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COST ESTIMATES

& FUNDING



Cost estimates and funding sources are both critical to implementation. Cost estimates help to determine how to fund the implementation of recommended projects and programs. In turn, identifying funding sources provides sustainable and responsible ways of implementing recommended projects and programs.

This chapter includes the following sections:

- **Cost estimates** for projects on the ten priority high-injury street segments and recommended program elements
- **Funding and revenue sources**, ranging from local and countywide sources to statewide and federal sources

COST ESTIMATES

Cost estimates for each proposed improvement are presented in **Table 9**. Low and high cost estimates have been provided to show a range of possible costs and to account for a variety of circumstances at each installation location. Low and high cost estimates for each priority project are shown alphabetically in **Table 10**. The full cost estimate worksheets for each of the ten priority street segments can be found in **Appendix D: Recommendations and Cost Estimates**.

TABLE 9: COST ESTIMATES FOR PROPOSED IMPROVEMENTS

CATEGORY	ITEM	UNIT	ESTIMATED COST
Signals	Add All-way Pedestrian Phase (Pedestrian Scramble)	Per Location	\$90,000 - \$150,000
	Restrict Right Turn on Red	Per Approach	\$500 - \$15,000
	Convert Permissive Left-Turn Phase to Protected	Per Location	\$40,000 - \$300,000
	Pedestrian Countdown Timers	Per Device	\$1,000
	Leading Pedestrian Interval	Per Location	\$500 - \$1,500
Intersections	Red Curb	Per Approach	\$500
	Stripe Advance Yield Lines	Per Crossing	\$500
	STOP Sign	Per Sign	\$600
	Pavement Markings	Per Approach	\$800
	High Visibility Crosswalk Pavement Markings	Per Crossing	\$2,500 - \$5,000
	Median as Pedestrian Refuge Island - paint and posts	Per Island	\$2,500 - \$4,000
	Raised Median as Pedestrian Refuge Island - concrete	Per Island	\$15,000 - \$25,000
	Curb Extension - paint and posts	Per Extension	\$2,500 - \$4,000
	Curb Extension - concrete and landscaping	Per Extension	\$15,000 - \$45,000
	Closing Curb Cut (redoing curb and sidewalk)	Per Location	\$5,000 - \$10,000
	Pedestrian Lighting	Per Light	\$5,000 - \$7,500
	Rectangular Rapid Flashing Beacon	Per Installation	\$25,000 - \$40,000
	Pedestrian Hybrid Beacon	Per Installation	\$250,000
	Raised Intersection or Raised Pedestrian Crossing	Per Crossing/ Intersection	\$10,000 - \$50,000
	Protected Intersection	Per Location	\$650,000
Realigned Intersection	Per Intersection	\$800,000 - \$1,250,000	
Segments	Centerline Hardening - paint and flexible posts	Per Location	\$2,000 - \$4,000
	Bus Bulb	Per Location	\$15,000 - \$70,000
	Lane Narrowing - striping shoulder or adding bike lane	Per Mile	\$750 - \$1,000
	Lane Reduction / Road Diet	Per Mile	\$25,000 - \$120,000

TABLE 10: COST ESTIMATES FOR PRIORITY STREET SEGMENT PROJECTS

PRIORITY PROJECT	FROM	TO	LOW ESTIMATE COST	HIGH ESTIMATE COST
Adeline Street	Ashby Avenue	Southern City Limits	\$2,540,000	\$4,730,000
Alcatraz Avenue	Sacramento Street	Adeline Street	\$315,000	\$1,055,000
Ashby Avenue	San Pablo Avenue	Shattuck Avenue	\$2,155,000	\$7,075,000
Cedar Street	Sixth Street	Stannage Avenue	\$855,000	\$3,310,000
Martin Luther King Jr. Way (North)	Hearst Avenue	Dwight Way	\$1,665,000	\$8,980,000
Martin Luther King Jr. Way (South)	Dwight Way	Adeline Street	\$1,390,000	\$6,350,000
Sacramento Street	Dwight Way	Southern City Limits	\$2,855,000	\$9,100,000
San Pablo Avenue	University Avenue	Dwight Way	\$1,375,000	\$4,085,000
Shattuck Avenue	Adeline Street	Southern City Limits	\$1,675,000	\$4,140,000
University Avenue	San Pablo Avenue	Oxford Street	\$3,595,000	\$12,630,000
TOTAL			\$18,420,000	\$61,455,000

FUNDING AND REVENUE SOURCES

Funding opportunities for implementing the Plan's recommendations are identified in this section. Pedestrian infrastructure can be funded from programs at federal, state, regional, countywide, and local levels. Pedestrian projects in Berkeley are funded through a combination of ballot measure monies (e.g., Alameda County Measure B and BB), the City General Fund, developer-funded projects, and State and federal grants. The City routinely uses local funds to provide matching funds required by grant programs.

Funding sources are summarized in **Table 11** below. Funding and revenue sources were identified with the purpose of matching potential projects to a range of sustainable funding sources.

The list of funding sources includes:

- **Local programs:** Berkeley Measure T1, General Fund
- **Countywide and Regional programs:** Measures B, BB, and F, Transportation Development Act Article 3
- **Statewide programs:** Active Transportation Program (ATP), Caltrans Sustainable Transportation Planning Program (Sustainable Communities Grants and Strategic Partnerships Grants), Affordable Housing & Sustainable Communities (AHSC) grants, State Highway Operation and Protection Program (SHOPP), State Transportation Improvement Program (STIP), Highway Safety Improvement Program (HSIP), Gas Tax Revenue
- **Federal funding:** One Bay Area Grant (OBAG), which utilizes the regional share of Federal Surface Transportation Program (STP) and Congestion Mitigation & Air Quality (CMAQ) funds



TABLE 11: FUNDING SOURCES APPLICABLE TO THE BERKELEY PEDESTRIAN PLAN

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Local					
Measure T1, Phase 2	City of Berkeley	Paving, sidewalks, green infrastructure, facilities	\$40 million for 2022-2025	<ul style="list-style-type: none"> Projects must have a 30-year useful life Complete Streets comprised 17 percent of Phase 1 	Begins 2022
General Fund & Capital Improvement Program ¹	City of Berkeley	Capital improvements without other funding sources regularly available	\$5 million annually ²	Streets, sidewalks, and transportation account for about \$2.6 million annually	Updated with CIP
Countywide and Regional					
Measure B ³	Alameda County Transportation Commission	<p>Bicycle and Pedestrian Program: Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p>Local Streets and Roads Program: Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p>	\$4.0 million in FY 2018-19 ⁴	<p>Bicycle and Pedestrian Program: Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff.</p> <p>Local Streets and Roads Program: Cannot be used for programs that exclusively serve City staff</p>	Monthly direct disbursements, also competitive discretionary funding awarded every 2 years

1 <https://www.cityofberkeley.info/citybudget/>

2 <https://www.cityofberkeley.info/uploadedFiles/Manager/Budget/FY-2020-2021-CIP-budget.pdf>

3 <https://www.alamedactc.org/funding/fund-sources/measure-b/>

4 https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19_2000MB_Sales_Tax_Projections_20180510.pdf

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Measure B/BB	Alameda County Transportation Commission	<p>Bicycle and Pedestrian Program: Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p>Local Streets and Roads Program: Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p>	\$3.7 million in FY 2018-19 ⁵	<p>Bicycle and Pedestrian Program: Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff</p> <p>Local Streets and Roads Program: Cannot be used for programs that exclusively serve City staff</p>	Monthly direct disbursements, also competitive discretionary grants awarded every two years
Measure F ⁶	Alameda County Transportation Commission	<p>Bicycle and Pedestrian Program: Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p>Local Streets and Roads Program: Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p>	\$280,000 annually for Berkeley	<p>Bicycle and Pedestrian Program: Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff</p> <p>Local Streets and Roads Program: Cannot be used for programs that exclusively serve City staff</p>	Monthly direct disbursements, also competitive discretionary funding awarded every 2 years

5 According to https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19_2014MBB_Sales_Tax_Projections_20180510-2.pdf, Berkeley received \$3.1 million for Local Streets and Roads, \$320,000 from the Bicycle and Pedestrian Program, and \$320,000 for Paratransit

6 <https://www.alamedactc.org/funding/fund-sources/vehicle-registration-fee/>

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Transportation Development Act (TDA) Article 3 ⁷	Alameda County	Pedestrian and bicycle plans; design and construction of walkways, bike paths, bike lanes, safety education programs	\$3 million regionwide annually	<ul style="list-style-type: none"> • Must be in adopted general plan or bicycle plan • All projects must be reviewed by the City or County Bicycle & Pedestrian Advisory Committee 	Every 2-3 years
Statewide					
Statewide Gas Tax Revenue	California Transportation Commission	Construction, engineering, and maintenance	\$945,000 annually for Berkeley	Ineligible expenses include decorative lighting, transit facilities, park features, new utilities	Annual
Active Transportation Program ⁸ (ATP)	California Transportation Commission	<ul style="list-style-type: none"> • Infrastructure projects • Plans, including bicycle, pedestrian, active transportation, and Safe Routes to School Plans • Education, encouragement, and enforcement activities 	\$238 million in Cycle 4	<ul style="list-style-type: none"> • Very competitive program. Projects in disadvantaged communities score highly • Cannot be used for fully funded projects or for cost increases • Infrastructure projects must exceed \$250,000 • The Quick-Build Project Pilot Program funds interim capital projects 	Approximately every 2 years
Sustainable Communities	Caltrans	Multimodal transportation and land use planning projects that further the region's Sustainable Communities Strategy	\$29.5 million, split between statewide and regional competitive funds	<ul style="list-style-type: none"> • Requires 11.47 percent local match • Often federalized 	Annual

7 <https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/transit-21st-century/funding-sales-tax-and-O>

8 http://www.catc.ca.gov/programs/atp/2019/docs/051618_2019_ATP_Guidelines_Final_Adopted.pdf

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Strategic Partnerships	Caltrans	Planning efforts that identify and address statewide, interregional, and regional transportation deficiencies on the State Highway System in partnership with Caltrans	\$4.5 million, \$3 million of which is dedicated to projects that relate to transit	<ul style="list-style-type: none"> Requires 20 percent local match Federalized City of Berkeley would need to apply as sub-applicant to MTC 	Annual
State Highway Operation and Protection Program (SHOPP) ⁹	Caltrans	<p>Repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System</p> <p>Elements include pavement, bridges, culverts, and transportation management systems</p>	\$18 billion statewide for four years	<p>Projects must be on the State Highway System:</p> <ul style="list-style-type: none"> San Pablo Avenue (SR 123) Ashby Avenue (SR 13) Freeway interchanges 	Portfolio is updated every 2 years projects are selected and administered by Caltrans, but the City can influence them
State Transportation Improvement Program (STIP)	California Transportation Commission	<p>Any transportation project eligible for State Highway Account or Federal Funds.</p> <p>Example: Gilman Interchange improvements Projects</p>	\$62 million for Alameda County ¹⁰	Projects need to be nominated in Regional Transportation Improvement Program (TIP), but MTC may nominate fund categories	STIP is updated every 2 years
Highway Safety Improvement Program (HSIP)	Caltrans	Focuses on infrastructure treatments with known collision reduction factors	\$418 million statewide	Countermeasures at locations with documented collision and safety issues	Every 1-2 years

9 http://www.dot.ca.gov/hq/transprog/SHOPP/2018_shopp/2018-shopp-adopted-by-ctc.pdf

10 http://www.catc.ca.gov/programs/stip/2018-stip/2018_ORANGE_BOOK.pdf

4. Cost Estimates & Funding

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Affordable Housing and Sustainable Communities Program (ASHC)	California Department of Housing and Community Development	Transit oriented development projects that which achieve greenhouse gas reductions and increase accessibility of affordable housing	Minimum award of \$1 million, maximum award of \$30 million	Developer must lead the application	Annual
Federal					
Better Utilizing Investments to Leverage Development (BUILD) grants	US DOT	Major infrastructure projects, especially with road, bridge, transit, or intermodal components Example: BUILD awarded \$15 million to Better Market Street in San Francisco	\$500 million - \$1.5 billion nationally	Minimum grant size of \$5 million but program of projects is possible	Annual
One Bay Area Grant (OBAG)	Metropolitan Transportation Commission	<ul style="list-style-type: none"> Local street and road maintenance Streetscape enhancements Bicycle and pedestrian improvements Safe Routes to School projects Transportation planning 	\$916 million in OBAG 2 regionwide ¹¹ <ul style="list-style-type: none"> \$530 million in Regional Program \$386 million in County Programs 	Most projects must be in a Priority Development Area (PDA) or have a connection to a PDA	Every 5 years
Congestion Mitigation & Air Quality (CMAQ)	Federal Highway Administration. Funds distributed to MPOs	Transportation projects or programs that contribute to attainment of national air quality standards	\$70.5 million regionwide	Must reduce air pollution and be included in Regional Transportation Plan	Annual

¹¹ <https://mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2>

FUND NAME	ADMINISTERING AGENCY	PROJECT TYPES	FUNDING LEVELS	LIMITATIONS	FREQUENCY
Surface Transportation Block Grant (STBG)	Federal Highway Administration	Improve conditions and performance on any federal-aid highway, bridge or tunnel projects on a public road, pedestrian and bicycle infrastructure	\$1 billion annually to California, divided into population-based and statewide funds	In general, funds aren't used on local roads, but there are many exceptions to this ¹²	Annual



¹² <https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>