



DATE: May 23, 2018

TO: Council Infrastructure Committee

FROM: Interim Director of Public Works

SUBJECT: Mission Boulevard Corridor Improvements Phase 3 Project Update

RECOMMENDATION

That the Committee comments on the design for the Mission Boulevard Corridor Improvements Phase 3 Project.

SUMMARY

During the January 24, 2018, Council Infrastructure Committee (CIC) meeting, staff provided an update on the Mission Boulevard Corridor Improvements Phase 3 Project. Given the limited available right-of-way the design incorporated bike lane sharing a travel lane. An alternative was also presented to provide bike facilities off Mission Boulevard on adjacent parallel streets. The Committee was not in favor of either design and asked that additional studies and considerations be made to include separate bike lanes on Mission Boulevard, including limiting travel lanes to one in each direction, plus a turn lane at intersections. Staff has analyzed that alternative and developed additional ones for the Committee's consideration.

BACKGROUND

On November 27, 2007, Council approved Phase 1 of the Route 238 Corridor Improvement Project, which covered roadway and street improvements on Mission Boulevard from A Street to Industrial Parkway and Foothill Boulevard from Mission Boulevard to Apple Avenue and certified the Final Environmental Impact Report (FEIR) for the project. Subsequently, Caltrans relinquished portions of State Routes 92, 185, and 238 to the City within the Phase 1 project limits. During relinquishment discussions, the City and Caltrans agreed that Caltrans would relinquish, and the City would accept, a majority of the remaining state highways within City boundaries after the Phase 1 project was completed, and after sufficient Local Area Transportation Improvement Program (LATIP) funding became available to improve these additional highway segments. Construction of the Phase 1 project was completed in January 2014. LATIP funds totaling \$30 million were approved by the California Transportation Commission (CTC) for use on the project. The CTC allocated \$8.1 million of this amount for project expenses, and subsequently \$2 million for the design of Phase 2 and 3. Phases 2 and 3 are a continuation of the Phase 1 project. Phases 2 and 3 will improve Mission Boulevard from

Industrial Parkway to the south City limit near Blanche Street, and from A Street to the north City limit at Rose Street, respectively.

At the CTC meeting on October 19, 2017, the remaining \$19.9 million was allocated for the construction of Phase 2, and for Adaptive Signal Timing on Jackson Street. At that meeting, the CTC relinquished the remaining portions of State Routes 238 (Mission Boulevard from Industrial Parkway to south City limit), 92 (Jackson Street from Atherton Street to Santa Clara Street), and 185 (Mission Boulevard from A Street to north City limit).

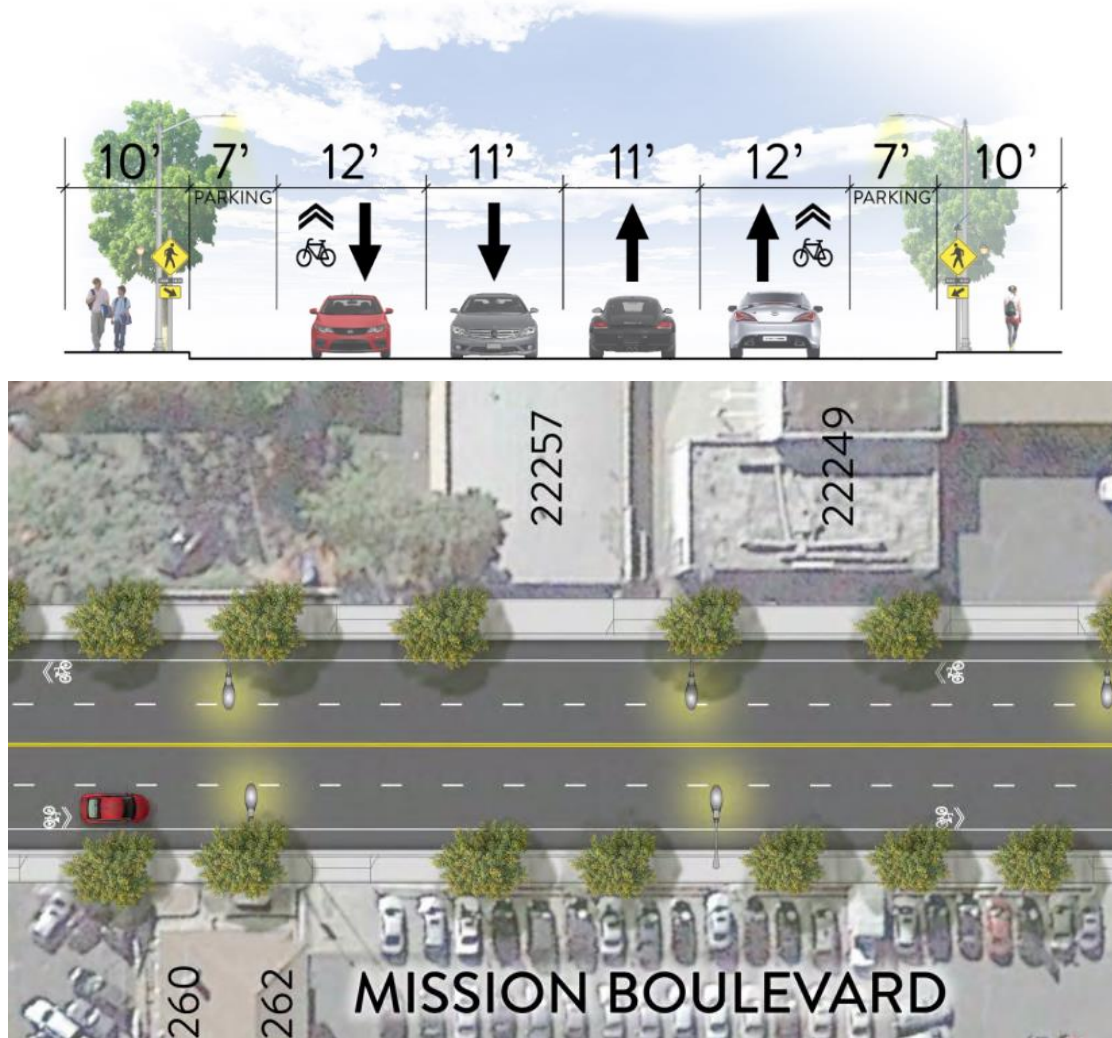
On October 28, 2014, Council approved an agreement with BKF Engineers for professional services to begin design work for Phase 2 and initiate preliminary designs for Phase 3. The design of Phases 2 and 3 incorporate the Council's Complete Streets policy with infrastructure to make safe and convenient travel along and across Mission Boulevard for all users, including pedestrians, bicyclists, transit users, and motorists.

Since design work began, the project has proceeded through several phases including design completion, bid document preparation for Phase 2, and 35% design completion for Phase 3 by BKF Engineers. On April 11, 2017, Council approved an agreement with Mark Thomas & Company, Inc., for professional services to complete the design for Phase 3. This report focuses on the Phase 3 Improvement project.

On January 24, 2018, staff presented the 65% plans for the Phase 3 improvements. These included the following:

- Reconstruction of existing sidewalks, curbs and gutters, valley gutters, and driveways that are in poor condition or deficient
- New street trees in between the curb and sidewalk
- Adjust existing driveways to conform to the new sidewalks, curbs, and gutters
- Adjust pavement, modify, and add new storm drain inlets to improve drainage
- Rehabilitate existing pavement using Cold In-place Recycling (CIR), and a new pavement overlay (CIR method reuses the existing pavement as base material thereby conserving new raw material resources and reducing greenhouse gases with reduced hauling)
- Upgrade intersections to comply with the latest ADA accessibility standards
- Upgrade existing traffic signal at Sunset Boulevard with Adaptive Traffic Management System technology to improve signal timing by adapting to traffic conditions in real time
- New signage and relocation of bus stops
- New fiber optic lines within the project limits
- New LED and dimmable street lighting
- Undergrounding of existing overhead utility lines
- Lane widening for shared use with bicyclists
- Improve crosswalks at uncontrolled crossings with bulb outs and flashing beacons
- New gateway entry features at Rose Street

The typical section of the 65% plans shown below made accommodations to all users. The configuration for each direction on Mission Boulevard provided 10-foot wide sidewalk, 7-foot wide parking, 12-foot wide shared lane for motorist, and bicyclists and a 11-foot wide lane. The 12-foot shared lane is not ideal due to potential conflict between buses and bicyclists. Mission Boulevard is constricted by an 80-foot right-of-way making the integration of bike lanes difficult unless space is taken from another user. Presently, the sidewalk is approximately 10-feet wide, which is appropriate for a major corridor with businesses.



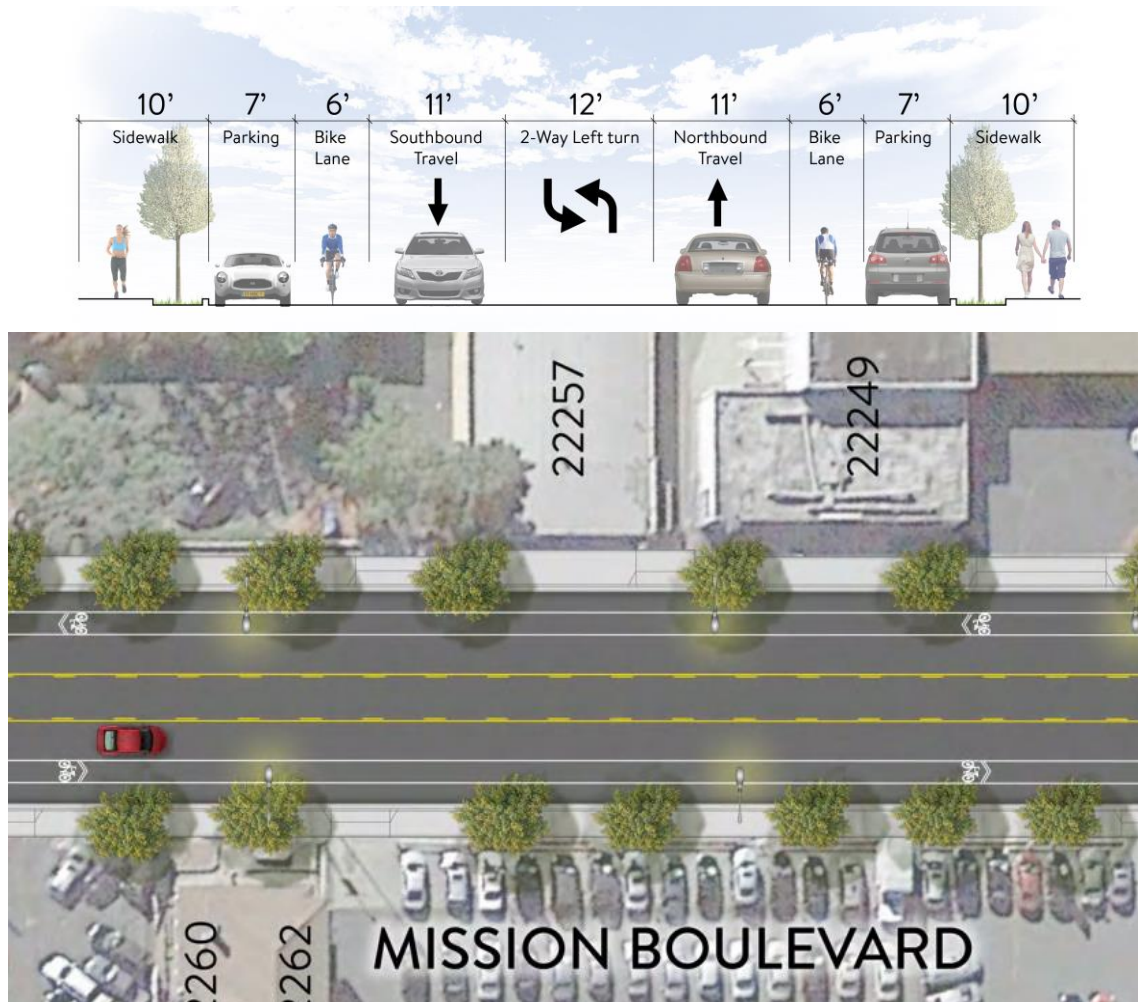
A design consideration was to route bike facilities off Mission Boulevard to parallel streets of Main and Montgomery; however, the Committee's desire was for this project to be a Complete Streets project, with bike facilities provided on Mission Boulevard. The Committee suggested that staff explore the idea of a single travel lane in each direction with turn lanes at intersections, along with a separate bike lane, and parking on each side.

DISCUSSION

Staff has developed this and other design options to provide a separate bike lane on Mission Boulevard for the Committee's consideration.

Alternative 1: Reducing motorist travel lane from two to one in each direction

This option would change the number of travel lanes from two lanes to one lane in each direction with a middle, two-way left turn lane, and would allow space for 6-foot bike lanes shown below. On-street parking and generally 10-foot wide sidewalks on both sides will be maintained, much like the existing conditions.



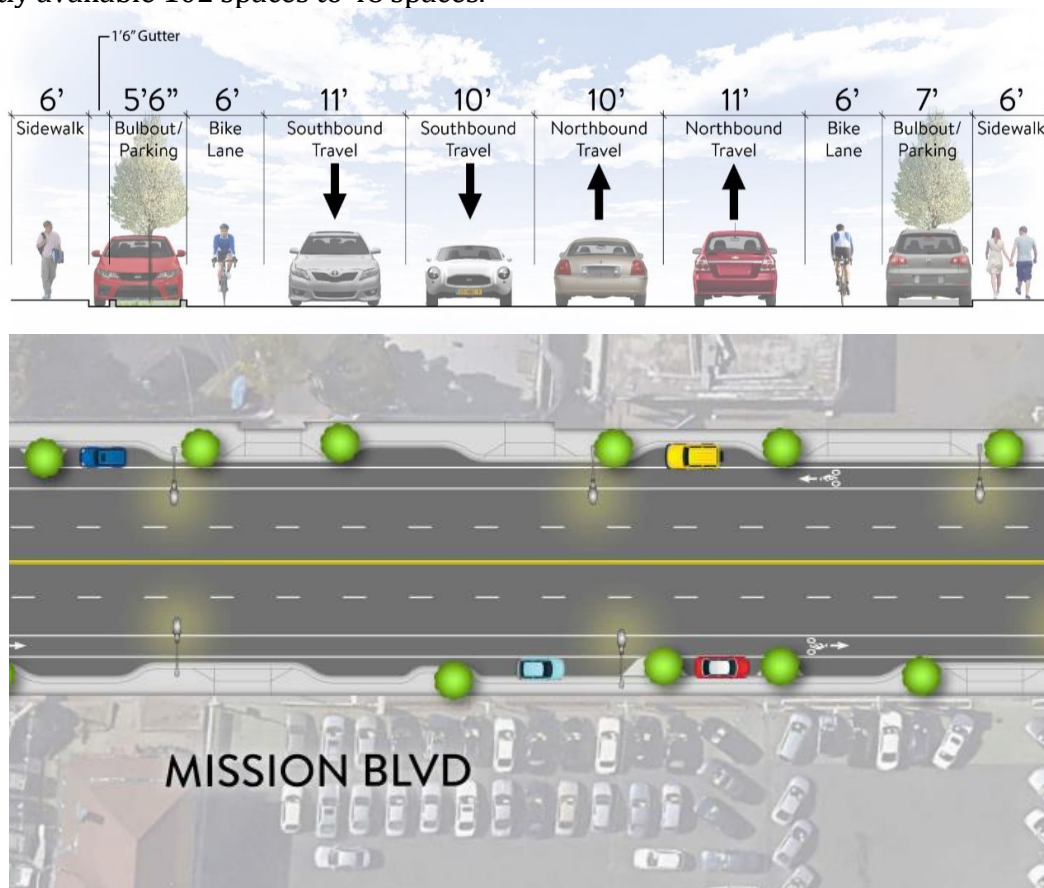
To assess the impacts of reducing the travel lanes from two to one, traffic volume counts and analysis of the impacts to the roadway network around the project limits were performed by a consultant for an independent evaluation on the following:

- 1) Existing Conditions (two travel lanes in each direction)
- 2) Existing plus Project Conditions (one travel lane in each direction)
- 3) Projected 2040-year traffic demands with existing conditions
- 4) Projected 2040-year traffic demands with Project Conditions

Based on the analysis conducted for the four scenarios, the study demonstrated that the level of service at intersections for Scenarios 1 and 2 were acceptable; however, further traffic simulations were performed for scenarios 2, 3, and 4. Congestion would significantly increase for Scenarios 2, 3, and 4. Under these scenarios, Mission Boulevard would experience substantial queueing and higher delays during commute hours. In addition, side streets, such as Peralta and Montgomery would also see an increase in neighborhood cut-through traffic, queueing, and delays.

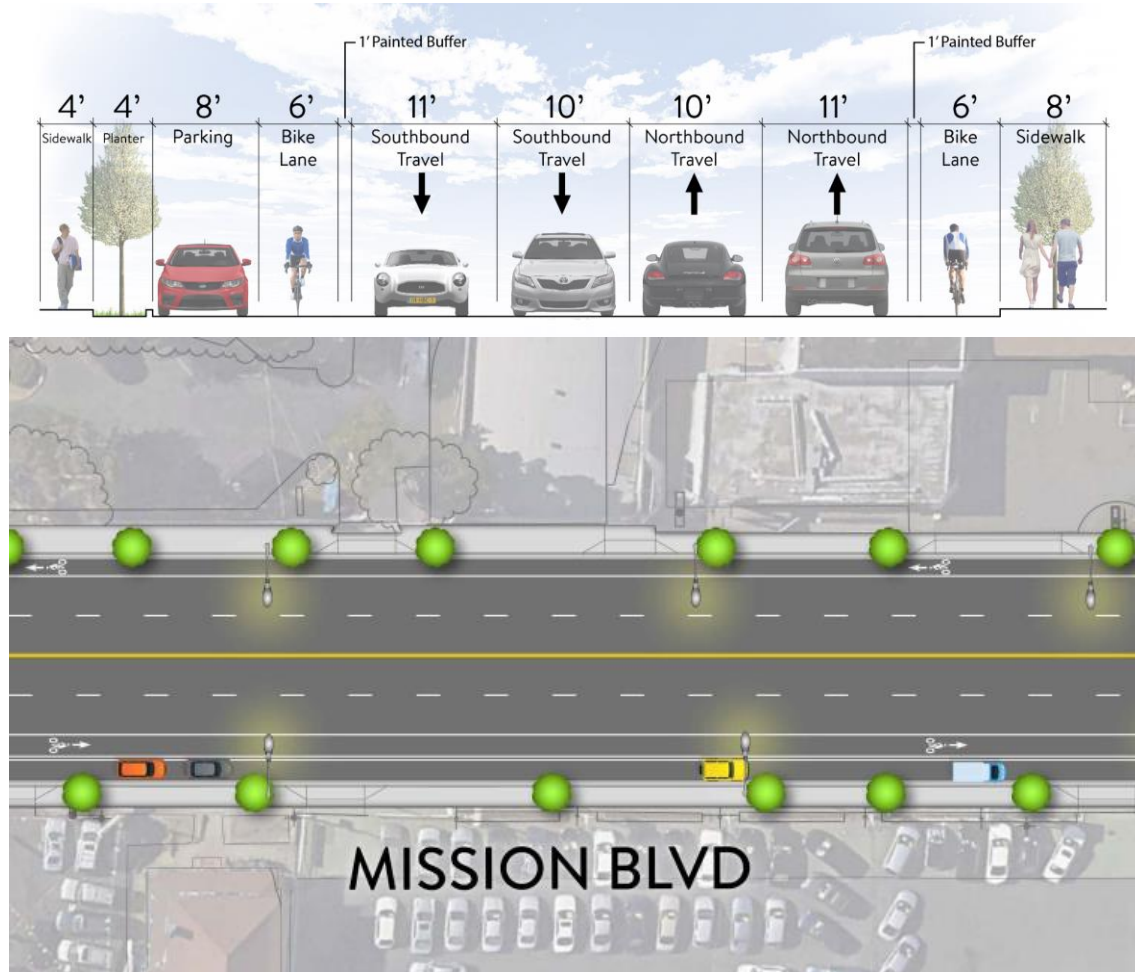
Alternative 2: Maintain 2-lanes motorist travel with 6-foot wide sidewalk

This alternative would keep bike lanes on Mission Boulevard within the 80-foot right-of-way by providing 6-foot wide sidewalks and 6-foot bike lanes as shown in the section below. While the minimum width of bike lanes is 5-feet, 6-foot wide bike lanes provide bicyclists the added safety from parked cars which is requested by Bike East Bay. The outside travel lane of 11-feet is necessary and requested by AC Transit since Mission Boulevard is a bus and truck route. Six-foot-wide sidewalks would not allow enough width to plant trees within the sidewalk area, so some trees would be planted in detached bulb out tree wells. The bulb out tree wells would take space away from on street parking. Alternative 2 accommodates parking on both sides of Mission Boulevard; however, it reduces the number of on street parking from the currently available 102 spaces to 48 spaces.



Alternative 3: Maintain 2-lanes motorist travel with 8-foot wide sidewalk

One of the disadvantages to Alternative 2 is the 6-foot wide sidewalk. For this section of Mission Boulevard with buildings that accommodate retail, restaurant, office, and residential uses, wider sidewalk may be desirable. Alternative 3 provides 8-foot wide sidewalks with trees planted within the sidewalk area. To accommodate this added width, parking is restricted to one side and alternates from block to block. Alternative 3 reduces the number of on street parking spaces to 50. Note that the width of the parking is 8-feet, and an additional 1-foot painted buffer is intended to provide added safety for bicyclists.



Each of the alternatives has its own advantages and disadvantages. Below is a summary of the benefits of the alternatives from the stakeholders' perspective. As examples, the alternatives with wider sidewalks would be beneficial to pedestrians and transit users. Bicyclists would benefit from alternatives with separate bike lanes.

	Stakeholder Benefit				
Alternative	Pedestrian	Bicyclist	Transit Users	Motorist	Businesses
Base	Better	Worse	Better	Better	Better
1 (one lane)	Better	Better	Better	Worse	Worse
2 (6' SW)	Worse	Better	Worse	Better	Worse
3 (8' SW)	Neutral	Better	Neutral	Better	Neutral

In addition to stakeholders, there are other factors to consider. Below is a summary of other benefits to each alternative.

	Other Benefit					
Alternative	Safety (bus/bike conflicts)	Traffic Handling Capacity	On-Street Parking	Impact to Local Streets	Street Trees	Street Furniture
Base	Worse	Better	Better	Better	Better	Better
1 (one lane)	Better	Worse	Better	Worse	Better	Better
2 (6' SW)	Better	Better	Worse	Better	Neutral	Worse
3 (8' SW)	Better	Better	Worse	Better	Better	Neutral

ECONOMIC IMPACT

When completed, this improvement project will make it easier for residents and visitors to walk, bike, drive, or take transit to their destinations which may help stimulate the local economy. Each of the alternatives may have different impacts to businesses. The Base and Alternative 3 with wider 8 to 10-foot sidewalk will allow space for street furniture and potential outdoor dining. The Base and Alternative 1 keep on-street parking in its current condition and will not have a negative impact to businesses. The reduction of on-street parking for Alternatives 2 and 3 is substantial and may have an impact on businesses along the project. The design will take this into consideration to maximize the number of spaces to the extent possible.

FISCAL IMPACT

Phases 2 and 3 will be funded by LATIP funds, matching funds from Measure BB and Rule 20A allocations for Underground District Nos. 29 and 30. The estimated funding breakdown is as follows:

Funding Source	Amount
LATIP	\$21,900,000
ACTC	\$19,500,000
Rule 20A	\$1,580,000 ¹
Total	\$42,980,000

¹ * The City's current Rule 20A allocation is \$2,900,000. An estimated 50% of this allocation is available for City costs to construct the joint utility trench with conduit and utility boxes. An estimated 50% will be used by PG&E for the wire, transformers and other equipment costs for materials and installation. Another estimated \$130,000 will be contributed by Comcast for their share of the joint trench cost.

The estimated project costs are as follows:

Phase 2	Estimated Cost
Design	\$2,557,384
Utility Undergrounding	\$2,000,000
Construction (including ACO & PLA/CWA)	\$24,942,616
Construction Admin, Inspection, Testing	\$3,000,000
Phase 2 Project Total	\$32,500,000

Phase 3	Estimated Cost
Design	\$1,000,000
Utility Undergrounding	\$5,000,000
Construction	\$8,000,000
Construction Admin, Inspection, Testing	\$1,000,000
PLA/CWA	\$500,000
Phase 3 Project Total	\$15,500,000

Phase 2 and 3 Project Total	\$48,000,000
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When the alternative is selected and refined, an updated cost estimate will be provided for Phase 3 with the next phase of design, and ultimately when the Phase 3 project receives construction bids.

STRATEGIC INITIATIVES

This agenda item supports the Complete Streets Strategic Initiative. The purpose of the Complete Streets initiative is to build streets that are safe, comfortable, and convenient for everyone regardless of age or ability, including motorists, pedestrians, bicyclists and public transportation riders. This item supports the following goals and objectives:

Goal 1: Prioritize safety for all modes of travel.

Objective 3: Ensure that roadway construction include complete streets elements.

Goal 2: Provide Complete Streets that balance the diverse needs of users of the public right-of-way.

Objective 1: Increase walking, biking, transit usage, carpooling and other sustainable modes of transportation by designing and retrofitting streets to accommodate all modes.

SUSTAINABILITY FEATURES

1. Water:

The project includes the installation of drought tolerant plants to reduce water usage.

2. Environment:

This project has implemented Bay-Friendly Landscaping techniques to use native and climate appropriate plants for the median islands and sidewalk planters. The project will be reviewed for Bay-Friendly certification after the project design is complete. Permeable pavers will also be used to treat storm water runoff from the sidewalk and filter pollution from the storm water before entering the San Francisco Bay. This project will use Cold In-place Recycling (CIR) to rehabilitate the pavement.

This project includes bike lanes which may encourage residents and visitors to ride bikes as an alternative mode of transportation.

3. Energy:

This project includes street lights with energy efficient LED lighting and dimming features to provide electricity and maintenance cost savings.

PUBLIC CONTACT

The first community meeting for Phase 3 was held on October 12, 2016. During that meeting, a few business owners preferred that little to no trees be planted due to business sign blockage and difficult egress from their businesses. The location of the new trees will take business signs, sight distances, and egress concerns into consideration.

The community in the Downtown and Prospect Hill neighborhoods were invited to attend the project update meeting on January 24, 2018. An attendee had concerns with safety for bicyclists on the shared bicyclist/motorist lane, especially since Mission Boulevard is a bus route. These alternatives addressed this concern.

Staff will invite the community and businesses to discuss the proposed designs and provide their feedback.

NEXT STEPS

The following is the tentative schedule for this project:

Complete Design	January 2019
Begin Construction	July 2019
Complete Construction	May 2020

This schedule is highly dependent on the responsiveness of the utility companies, such as PG&E and AT&T to provide the necessary support in a timely fashion since Rule 20B undergrounding design is performed by the utility companies.

Maintaining this schedule would facilitate the advertising of the project during the winter when the City is more likely to receive better bids.

Following this meeting, staff will incorporate Committee's comments, and will conduct a community meeting. Staff may return to the Committee for an update. Ultimately, if an alternative is recommended for approval, staff will go before Council for the approval of plans and specifications and call for construction bids.

Prepared by: Kathy Garcia, Deputy Director of Public Works

Recommended by: Alex Ameri, Interim Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', is positioned above a horizontal line.

Kelly McAdoo, City Manager