

7. Phasing Plan and Next Steps

7.1 Phasing Plan

This section provides a draft framework for phased implementation of a pedestrian and bicycle pathway along EBMUD Aqueduct ROW. The project segments established in *Chapter 5: Options Evaluation and Preferred Options* and presented in *Figure 5-2* are presented here in terms of their recommended implementation phasing. Pathway Segments 1 through 4 provide independent utility and can each be implemented as stand-alone projects, thus the segment definitions are preserved here for consistency and continuity. The recommended implementation phasing is as follows and is discussed in further detail below:

- Phase 1: Risa Road to BART (Segment 1)
- Phase 2: BART to Oak Hill Road (Segment 2) and Oak Hill Road Crossing
- Phase 3: Oak Hill Road to Brown Avenue (Segments 3 and 4) and First Street Crossing

Prior to implementing Phase 2 and Phase 3, the prior completed phase should be evaluated to determine if cost-benefit assumptions continue to hold. At that point, a determination can be made whether to pursue the subsequent phase.

Table 7-1, on the next page, presents construction, annual maintenance, annual contribution for long-term maintenance, and annual contribution for eventual pathway replacement cost estimates by phase. Costs for maintenance and eventual pathway reconstruction are discounted to 2010 dollars. Maintenance costs differentiate between annual and long-term (i.e., slurry-sealing and asphalt overlay) maintenance costs. The table also identifies optional contributions to a reserve fund for eventual pathway replacement at year 30. Given the overall cost and complexity of implementing this pathway project it is critical that the first phase of implementation serve multiple benefits for the City of Lafayette, partner agency stakeholders, and local and regional users of the multi-modal transportation network.

Table 7-1 Cost Estimates by Phase

Phase		Estimated Cost
1*	Segment 1: Risa Road to BART	\$372,100
	Risa Road crossing	\$144,400 to \$148,300
	Private Drive crossing	\$67,800
	Dolores Drive crossing	\$249,000
	Happy Valley Road crossing	\$1,238,100
	Construction Subtotal	\$2,071,400 to \$2,075,300
	Annual Maintenance**	\$27,200
	Annual Contribution for Long-Term Maintenance*** (Slurry seal and AC overlay)	\$2,300 to \$2,500
	Annual Contribution for Reconstruction of Pathway at 30 Years*** (Optional)	\$41,600 to \$45,600
	Phase 1 Construction, Annual Maintenance, and Annual Contributions Total	\$2,142,500 to \$2,150,600
2	Oak Hill Road crossing (Option 3)	\$721,200
	Segment 2: BART to Oak Hill Road	\$1,958,300
	Construction Subtotal	\$2,679,500
	Annual Maintenance**	\$6,400
	Annual Contribution for Long-Term Maintenance*** (Slurry seal and AC overlay)	\$600 to \$700
	Annual Contribution for Reconstruction of Pathway at 30 Years*** (Optional)	\$11,200 to \$12,300
Phase 2 Construction, Annual Maintenance, and Annual Contributions Total	\$2,697,700 to \$2,698,900	
3	First Street crossing (Options 3 and 4)	\$720,000 to \$937,900
	Segment 3: Oak Hill Road to First Street	\$274,100
	Segment 4: First Street to Brown Avenue	\$246,000
	Construction Subtotal	\$1,240,100 to \$1,458,000
	Annual Maintenance**	\$17,300
	Annual Contribution for Long-Term Maintenance*** (Slurry seal and AC overlay)	\$1,900 to \$2,000
	Annual Contribution for Reconstruction of Pathway at 30 Years*** (Optional)	\$34,100 to \$37,400
Phase 3 Construction, Annual Maintenance, and Annual Contributions Total	\$1,293,400 to \$1,514,700	
Pathway Subtotal Construction		\$5,991,000 to 6,212,800
Pathway Subtotal Annual Maintenance**		\$50,900
Pathway Subtotal Annual Contribution for Long-Term Maintenance***		\$4,800 to \$5,200
Pathway Subtotal Annual Contribution for Reconstruction of Pathway at 30 Years*** (Optional)		\$86,900 to \$95,300
Total Construction, Annual Maintenance, and Annual Contributions (Including Reconstruction)***		\$6,133,600 to \$6,364,200

* Initiate further traffic analysis of recommended Oak Hill Road and First Street improvements.

** 2010 Dollars

*** Low value assumes 2.5% discount rate. High value assumes 5% discount rate.

Numbers may not sum due to rounding.

7.1.1 Phase 1: Risa Road to BART (Segment 1)

Phase 1 provides the connection from BART to the western project boundary at the Risa Road, the western Downtown neighborhoods, the Veteran’s Memorial Building, the Lafayette Reservoir sidewalk path and the Walter Costa Trail. This segment provides independent utility, was identified by the TAG the CAC and members of the public as the segment with the highest potential use, and is eligible for transportation-related construction funds. Several pathway sections of this segment may be developed in conjunction with new development, and will likely be the first sections of pathway to be constructed. The Woodbury Condominium project provides a precedent as to how the pathway and associated landscape improvements may be required as a part of adjacent development projects. With the exception of the bridge over Happy Valley Road, the design and permitting for this segment are straightforward: topography is relatively flat and the majority of the segment is located entirely within EBMUD ROW. Construction of the bridge over Happy Valley Road requires coordination and approvals from Caltrans, EBMUD and BART. As outlined in *Chapter 5, Options Evaluation and Preferred Options*, there are civil engineering, design and ROW challenges associated with construction of the bridge over Happy Valley Road in the Caltrans SR 24 ROW. Most significantly, the bridge design must not place a structural load over the Aqueduct in the EBMUD ROW.

Following establishment of agreements and obtaining Caltrans encroachment permits for the Happy Valley Road bicycle and pedestrian bridge, the City of Lafayette should begin the process of securing agreements and obtaining permits for the required signal controls and lane modifications at Oak Hill Road and First Street. If possible, simultaneously seeking approval from Caltrans for all three encroachment areas may minimize staff time and facilitate timely implementation.

During Phase 1, the City would also initiate additional traffic analysis to determine the feasibility of proposed improvements along First Street and Oak Hill Road, and conduct environmental analysis. The scope of the traffic analysis is discussed below under **Section 7.2**.

7.1.2 Phase 2: BART to Oak Hill Road (Segment 2) and Oak Hill Road Crossing

Phase 2 continues the pathway from BART to Oak Hill Road, providing connections between the station and employment and services in Downtown Lafayette, including access to the Safeway shopping center, and shops and services along Mount Diablo Boulevard. This phase includes widening the sidewalk on the east side of Oak Hill Road between Mt. Diablo Boulevard and Deer Hill Road, which will improve bicycle and pedestrian access to downtown.

Segment 2 from BART to Oak Hill Road requires Caltrans coordination and approval, as outlined in *Chapter 5: Options Evaluation and Preferred Options*, and can be initiated as recommended above in Phase 1. This segment would be pursued through a cooperative agreement and through a formal Caltrans project development procedures process to be defined. Once the Oak Hill Road signal is approved, the design for the pathway can be finalized. The basic geometric and civil engineering design outlined in *Chapter 5: Options Evaluation and Preferred Options* and would be refined through additional technical studies and design development prior to development of design documents and construction. The horizontal and vertical layout of this segment avoids impacts to EBMUD’s Aqueduct pipeline and private parcels located south of the Aqueduct with use rights over the EBMUD ROW.

Improving the intersections at Oak Hill Road and First Street is critical to the overall functionality and success of the remaining three pathway segments.

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Community members and TAG members identified creation of safe crossings at these streets as critical elements for the pathway. Because the need for signal control at these intersections was identified in the DSP Draft EIR and in this pathway feasibility study, there are clear efficiencies and benefits to integrating the interrelated pedestrian, bicycle and auto circulation needs.

Given the greater community concerns and the uncertainty of potential downstream traffic effects with signaling First Street, it is recommended that signalization of that intersection be implemented in Phase 3 rather than Phase 2. During Phase 2, the City should conduct community outreach and any necessary additional traffic analysis to identify the preferred option for the First Street crossing.

7.1.3 Phase 3: First Street to Brown Avenue (Segments 3 and 4)

This phase includes Segment 3: Oak Hill Road to First Street and Segment 4: First Street to Brown Avenue, as well as improvements to the First Street crossing. With additional traffic analysis and public outreach completed, the City will be well-positioned to complete signal designs and secure Caltrans permits for the First Street crossing.

Segment 3 from Oak Hill Road to First Street and Segment 4 from First Street to Brown Avenue can be constructed under agreement with EBMUD and without structural requirements that would negatively impact the Aqueduct. These segments are entirely within the EBMUD ROW and do not require Caltrans coordination and approval.

7.2 Next Steps

7.2.1 Overview

This Feasibility and Options Study for the EBMUD Aqueduct Pathway is the first in a series of steps that are required prior to design and construction of the proposed pathway. This feasibility and options study identified several issues that will require additional analysis and work to address. This section describes these issues.

Additional Public Outreach

Individual meetings with potentially impacted private property owners and managers should be conducted during subsequent phases of planning and design development. Public outreach conducted during the Study identified numerous stakeholders who should be involved in future plans for pathway development.

Environmental Review

If City Council decides to pursue implementation of the pathway, environmental review would be required at such point when the City would be bound to implementing some form of the project, such as executing a new license agreement or completion of the design phase. Costs associated with environmental review are included in the 25 percent soft costs (survey, design, permitting, and administration) applied to construction costs.

Conduct Additional Traffic Analysis

First Street and Oak Hill Road require additional traffic analysis to determine the feasibility of proposed improvements. In order to analyze the signal controlled crossings at Oak Hill Road and First Street it is necessary to simulate a network that includes the following intersections:

- Mt. Diablo Boulevard/Moraga Road
- Mt. Diablo Boulevard/1st Street
- Mt. Diablo Boulevard/Oak Hill Road
- Deer Hill Road/1st Street
- Deer Hill Road/Oak Hill Road
- SR 24 Off-Ramp/EBMUD ROW/Oak Hill Road (Ped/Bike Crossing)
- SR 24 On-Ramp/EBMUD ROW/1st Street (Ped/Bike Crossing)

This simulated network will permit detailed analysis of the proposed signal locations, signal timing, lane configurations and varying auto, pedestrian and bicyclist volumes at different peak periods. Based on the signal configuration, crossing locations and layout, and lane configurations for First Street and Oak Hill Road, this analysis would accurately demonstrate queuing impacts, level of service for autos on the network, potential impacts to Caltrans operations, and crossing delay for pedestrians and bicyclists under different scenarios. The specific scenarios for analysis will be determined as part of the additional traffic analysis, but should include concerns brought up during this feasibility study, including: queuing impacts of proposed signals at Oak Hill Road and First Street on SR 24 ramps and Deer Hill Road; evaluation of “No Turn on Red” sign at Oak Hill Road/ SR 24 off-ramp; and downstream impacts of the proposed signals on all intersections listed above.

The scope of work for this analysis would include limited additional data gathering, creation of the simulated network, discussion and agreement on the specific scenarios for analysis, agreement on peak periods for analysis, model runs, model validation, and reporting and review with City staff, Caltrans and local commissions and City Council.

Technical Studies, Design Development and Preliminary Engineering

Various technical studies will be required to advance the conceptual designs presented in this feasibility study. Additional information related to soils and geotechnical issues, additional detailed review of EBMUD Aqueduct as-built drawings and potholing to determine the depth of soil cover over aqueducts, and ultimately CEQA/NEPA environmental clearance focused on topics with potentially significant impacts will be required to support the design development, permitting and property agreements. Preliminary engineering will further develop the design of the pathway and roadway crossings, refine cost estimates and prepare for the final design of the project. Additional discussions with EBMUD, EBMUD’s review and approval of the pathway design, and issuance of an encroachment permit for construction within EBMUD’s ROW will be needed during future planning and design phases. Caltrans Coordination and Permits

This project will require substantial coordination with Caltrans including but not limited to design coordination, design exceptions approvals, ROW agreements, and encroachment permits.

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In order to facilitate the required coordination between the City of Lafayette and Caltrans, this study recommends that subsequent phases of project planning and design development follow the Caltrans documentation process outlined in the Project Development Procedures Manual pursuant to a Project Initiation Document, Project Report/Project Study Report potentially followed by a Project Approval/Environmental Analysis document. The appropriate format and precise scope of this effort should be determined in consultation with Caltrans District 4 staff and would be initiated in Phase I, recommended above. This procedure would identify all required technical studies, permits and approvals required to implement the project.

Revise EBMUD Revocable Landscaping License Agreement

The City and EBMUD should review and revise the Revocable Landscaping License agreement to clarify maintenance responsibilities and requirements. The City's maintenance requirements outlined in the current Revocable Landscaping License agreement are not practical and will require significant City resources to meet. Additionally, the reimbursement rates contained in the agreement have not been revised in many years, and should be updated to reflect current costs. The maintenance requirements and associated costs are described in *Chapter 6: Funding and Maintenance Strategy and Benefit-Cost Analysis*. Some of the private property owner concerns discussed in Section 4.8.1 will need to be addressed in the revised Revocable Landscaping License between EBMUD and the City. These include, but are not limited to: fencing, pathway patrols, access treatments, aesthetic impacts, pathway operating hours, and pathway lighting.

Secure Operations and Maintenance Funding

The City of Lafayette should identify a funding source for operations and maintenance activities prior to construction of the pathway. *Chapter 6, Funding and Maintenance Strategy and Benefit-Cost Analysis* provides cost estimates for maintenance, and funding strategies the City may wish to pursue. If the City and/or Police Department decided to initiate patrols or other safety-related programs along the pathway, operations funding for these activities should also be secured. Since the costs of maintenance and operations are tied to the final design of the pathway this step must come after designs have been finalized and the EBMUD Revocable Landscaping License Agreement is renegotiated.

Identify Construction Funding

The level of funding available for the planning, design, and construction phases of projects varies but in general the largest fund sources are available for projects that are considered "Shovel-Ready" with environmental planning and design work complete so that a project can be immediately made available for construction bidding. As discussed in *Chapter 6: Funding and Maintenance Strategy and Benefit-Cost Analysis* maximum grant awards for bicycle and pedestrian projects tend to be low so pathway construction would need to be phased and potentially multiple grant sources used to fund a segment.

7.2.2 Near-Term, Mid-Term, and Long-Term Next Steps

The Lafayette City Council accepted the Final Feasibility and Options Study for the EBMUD Aqueduct Pathway at its meeting on February 13, 2012. The Council also agreed to the following next step actions:

Near-Term Next Steps:

- Continue to determine the feasibility of installing the traffic signals as discussed in the Final Study. This involves monitoring the outcome of the City's Downtown Specific Plan process and its consideration of the two traffic signals at Oak Hill Road and SR 24 off-ramp and at First Street and the SR 24 on-ramp as mitigation measures.
- Pursue opportunities for implementation of the pathway via the development review process. As there are several active development applications in the vicinity of the pathway, staff may need to begin re-negotiating the existing use license with EBMUD regarding maintenance responsibilities associated with the pathway in the EBMUD's ROW. The City would re-negotiate the license along this section of the EBMUD ROW only as a first step, and wait on the future phases until such time when they become more imminent.

Near- to Mid-Term Next Steps:

- Depending on the outcome of decision to include the two traffic signals in the Downtown Specific Plan, seek grants for additional traffic analysis as appropriate.
- Depending on the outcome of the additional traffic analysis or as appropriate, pursue funding and implementation of design, engineering, and environmental work for the pathway.
- Pursue funding opportunities for construction of the pathway.

Long-Term Next Steps:

- Evaluate and consider whether to complete the entire pathway alignment over the long-term upon completion of Phase 1 or any usable segment when actual use and cost experience would then be available.