8.2	[Lane Removal Alternative] Newell Avenue, Main Street to Broadway and the IHT (Walnut Creek)			Subtotal	\$16,386
	Signs, Striping, and Pavement Markings	\$59,320	IC	INSTALLATION COST / 10	\$5,932
	Sidepath Maintenance	354	LF	\$2652 / 1,000 LF	\$938
	Sidepath Pavement Maintenance	\$53,040	IC	INSTALLATION COST / 20	\$2,652
	Landscape Maintenance	220	LF	\$900 / 1,000 LF	\$198
	Bridge Maintenance	\$200,000	IC	INSTALLATION COST / 30	\$6,667
9	Newell Avenue West of I-680 (CC County/Walnut Creek)				No Improvements
10	Southern Connections to IHT (CC County/Walnut Creek)				No Improvements
TOTAL ANNUAL PROJECT MAINTENANCE COST - SIDEPATH ALTERNATIVE (ROUNDED UP)					\$108,280
TOTAL ANNUAL PROJECT MAINTENANCE COST - LANE REMOVAL ALTNERNATIVE (ROUNDED UP)					\$111,765

Appendix A: Community Input

A.1 Workshop #1

Approximately 35 people attended the first Community Workshop for the Olympic Boulevard Corridor Trail Connector Study, held on December 5, 2013. The workshop began with an open house, during which meeting attendees could review the project posters and ask questions. Following the open house, County staff and consultants presented a project overview, a summary of the project’s existing conditions, and the design toolkit. Attendees then worked in small groups to discuss and record their observations and ideas on the maps provided. Table A-1 presents the notes from the Break Out Groups. After this working session, a participant from each table reported out key points from their table. At the close of the meeting, consultants provided a summary of the next steps and upcoming opportunities for public engagement.

Table A-1: Break Out Group Notes

Group 1	
Location	Notes
[General]	Polish path example had different pavement types/colors for bikes and pedestrians (photo later provided by commenter)
[General]	Can the maps and plans be posted on a (County?) website?
California (b/w Olympic and Mt. Diablo)	California Boulevard has a third lane b/w Olympic and Mt. Diablo – possible route
Downtown Walnut Creek	Bike parking shortage in Downtown Walnut Creek – more would bike if there were facilities
Mt. Diablo	South of Mt. Diablo= more intense development; north of Newell = lower density development
Mt. Diablo (through Downtown Walnut Creek)	Convert one travel lane into a two-way, physically-separated bikeway [graphic drawn on map]
Mt. Diablo <-> California (from Main to Olympic)	A lot of extra space [– opportunity for a route]
Newell East (b/w California and Broadway)	Possible improvements proposed as part of Broadway Plaza Redevelopment
Newell West	Will people use an alternative facility to Newell West?
Newell West	Yes, if a Class I separated path and if they are not aggressive / highly competent cyclists
Newell West	Could help school access
Newell West	Newell = narrow, but what can be done to improve student access?
Newell West	1-way Newell w/ cycle track; would residents be OK lighting Newell?
Newell West	Newell as Class III?
Olympic	Road diet on Olympic to extend path
Under I-680	Floating cycle track round-a-bout – a suspended grade separated roundabout per Dutch example

Group 2	
Location	Notes
[General]	Preferred off-street facility
[General]	Accommodate bikes, pedestrians, and wheelchairs – increased width to provide comfortable access
[General]	Dedicated bicycle space to reduce stress
[General]	Catering to all ages and users – Class I preferred
[General]	Any safety improvement is a positive
[General]	Families are most underserved by current facility designs
[General]	Let’s not only focus on one project
California	Cycle track (connect w/ BART and Kaiser)
Class I path (green line) b/w Newell Court and Tice Valley)	Not part of Lafayette Moraga Trail [crossed out on map]
Creek ROW	Creek has potential for added value, experience
Newell (b/w Olympic and California)	Opportunity for traffic calming?
Newell, Olympic West	Potential for couplet with Newell one-way
Olympic (b/w Newell and I-680)	Challenge area
Olympic (b/w Pleasant Hill and Tice Valley)	45 MPH speed limit?; Speed sign?
S Main (b/w Olympic and Newell)	Cars so slow; feels safer to bike
Group 3	
Location	Notes
[General]	Traffic calming may make certain routes more favorable
[General]	Cycle track better for families with kids compared to Class II lanes
[General]	3 miles is the maximum “walkable” distance
Boulevard @ Nicholson, Mt. Diablo, and Oakland	Reported collisions
Downtown Walnut Creek	Route through middle of Downtown might be good or bad (good: access; bad: auto conflicts)
Mt Diablo (b/w Boulevard/I-680 and California)	Feels like I should drive fast along this stretch
Mt. Diablo	Mt. Diablo would feel unsafe due to “extension” of freeway speeds
Mt. Diablo	Fast cars
Mt. Diablo, Olympic, Newell	Mt. Diablo and Olympic have room; less room for improvements on Newell
Newell	Improvements on Newell would benefit kids attending Parkmead, Dorris Eaton, Las Lomas, and Walnut Creek Intermediate
Newell b/w Lilac & Eastwood	Remain 2-way auto traffic
Newell b/w Olympic & Lilac	1-way auto traffic, 2-way cycle track, and raised sidewalk

Location	Notes
Newell West	One-way EB, two-way cycle track, raised sidewalk on south side; two-way east of Lilac
Newell, Lilac	Kaiser uses Newell and Lilac for “Live Well, Be Well” walking – potential source of funding
Olympic @ I-680	Olympic route preferred if I-680 undercrossing significantly improved
Olympic @ I-680	Good route for BART, shopping <IF> safety is significantly improved
Group 4	
Location	Notes
[General]	How do different jurisdictions affect the plan? (County, City, etc.)
[General]	Recommend a “Share the Road” initiative upon completion
[General]	Include the BART station as priority destination
[General]	What is the real target market? Unless it’s Class I, it’s not family-friendly.
[General]	Education for motorists is needed
Arlington	Steep
Boulevard (under I-680)	Consider signing as an alternate route for road cyclists
Broadway (b/w Mt. Diablo and Newell)	Mid-block crosswalk (connection to Iron Horse Trail?)
Creek ROW	Creekside trails preferred for separation when feasible
Dewing Park Rd & Olympic	Possible pedestrian crossing
Eastside of I-680 (b/w Mt. Diablo and Olympic)	Potential route
I-680 & Olympic	Issues with I-680 on- and off-ramps
Juanita & Saranap	Steep
Newell & California	Problematic intersection
Newell East	South side is better [than riding on the north side]
Olympic	Preferred route is Olympic – Class I as much as possible
Olympic (b/w Tice Valley and Newell)	Reported speeding
Olympic @ Bridgefield/King	Crossing used often by kids

A.2 Workshop #2

A second public workshop was held to solicit feedback on the Draft Study on September 16, 2014. Feedback received at this workshop includes:

- I am in favor of such a proposed connection for bikes and pedestrians. Sounds good.
- Please create a safe way to bike and/or walk between the Lafayette/Moraga Trail and the Iron Horse Trail, especially between Olympic Boulevard/Boulevard Way to Olympic Blvd/Pleasant Hill Road. This is especially important for the kids in the community to safely get around town. Thank you! :)
- Email in support of Trail Connector. A Trail Connector is a great idea. There is constant high volume ped and bicycle traffic on the existing trails and a Trail Connector would provide a safer more enjoyable environment for these many resident and visiting trail users. Thus a Trail Connector is certainly a reasonable use of tax payers funds. We appreciate the attention and effort towards this solution.
- Hall Equities Group owns property in the vicinity of Boulevard Way and Saranap Avenue, and is concerned about the potential impacts of a designated bicycle trail to our development plans along our property frontage, and would like to see more information about your plans.
- I am writing to encourage that the connector between the two trails be designed with the safety of the pedestrians and bicyclists who will use it as the primary consideration.
- I live in the Parkmead area off Lancaster that would probably be impacted by this connector. With a small child and avid cyclist I would be in favor and most interested in this study
- I live in the Parkmead neighborhood and am in full support of the proposed Olympic Corridor Trail.
- I prefer the Paulson Rd route. It takes you to one end of town, it's more off the main roads. The direct route to the Lafayette trials is better. I believe you'll have more users.
- I support a trail and/or bike lane connecting the Lafayette-Moraga Trail and the Iron Horse Trail (in the Olympic corridor). This will add a lot of benefit to our community and increase safety of children (in particular) when riding bikes along the busy road! Thank you for working hard to make this happen.
- I support the bike trail on Newell through the Parkmead with some reservations. 1) Newell Avenue is the ONLY access into and out of the Parkmead for several hundred homes. It must remain a two way street because of this. 2) there are already many bicyclists that use Newell. If making this an official bike path will congest Newell with bicyclists and make traffic even more difficult for Parkmead residents than it currently is, why make an "official" bike path? Why not allow it remain less official to ensure a good mix of neighborhood vehicles and bikes?

Please add me to the elist. Had I known earlier about the Thursday meeting I would have attended.

- I have lived in the Parkmead neighborhood for more than 20 years. I walk on either the Lafayette or Iron horse trails on a daily basis. Both my children attended the Parkmead elementary school. The idea of using Newel Ave., between Olympic and S. California Blvd., as a ""connector"" between these two trails is a very, very bad idea. First, the amount of pedestrian and vehicle traffic on Newell today is significant. Especially at peak hours during school drop off and pickup times, and for the various church events held at Hillside Covenant. For anyone who studies this they will notice that during these peak times the cars often will be lined up, bumper-to-bumper from Lilac to Magnolia. At the same time, there are usually a large number of pedestrians, mostly school kids, walking and playing on the narrow pathway along Newell in both directions.

Importantly, this pedestrian and vehicle traffic is fundamentally different than the majority of the traffic on and around the Iron Horse and Lafayette trails. In other words, there appears to me to be little overlap between the type of traffic on the trails and the type of traffic on Newell. More importantly, most of the pedestrian traffic on the trails is comprised of joggers, bikers (many are high-speed cyclists in packs) and dog walkers. This type of traffic is not typical of the type of traffic flow in the Parkmead community currently. If this new traffic type is accommodated and welcomed in the Parkmead neighborhood it will change the structure of this family and school oriented community. This will have profound effects on who moves into, and lives in, the Parkmead community. Finally, I believe it would be hard to dispute that if this ""connector"" uses Newell Ave it will have a pronounced effect on the traffic flows and significantly change the character of the Parkmead community as it exists today.

- I would support this project.

- Our family supports expanding the access to the trails for bicycle use. We are active users of both the Lafayette-Moraga and Iron Horse Trails, but often have to use our cars to bring bikes to the trailheads to accommodate our young daughter, who does not like to ride on busy streets. We would definitely use a safe, continuous trail or one with well designated bike paths. I also believe that improved trails would encourage more bicycle use overall and could see many others taking advantage of the trail system.
- Separated bike lanes would be best with raised paving(cyclotracks). Sharrows are not safe because cycles have to share with cars. There is no competition with autos and bikes. Widening the sidewalks along the Olympic corridor. Newell needs widening sidewalks and clear identification of bike lanes. Cyclotracks are raised pavement so they are clearly marked. Paint the lanes green. Lights with separate signals for bikes and pedestrians at the freeway entrances and exits. The traffic on this corridor is definitely fast so separate bikeways would help calm the traffic. Thanks for giving me the opportunity to offer suggestions.
- This would be a wonder progressive accomplishment that would benefit all, and would help put our city on the cutting edge.
- We ABSOLUTELY should connect these trails. I support it 110% per cent. Please keep me informed via email.
- We need to connect Saranap with the rest of humanity too!!! Especially when we will be adding hundreds of new families with the Saranap Village project in the next few years!
- While I support the OCTCS planning effort to connect the current fragments of trails into a network , the main area within the initial project boundaries - the neighborhood of Saranap - is glaringly absent any proposed class of trails. Our family, and many other we know, see a great need in providing a safe route between Saranap and the Parkmead neighborhoods so children can ride to school safely, and families can enjoy a safe and convenient alternative to using a car.

I encourage the Contra Costa County Department of Conservation and Development to revise the OCTCS to include a segment connecting the Saranap and Parkmead neighborhoods in the final design of the trail network.

- "Comments: I think the Cycle Route within Walnut Creek should go from Olympic to Mt Diablo Blvd (at CVS) and connect to the IHT at Safeways

Benefits

This would make the shopping center of Walnut Creek more walkable by restricting car access along Mt Diablo

This would enable cyclists to directly access and pass through the downtown area

This would ease congestion at the corners (Main St and Mt Diablo) – and could even allow the corners to become a piazza space for concerts and sidewalk cafes

This would make California, Newell, Broadway and Civic the orbital car routes around the city center – keeping cars away from the inner downtown and separating cars from bikes/pedestrians

This would keep cyclists off the California, Newell, Broadway and Civic the orbital car routes around the city center

When the CVS lot is redeveloped, a cycle path from Olympic to Mt Diablo could be built (this also could be a piazza)

Mt Diablo could become a one lane street in each direction allowing space for wide cycle paths and the free bus, with sidewalk cafes, street performers and market stands.

Disadvantages

Cars would still need some access to the parking lots and pick up points in downtown"

- I am particularly concerned about the connector between Crawford Ct and Newell. The current sidewalk/dirt path is insufficient to accommodate both cyclists and pedestrians. In addition, the vegetation is overgrown and should be maintained to increase safety and visibility.
- The preferred alignment proposal is a very good solution to enable a safe bike/ped connection between the IHT and the Lafayette-Moraga Trail. It utilizes aggressive shifting of lanes and medians to provide space for a quality trail. Tree replacement should be mitigated at a rate of at least 3-1. Removal of traffic lanes (if pursued) could result in backlash against bike facilities in this area. The staging of the phases from west to east is logical. Generous trail width as planned is appropriate for areas of intense use.
Congratulations on taking the available "real estate" and reconfiguring it to provide a modern transportation facility for all users! This should be a model for other roads where bike/ped infrastructure is needed.
- I am a regular bicyclist who lives in the Lafayette Trail Neighborhood and works off the Iron Horse Trail; I bike these routes almost every week during the dry season, and i always use Olympic and usually use Newell. I strongly support your efforts to improve both of these routes, as they have a number of dangerous spots (most dangerous of all is Newell by Trader Joes parking lot).

- I am beyond pleased that the possibility of a bike/walking connector is under consideration. On 7/22/11 I was knocked off my bike in front of Whole Foods on Newell, just short of the connection to the Iron Horse. The culpable driver tried to leave the scene, and would have, but for the quick action of my husband, who was riding behind and witnessed the entire incident. Unfortunately, the second responding police officer chose (and I do mean chose) to find "no fault" after making the comment that of course "you must have medical insurance. The driver was, and likely still is, a WCPD contractor, which made the whole situation very suspect. Clearly the construction of a bike path, separate from the roadway, would be beneficial to everyone.
- We are property owners of the home at 1958 Newell Ave , on the northeast corner of Newell and Olympic.

According to the Olympic Corridor Trail Connector Study, page 26 figure 21, there is a one foot shift to the south along Olympic which would be taken from our property to accommodate more room for the proposed bike lane.

We strongly object to this part of the plan. Our home is already perilously close to the fast paced traffic on Olympic Boulevard. Currently, our home is only 8 feet from the roadway where cars travel at 40-50 mph. We have experienced a car crashing through our fence, another hitting cars parked in our driveway, and witnessed many times when pedestrians faced danger. We have documents to support many incidents.

The county originally created this problem by granting a variance to the Public Works Department for an 8 ft. setback to our property along Olympic Boulevard in 1965. (Application No. 531-65, Lot 117). While we understand not seeing the future in 1965, since then Olympic has become as a major thoroughfare. The area continues to develop and the traffic density continues to grow. This creates a very evident safety problem for our residence and poses an unreasonable risk. It is unfair in the face of already moving the roadway too close to our home, that this should happen to this location again.

Furthermore, setbacks to our property would decrease our property values and make the home difficult to sell as well as creating a risk for public safety and county operation.

We would like the Department and Project Managers to acknowledge receiving and reading this letter. It is our hope that continued communications and flexibility on both sides can ameliorate the unfairness of the situation and fully create a safe and attractive bike connector without financial loss or risk to either parties.

- My primary concern with the Olympic corridor is @ Bridgefield and Olympic - either turning left from Bridgefield onto Olympic or turning left onto Bridgefield from Olympic. It is almost blind turning onto Olympic from Bridgefield (when making a left). Cars speed along that corridor and, due to slight curve in road, you take your life in your hands when trying to turn left. From Olympic to Bridgefield (making left) drivers get very angry (road rage angry) when they are behind you waiting for you to turn. They try to go around (but they can't). A light or some way to halt traffic for Bridgefield comings and goings would make the area safer for everyone. It is also difficult for pedestrians to get to middle trail without light - and many of those pedestrians are (1) kids or (2) adults with small children/infants.
- The current right turn from Olympic to Newell is very unsafe for bikes. The narrow turn area should be widened to 3 feet or more in a way to still prevent cars from accessing Newell.
- First of all, Thank you for your hard work and planning on this project . All of the staff that I have interacted with at the various meetings and workshops have been wonderful. As a Home Owner on Cottage Lane, an avid bicycle commuter, and neighborhood pedestrian I fully support the development the Olympic corridor bicycle connector, It is a critical part of making Walnut Creek (and the region) a vital cycling and pedestrian community with supporting infrastructure. My children love cycling and we use the Olympic corridor multiple times a day. When we travel to downtown Walnut Creek, my children frequently ask if we can ride bike. This infrastructure is being built for them, and they want it.

My top priority for the project is protected bike lanes and bike paths the separate cars and bicycles and pedestrians. This promotes walking and cycling by making casual pedestrians and cyclists feel safer and more comfortable. These paths should be on both sides of the street to reduce crossing and support the daily movement of children to the local schools. In support of these objective I would specifically like to see are: Physical barriers, such as guardrails along the bike path to prevent bikes from leaving the path and entering the road (and vice versa), scramble periods during the light cycles to allow bikes to cross the intersection diagonally when the bike path switches sides of the road, and, specifically at the Tice Valley Blvd / Olympic Blvd intersection, dedicated pedestrian crossing times with flashing yellow lights at the intersections that indicate when a pedestrian is crossing the street.

Finally, although I understand that it is beyond the scope of the Olympic development, it is important to point out that the development of bike and pedestrian infrastructure along Boulevard way is important for connecting the Olympic corridor to the Saranap neighborhood and the Saranap Village being developed.

Appendix B: Detailed Cost Estimates

B.1 Unit Cost Assumptions

Table B-1: Unit Cost Assumptions for Capital Improvements		
DESCRIPTION	UNIT	UNIT COST OR RATE
MOBILIZATION	LS	5%
GENERAL CONDITIONS, BONDS AND INSURANCE	LS	2%
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	LS	5%
TRAFFIC CONTROL	LS	10%
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.		
Sawcut pavement	LF	\$5.00
Remove AC pavement	SF	\$0.80
Remove concrete pavement	SF	\$10.00
Remove fence	LF	\$10.00
Relocate existing utility pole	EA	\$8,000.00
Remove and relocate existing light standard	EA	\$2,000.00
Remove existing storm drain culvert	EA	\$1,000.00
Remove and relocate utility or signal cabinets (up to three)	EA	\$3,000.00
Remove curb/gutter	LF	\$10.00
Remove pavement markings	SF	\$7.00
Tree removal	EA	\$500.00
Remove existing striping	LF	\$2.00
Modify existing concrete retaining (at I-680 undercrossing)	EA	\$5,000.00
Earthwork		
Clearing and grubbing	SF	\$0.25
Excavation and grading	CY	\$50.00
Embankment, import borrow	CY	\$30.00
Soil for new landscape areas	CY	\$20.00
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath		
Construct curb & gutter	LF	\$55.00
Construct AC curb	LF	\$12.00
Construct 4" PCC sidewalk	SF	\$15.00
Construct 4" AC over 6" AB	SF	\$10.00
Construct new inlet to existing storm drain	EA	\$3,000.00
Aggregate base and shoulder rock	CY	\$50.00
Curb ramp with truncated dome surface	EA	\$1,400.00
Curb extension with decorative pavers	SF	\$15.00
Colored stamped asphalt or concrete	SF	\$15.00
Extend existing storm drain system	EA	\$1,000.00
Construct CMP storm drain pipe	LF	\$60.00
Construct wide curb ramp with truncated dome surface	EA	\$2,000.00

DESCRIPTION	UNIT	UNIT COST OR RATE
Hot mix asphalt	SF	\$2.00
Concrete block retaining wall- 3' high	LF	\$150.00
Decomposed Granite - includes trails and surfaced areas with base rock, geotextile fabric, binder, and compaction	SF	\$5.00
Planting		
24" box trees with root barriers, tree grates, and irrigation	EA	\$2,200.00
15 gallon trees with protective posts and root barriers, irrigation	EA	\$1,600.00
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	SF	\$6.50
Irrigation meter/connection, backflow, and controller	EA	\$15,000.00
Retaining Walls		
Concrete retaining wall	SF	\$150.00
Site Furnishings		
Benches (bench, footings)	EA	\$1,000.00
Pedestrian light Type 1 (streetlamp style, placed near intersections)	EA	\$6,000.00
Pedestrian light Type 2	EA	\$2,000.00
Chain link fence - 4' vinyl coated	LF	\$25.00
Timber barrier/wheel stop 8'x8"x8"	EA	\$50.00
R.O.W. fence - 5-strand barbed wire with mesh (dog exclusion)	LF	\$20.00
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.		
High visibility crosswalk	LF	\$35.00
Repaint stop bars and markings	EA	\$800.00
Painted pedestrian walkway - per 30' with associated signage	EA	\$1,060.00
Buffered bike lane and pavement markings	LF	\$7.58
Bike lane and pavement markings	LF	\$5.25
Miscellaneous Class I trail striping, signage and bollards	MI	\$5,000.00
HAWK/RRFB	EA	\$22,250.00
Gateway monument sign	EA	\$5,000.00
Greenback sharrow	EA	\$300.00
Miscellaneous 4" thermoplastic stripe	LF	\$3.00
Wayfinding signage	EA	\$1,340.00
Yield pavement marking	SF	\$7.00
Green conflict markings	LF	\$14.81
Bridges		
Provide and install pre-manufactured steel bridge (130'x12')	LS	\$300,000.00
Provide and install pre-manufactured steel bridge (75'x12')	LS	\$200,000.00
Right of Way Acquisition		
Acquire easements for bridge approach	SF	\$50.00
CONTINGENCY	LS	20%
SURVEYING	LS	5%
PLANS, SPECIFICATIONS AND ENGINEERING	LS	15%
ENVIRONMENTAL DOCUMENTATION, PERMITTING	LS	10%
TECH STUDIES, MITIGATION	LS	2.5%
CONSTRUCTION ENGINEERING/ADMIN.	LS	15%

B.2 Segment 1: Olympic Boulevard – Lafayette Moraga Trail to Pleasant Hill Road

Table B-2: Short-Term Improvements Cost Estimate				
DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$3,422
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$1,369
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$3,422
TRAFFIC CONTROL	1	LS	10%	\$6,843
Subtotal				\$15,055
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	100	LF	\$5.00	\$500
Remove AC pavement	80	SF	\$0.80	\$64
Remove curb/gutter	40	LF	\$10.00	\$400
Remove existing striping (no lead present)	3,089	LF	\$2.00	\$6,178
Subtotal				\$7,142
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct AC curb	40	LF	\$12.00	\$480
Construct 4" AC over 6" AB	200	SF	\$10.00	\$2,000
Subtotal				\$2,480
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	95	LF	\$35.00	\$3,325
Repaint stop bars and markings	6	EA	\$800.00	\$4,800
Buffered bike lane, pavement markings, and signs	5,256	LF	\$7.58	\$39,840
Wayfinding Signage	8	EA	\$1,340.00	\$10,720
Yield pavement marking	18	SF	\$7.00	\$126
Subtotal				\$58,811
CONSTRUCTION SUBTOTAL				\$83,489
CONTINGENCY			20%	\$16,698
SURVEYING			5%	\$4,174
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$12,523
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$12,523
TOTAL				\$130,000

Table B-3: Annual Maintenance Cost Estimate				
DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	5,256	LF	\$10/1,000 LF	\$53
Signs, Striping, and Pavement Markings	\$58,811	IC	Installation Cost/10	\$5,881

B.3 Segment 2.1: Olympic Boulevard – Pleasant Hill Road to Windtree Court

Table B-4: Short-Term Improvements Cost Estimate				
DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$1,762
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$705
TRAFFIC CONTROL	1	LS	10%	\$3,525
Subtotal				\$5,992
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove existing striping (no lead present)	3,700	LF	\$2.00	\$7,400
Subtotal				\$7,400
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Buffered bike lane, pavement markings, and signs	1,850	LF	\$7.58	\$14,023
Miscellaneous 4" thermoplastic stripe	3,700	LF	\$3.00	\$11,100
Green conflict markings	184	LF	\$14.81	\$2,725
Subtotal				\$27,848
CONSTRUCTION SUBTOTAL				\$41,240
CONTINGENCY			20%	\$8,248
SURVEYING			5%	\$2,062
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$6,186
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$6,186
TOTAL				\$64,000

Table B-5: Long-Term Improvements Cost Estimate				
DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$30,569
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$12,228
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$30,569
TRAFFIC CONTROL	1	LS	10%	\$61,138
Subtotal				\$134,503
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	1903	LF	\$5.00	\$9,515
Remove AC pavement	6,498	SF	\$0.80	\$5,198
Remove fence	400	LF	\$10.00	\$4,000
Relocate existing utility pole	1	EA	\$8,000.00	\$8,000
Remove curb/gutter	925	LF	\$10.00	\$9,250
Remove existing striping	3,700	LF	\$2.00	\$7,400
Subtotal				\$43,363
Earthwork				
Clearing and grubbing	3,700	SF	\$0.25	\$925
Excavation and grading	205	CY	\$50.00	\$10,250
Subtotal				\$11,175

B.4 Segment 2.2: Olympic Boulevard – Windtree Court to Newell Court

Table B-7: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$3,238
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$1,295
TRAFFIC CONTROL	1	LS	10%	\$6,475
Subtotal				\$11,008
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove existing striping (no lead present)	8,840	LF	\$2.00	\$17,680
Subtotal				\$17,680
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	155	LF	\$35.00	\$5,425
Repaint stop bars and markings	3	EA	\$800.00	\$2,400
Buffered bike lane, pavement markings, and signs	2,200	LF	\$7.58	\$16,676
Miscellaneous 4" thermoplastic stripe	6,630	LF	\$3.00	\$19,890
Wayfinding signage	2	EA	\$1,340.00	\$2,680
Subtotal				\$47,071
CONSTRUCTION SUBTOTAL				\$75,759
CONTINGENCY			20%	\$15,152
SURVEYING			5%	\$3,788
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$11,364
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$11,364
TOTAL				\$118,000

Table B-8: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$11,971
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$4,788
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$11,971
TRAFFIC CONTROL	1	LS	10%	\$23,942
Subtotal				\$52,673
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	1,161	LF	\$5.00	\$5,805
Remove concrete pavement	100	SF	\$10.00	\$1,000
Remove curb/gutter	1,161	LF	\$10.00	\$11,610
Remove existing striping	6,966	LF	\$2.00	\$13,932
Subtotal				\$32,347
Earthwork				
Clearing and grubbing	3,483	SF	\$0.25	\$871
Subtotal				\$871

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	1,903	LF	\$55.00	\$104,665
Construct 4" AC over 6" AB	10,830	SF	\$10.00	\$108,300
Subtotal				\$212,965
Planting				
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	820	SF	\$6.50	\$5,330
Subtotal				\$5,330
Retaining Walls				
Concrete retaining wall	2,050	SF	\$150.00	\$307,500
Subtotal				\$307,500
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Repaint stop bars and markings	1	EA	\$800.00	\$800
Buffered bike lane and pavement markings	2,166	LF	\$7.58	\$16,418
Miscellaneous 4" thermoplastic stripe	3,700	LF	\$3.00	\$11,100
Green conflict markings	184	LF	\$14.81	\$2,725
Subtotal				\$31,043
CONSTRUCTION SUBTOTAL				\$745,880
CONTINGENCY			20%	\$149,176
SURVEYING			5%	\$37,294
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$111,882
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$74,588
TECH STUDIES, MITIGATION			2.5%	\$18,647
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$111,882
TOTAL				\$1,250,000

Table B-6: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	1,850	LF	\$10 / 1,000 LF	\$19
Signs, Striping, and Pavement Markings	\$27,848	IC	Installation Cost / 10	\$2,785
Long-Term Improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	2,166	LF	\$10 / 1,000 LF	\$22
Signs, Striping, and Pavement Markings	\$31,043	IC	Installation Cost / 10	\$3,104
Sidepath Maintenance	1,083	LF	\$2652 / 1,000 LF	\$2,872
Sidepath Pavement Maintenance	\$108,300	IC	Installation Cost / 20	\$5,415
Landscape Maintenance	410	LF	\$900 / 1,000 LF	\$369

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	1,161	LF	\$55.00	\$63,855
Construct 4" PCC sidewalk	100	SF	\$15.00	\$1,500
Construct 4" AC over 6" AB	1,1610	SF	\$10.00	\$116,100
Construct wide curb ramp with truncated dome surface	4	EA	\$2,000.00	\$8,000
Subtotal				\$189,455
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Buffered bike lane and pavement markings	2,210	LF	\$7.58	\$16,752
Subtotal				\$16,752
CONSTRUCTION SUBTOTAL				\$292,098
CONTINGENCY			20%	\$58,420
SURVEYING			5%	\$14,605
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$43,815
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$29,210
TECH STUDIES, MITIGATION			2.5%	\$7,302
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$43,814
TOTAL				\$490,000

Table B-9: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	2,200	LF	\$10 / 1,000 LF	\$22
Signs, Striping, and Pavement Markings	\$47,071	IC	Installation Cost / 10	\$4,707
Long-Term Improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	2,210	LF	\$10 / 1,000 LF	\$22
Signs, Striping, and Pavement Markings	\$16,752	IC	Installation Cost / 10	\$1,675
Sidepath Maintenance	1,178	LF	\$2652 / 1,000 LF	\$3,123
Sidepath Pavement Maintenance	\$116,100	IC	Installation Cost / 20	\$5,805

B.5 Segment 3: Olympic Boulevard – Newell Court to Boulevard Way/Tice Valley Boulevard

Table B-10: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$6,018
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$2,407
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	2%	\$2,407
TRAFFIC CONTROL	1	LS	10%	\$12,037
Subtotal				\$22,870
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	160	LF	\$5.00	\$800
Remove concrete pavement	48	SF	\$1.00	\$48
Remove pavement markings	120	SF	\$7.00	\$840
Remove existing striping (no lead present)	5,372	LF	\$2.00	\$10,744
Subtotal				\$12,432
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct AC curb	160	LF	\$12.00	\$1,920
Construct 4" AC over 6" AB	320	SF	\$10.00	\$3,200
Curb Ramp with truncated dome surface	4	EA	\$1,400.00	\$5,600
Subtotal				\$10,720
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	371	LF	\$35.00	\$12,985
Repaint stop bars and markings	5	EA	\$800.00	\$4,000
Buffered bike lane, pavement markings, and signs	3,955	LF	\$7.58	\$29,979
Bike lane, pavement markings, and signs	190	LF	\$5.25	\$998
HAWK/RRFB	2	EA	\$22,250.00	\$44,500
Wayfinding signage	2	EA	\$1,340.00	\$2,680
Yield pavement marking	38	SF	\$7.00	\$266
Green conflict markings	122	LF	\$14.81	\$1,807
Subtotal				\$97,214
CONSTRUCTION SUBTOTAL				\$143,236
CONTINGENCY			20%	\$28,647
SURVEYING			5%	\$7,162
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$21,485
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$21,485
TOTAL				\$223,000

Table B-11: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$15,012
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$6,005
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$15,012
TRAFFIC CONTROL	1	LS	10%	\$30,025
Subtotal				\$66,054
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	1,170	LF	\$5.00	\$5,850
Remove AC pavement	1,125	SF	\$0.80	\$900
Remove concrete pavement	200	SF	\$10.00	\$2,000
Remove existing storm drain culvert	1	EA	\$1,000.00	\$1,000
Remove and relocate utility or signal cabinets (up to three)	2	EA	\$3,000.00	\$6,000
Remove curb/gutter	1,170	LF	\$10.00	\$11,700
Tree removal	11	EA	\$500.00	\$5,500
Remove existing striping	1,170	LF	\$2.00	\$2,340
Subtotal				\$35,290
Earthwork				
Clearing and grubbing	8,730	SF	\$0.25	\$2,183
Subtotal				\$2,183
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	2,010	LF	\$55.00	\$110,550
Construct 4" PCC sidewalk	9,855	SF	\$15.00	\$147,825
Construct new inlet to existing storm drain	1	EA	\$3,000.00	\$3,000
Curb ramp with truncated dome surface	1	EA	\$1,400.00	\$1,400
Subtotal				\$262,775
CONSTRUCTION SUBTOTAL				\$366,302
CONTINGENCY			20%	\$73,260
SURVEYING			5%	\$18,315
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$54,945
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$36,630
TECH STUDIES, MITIGATION			2.5%	\$9,158
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$54,945
TOTAL				\$613,556

Table B-12: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	3,955	LF	\$10 / 1,000 LF	\$40
Signs, Striping, and Pavement Markings	\$97,214	IC	Installation Cost / 10	\$9,721
Sidepath Maintenance	160	LF	\$2652 / 1,000 LF	\$424
Sidepath Pavement Maintenance	\$3,200	IC	Installation Cost / 20	\$160
Long-Term Improvement Concept				
Sidepath Maintenance	1,792	LF	\$2652 / 1,000 LF	\$4,752
Sidepath Pavement Maintenance	\$147,825	IC	Installation Cost / 20	\$7,391

B.6 Segment 4: Olympic Boulevard – Boulevard Way/Tice Valley Boulevard to Newell Avenue

Table B-13: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$17,042
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$6,817
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$17,042
TRAFFIC CONTROL	1	LS	10%	\$34,083
Subtotal				\$74,983
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	1,370	LF	\$5.00	\$6,850
Remove AC pavement	8,780	SF	\$0.80	\$7,024
Remove concrete pavement	560	SF	\$1.00	\$560
Remove curb/gutter	1,370	LF	\$10.00	\$13,700
Remove existing striping (no lead present)	2,740	LF	\$2.00	\$5,480
Subtotal				\$33,614
Earthwork				
Soil for new landscape areas	152	CY	\$20.00	\$3,040
Subtotal				\$3,040
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	1,390	LF	\$55.00	\$76,450
Construct 4" AC over 6" AB	14,540	SF	\$10.00	\$145,400
Curb Ramp with truncated dome surface	1	EA	\$1,400.00	\$1,400
Subtotal				\$223,250
Planting				
Landscaping (1 gallon shrubs, 15 gallon trees, irrigation)	4,110	SF	\$6.50	\$26,715
Irrigation meter/connection, backflow, and controller	1	EA	\$15,000.00	\$15,000
Subtotal				\$41,715
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Bike lane, pavement markings, and signs	5,138	LF	\$5.25	\$26,972
Miscellaneous 4" thermoplastic stripe	2,740	LF	\$3.00	\$8,220
Wayfinding signage	3	EA	\$1,340.00	\$4,020
Subtotal				\$39,212
CONSTRUCTION SUBTOTAL				\$415,814
CONTINGENCY			20%	\$83,163
SURVEYING			5%	\$20,791
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$62,372
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$62,372
TOTAL				\$645,000

Table B-14: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$15,445
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$6,178
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$15,445
TRAFFIC CONTROL	1	LS	10%	\$30,890
Subtotal				\$67,958
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	158	LF	\$5.00	\$790
Remove AC pavement	13,020	SF	\$0.80	\$10,416
Remove concrete pavement	200	SF	\$10.00	\$2,000
Remove curb/gutter	158	LF	\$10.00	\$1,580
Subtotal				\$14,786
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	158	LF	\$55.00	\$8,690
Construct 4" PCC sidewalk	474	SF	\$15.00	\$7,110
Construct 4" AC over 6" AB	21,700	SF	\$10.00	\$217,000
Extend existing storm drain system	4	EA	\$1,000.00	\$4,000
Subtotal				\$236,800
Planting				
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	6,510	SF	\$6.50	\$42,315
Irrigation meter/connection, backflow, and controller	1	EA	\$15,000.00	\$15,000
Subtotal				\$57,315
CONSTRUCTION SUBTOTAL				\$376,859
CONTINGENCY			20%	\$75,372
SURVEYING			5%	\$18,843
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$56,529
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$37,686
TECH STUDIES, MITIGATION			2.5%	\$9,421
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$56,529
TOTAL				\$632,000

Table B-15: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	5,138	LF	\$10 / 1,000 LF	\$51
Signs, Striping, and Pavement Markings	\$39,212	IC	Installation Cost / 10	\$3,921
Sidepath Maintenance	1,510	LF	\$2652 / 1,000 LF	\$4,005
Sidepath Pavement Maintenance	\$145,400	IC	Installation Cost / 20	\$7,270
Landscape Maintenance	1,370	LF	\$900 / 1,000 LF	\$1,233
Long-Term Improvement Concept				
Sidepath Maintenance	2,170	LF	\$2652 / 1,000 LF	\$5,755
Sidepath Pavement Maintenance	\$217,000	IC	Installation Cost / 20	\$10,850
Landscape Maintenance	2,170	LF	\$900 / 1,000 LF	\$1,953

B.7 Segment 5: Olympic Boulevard – Newell Avenue to I-680

Table B-16: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$4,4256
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$1,770
TRAFFIC CONTROL	1	LS	10%	\$8,852
Subtotal				\$15,048
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove existing striping (no lead present)	5,994	LF	\$2.00	\$11,987
Subtotal				\$11,987
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Bike lane, pavement markings, and signs	3,746	LF	\$5.25	\$19,667
HAWK/RRFB	2	EA	\$22,250.00	\$44,500
Miscellaneous 4" thermoplastic stripe	4,121	LF	\$3.00	\$12,362
Subtotal				\$76,528
CONSTRUCTION SUBTOTAL				\$103,563
CONTINGENCY			20%	\$20,713
SURVEYING			5%	\$5,178
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$15,534
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$15,534
TOTAL				\$161,000

Table B-17: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$40,624
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$16,249
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$40,624
TRAFFIC CONTROL	1	LS	10%	\$81,247
Subtotal				\$178,744
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	5,919	LF	\$5.00	\$29,595
Remove AC pavement	9,450	SF	\$0.80	\$7,560
Remove concrete pavement	18,900	SF	\$5.00	\$94,500
Remove and relocate existing light standard	5	EA	\$2,000.00	\$10,000
Remove and relocate utility or signal cabinets (up to three)	1	EA	\$3,000.00	\$3,000
Remove curb/gutter	5,919	LF	\$10.00	\$59,190
Tree removal	6	EA	\$500.00	\$3,000
Remove existing striping	7,560	LF	\$2.00	\$15,120
Subtotal				\$221,965

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	5,919	LF	\$55.00	\$325,545
Construct 4" PCC sidewalk	9,450	SF	\$15.00	\$141,750
Construct new inlet to existing storm drain	5	EA	\$3,000.00	\$15,000
Colored stamped asphalt or concrete	5,619	SF	\$15.00	\$84,285
Subtotal				\$566,580
Planting				
15 gallon trees with protective posts and root barriers, irrigation	6	EA	\$1,600.00	\$9,600
Subtotal				\$9,600
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Buffered bike lane and pavement markings	1,890	LF	\$7.58	\$14,326
Subtotal				\$14,326
CONSTRUCTION SUBTOTAL				\$991,215
CONTINGENCY			20%	\$198,243
SURVEYING			5%	\$49,561
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$148,682
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$99,121
TECH STUDIES, MITIGATION			2.5%	\$24,780
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$148,682
TOTAL				\$1,661,000

Table B-18: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	3,746	LF	\$10 / 1,000 LF	\$37.46
Signs, Striping, and Pavement Markings	\$76,528	IC	Installation Cost / 10	\$7,653
Long-Term Improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	1,890	LF	\$10 / 1,000 LF	\$19
Signs, Striping, and Pavement Markings	\$14,326	IC	Installation Cost / 10	\$1,433
Sidepath Maintenance	158	LF	\$2652 / 1,000 LF	\$418
Sidepath Pavement Maintenance	\$14,326	IC	Installation Cost / 20	\$716

B.8 Segment 6.1: Olympic Boulevard – I-680 to Alpine Road

Table B-19: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$3,960
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$1,584
TRAFFIC CONTROL	1	LS	10%	\$7,921
Subtotal				\$13,465
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove existing striping (no lead present)	3,470	LF	\$2.00	\$6,940
Subtotal				\$6,940
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	770	LF	\$35.00	\$26,950
Bike lane, pavement markings, and signs	1,730	LF	\$5.25	\$9,083
Gateway monument sign	6	EA	\$5,000.00	\$30,000
Wayfinding signage	2	EA	\$1,340.00	\$2,680
Green conflict markings	240	LF	\$14.81	\$3,554
Subtotal				\$72,267
SUBTOTAL				\$92,672
CONTINGENCY			20%	\$18,534
SURVEYING			5%	\$4,634
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$13,901
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$13,901
TOTAL				\$144,000

Table B-20: Long Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$31,072
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$12,429
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$31,072
TRAFFIC CONTROL	1	LS	10%	\$62,144
Subtotal				\$136,717
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove concrete pavement	3,160	SF	\$10.00	\$31,600
Remove and relocate utility or signal cabinets (up to three)	2	EA	\$3,000.00	\$6,000
Remove curb/gutter	160	LF	\$10.00	\$1,600
Modify existing concrete retaining (at I-680 undercrossing)	1	EA	\$5,000.00	\$5,000
Subtotal				\$44,200

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Earthwork				
Excavation and grading	425	CY	\$50.00	\$21,250
Subtotal				\$21,250
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct 4" PCC sidewalk	3,700	SF	\$15.00	\$55,500
Colored stamped asphalt or concrete	7,700	SF	\$15.00	\$115,500
Construct wide curb ramp with truncated dome surface	8	EA	\$2,000.00	\$16,000
Subtotal				\$187,000
Planting				
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	460	SF	\$6.50	\$2,990
Subtotal				\$2,990
Retaining Walls				
Concrete retaining wall	2,440	SF	\$150.00	\$366,000
Subtotal				\$366,000
CONSTRUCTION SUBTOTAL				\$758,157
CONTINGENCY			20%	\$151,631
SURVEYING			5%	\$37,908
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$113,724
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$75,816
TECH STUDIES, MITIGATION			2.5%	\$18,954
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$113,724
TOTAL				\$1,270,000

Table B-21: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	1,730	LF	\$10 / 1,000 LF	\$17
Signs, Striping, and Pavement Markings	\$72,267	IC	Installation Cost / 10	\$7,227
Long-Term Improvement Concept				
Sidepath Maintenance	370	LF	\$2652 / 1,000 LF	\$981
Sidepath Pavement Maintenance	\$55,500	IC	Installation Cost / 20	\$2,775
Landscape Maintenance	230	LF	\$900 / 1,000 LF	\$207

B.9 Segment 6.2: Olympic Boulevard – Alpine Road to S. California Boulevard

Table B-22: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$2,043
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$817
TRAFFIC CONTROL	1	LS	10%	\$4,086
Subtotal				\$6,945
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove existing striping (no lead present)	7,055	LF	\$2.00	\$14,110
Subtotal				\$14,110
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	360	LF	\$35.00	\$12,600
Buffered bike lane, pavement markings, and signs	1,340	LF	\$7.58	\$10,157
Bike lane, pavement markings, and signs	390	LF	\$5.25	\$2,048
Greenback sharrow	4	EA	\$300.00	\$1,200
Green conflict markings	50	LF	\$14.81	\$741
Subtotal				\$26,745
CONSTRUCTION SUBTOTAL				\$47,801
CONTINGENCY			20%	\$9,560
SURVEYING			5%	\$2,390
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$7,170
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$7,170
TOTAL				\$75,000

Table B-23: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$11,250
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$4,500
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$11,250
TRAFFIC CONTROL	1	LS	10%	\$22,500
Subtotal				\$49,500
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	910	LF	\$5.00	\$4,550
Remove AC pavement	8,500	SF	\$0.80	\$6,800
Remove concrete pavement	864	SF	\$10.00	\$8,640
Remove curb/gutter	850	LF	\$10.00	\$8,500
Remove existing striping	2,550	LF	\$2.00	\$5,100
Subtotal				\$33,590

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	850	LF	\$55.00	\$46,750
Construct 4" AC over 6" AB	9,364	SF	\$10.00	\$93,640
Construct new inlet to existing storm drain	3	EA	\$3,000.00	\$9,000
Construct wide curb ramp with truncated dome surface	2	EA	\$2,000.00	\$4,000
Subtotal				\$153,390
Planting				
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	2,550	SF	\$6.50	\$16,575
Irrigation meter/connection, backflow, and controller	1	EA	\$15,000.00	\$15,000
Subtotal				\$31,575
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Buffered bike lane and pavement markings	850	LF	\$7.58	\$6,443
Subtotal				\$6,443
CONSTRUCTION SUBTOTAL				\$274,498
CONTINGENCY			20%	\$54,900
SURVEYING			5%	\$13,725
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$41,175
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$27,450
TECH STUDIES, MITIGATION			2.5%	\$6,862
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$41,175
TOTAL				\$460,000

Table B-24: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	1,780	LF	\$10 / 1,000 LF	\$18
Signs, Striping, and Pavement Markings	\$26,745	IC	Installation Cost / 10	\$2,675
Long-Term Improvement Concept				
Bicycle Lanes and Bicycle Route Sweeping	850	LF	\$10 / 1,000 LF	\$9
Signs, Striping, and Pavement Markings	\$6,443	IC	Installation Cost / 10	\$644
Sidepath Maintenance	936	LF	\$2652 / 1,000 LF	\$2,483
Sidepath Pavement Maintenance	\$93,640	IC	Installation Cost / 20	\$4,682
Landscape Maintenance	850	LF	\$900 / 1,000 LF	\$765

B.10 Segment 7: S. California Boulevard – Olympic Boulevard to Newell Avenue

Table B-25: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$328
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$131
TRAFFIC CONTROL	1	LS	10%	\$656
Subtotal				\$1,115
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Greenback sharrow	4	EA	\$300.00	\$1,200
Wayfinding signage	4	EA	\$1,340.00	\$5,360
Subtotal				\$6,560
CONSTRUCTION SUBTOTAL				\$7,675
CONTINGENCY			20%	\$1,535
SURVEYING			5%	\$384
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$1,151
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$1,151
TOTAL				\$12,000

Table B-26: Long-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$28,309
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$11,324
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$28,309
TRAFFIC CONTROL	1	LS	10%	\$56,618
Subtotal				\$124,560
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	250	LF	\$5.00	\$1,250
Remove AC pavement	1,730	SF	\$0.80	\$1,384
Remove concrete pavement	4,240	SF	\$10.00	\$42,400
Relocate existing utility pole	2	EA	\$8,000.00	\$16,000
Remove and relocate existing light standard	5	EA	\$2,000.00	\$10,000
Remove and relocate utility or signal cabinets (up to three)	2	EA	\$3,000.00	\$6,000
Remove curb/gutter	490	LF	\$10.00	\$4,900
Tree removal	14	EA	\$500.00	\$7,000
Subtotal				\$88,934
Earthwork				
Soil for new landscape areas	55	CY	\$20.00	\$1,100
Subtotal				\$1,100

B.11 Segment 8.1: Newell Avenue – S. California Boulevard to S. Main Street

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	410	LF	\$55.00	\$22,550
Construct AC curb	160	LF	\$12.00	\$1,920
Construct 4" PCC sidewalk	6,942	SF	\$15.00	\$104,130
Construct new inlet to existing storm drain	1	EA	\$3,000.00	\$3,000
Construct wide curb ramp with truncated dome surface	2	EA	\$2,000.00	\$4,000
Subtotal				\$135,600
Planting				
15 gallon trees with protective posts and root barriers, irrigation	14	EA	\$1,600.00	\$22,400
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	1,500	SF	\$6.50	\$9,750
Subtotal				\$32,150
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	240	LF	\$35.00	\$8,400
Subtotal				\$8,400
Bridges				
Provide and install pre-manufactured steel bridge (130'x12')	1	LS	\$300,000.00	\$300,000
Subtotal				\$300,000
Right of Way Acquisition				
Acquire easements for bridge approach	1,000	SF	\$50.00	\$50,000
Subtotal				\$50,000
CONSTRUCTION SUBTOTAL				\$740,744
CONTINGENCY			20%	\$148,149
SURVEYING			5%	\$37,037
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$111,112
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$74,074
TECH STUDIES, MITIGATION			2.5%	\$18,519
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$111,112
TOTAL				\$1,241,000

Table B-27: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Signs, Striping, and Pavement Markings	\$6,560	IC	Installation Cost / 10	\$656
Long-Term Improvement Concept				
Signs, Striping, and Pavement Markings	\$8,400	IC	Installation Cost / 10	\$840
Sidepath Maintenance	694	LF	\$2652 / 1,000 LF	\$1,841
Sidepath Pavement Maintenance	\$104,130	IC	Installation Cost / 20	\$5,207
Landscape Maintenance	500	LF	\$900 / 1,000 LF	\$450
Bridge Maintenance	\$300,000	IC	Installation Cost / 30	\$10,000

Table B-28: Short-Term Improvements Concept

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$45
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$18
TRAFFIC CONTROL	1	LS	10%	\$90
Subtotal				\$153
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Greenback sharrow	3	EA	\$300.00	\$900
Subtotal				\$900
CONSTRUCTION SUBTOTAL				\$1,053
CONTINGENCY			20%	\$211
SURVEYING			5%	\$53
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$158
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$158
TOTAL				\$2,000

Table B-29: Long-Term Improvements Cost Estimate – Sidepath Alternative

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$12,387
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$4,955
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$12,387
TRAFFIC CONTROL	1	LS	10%	\$24,774
Subtotal				\$54,503
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	830	LF	\$5.00	\$4,150
Remove AC pavement	3,650	SF	\$0.80	\$2,920
Remove concrete pavement	1,314	SF	\$10.00	\$13,140
Relocate existing utility pole	2	EA	\$8,000.00	\$16,000
Remove and relocate existing light standard	2	EA	\$2,000.00	\$4,000
Remove and relocate utility or signal cabinets (up to three)	1	EA	\$3,000.00	\$3,000
Remove curb/gutter	730	LF	\$10.00	\$7,300
Tree removal	3	EA	\$500.00	\$1,500
Remove existing striping	3,650	LF	\$2.00	\$7,300
Subtotal				\$59,310
Earthwork				
Soil for new landscape areas	66	CY	\$20.00	\$1,320
Subtotal				\$1,320

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	950	LF	\$55.00	\$52,250
Construct 4" PCC sidewalk	4,514	SF	\$15.00	\$67,710
Construct new inlet to existing storm drain	2	EA	\$3,000.00	\$6,000
Colored stamped asphalt or concrete	330	SF	\$15.00	\$4,950
Construct wide curb ramp with truncated dome surface	2	EA	\$2,000.00	\$4,000
Subtotal				\$134,910
Planting				
15 gallon trees with protective posts and root barriers, irrigation	6	EA	\$1,600.00	\$9,600
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	1,800	SF	\$6.50	\$11,700
Subtotal				\$21,300
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	570	LF	\$35.00	\$19,950
Miscellaneous 4" thermoplastic stripe	3,650	LF	\$3.00	\$10,950
Subtotal				\$30,900
CONSTRUCTION SUBTOTAL				\$302,243
CONTINGENCY			20%	\$60,449
SURVEYING			5%	\$15,112
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$45,336
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$30,224
TECH STUDIES, MITIGATION			2.5%	\$7,556
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$45,336
TOTAL				\$507,000

Table B-30: Long-Term Improvements Cost Estimate – Lane Removal Alternative

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$11,098
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$4,439
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$11,098
TRAFFIC CONTROL	1	LS	10%	\$22,195
Subtotal				\$48,830
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Remove AC pavement	4,380	SF	\$0.80	\$3,504
Remove concrete pavement	1,314	SF	\$10.00	\$13,140
Remove and relocate utility or signal cabinets (up to three)	1	EA	\$3,000.00	\$3,000
Remove curb/gutter	730	LF	\$10.00	\$7,300
Remove existing striping	3,650	LF	\$2.00	\$7,300
Subtotal				\$34,244

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	950	LF	\$55.00	\$52,250
Construct 4" PCC sidewalk	6,704	SF	\$15.00	\$100,560
Construct new inlet to existing storm drain	2	EA	\$3,000.00	\$6,000
Colored stamped asphalt or concrete	330	SF	\$15.00	\$4,950
Construct wide curb ramp with truncated dome surface	2	EA	\$2,000.00	\$4,000
Subtotal				\$167,760
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	570	LF	\$35.00	\$19,950
Subtotal				\$19,950
CONSTRUCTION SUBTOTAL				\$270,784
CONTINGENCY			20%	\$54,157
SURVEYING			5%	\$13,539
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$40,618
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$27,078
TECH STUDIES, MITIGATION			2.5%	\$6,770
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$40,618
TOTAL				\$454,000

Table B-31: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Signs, Striping, and Pavement Markings	\$900	IC	Installation Cost / 10	\$90
Long-Term Improvement Concept – Sidepath Alternative				
Signs, Striping, and Pavement Markings	\$30,900	IC	Installation Cost / 10	\$3,090
Sidepath Maintenance	347	LF	\$2652 / 1,000 LF	\$921
Sidepath Pavement Maintenance	\$67,710	IC	Installation Cost / 20	\$3,386
Landscape Maintenance	600	LF	\$900 / 1,000 LF	\$540
Long-Term Improvement Concept – Lane Removal Alternative				
Signs, Striping, and Pavement Markings	\$19,950	IC	Installation Cost / 10	\$1,995
Sidepath Maintenance	670	LF	\$2652 / 1,000 LF	\$1,778
Sidepath Pavement Maintenance	\$100,560	IC	Installation Cost / 20	\$5,028

B.12 Segment 8.2: Newell Avenue – S. Main Street to Broadway Avenue/Iron Horse Trail

Table B-32: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$276
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$110
TRAFFIC CONTROL	1	LS	10%	\$552
Subtotal				\$938
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Greenback sharrow	5	EA	\$300.00	\$1,500
Wayfinding signage	3	EA	\$1,340.00	\$4,020
Subtotal				\$5,520
CONSTRUCTION SUBTOTAL				\$6,458
CONTINGENCY			20%	\$1,292
SURVEYING			5%	\$323
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$969
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$969
TOTAL				\$11,000

Table B-33: Long-Term Improvements Cost Estimate – Sidepath Alternative

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$20,903
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$8,361
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$20,903
TRAFFIC CONTROL	1	LS	10%	\$41,807
Subtotal				\$91,974
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.				
Sawcut pavement	850	LF	\$5.00	\$4,250
Remove AC pavement	1,000	SF	\$0.80	\$800
Remove concrete pavement	1,825	SF	\$10.00	\$18,250
Remove and relocate existing light standard	2	EA	\$2,000.00	\$4,000
Remove curb/gutter	850	LF	\$10.00	\$8,500
Tree removal	6	EA	\$500.00	\$3,000
Remove existing striping	1,184	LF	\$2.00	\$2,368
Subtotal				\$41,168
Earthwork				
Soil for new landscape areas	24	CY	\$20.00	\$480
Subtotal				\$480

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath				
Construct curb & gutter	850	LF	\$55.00	\$46,750
Construct 4" PCC sidewalk	890	SF	\$15.00	\$13,350
Construct new inlet to existing storm drain	1	EA	\$3,000.00	\$3,000
Colored stamped asphalt or concrete	1,185	SF	\$15.00	\$17,775
Construct wide curb ramp with truncated dome surface	3	EA	\$2,000.00	\$6,000
Subtotal				\$86,875
Planting				
15 gallon trees with protective posts and root barriers, irrigation	6	EA	\$1,600.00	\$9,600
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	660	SF	\$6.50	\$4,290
Irrigation meter/connection, backflow, and controller	1	EA	\$15,000.00	\$15,000
Subtotal				\$28,890
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
High visibility crosswalk	360	LF	\$35.00	\$12,600
HAWK/RRFB	2	EA	\$22,250.00	\$44,500
Miscellaneous 4" thermoplastic stripe	1,184	LF	\$3.00	\$3,552
Subtotal				\$60,652
Bridges				
Provide and install pre-manufactured steel bridge (75'x12')	1	LS	\$200,000.00	\$200,000
Subtotal				\$200,000
Right of Way Acquisition				
Acquire easements for bridge approach	1,000	SF	\$50.00	\$50,000
Subtotal				\$50,000
CONSTRUCTION SUBTOTAL				\$560,039
CONTINGENCY			20%	\$112,008
SURVEYING			5%	\$28,002
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$84,006
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$56,004
TECH STUDIES, MITIGATION			2.5%	\$14,001
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$84,006
TOTAL				\$939,000

Table B-34: Long-Term Improvements Cost Estimate – Lane Removal Alternative					
DESCRIPTION	QTY	UNIT	UNIT COST	COST	
MOBILIZATION	1	LS	5%	\$20,639	
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$8,256	
EROSION CONTROL - INCLUDES ALL BMPS, SWPPP AND REPORTING	1	LS	5%	\$20,639	
TRAFFIC CONTROL	1	LS	10%	\$41,279	
Subtotal				\$90,813	
Sitework, Demolition and Removal - includes all demolition, site preparation for all construction; relocation or re-setting of utilities; temporary construction fencing.					
Sawcut pavement	250	LF	\$5.00	\$1,250	
Remove AC pavement	2,500	SF	\$0.80	\$2,000	
Remove concrete pavement	240	SF	\$10.00	\$2,400	
Remove existing striping	740	LF	\$2.00	\$1,480	
Subtotal				\$7,130	
Earthwork					
Soil for new landscape areas	24	CY	\$20.00	\$480	
Subtotal				\$480	
Concrete Work and Asphalt Paving - includes concrete curbs, 4" PCC sidewalk, Type I pedestrian ramps, concrete pads, Sidepath					
Construct curb & gutter	850	LF	\$55.00	\$46,750.	
Construct 4" PCC sidewalk	3,536	SF	\$15.00	\$53,040	
Construct new inlet to existing storm drain	1	EA	\$3,000.00	\$3,000	
Colored stamped asphalt or concrete	1,185	SF	\$15.00	\$17,775	
Construct wide curb ramp with truncated dome surface	3	EA	\$2,000.00	\$6,000	
Subtotal				\$126,565	
Planting					
Landscaping (1 gallon shrubs, 5 gallon shrubs, irrigation)	660	SF	\$6.50	\$4,290	
Irrigation meter/connection, backflow, and controller	1	EA	\$15,000.00	\$15,000	
Subtotal				\$19,290	
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.					
High visibility crosswalk	360	LF	\$35.00	\$12,600	
HAWK/RRFB	2	EA	\$22,250.00	\$44,500	
Miscellaneous 4" thermoplastic stripe	740	LF	\$3.00	\$2,220	
Subtotal				\$59,320	
Bridges					
Provide and install pre-manufactured steel bridge (75'x12')	1	LS	\$200,000.00	\$200,000	
Subtotal				\$200,000	

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Right of Way Acquisition				
Acquire easements for bridge approach	1,000	SF	\$50.00	\$50,000
Subtotal				\$50,000
CONSTRUCTION SUBTOTAL				\$553,598
CONTINGENCY			20%	\$110,720
SURVEYING			5%	\$27,680
PLANS, SPECIFICATIONS AND ENGINEERING			15%	\$83,040
ENVIRONMENTAL DOCUMENTATION, PERMITTING			10%	\$55,360
TECH STUDIES, MITIGATION			2.5%	\$13,840
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$83,040
TOTAL				\$928,000

Table B-35: Annual Maintenance Cost Estimate				
DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Signs, Striping, and Pavement Markings	\$5,520	IC	Installation Cost / 10	\$552
Long-Term Improvement Concept – Sidepath Alternative				
Signs, Striping, and Pavement Markings	\$60,652	IC	Installation Cost / 10	\$6,065
Sidepath Maintenance	64	LF	\$2652 / 1,000 LF	\$169
Sidepath Pavement Maintenance	\$13,350	IC	Installation Cost / 20	\$668
Landscape Maintenance	220	LF	\$900 / 1,000 LF	\$198
Bridge Maintenance	\$200,000	IC	Installation Cost / 30	\$6,667
Long-Term Improvement Concept – Lane Removal Alternative				
Signs, Striping, and Pavement Markings	\$59,320	IC	Installation Cost / 10	\$5,932
Sidepath Maintenance	354	LF	\$2652 / 1,000 LF	\$938
Sidepath Pavement Maintenance	\$53,040	IC	Installation Cost / 20	\$2,652
Landscape Maintenance	220	LF	\$900 / 1,000 LF	\$198
Bridge Maintenance	\$200,000	IC	Installation Cost / 30	\$6,667

B.13 Segment 9: Newell Avenue – west of I-680

Table B-36: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
MOBILIZATION	1	LS	5%	\$402.
GENERAL CONDITIONS, BONDS AND INSURANCE	1	LS	2%	\$161
TRAFFIC CONTROL	1	LS	10%	\$804
Subtotal				\$1,367
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Wayfinding signage	6	EA	\$1,340.00	\$8,040
Subtotal				\$8,040
CONSTRUCTION SUBTOTAL				\$9,407
CONTINGENCY			20%	\$1,881
SURVEYING			5%	\$470
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$1,411
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$1,411
TOTAL				\$15,000

Table B-37: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Signs, Striping, and Pavement Markings	\$8,040	IC	Installation Cost / 10	\$804

B.14 Segment 10: Southern connections to the Iron Horse Trail

Table B-38: Short-Term Improvements Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT COST	COST
Mobilization	1	LS	5%	\$402
General Conditions, Bonds and Insurance	1	LS	2%	\$161
Traffic Control	1	LS	10%	\$804
Subtotal				\$1,367
Signs and Pavement Markings - includes painted traffic lines and markings on pavement, and traffic signage.				
Wayfinding signage	6	EA	\$1,340.00	\$8,040
Subtotal				\$8,040
CONSTRUCTION SUBTOTAL				\$9,407
CONTINGENCY			20%	\$1,881
SURVEYING			5%	\$470
PLANS, SPECIFICATIONS AND ESTIMATE			15%	\$1,411
CONSTRUCTION ENGINEERING/ADMIN.			15%	\$1,411
TOTAL				\$15,000

Table B-39: Annual Maintenance Cost Estimate

DESCRIPTION	QTY	UNIT	UNIT MAINTENANCE COST/YEAR	TOTAL MAINTENANCE COST/YEAR
Short-Term improvement Concept				
Signs, Striping, and Pavement Markings	\$8,040	IC	Installation Cost / 10	\$804