



Mission Boulevard Public Spaces & Active Transportation

FINAL REPORT (DECEMBER, 2019)

ACKNOWLEDGEMENTS

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INTRODUCTION & PLANNING STUDY PURPOSE

1

- 1.1 Background and Purpose
- 1.2 Study Area Location
- 1.3 Relevant Planning Documents and Policies
- 1.4 Planning Study Outline
- 1.5 Policy Framework

1.1 BACKGROUND AND PURPOSE

The Mission Boulevard Public Spaces and Active Transportation planning study consists of a plan to identify opportunities for public spaces, to improve walking, bicycling, access to transit and access to the beach. The project was funded through the San Diego Association of Governments (SANDAG) Smart Growth Incentive Grant Program. The overall project includes development of streetscape improvements and public space concepts to increase community spaces, improve pedestrian areas, improve beach and boardwalk access, and integrate art and culture into the urban design for the project area.

This planning study identifies potential improvements within the study area that includes Mission Boulevard from Diamond Street to Pacific Beach Drive, all east-west connecting streets between Mission Boulevard and the boardwalk, and Ocean Boulevard. This planning study scope does not include improvements to the boardwalk.

MISSION BOULEVARD PUBLIC SPACES AND ACTIVE TRANSPORTATION OBJECTIVES

Engage the community and stakeholders to create a vision for the area by identifying opportunities for:

- Multi-modal infrastructure improvements that support walking, bicycling, and using transit.
- Additional community public gathering spaces.
- Improvement concepts that could result in future funding opportunities.



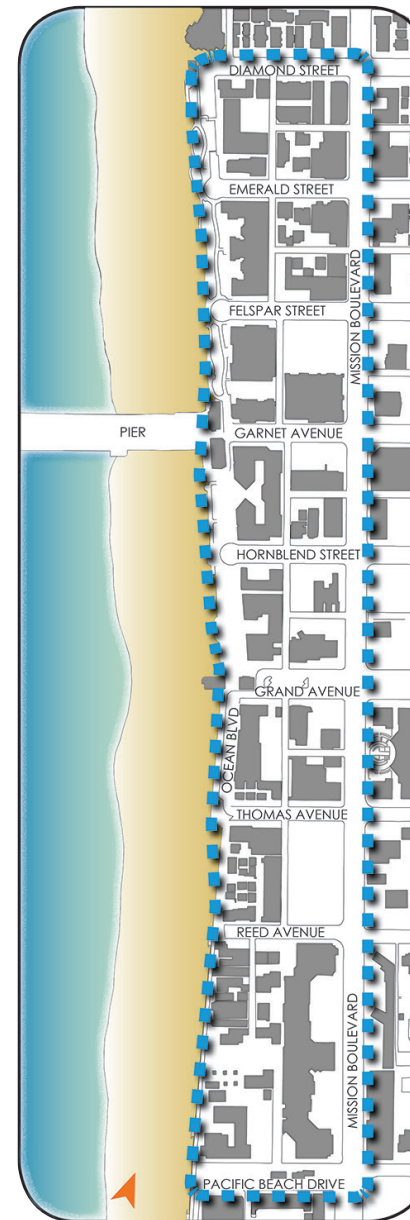
Potential public space concept that supports pedestrian activity and proposes a unifying theme for this area of the Pacific Beach community.

1.2 STUDY AREA LOCATION

The Mission Boulevard Public Spaces and Active Transportation study area is located within the Pacific Beach community planning area. The community planning area is bounded to the north by La Jolla, to the west by the Pacific Ocean, to the south by Mission Beach and Mission Bay Park, and to the east by Interstate 5 and Clairemont Mesa. The study area extends approximately 0.6 miles along Mission Boulevard from Diamond Street to Pacific Beach Drive, and includes the intersecting east-west streets between Mission Boulevard and the boardwalk (also referred to as “Ocean Front Walk”). The study area location is illustrated in Figure 1-1.

Within the study area, Mission Boulevard is a combination of a three and four-lane roadway that serves as the main north-south connection between the nearby communities of La Jolla and Mission Beach, and is the north-south spine road within coastal Pacific Beach. Side streets that intersect with this portion of Mission Boulevard include Diamond Street, Emerald Street, Felspar Street, Garnet Avenue, Hornblend Street, Grand Avenue, Thomas Avenue, Reed Avenue, and Pacific Beach Drive. There are also a series of alleyways in the east-west direction that intersect with Mission Boulevard and one alleyway in the north-south direction. The existing traffic control for study intersections and the location of alleyways along Mission Boulevard are illustrated in Figure 1-2. The boardwalk runs parallel to the beach and generally parallel to Mission Boulevard, and is a highly utilized pedestrian and bicycle corridor that extends from north of Diamond Street to Mission Beach.

FIGURE 1-1: STUDY AREA



The study area includes the following:

- Mission Boulevard (between Diamond Street and Pacific Beach Drive)
- The streets between Mission Boulevard and the boardwalk:
 - Diamond Street
 - Emerald Street
 - Felspar Street
 - Garnet Avenue
 - Hornblend Street
 - Grand Avenue
 - Ocean Boulevard
 - Thomas Avenue
 - Reed Avenue
 - Oliver Avenue
 - Pacific Beach Drive

1.3 RELEVANT PLANNING DOCUMENTS AND POLICIES

Past studies or plans have been prepared that address pedestrian, bicycle and transit mobility along Mission Boulevard and its connecting streets. The following is a brief description of each planning document and its relevance to the planning study.

San Diego Forward: The Regional Plan, SANDAG (2011)

The Regional Plan prepared by San Diego Association of Governments (SANDAG), provides a long-range vision and guidance toward improving transportation in the San Diego region across all modes. To meet the goal of improving multi-modal opportunities in the region. The Regional Plan focuses on multi modal improvements including upgrading existing transit service and providing new transit options. Key improvements included in the Regional Plan that fall within the planning study area include:

- Local and rapid bus (BRT Route 30, page A-14) along Mission Boulevard by 2035 (page 199)
- Light Rail Transit connections (Trolley Route 563, listed on page A-15)

City of San Diego Bicycle Master Plan (2013)

The City's Bicycle Master Plan (BMP) (2013) establishes the framework and vision for bicycle facilities throughout the City. The BMP includes recommendations for regional and local linkages that built upon the 2008 General Plan as well as additional policies and guidance for achieving improved bicycle environments throughout the City. The BMP makes the following recommendations within the study area:

- Identifies a Class II (Bike Lane) facility along Mission Boulevard from Turquoise Street to Grand Avenue (Project 13, p. 147)
- Identifies a Class II (Bike Lane) facility along Mission Boulevard from Grand Avenue to Pacific Beach Drive and Bicycle Boulevard facilities along Mission Boulevard from Pacific Beach Drive to West Mission Bay Drive (Project 32, p. 166)
- Identifies bicycle facilities along Mission Boulevard as high priority projects (Figure 6-3, Table 6-4 & Table 8-2)
- Identifies the intersection of Garnet Avenue / Mission Boulevard as a "Major Transit Stop (Greater than 1,000 Daily Boardings/Alightings)" (Figure 3-7)
- Identifies locations along Mission Boulevard as "Activity Centers with Probable Bicycle Parking Locations" (Figure 3-5)

City of San Diego Pedestrian Master Plan (2006)

City of San Diego Pedestrian Master Plan (PMP) provided a comprehensive analysis of walking and bicycling conditions in communities throughout the City. Phase 1 of the PMP established the framework for evaluating walking conditions based on safety, connectivity, walkability and accessibility. The framework document established scoring criteria for prioritizing needs and projects through the use of the City's Pedestrian Priority Model. The phases of the Pedestrian Master Plan following Phase 1 (Phases 2 through 4) focused on applying the methodology outlined in the Phase 1 document and identifying specific projects within specific communities. Pacific Beach was included in the Phase 4 Pedestrian Master Plan. A few highlights from Phase 1 and Phase 4 Pedestrian Master Plan documents:

- Mission Boulevard Corridor Study is listed as Improvement Area PB-4 in the Phase 4 Pedestrian Master Plan for the Pacific Beach Community (page PB-4), where "specific intersection improvements should be implemented to address existing connectivity and walkability issues"
- Phase 4 of the Pedestrian Master Plan, Exhibit PB-1 Missing Sidewalk and Curb Ramps, shows several non-compliant curb ramps within the study area (page PB-7)
- Phase 4 of the Pedestrian Master Plan, Exhibit PB-4: Improvement Areas, shows Mission Boulevard included in Improvement Area 4 with specific recommendations for intersections within the study area listed on pages PB-28 and PB-29.

Pacific Beach Community Plan (1995)

The Pacific Beach Community Plan was adopted in 1995 by City Council and is the current guiding document for the Pacific Beach Community. In the study area, the Plan allows for residential densities up to 29 dwelling units per acre with a community plan density bonus that allows up to 43 dwelling unit per acre for transit-oriented, pedestrian friendly mixed-use projects.

The Circulation Element of the Community Plan establishes the goals and objectives for the transportation system, which include reducing traffic congestion, creating safe, pleasant and useful pedestrian and bicycle pathways and increase public transportation routes. Key elements of the Circulation Element that affect the Mission Boulevard corridor include:

- Mission Boulevard is classified in Figure 7 – Street Classifications as a 4-Lane Major roadway.
- Mission Boulevard is designated in Figure 8 – Bus Routes / Transit Corridors as having a bus route and in the location of a transit corridor.
- Mission Boulevard is shown in Figure 9 – Existing Bikeways as having a Class III Bikeway between Agate St and Law Street (not extending to study area).
- Mission Boulevard is shown in Figure 9a – Future Bikeways as not having improvements south of Law Street (no improvements extending down into study area).
- Policies on page 34, especially Policies 4 and 5, emphasize improvements to traffic circulation and promote cycling and pedestrian enhancements, maintaining sidewalks, and landscaping.
- Goals include, "Actively encourage mixed-use residential....in conjunction with transit corridors along Garnet Avenue and Mission Boulevard...." (page 41)

Pacific Beach Park Plan Concept Study (April 2012)

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Prepared for the Pacific Beach Planning Group and the Ad Hoc Pacific Beach Park Plan Committee. This study focuses on a subarea within the current study area bounded by Grand Avenue, Pacific Beach Drive, Ocean Boulevard, and Mission Boulevard. The study identifies potential public space and mobility improvement areas and opportunities and constraints within the subarea. The work prepared by the Ad Hoc Committee includes conceptual drawing and preliminary cost estimates and covers the following topics:

- Location of potential new angled parking; Public open space; Primary interest roads; Beach drop-off areas; Expanded street corners (bulb-outs); Proposed median landscape island; Pedestrian market promenades, among others.

Pacific Beach / Mission Beach Sustainable Design Assessment Team (SDAT) (2014)

The Sustainable Design Assessment Team (SDAT) Program focuses on the importance of developing sustainable communities through design. A project team comprised of planning and sustainability professionals evaluated Pacific Beach and Mission Beach with respect to economic, transportation, urban design, green infrastructure, and community capacity and provided recommendations for its development. Of interest to this study, the program notes the following:

- Cass St, not Mission Boulevard, is identified as a major north-south Neighborhood Greenway connection (page 18)
- Includes discussion of alleys, crosswalks, curb extensions, and landscaping treatments at street locations, including the waterfront area (pages 38-39)

1.4 PLANNING STUDY OUTLINE

The Mission Boulevard Public Spaces and Active Transportation planning study accomplishes the following:

- Establishes a vision for enhancing multi-modal mobility within the study area;
- Includes technical analysis (Appendices) of the concepts developed;
- Includes preliminary (30 percent) design engineering drawings and cost estimates for potential improvements along Mission Boulevard;
- Includes detailed graphics of potential improvements within the side streets, including plan view, cross sections, and perspective renderings, which are based on each street's right-of-way and curb-to-curb dimensions;
- Provides strategies and implementing actions to accomplish the vision.



Community Workshop #1 (see Section 3)

SECTION 1: INTRODUCTION AND PLANNING STUDY PURPOSE

Provides an overview of the planning study background information, including a discussion of the project location, community input, and a review of relevant planning efforts and policies.

SECTION 2: CORRIDOR ENVIRONMENT

Summarizes the existing setting, land use and urban design characteristics within the study area.

SECTION 3: PUBLIC OUTREACH AND STAKEHOLDER COORDINATION

Summarizes the methods employed to engage the public and stakeholders and obtain community input throughout the planning study process.

SECTION 4: EXISTING MOBILITY

Summarizes existing transportation facilities and operations, within the project area (refer to Appendix A for full technical analysis)

SECTION 5: CONCEPT DEVELOPMENT

Presents various conceptual alternatives that were identified and developed for the study area, and summarizes the process used to select the preferred concept for Mission Boulevard and side streets.

SECTION 6: PROPOSED CONCEPTS

Presents the key components of the proposed concepts for Mission Boulevard and the side streets.

SECTION 7: IMPLEMENTATION STRATEGY

Identifies potential near-term and long-term improvements and potential funding sources.

APPENDIX A

Includes the Technical Report prepared as part of the Mission Boulevard Public Spaces and Active Transportation planning study.

APPENDIX B

Includes the topographic aerial survey that was prepared as part of the planning study, which provided accurate right-of-way dimensions.

APPENDIX C

Includes the exhibits presented at Community Workshop #1.

APPENDIX D

Includes the exhibits presented at Community Workshop #2.



Potential improvements within the public right-of-way would benefit residents, employees, and visitors, which would enjoy a better environment for walking, bicycling, and accessing transit.

1.5 POLICY FRAMEWORK

RELATIONSHIP TO THE COMMUNITY PLAN

The General Plan provides policy framework for how the City of San Diego will grow and develop. The Pacific Beach Community Plan further expresses General Plan policies in the context of the Pacific Beach area with policies that complement the citywide goals and addresses community needs. The Mission Boulevard Public Spaces and Active Transportation planning study does not include any changes to the land uses within the Pacific Beach community, it instead identifies and evaluates recommended improvements within the public right-of-way. Furthermore, the implementation of the preferred Mission Boulevard concept would require an amendment to the circulation network (i.e., amending Mission Boulevard's street classification) in the currently adopted Community Plan.

RELATIONSHIP TO THE CLIMATE ACTION PLAN

The Climate Action Plan (CAP) is intended to ensure the City of San Diego achieves Greenhouse Gas (GHG) reductions through local action. The CAP identifies five primary strategies to reduce GHG emissions by 2035. One of the five primary strategies identified in the CAP is Strategy 3 - Bicycling, Walking, Transit & Land Use, which includes the following goals: to increase the use of mass transit, increase walking and bicycling opportunities, and to plan for the installation of roundabouts to reduce vehicle fuel consumption.

The proposed concepts identified within the Mission Boulevard Public Spaces and Active Transportation planning study would help implement the Climate Action Plan as they would result in improvements that would promote walking, bicycling, and using transit, as well as it proposes a roundabout within the study area.



Perspective view of Grand Avenue concept (see Section 6 for details).

CORRIDOR ENVIRONMENT

2

- 2.1 Setting
- 2.2 Land Use
- 2.3 Current Streetscape
- 2.4 Right-of-Way Assessment

2.1 SETTING

Mission Boulevard, the beach, the Boardwalk, and the surrounding Pacific Beach community are major recreation and tourist destinations that attract community and regional visitors. Specifically, the study area draws a significant number of pedestrians and bicyclists, and more recently users of micro-mobility (i.e., electric scooters and e-bikes).

The pedestrian environment in the area still has room for improvement. The Pacific Beach community includes a grid street network, however, most of the streets within the study area include either a turn-around cul-de-sac, or other types of u-turn configuration where they meet the boardwalk/Ocean Boulevard. Although most sidewalks in the area are connected (with the exception of a missing segment on Reed Avenue) some sidewalks are narrow, and are not furnished with street trees, street lights, or other streetscape elements that negatively affect the comfort of pedestrians in the area.

There is a significant amount of residents and visitors that use bicycling both for recreational and commuting purposes in the Pacific Beach community. However, there is an absence of dedicated bicycle lanes, specifically in the study area. The area is served by bus service on Mission Boulevard, Grand Avenue, Garnet Avenue, and Ingraham Street. The study aims to improve the pedestrian and bicycle environment that supports transit ridership, and access to the beach.

2.2 LAND USE

The Mission Boulevard Public Spaces and Active Transportation planning study area contains a mixture of pedestrian and auto-oriented retail uses, mostly along Mission Boulevard and Grand and Garnet Avenues. A mixture of hotels, multifamily apartments, and condominiums are located along the side streets within the study area. Fire station 21 is located on Grand Street.



Mission Boulevard and the rest of the study area have a mix of visitor-serving commercial uses, restaurants, retail, hotels, entertainment, and recreation.

2.3 CURRENT STREETScape

The study area currently is auto-centric due to majority of the area being utilized by moving or parked vehicles. This presents less than ideal conditions for bicyclists and pedestrians who do not have adequate facilities or connections to the study area's main asset - the beach (via the boardwalk). The sidewalks and roads leading to the Boardwalk, are not cohesively connected, in instances leading to potential for conflicts between vehicles, pedestrians, and bicycles.

2.4 RIGHT-OF-WAY ASSESMENT

The Mission Boulevard Public Spaces and Active Transportation planning study identifies concepts for improvements within the public right-of-way that can enhance the pedestrian and bicycle environment, improve access to transit and to the beach, and strengthen community character and identity.

Through the planning study, each street's opportunities and constraints have been evaluated as follows:

- A **topographic aerial survey** was performed, as part of the first stages of the study, which confirmed each street's right-of-way.
- The **technical report** evaluates the physical and operational conditions of the existing transportation system (see Appendix A).
- **Multiple site visits**, by staff and consultant teams, allowed the team to understand how each street functions, and what could be done to improve its current condition.
- **Coordination with City Departments and stakeholders** further informed the planning study team of key aspects of each street within the study area.



Community workshops with boards displaying layouts and benefits of each concept provided an opportunity to obtain feedback on potential concepts within the study area.



Multiple opportunities for improving walking, bicycling, access to transit, and access to the beach were presented evaluated.



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PUBLIC OUTREACH AND STAKEHOLDER COORDINATION

3

- 3.1 Meetings with City Staff
- 3.2 Stakeholder Interviews
- 3.3 Public Workshops

3.1 PUBLIC OUTREACH & STAKEHOLDER COORDINATION

One of the objectives of the planning study was to engage the community members and stakeholders to create a vision for the study area. As part of the process, multiple opportunities for community and stakeholder engagement were provided. A variety of communication approaches were utilized to involve residents, property owners, business owners, and local organizations as part of the concept development process.

3.2 STAKEHOLDER COORDINATION

Throughout the planning process, the planning study team met with multiple organizations. The planning study team held a series of stakeholder interviews on November 8 and November 9, 2016, at the Pacific Beach Recreation Center and Pacific Beach Library. (Participants in the interviews are identified in Appendix A of this report).

- » Pacific Beach Community Planning Group
- » Pacific Beach Town Council
- » BeautifulPB
- » Discover PB

The planning study team continuously engaged representatives of these local organizations to gather their input on the concepts evaluated as part of the study. This included presentations from the planning study team to the Pacific Beach Community Planning Group, the Pacific Beach Town Council, and Beautiful PB. As well as meetings, emails, phone calls, invitation to each of the community outreach events, and distribution of comment booklets.

3.3 CITY DEPARTMENT COORDINATION

The planning study team coordinated with different key staff members of different departments (listed below) within the City of San Diego to obtain their input regarding key considerations as part of the study.

- » Fire-Rescue Station 21
- » Pacific Beach Lifeguard Station
- » Parks and Recreation Department
- » Transportation and Stormwater Department (Streets Division, and Transportation Engineering Operations (TEO) Division)
- » Economic Development Department
- » Public Works Department
- » Parking Enforcement, San Diego Police Department

3.4 FIELD WALK

The planning study team led a walking tour of the study area with staff from multiple City departments on November 8, 2016 to familiarize team members with the site, discuss the challenges identified in the kick-off meeting, identify additional potential issues, opportunity areas and constraints, and gather general observations, and obtain site photos to help evaluate the study area.

The team observed potential public space opportunity areas, issues and conflicts within the areas adjacent to the boardwalk, as well as areas with underutilized right-of-way. The team conducted an initial observation of existing public parking areas within the study area.

3.5 POP-UP OUTREACH

The planning study team attended a community event on August 2018 to advertise the first community workshop at a community event named PB Sip n' Stroll. Staff prepared boards and fliers to highlight the background and objectives of the planning study and to invite community members to the community workshop.

3.6 COMMUNITY WORKSHOP #1

On September 13, 2018, the planning study team held a community workshop at the Pacific Beach/Taylor Library. At Community Workshop #1, the team introduced community members to the study, summarized the work completed to-date, and assisted in collecting input on existing mobility issues and opportunities within the study area. Additionally, exhibits were presented that showcased multiple options for bicycle and pedestrian facilities that potentially could be incorporated along Mission Boulevard and each cross-street west of Mission Boulevard, between Diamond Street and Pacific Beach Drive.

3.7 COMMUNITY WORKSHOP #2

On May 30th, 2019, the planning study team held a community workshop at the Auditorium of Crown Point Elementary School. At Community Workshop #2, the team provided community members with an update on the study's progress and collected feedback on the design concepts for the side-streets and the proposed concept for Mission Boulevard, which had been refined based on the input collected during Workshop #1 and other outreach efforts. At Community Workshop #2 the team highlighted the benefits of the concepts presented and explained how these meet the goals of the study.



3.8 COMMENT BOOKLETS (ONLINE AND PRINTED VERSION)

An online and a printed version of the contents of Community Workshops #1 and #2 were made available to the public by the planning study team to provide feedback by answering the questions included. The document included the exhibits that were shown at each Community Workshop as well as the questions that were asked to attendees.

The online versions of the Comment Booklets were available at the MBPSAT website, to Facebook, and through a link provided on SDNews.com/Beach and Bay Press.

The printed versions of the Comment Booklets were made available at the Pacific Beach/Taylor Library, where a comment inbox was set-up to collect submitted booklets.

- » The Comment Booklet for Community Workshop #1 was available through November 9, 2018.
- » The Comment Booklet for Community Workshop #2 was available Workshop #1 was available through June 21st, 2019.

3.9 COMMUNITY OPEN HOUSE

On Wednesday, August 28th, the planning study team held an Open House at the Pacific Beach/Taylor Library. At the Open House, the team presented the final concepts prepared as part of the study to the public.

EXISTING MOBILITY



4.1 Mobility Summary

4.1 MOBILITY SUMMARY

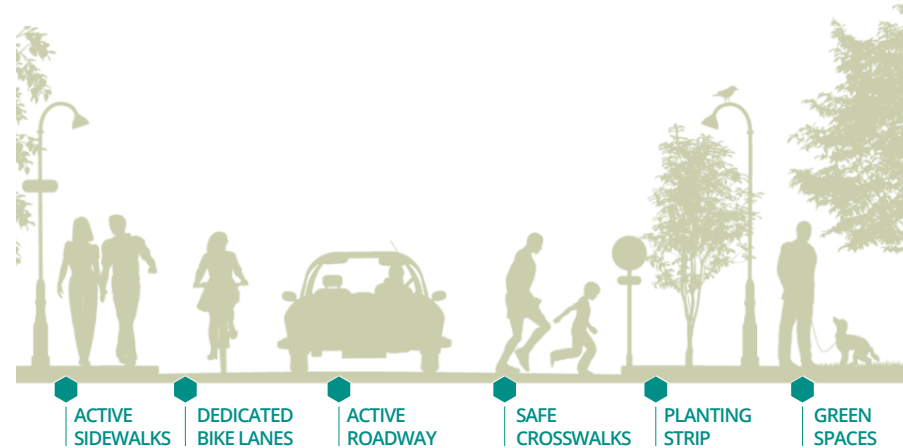
Despite the presence of a grid network, the study area facilitates the movement of vehicles and does not adequately serve the needs of active transportation users as highlighted below.

- Most sidewalks in the area are provided (with the exception of a missing segment on Reed Avenue); however, some sidewalks are narrow, have non-ADA compliant curb ramps, and/or lack pedestrian amenities which affect walkability within the community.
- There is a significant number of residents and visitors that use bicycling both for recreational and commuting purposes in the Pacific Beach community, but the absence of dedicated bicycle facilities on Mission Boulevard deter bicyclists, especially casual, novice riders, from traversing the area.
- Multiple bus routes serve the area, but the design of the existing bus stops limit the usability for transit riders.

Overall, this imbalance in transportation infrastructure negatively affects non-motorists especially when it comes to access to/from the study area, including the beach.

Table 4-1 (found in next page) provides a summary of the existing mobility analyses by mode along Mission Boulevard. These analyses provided a foundation for developing multi-modal improvements that would help create **complete streets** that meet the needs of residents and visitors of the area.

For more details of the physical and operational conditions of the existing transportation system, the planning study's technical report is provided in Appendix A.



WHAT ARE COMPLETE STREETS?

Complete Streets are streets designed and operated to give all users of the street equal access to the roadway, with a special emphasis on safety for the most vulnerable users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient.

TABLE 4-1: SUMMARY OF EXISTING CONDITIONS BY MODE ALONG MISSION BOULEVARD

	PEDESTRIAN						BICYCLES		TRANSIT		AUTO	
INTERSECTION WITH MISSION BOULEVARD	ADA RAMPS	PEQE GRADES				COLLISIONS	LTS	COLLISIONS	AMENITIES	RIDERSHIP	LOS	COLLISIONS
		INTERSECTION ANALYSIS BY LEG										
		NORTH	SOUTH	EAST	WEST							
Diamond Street	✓	Low	Medium	Low	Low	Low	High	Low	Partial - SB	Low	Not Analyzed	High
Emerald Street	✓	Medium	Low	Low	Low	Low	High	Low	NA	NA	Not Analyzed	High
Felspar Street	Non ADA	Medium	Medium	Medium	Medium	Low	High	Low	Full - SB Partial - NB, EB, WB	High	Acceptable	High
Garnet Avenue	✓	Medium	Medium	Medium	Medium	High	High	Low	NA	NA	Acceptable	High
Hornblend Street	✓	Medium	Low	Low	Low	High	High	Low	Partial- NB, SB	High	Not Analyzed	Low
Grand Avenue	Partial	Medium	Medium	Medium	Medium	Low	High	Low	NA	NA	Acceptable	High
Thomas Avenue	✓	Medium	Low	Low	Low	Moderate	High	Low	Full – SB Partial - NB	Moderate	Not Analyzed	High
Reed Avenue	Non ADA	Medium	Medium	Medium	Medium	Low	High	Low	NA	NA	Acceptable	Moderate
Pacific Beach Drive	Non ADA	Low	Low	Low	Low	Low	High	Low	NA	NA	Acceptable	High

*LEGEND FOR TABLE 4-1

PEDESTRIAN CONDITIONS	BICYCLE CONDITIONS	TRANSIT CONDITIONS	AUTO CONDITIONS
ADA Ramps: ✓ compliant on all corners Partial compliant on some corners Non ADA no ADA compliant ramps Pedestrian Environmental Quality Evaluation (PEQE): High > 6 Medium 4-6 Low < 4 Collisions (total reported): Low < 3 Moderate 4 to 5 High > 5	Level of Traffic Stress (LTS): Low < 2 Medium 3 High 4 Collisions (total reported): Low < 3 Moderate 3 to 5 High > 5	Amenities: Full = shelter, bench & trash Partial = 1 or 2 of the amenities None = no amenities NA = not applicable; no bus stop Travel Direction Adjacent to Bus Stop: NB: Northbound SB: Southbound EB: Eastbound WB: Westbound Ridership (total on/off per day): Low < 40 Moderate 40 to 80 High > 80	Level of Service (LOS): Acceptable: LOS A, B, C or D Failing: LOS E or F Collisions (total reported): Low < 3 Moderate 4 to 5 High > 5



Mission Boulevard Public Spaces & Active Transportation

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CONCEPT DEVELOPMENT

5

- 5.1 Mission Boulevard Concept Development
- 5.2 Mission Boulevard Concepts Analysis Metrics
- 5.3 Mission Boulevard Concepts Benefits Matrix
- 5.4 Mission Boulevard Preferred Concept Identification

5.1 MISSION BOULEVARD CONCEPT DEVELOPMENT

The planning study's concepts for Mission Boulevard were developed based on a combination of stakeholder and community feedback, as well as the existing issues and needs that were identified within the corridor based on the existing conditions analysis. Each concept incorporated complete street concepts through mobility and streetscape improvements and looked to increase public spaces within the corridor.

Three plan concepts were initially developed for the Mission Boulevard corridor, but then each concept was expanded upon to include different variations of bicycle and pedestrian facilities that would encourage and enhance active travel throughout the corridor, as well as include potential ways to expand public parking and transit access within the corridor. From this process the sub-concepts were developed, which yielded a total of seven design options for Mission Boulevard.

5.1. MISSION BOULEVARD CONCEPTS SUMMAR

Figures 5-1 and 5-2 include the existing conditions cross sections of Mission Boulevard, in its configuration from Diamond to Felspar, and from Felspar to Pacific Beach Drive.

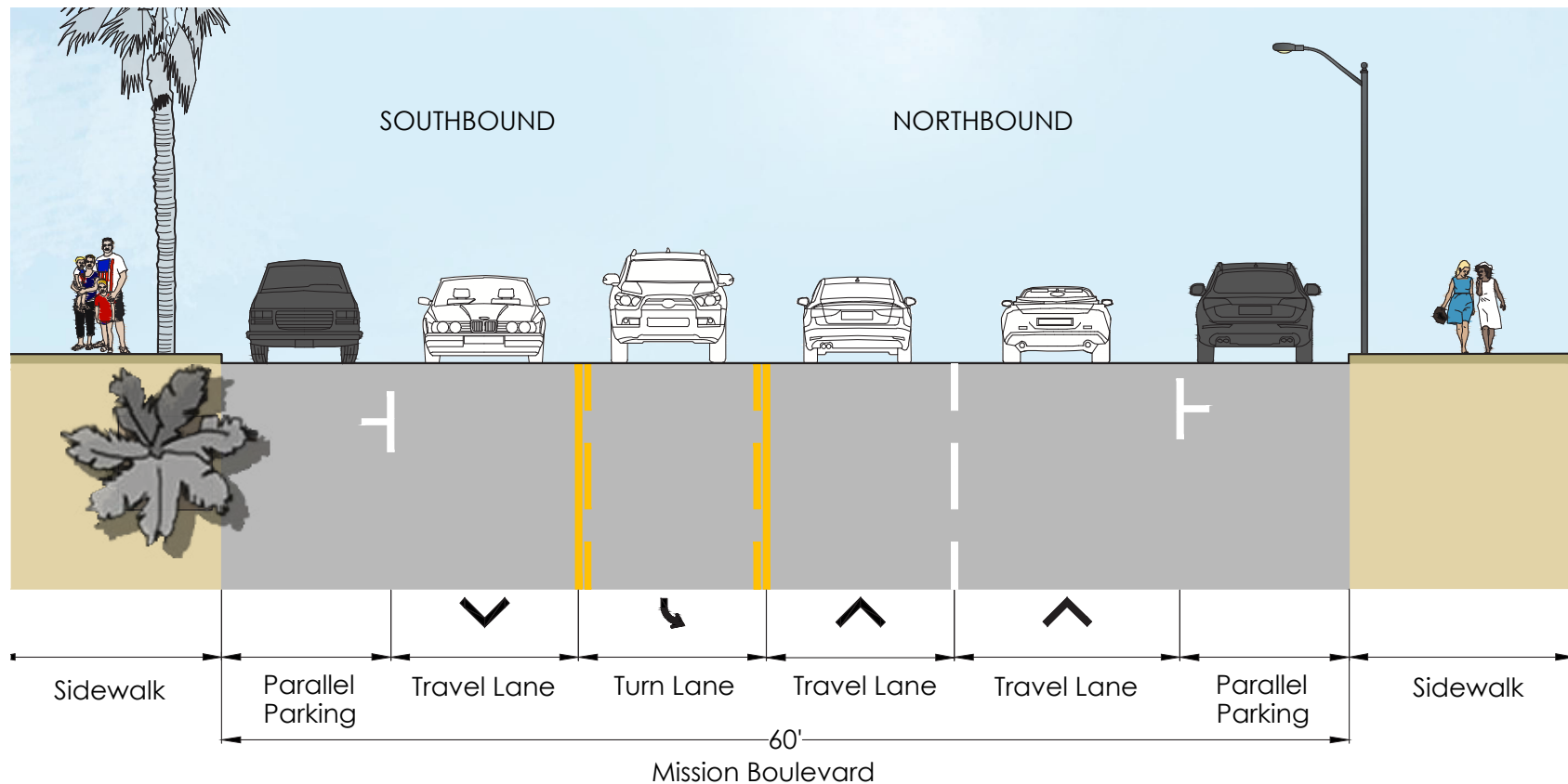
Figures 5-3 to 5-9 include cross-sections that represent typical street design concepts that were considered for Mission Boulevard:

- Concept 1: Two Lanes with Traffic Signals and Two-way Left Turn Lane
 - » Concept 1A – Two Lanes with Buffered Bicycle Lanes
 - » Concept 1B – Two Lanes with One-Way Cycle Tracks
 - » Concept 1C – Two Lanes with Two-Way Cycle Track
- Concept 2: Two Lanes with Roundabouts and Raised Medians
 - » Concept 2A – Roundabouts with Buffered Bicycle Lanes
 - » Concept 2B – Roundabouts with One-Way Cycle Tracks
- Concept 3: Three Lanes with Traffic Signals and Two-way Left Turn Lane
 - » Concept 3A – Three Lanes with Buffered Bicycle Lanes
 - » Concept 3B – Three Lanes with Two-Way Cycle Track

Figure 5-10 includes the Preferred Concept that this study identifies for Mission Boulevard:

- » Preferred Concept – Two-Lanes with One-Way Cycle Tracks and Parallel Parking

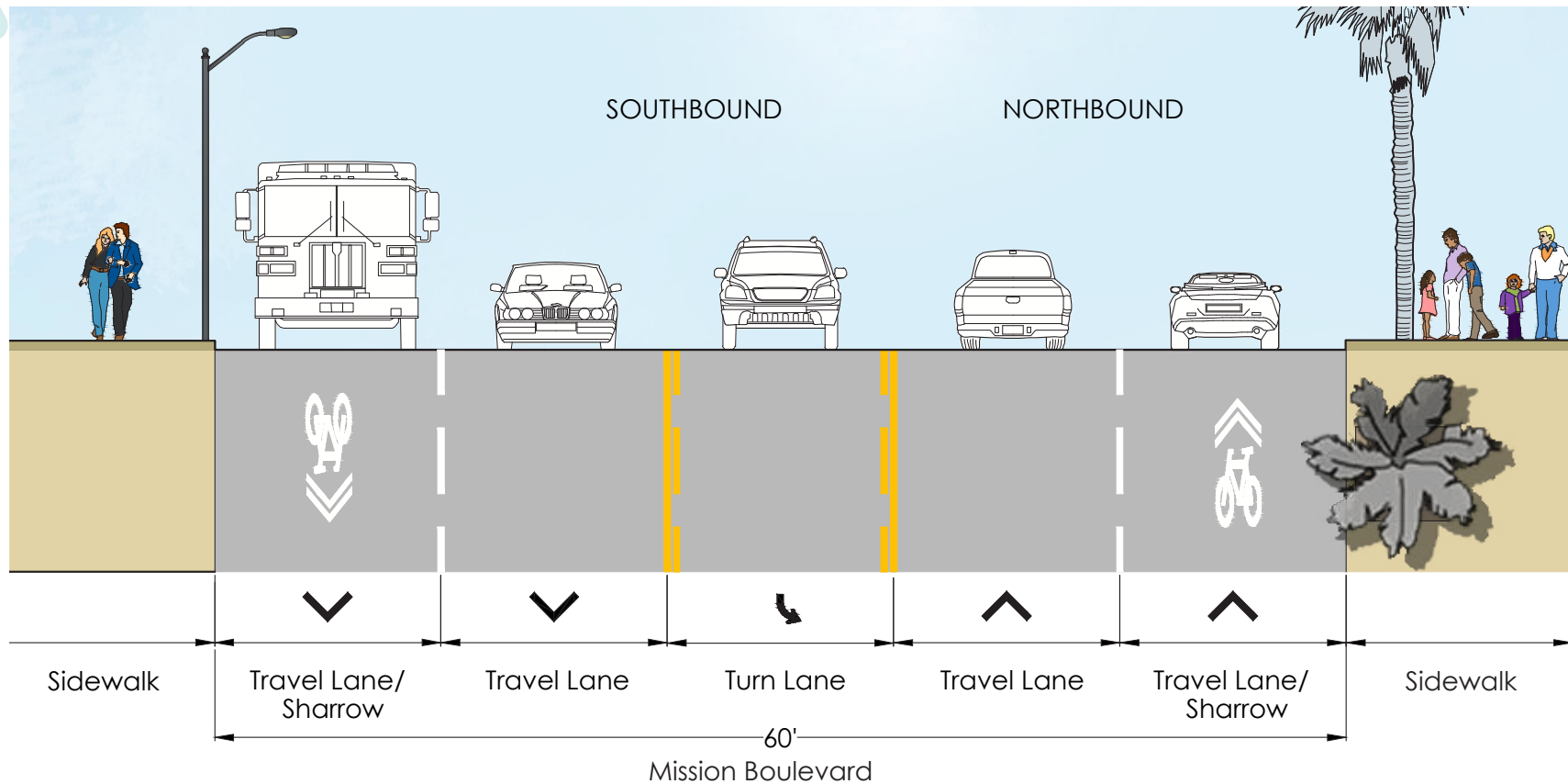
FIGURE 5-1: EXISTING CONFIGURATION (DIAMOND STREET TO FELSPAR STREET)

**FEATURES:**

- Two northbound travel lanes
- One southbound travel lane
- Two-way left-turn lane
- Parallel parking on east and west sides

Mission Boulevard Public Spaces & Active Transportation

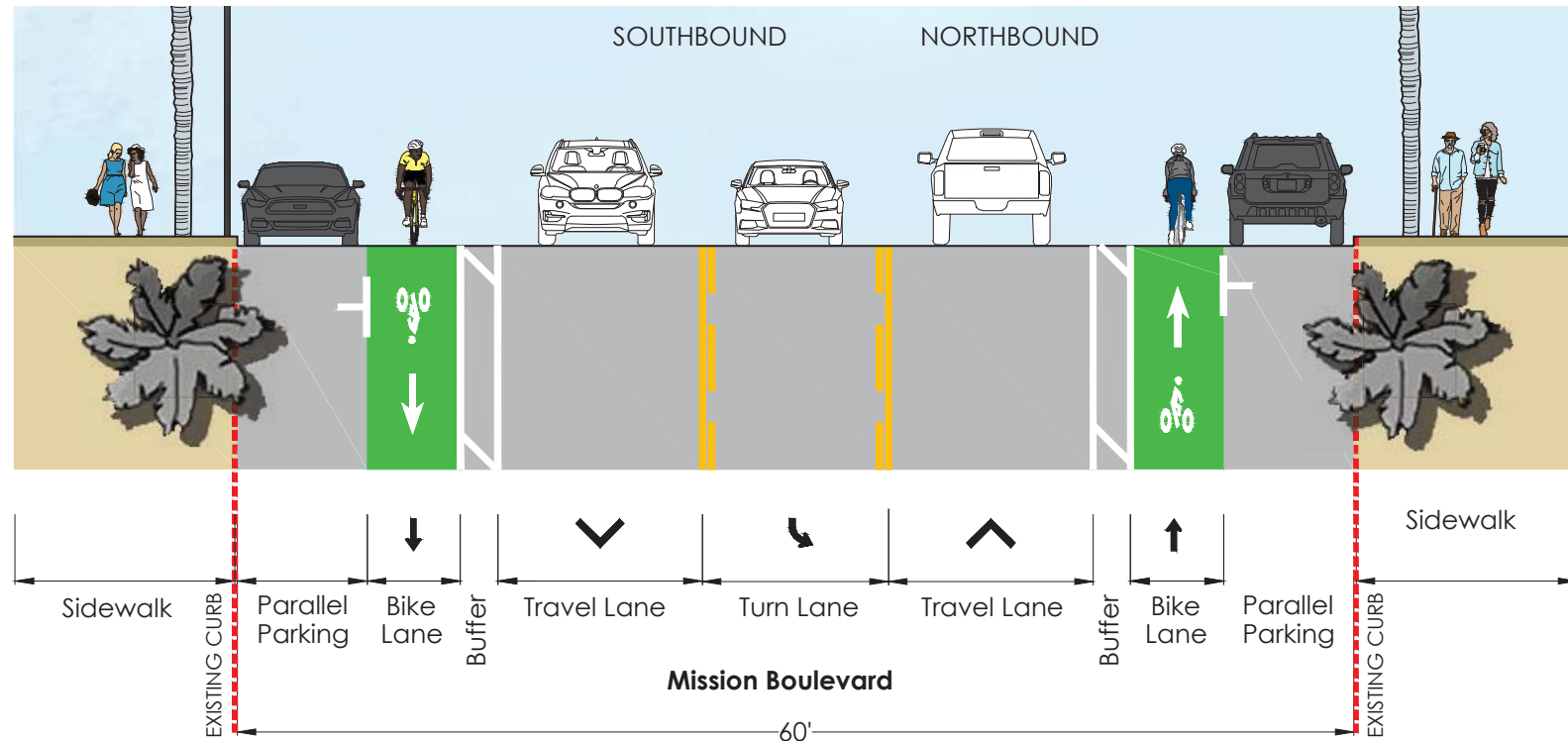
FIGURE 5-2: EXISTING CONFIGURATION (FELSPAR STREET TO PACIFIC BEACH DRIVE)



FEATURES:

- Two northbound travel lanes
- Two southbound travel lanes
- Two-way left-turn lane
- Bicycle sharrows

FIGURE 5-3: CONCEPT 1A – TWO LANES WITH BUFFERED BICYCLE LANES

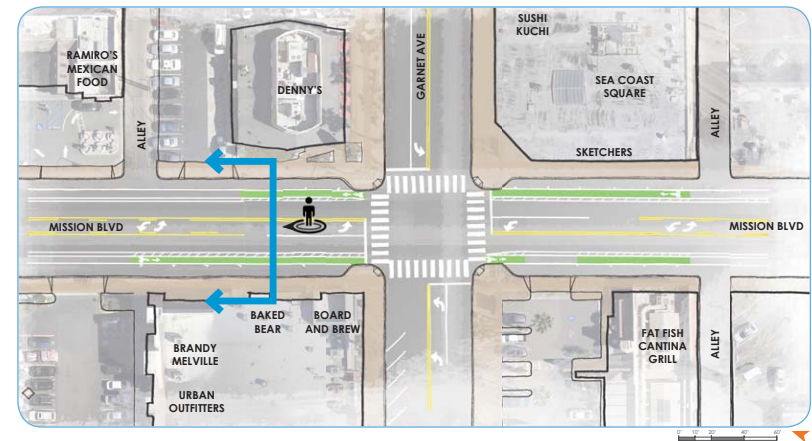


FEATURES:

- One travel lane in each direction
- Two-way left-turn lane to maintain access to existing driveways
- Buffered bicycle lanes
- Parallel parking on east and west sides
- Intersection bulb-outs on both sides of Mission Boulevard – reduces pedestrian crossing distance and increases visibility

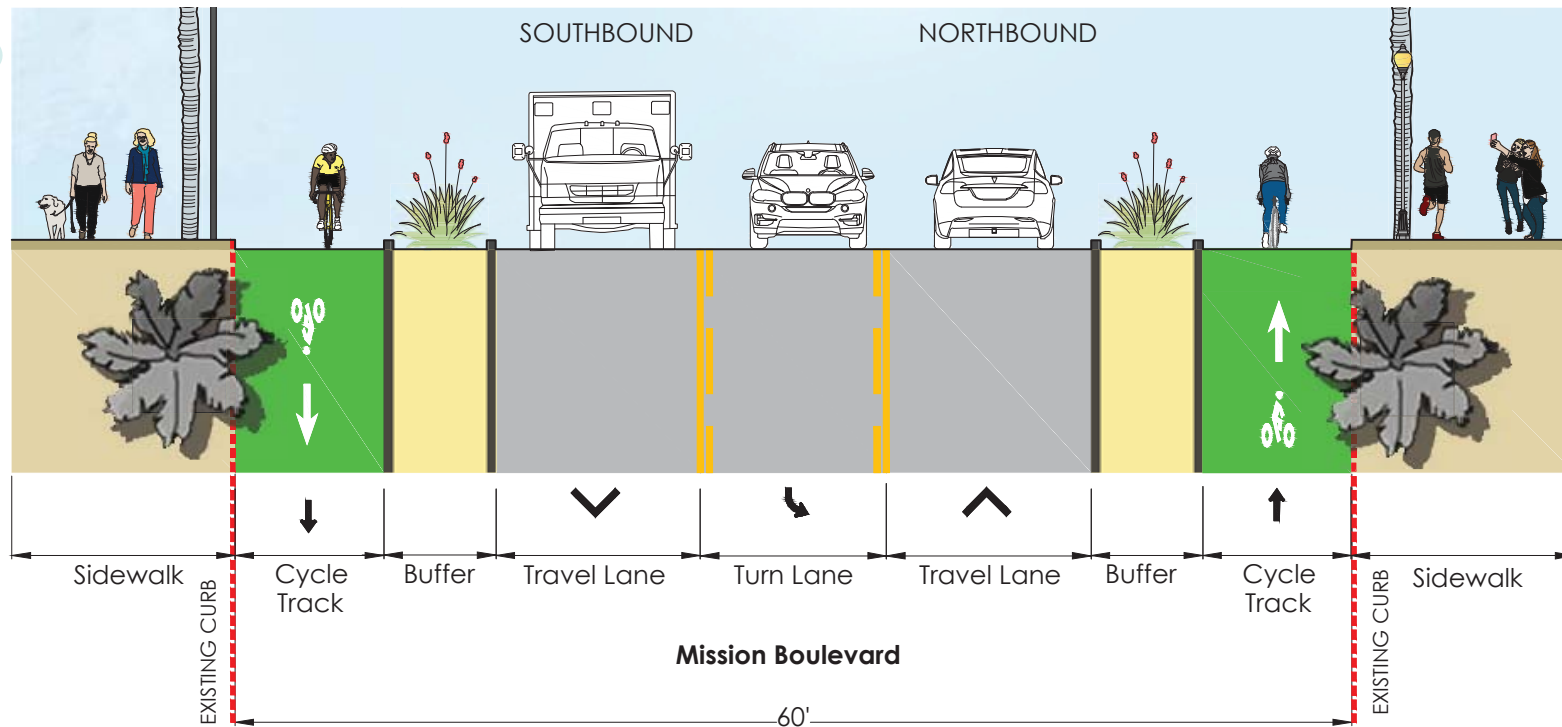
TRADE-OFFS:

- Reduces roadway capacity
- No protected bicycle facility
- Limited ability to expand pedestrian realm area
- Potential for conflict between bicyclists and parked vehicles in door zones



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FIGURE 5-4: CONCEPT 1B – TWO LANES WITH ONE-WAY CYCLE TRACKS



FEATURES:

- One travel lane in each direction
- Two-way left-turn lane to maintain access to existing driveways
- One-way cycle tracks (both directions) – protected bike facility is more friendly for all users
- Includes expanded pedestrian-realm by creating a vertical and horizontal separation between the sidewalk and vehicle travel lane

TRADE-OFFS:

- Decreases roadway capacity
- Removal of all on-street parking
- Cannot provide bulb-outs at intersections

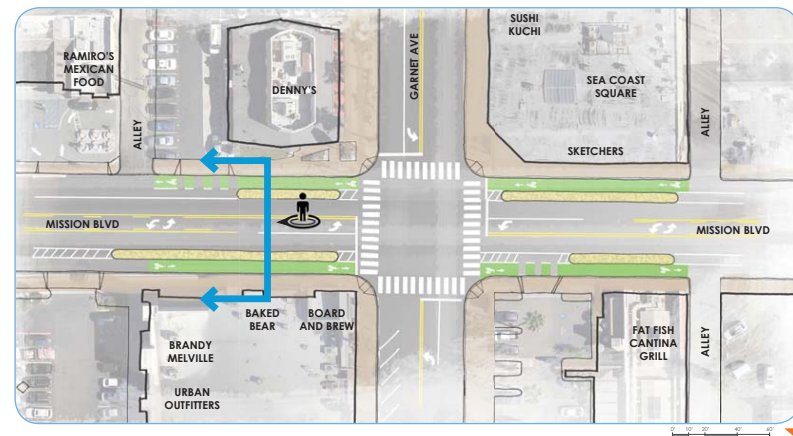
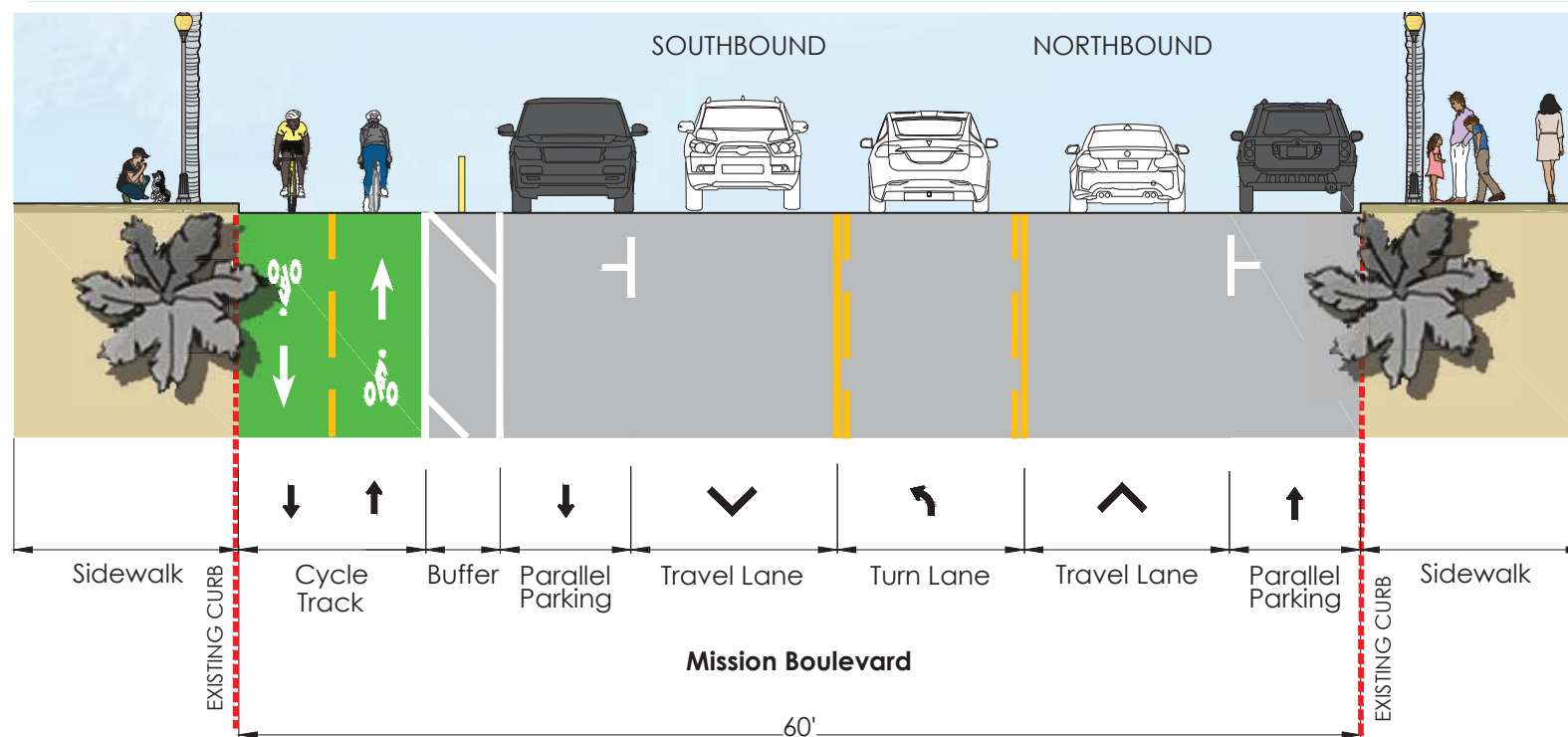


FIGURE 5-5: CONCEPT 1C - TWO LANES WITH TWO-WAY CYCLE TRACK



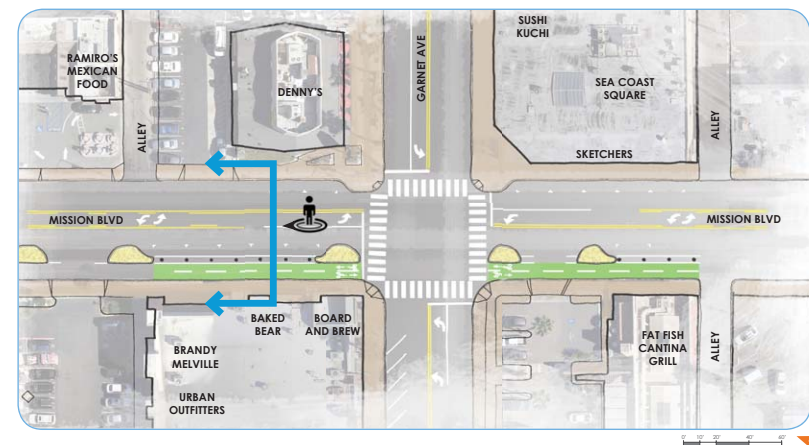
FEATURES:

- One travel lane in each direction
- Two-way left-turn lane to maintain access to existing driveways
- Two-way cycle track (one side) – protected bike facility is more friendly for all users
- Parallel parking on both sides of the roadway
- Intersection bulb-outs on one side of Mission Boulevard – reduces pedestrian crossing distance and increases visibility

- Includes expanded pedestrian-realm on one side (adjacent to the cycle track) of the street by creating a vertical and horizontal separation between the sidewalk and vehicle travel lane

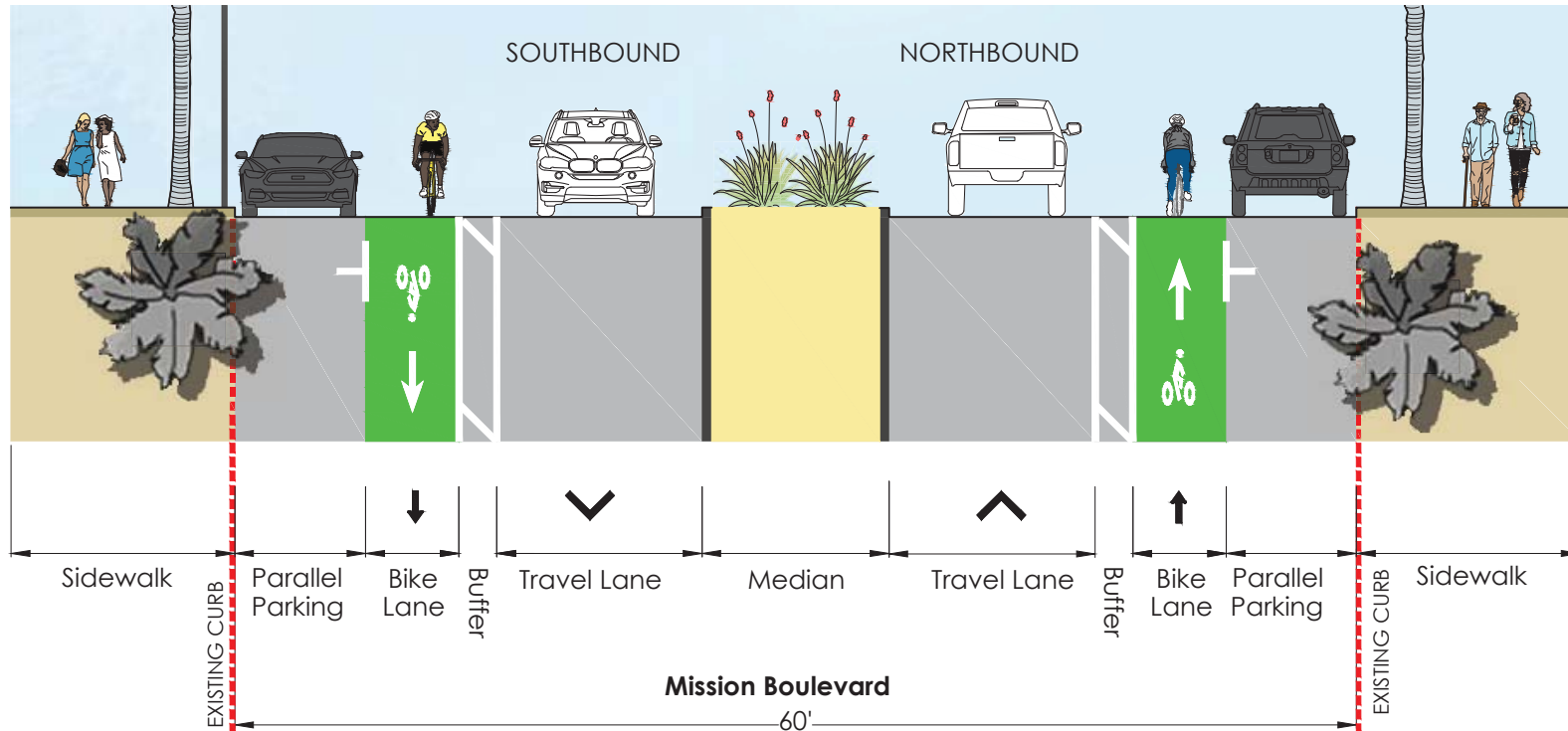
TRADE-OFFS:

- Decreases roadway capacity
- At the beginning/end of the cycle track, bicyclists must cross the street to continue in the direction of traffic flow
- Costly to implement



Mission Boulevard Public Spaces & Active Transportation

FIGURE 5-6: CONCEPT 2A – ROUNDABOUTS WITH BUFFERED BICYCLE LANES

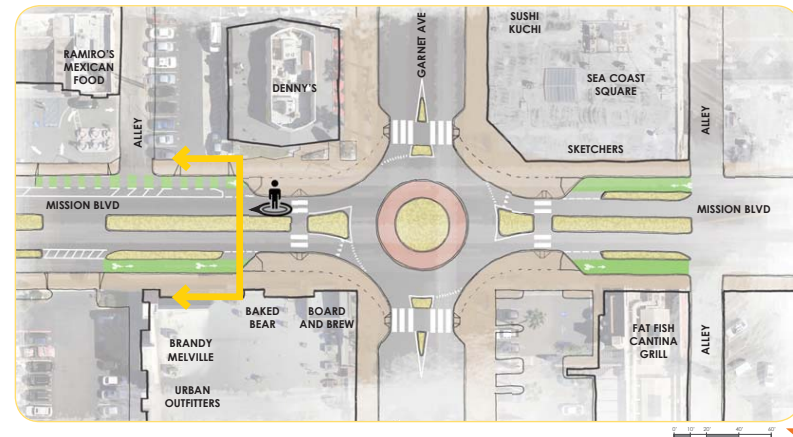


FEATURES:

- One travel lane in each direction
- Roundabouts replace traffic signals
- Raised median
- Buffered bicycle lanes
- Parallel parking on both sides of the roadway
- Intersection bulb-outs on both sides of Mission Boulevard – reduces pedestrian crossing distance and increases visibility

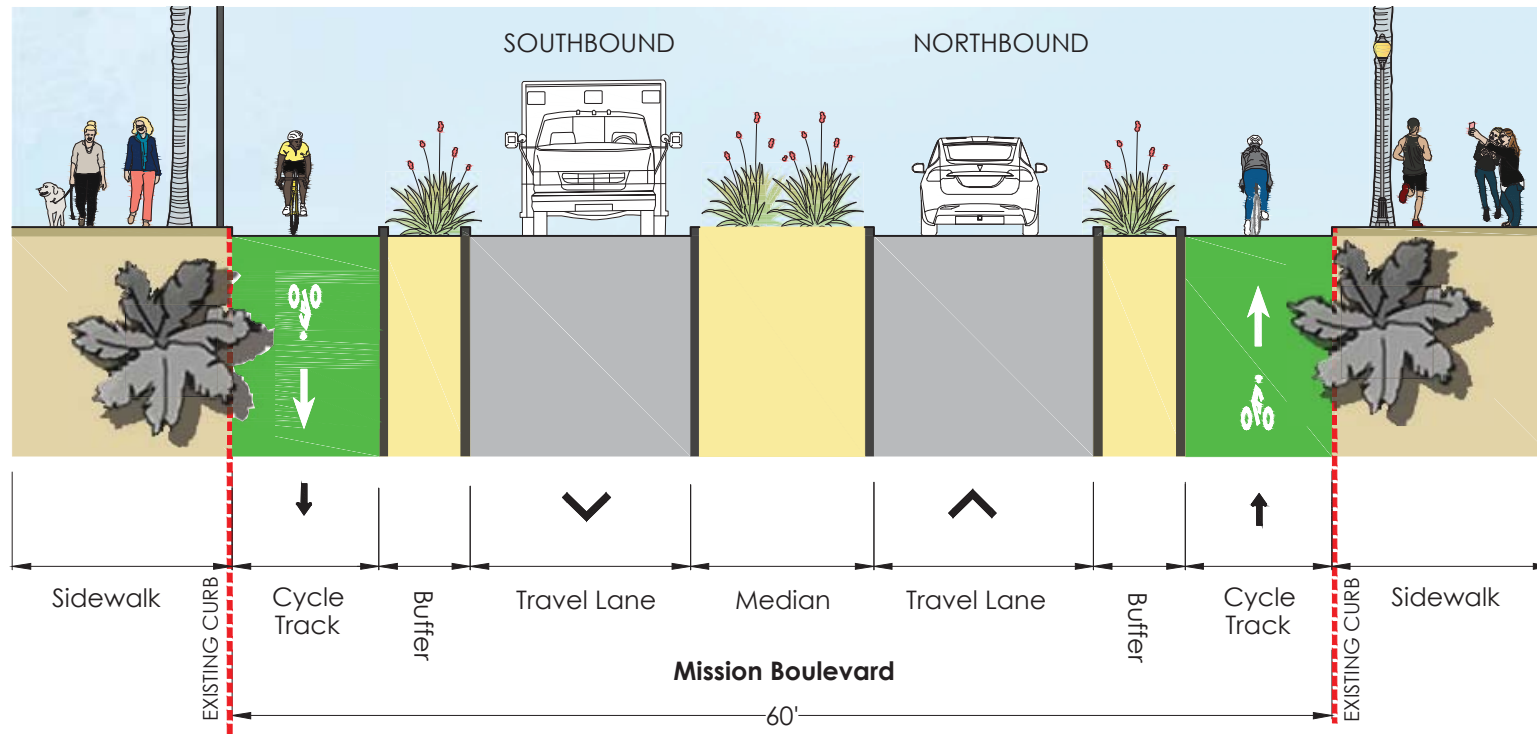
TRADE-OFFS:

- Reduces roadway capacity
- Median may restrict access to side streets and alleys
- No protected bicycle facility
- Limited ability to expand pedestrian realm area
- Potential for conflict between bicyclists and parked vehicles in door zones



This concept is not deemed feasible due to the raised median. A 10-foot additional lane is required for emergency response vehicles.

FIGURE 5-7: CONCEPT 2B – ROUNDABOUTS WITH ONE-WAY CYCLE TRACKS

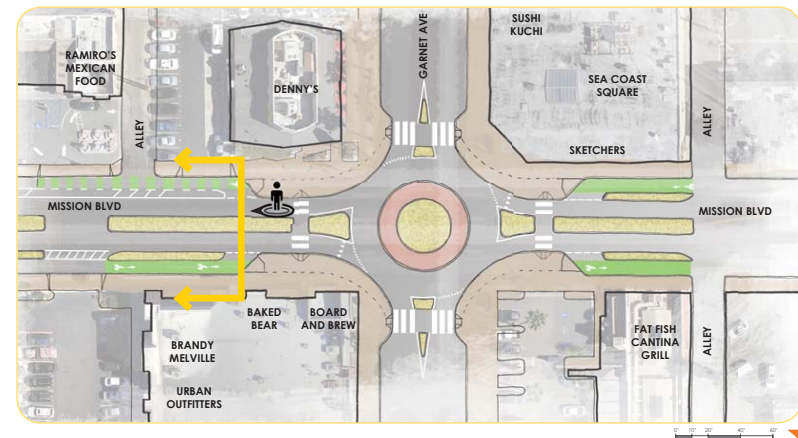


FEATURES:

- One travel lane in each direction
- Roundabouts replace traffic signals
- Raised median
- One-way cycle track (both sides) – protected bike facility is more friendly for all users
- Includes expanded pedestrian-realm by creating a vertical and horizontal separation between the sidewalk and vehicle travel lane

TRADE-OFFS:

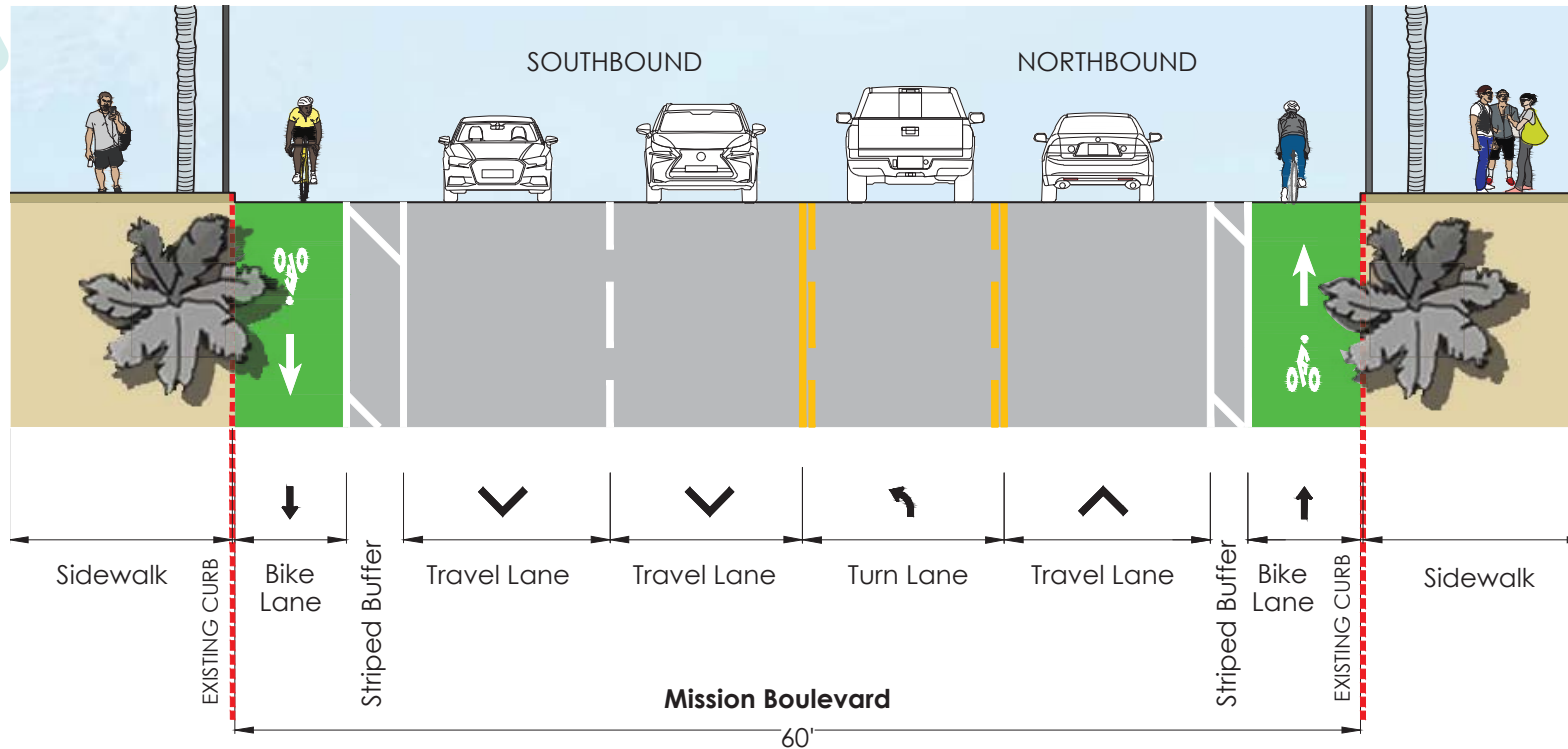
- Decreases roadway capacity
- Median may restrict access to side streets and alleys
- Removal of on-street parking



This concept is not deemed feasible due to the raised median. A 10-foot additional lane is required for emergency response vehicles.

Mission Boulevard Public Spaces & Active Transportation

FIGURE 5-8: CONCEPT 3A – THREE LANES WITH BUFFERED BICYCLE LANES



FEATURES:

- One northbound and two southbound lanes
- Two-way left-turn lane to maintain access to existing driveways
- Buffered bicycle lanes

TRADE-OFFS:

- Decreases roadway capacity for the northbound direction only
- Limited ability to expand public realm area
- Removal of all on-street parking

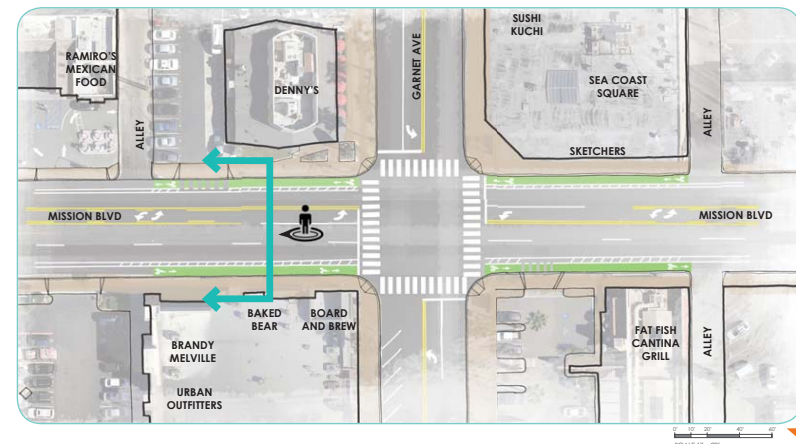
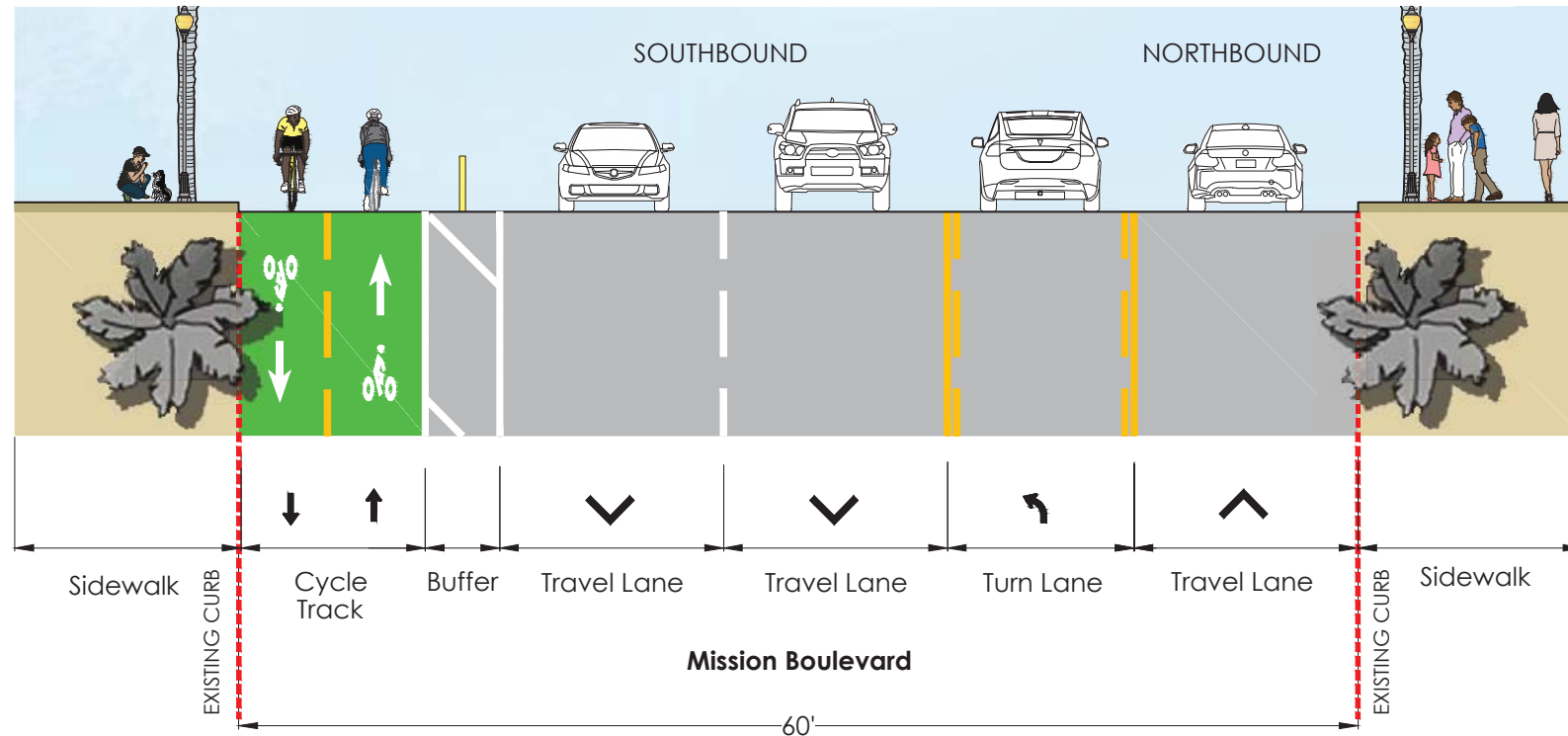


FIGURE 5-9: CONCEPT 3B – THREE LANES WITH TWO-WAY CYCLE TRACK

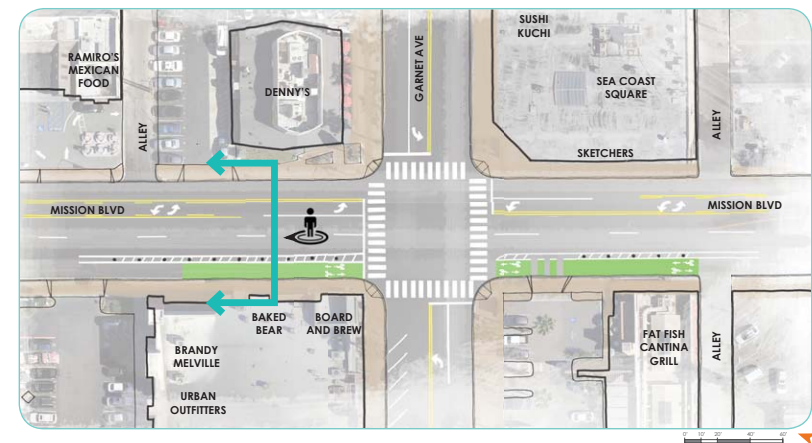


FEATURES:

- One northbound and two southbound lanes
- Two-way left-turn lane to maintain access to existing driveways
- Two-way cycle track (one side) – protected bike facility is more friendly for all users
- Includes expanded pedestrian-realm on one side (adjacent to the cycle track) of the street by creating a vertical and horizontal separation between the sidewalk and vehicle travel lane

TRADE-OFFS:

- Decreases roadway capacity
- At the beginning/end of the cycle track, bicyclists must cross the street to continue in the direction of traffic flow
- Costly to implement



5.2 MISSION BOULEVARD CONCEPTS ANALYSIS METRICS

One of the main goals of the planning study is to improve the overall traveling experience for all users along the Mission Boulevard corridor and improve connectivity to and from the community for all modes. A set of evaluation criteria was developed to determine the benefits and trade-offs of the proposed improvements and help distinguish which concept best fit the plan goals.

Below is a summary list of criteria used to evaluate the corridor under the various concepts:

- Overall Pedestrian Environment Quality Evaluation (PEQE) score
- Pedestrian conflicts
- Level of traffic stress (LTS) score for bicyclists
- Enhanced visibility of bicyclists at intersections
- Connectivity for pedestrians and bicyclists to transit stops
- Vehicular travel time along corridor
- Total available on-street parking along corridor
- Cost and timing of implementation

5.3 MISSION BOULEVARD CONCEPTS BENEFITS MATRIX

A benefits matrix was built to weigh the Mission Boulevard design concepts against the evaluation criteria and to determine which concept would advance for further consideration. Each criteria was scored on a 1-to-5 scale, whereby a score of five exhibited the greatest benefit and/or presence of a given criteria.

Table 5-1 displays the results of the benefits matrix that was performed for each of the concepts.

TABLE 5-1: CONCEPTS BENEFIT MATRIX

CONCEPTS	PEDESTRIAN		BICYCLE		TRANSIT	VEHICLE		COST	TOTAL
	PEQE	PEDESTRIAN EXPOSURE	LTS	ENHANCED BICYCLE FACILITY	BIKE/PED CONNECTIVITY TO TRANSIT	PARKING SUPPLY	AUTO TRAVEL TIME ALONG CORRIDOR	COST & TIMING	
Maintain Existing Roadway Configuration	1	1	1	1	2	2	4	5	17
Concept 1A – Two Lanes with Buffered Bicycle Lanes	3	5	3	3	3	3	3	4	27
Concept 1B – Two Lanes with One-Way Cycle Tracks	5	3	5	5	5	1	2	1	27
Concept 1C – Two Lanes with Two Way Cycle Track	5	3	4	4	2	4	2	2	26
Concept 2A – Roundabouts with Buffered Bicycle Lanes	3	5	3	3	2	3	3	2	24
Concept 2B – Roundabouts with One-Way Cycle Tracks	5	3	5	5	5	1	2	1	27
Concept 3A – Three Lanes with Buffered Bicycle Lanes	2	5	3	3	3	1	4	3	24
Concept 3B – Three Lanes with Two-Way Cycle Track	5	3	4	4	2	1	4	1	24

NOTES FOR TABLE 5-1

Score 1 = lowest benefit/presence

Score 5 = highest benefit/presence

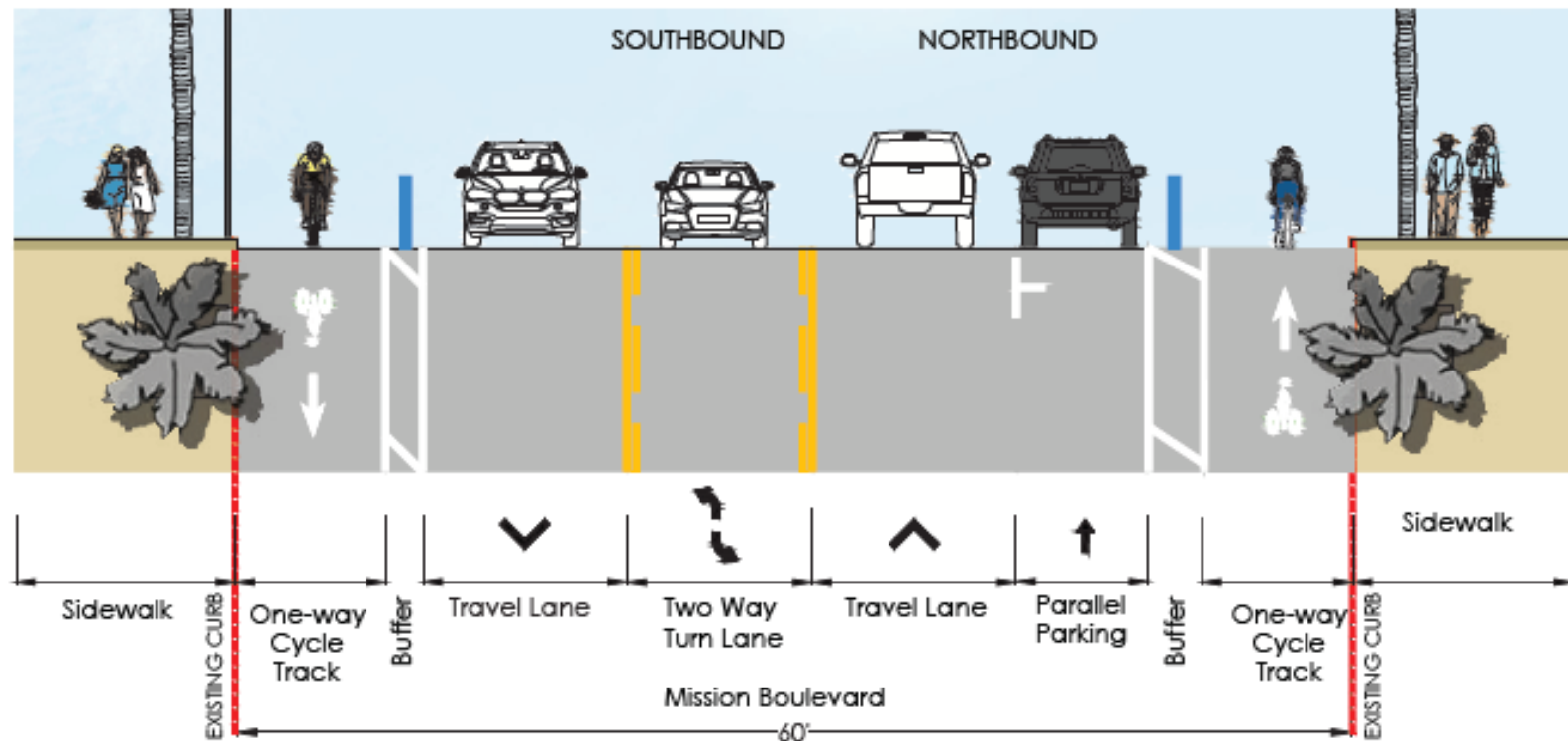
5.4 MISSION BOULEVARD PREFERRED CONCEPT IDENTIFICATION

Public input collected during the public outreach process was used to select the preferred design concept. Some of the main comments received from the community were:

- Provide vertical protection or physical separation for bicyclists from vehicles
- Ensure proper signalization enhancements for pedestrians and bicyclists along Mission Boulevard
- Reduce net parking loss on Mission Boulevard
- Incorporate shorter crossings for pedestrians at intersections

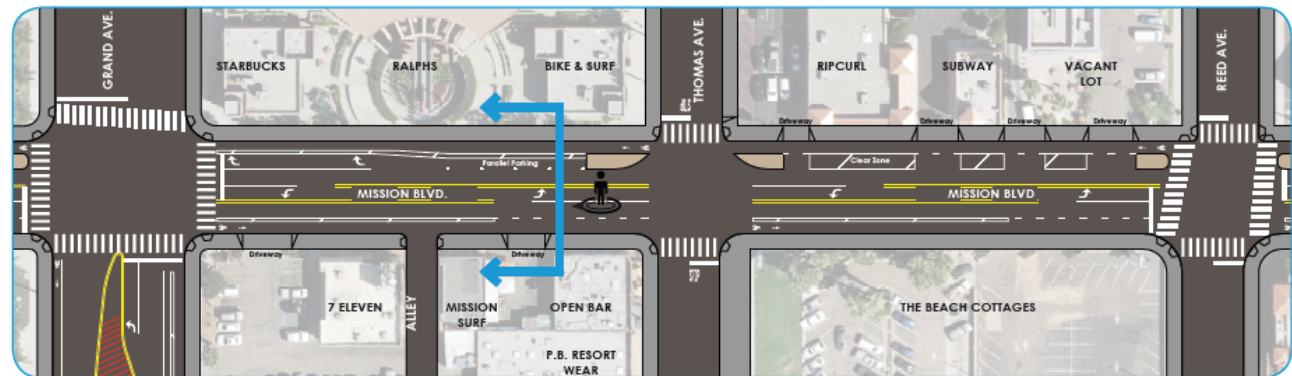
Based on community feedback, the concepts were reviewed and refined to develop a hybrid concept to address the main comments received, which became the Preferred Concept. The Preferred Concept became a hybrid of Concepts 1A and 1B, which will implement one-way cycle tracks on either side of the roadway and maintain parallel parking on the eastside of the roadway. This concept meets all of the community goals listed above and provides improved bicycle and pedestrian connectivity along the corridor. In addition, a roundabout is proposed at the intersection of Mission Boulevard and Pacific Beach Drive. Implementation of such a traffic control feature at this location with high pedestrian activity would reduce pedestrian crossing distance and increase their visibility to motorists. The roundabout could also function as a gateway feature into the Mission Boulevard study area and Pacific Beach. The Preferred Concept is displayed on Figure 5-10, while Table 5-2 shows the results of the benefits of this design concept.

FIGURE 5-10: PREFERRED CONCEPT - TWO-LANES WITH ONE-WAY CYCLE TRACKS AND PARALLEL PARKING



FEATURES:

- One northbound travel lane
- One southbound travel lane
- Two-way left-turn
- One-way cycle track (both sides)
- Parallel parking on east side
- No parking on west side
- Roundabout at Mission Boulevard / Pacific Beach Drive intersection



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TABLE 5-2: PREFERRED CONCEPT BENEFIT MATRIX

	PEDESTRIAN		BICYCLE		TRANSIT	VEHICLE		COST	
CONCEPT	PEQE	PEDESTRIAN EXPOSURE	LTS	ENHANCED BICYCLE FACILITY	BIKE/PED CONNECTIVITY TO TRANSIT	PARKING SUPPLY	AUTO TRAVEL TIME ALONG CORRIDOR	COST & TIMING	TOTAL

As shown on Table 5-2, the Preferred Concept scores higher than existing conditions and the seven previous design concepts (shown on Table 5-1) by yielding a total score of 32 points.

More information on the planning study concept development process for Mission Boulevard are provided in Chapter 5 of the MBPSAT Planning Study Technical Report (Appendix A).



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PROPOSED CONCEPTS

6

- 6.1 Planning Study Proposed Concepts
- 6.2 Mission Boulevard – A Complete Corridor Concept
- 6.3 Side Streets Concepts

6.1 PLANNING STUDY PROPOSED CONCEPTS

The proposed concepts for the study area have been refined through the preparation of this planning study based on existing conditions, technical evaluation, input from City departments, in addition to community input (as described in Section 5).

The proposed concepts prepared as part of the Mission Boulevard Public Spaces and Active Transportation planning study include two main components:

1. A proposed concept for Mission Boulevard between Pacific Beach Drive and Diamond Street (section 6.2), and;
2. Proposed concepts for each of the side streets, which include the following streets (between Mission Boulevard and the boardwalk), Diamond Street, Emerald Street, Felspar Street, Garnet Avenue, Hornblend Street, Grand Avenue, Thomas Avenue, Reed Avenue, Oliver Avenue, Pacific Beach Drive, and Ocean Boulevard (section 6.3).

The proposed concepts provide a vision for an enhanced pedestrian and bicycle environment, while maintaining vehicular traffic along the streets within the study area.



6.2 MISSION BOULEVARD – A COMPLETE CORRIDOR CONCEPT

The proposed concept for Mission Boulevard encompasses “Complete Streets” components as it accommodates and balances all travel modes along the Mission Boulevard corridor. Implementation of these concepts would create over half-a-mile of inviting and convenient bicycle facilities that would provide access to key community destinations and would make streets safer and more comfortable for people who drive, bike, walk, and take transit.

MISSION BOULEVARD

The proposed concept would provide the following pedestrian and bicycle enhancements on Mission Boulevard:

- Class IV one-way cycle-tracks that provide a vertical and horizontal separation between bicyclists and vehicles. This creates a safer and more inviting facility for bicyclists of all ages and abilities and will also provide motorized scooters a safe area to travel in and alleviate conflicts with pedestrians and vehicles.
- Bike signals and leading pedestrian intervals (LPI's) to eliminate vehicle and pedestrian/bicycle conflicts at intersection crosswalks. This signal modification would increase the visibility of pedestrians and bicyclists crossing as they would enter the intersection before the vehicle is given the green light to turn right. Additionally, right-turn on red would no longer be permitted, which would eliminate vehicle and bicycle/ pedestrian conflicts crossing the intersection.

- Implementation of bicycle and scooter parking and storage areas that are located outside of the public realm and walkways. This will help to limit conflicts and barriers for pedestrians while enhancing opportunities for these modes.

- Bulb-outs at certain intersection crosswalks to reduce pedestrian crossing, increase pedestrian visibility, and help reduce vehicle speeds.

The proposed concept would provide the following transit enhancements on Mission Boulevard:

- Bus islands for the northbound bus stops to eliminate conflicts between transit loading and bicyclists. Additionally, the bus islands would provide a continuous protected bike lane through bus stops and increases transit dwell time.

- Dedicated space for buses at bus stops to eliminate conflicts between transit and motorists at signalized intersections. This also provides an opportunity to facilitate transit turning right at the intersection.

The proposed concept would provide the following vehicular enhancements on Mission Boulevard:

- Reducing the travel lanes on Mission Boulevard to one lane in each direction would help reduce travel speeds to be more compatible with the character of the roadway and conducive to pedestrian and bicycle travel.

- A continuous two-way left-turn lane throughout the corridor would benefit traffic flow and improve safety as it could reduce rear-ends, turning-related crashes, and provides an additional lane for emergency vehicles.

PARKING

Any existing on-street parallel parking on the west side of Mission Boulevard would be removed to accommodate the one-way cycle track in the southbound direction. On-street parallel parking would continue to be provided along the east side of Mission Boulevard and would even extend to segment portions where there are no on-street parking spaces today. The on-street parking on the east side would create a physical separation between bicyclists and moving vehicles. Overall, the proposed concept may result in the loss of an estimated 16 on-street spaces (47 spaces to 31 spaces) along Mission Boulevard.

A BALANCING ACT

As described in the previous sections, balancing the Mission Boulevard corridor would require trade-offs from one mode to benefit another. The proposed concept for Mission Boulevard would give people options to travel as it would help make travel choices more convenient, safe, and attractive so people do not have to solely rely on their automobile. It would also improve efficiency and capacity on Mission Boulevard by moving more people in the same amount of space.

As part of the planning study, preliminary engineering drawings (i.e., 30% CAD drawings) for the proposed concept for Mission Boulevard has been prepared to help determine feasibility and guide potential costs needed for future implementation. Excerpts of these drawings are included in Figures 6-2 through 6-4.

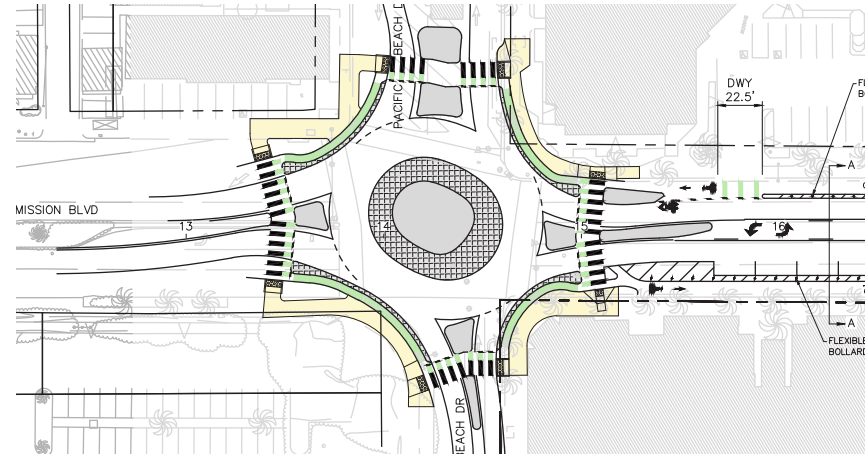
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ROUNDBABOUT AT PACIFIC BEACH DRIVE AND MISSION BOULEVARD

Roundabouts often provide safer, more efficient traffic control through enhanced low-speed travel and circulation when compared to the conventional intersection design. Roundabouts also complement the Complete Streets objective as they are designed to benefit all modes of travel.

Mission Boulevard's proposed concept includes a roundabout at its intersection with Pacific Beach Drive. The mobility analysis determined that this type of traffic control is appropriately meets the needs of serving high pedestrian activity adjacent to the intersection and still maintain traffic flow. Also, the reduction in vehicular speeds would further reduce collisions and benefit cyclists and pedestrians traversing through this intersection.

Additionally, roundabouts offer opportunities to provide attractive entries and focal points, and such an intersection treatment at Mission Boulevard and Pacific Beach Drive would serve as a gateway into Pacific Beach.

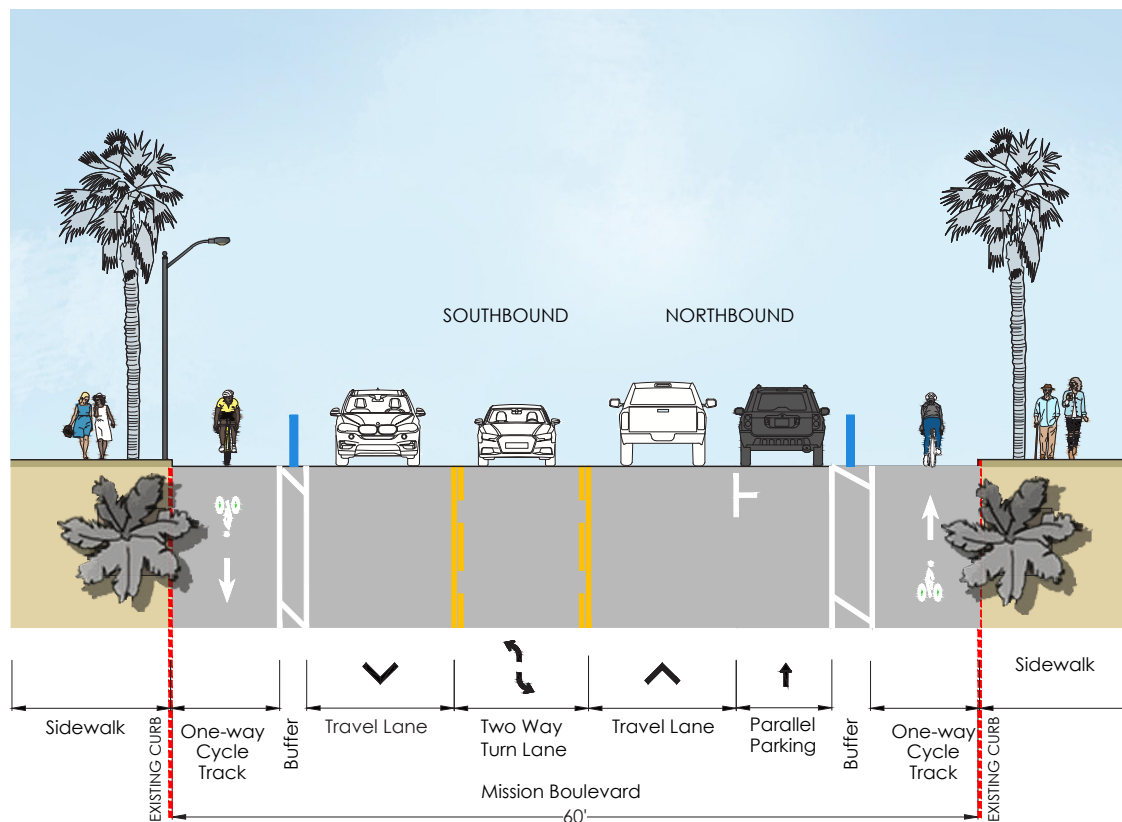


The preliminary engineering design (shown above) and roundabout analysis prepared for Mission Boulevard at Pacific Beach Drive (contained in Appendix A: Technical Report) provide an in-depth assessment of the potential roundabout implementation.

MISSION BOULEVARD PROPOSED CONCEPT - ROADWAY CONFIGURATION

As shown in Figures 6-1 through 6-4, the number of travel lanes would be reduced from four/three lanes (depending on location) to one northbound, one southbound lane and a two-left-turn lane throughout the entire study area. One of the defining features of Mission Boulevard's proposed concept is an 8-foot wide cycle track on each side of Mission Boulevard. The cycle track would provide for a bicycle facility that is physically separated from vehicular traffic both horizontally with a two- to three-foot buffer and vertically with bollards and/or a parking lane.

FIGURE 6-1: MISSION BOULEVARD PROPOSED CONCEPT - (CROSS SECTION)



MISSION BOULEVARD - KEY IMPROVEMENTS:

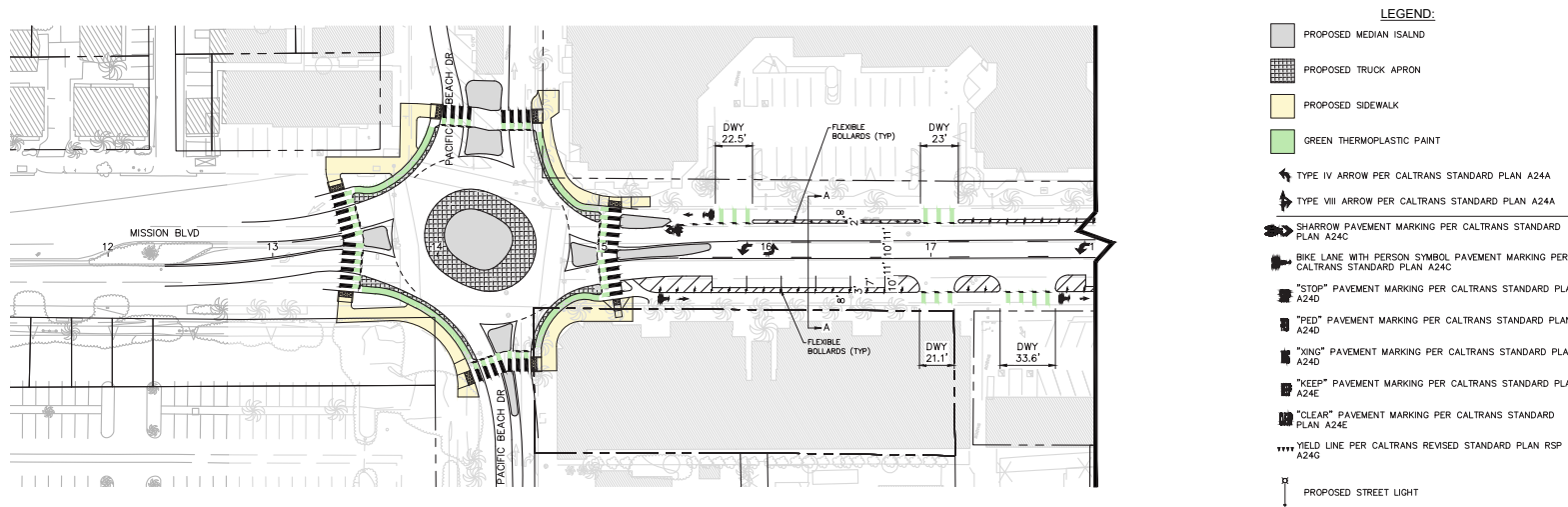
- One travel lane in each direction with a center turn lane or two-way left-turn lane throughout the entire corridor
- One-way cycle tracks in each direction with on-street parallel parking on the east side creating the physical separation
- A roundabout at the intersection of Pacific Beach Drive and Mission Boulevard creating a gateway element to the community (see Figure 6-2)
- Storage for micromobility devices such as scooters
- At signalized intersections:
 - Prohibiting right turning traffic on red;
 - Implementing lead-pedestrian/ bicycle intervals;
 - Implementing protected left-turn phasing;
 - Bus islands at key transit stops; and
 - Corner island at Grand Avenue intersection to increase visibility of pedestrians and bicylists.
- ADA curb ramps and bulb-outs at select corners based on feasibility

See Figures 6-2, 6-3, 6-4, & Appendix A.

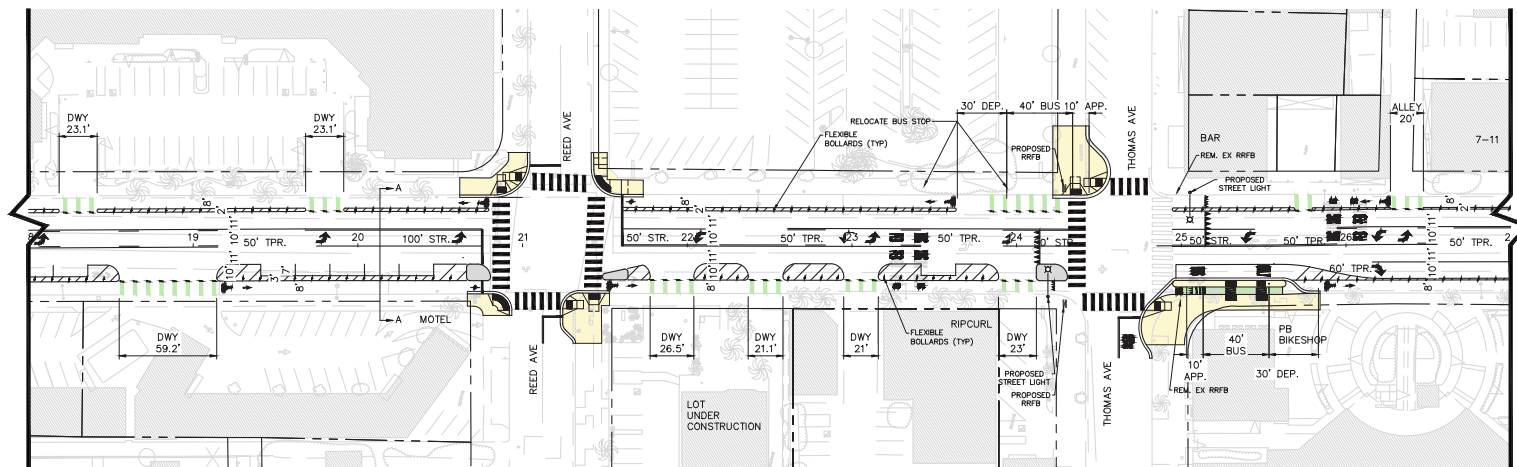
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FIGURE 6-2: MISSION BOULEVARD PROPOSED CONCEPT - 30% DESIGN (1 OF 3)

(The images below are excerpts from the Technical Report (Appendix A), please refer to Appendix A for complete drawings/notes)



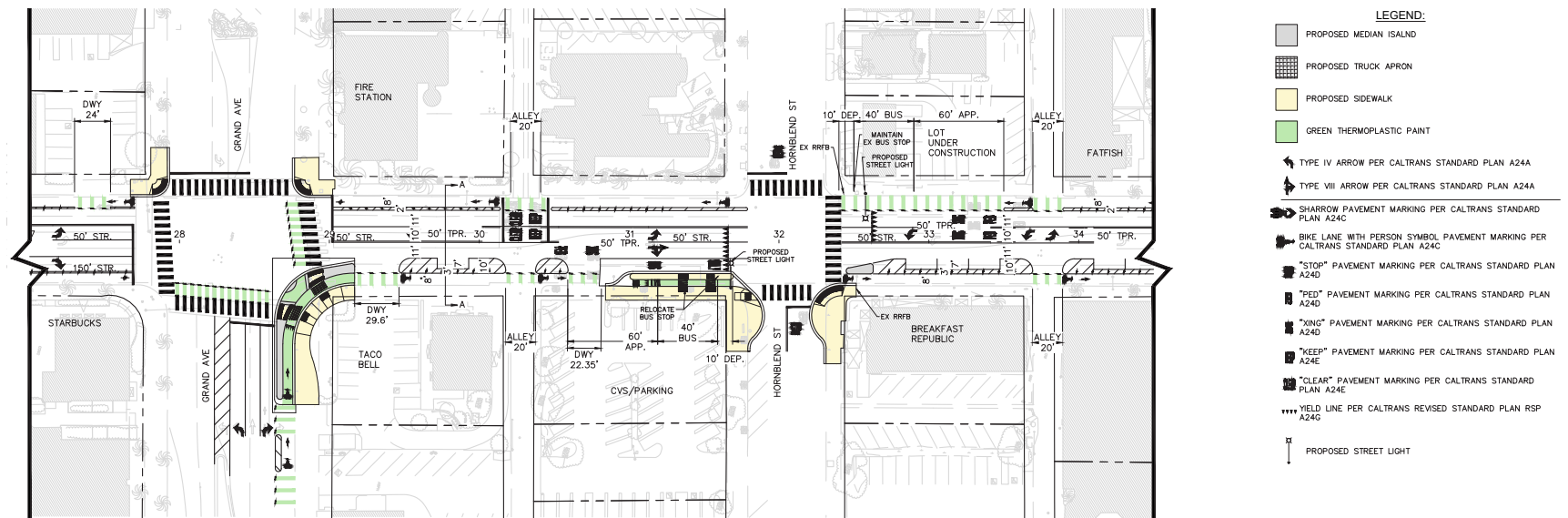
Mission Boulevard Proposed concept - Pacific Beach Intersection (from Sheet 3)



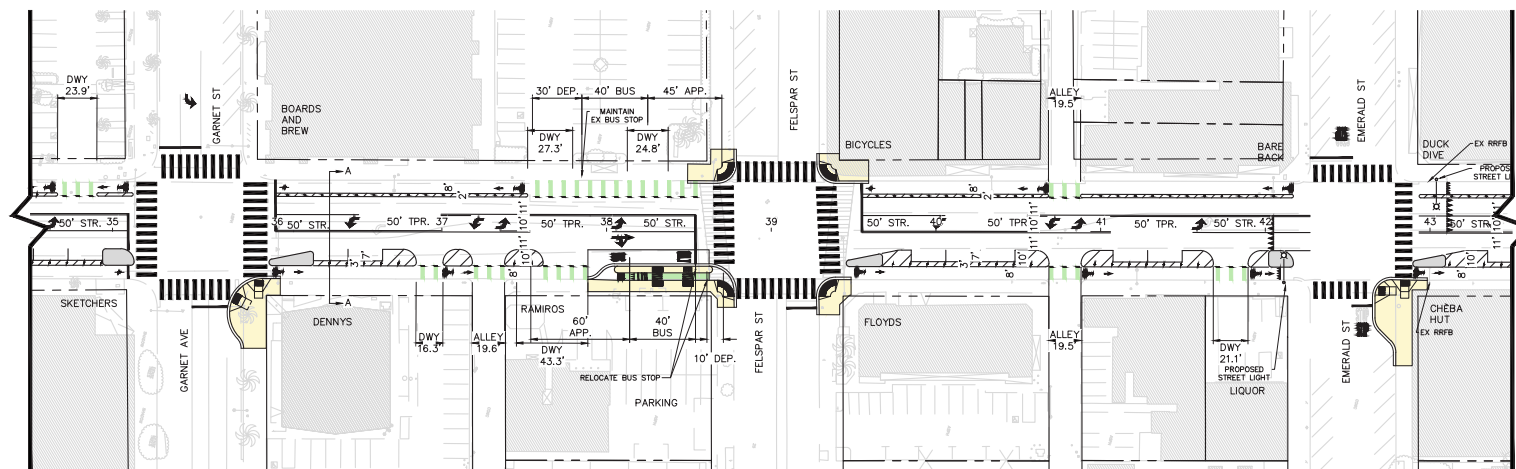
Mission Boulevard Proposed concept - Reed Avenue and Thomas Avenue Intersections (from Sheet 3)

FIGURE 6-3: MISSION BOULEVARD PROPOSED CONCEPT - 30% DESIGN (2 OF 3)

(The images below are excerpts from the Technical Report (Appendix A), please refer to Appendix A for complete drawings/notes)



Mission Boulevard Proposed concept - Grand Avenue and Hornblend Street Intersections (from Sheet 4)

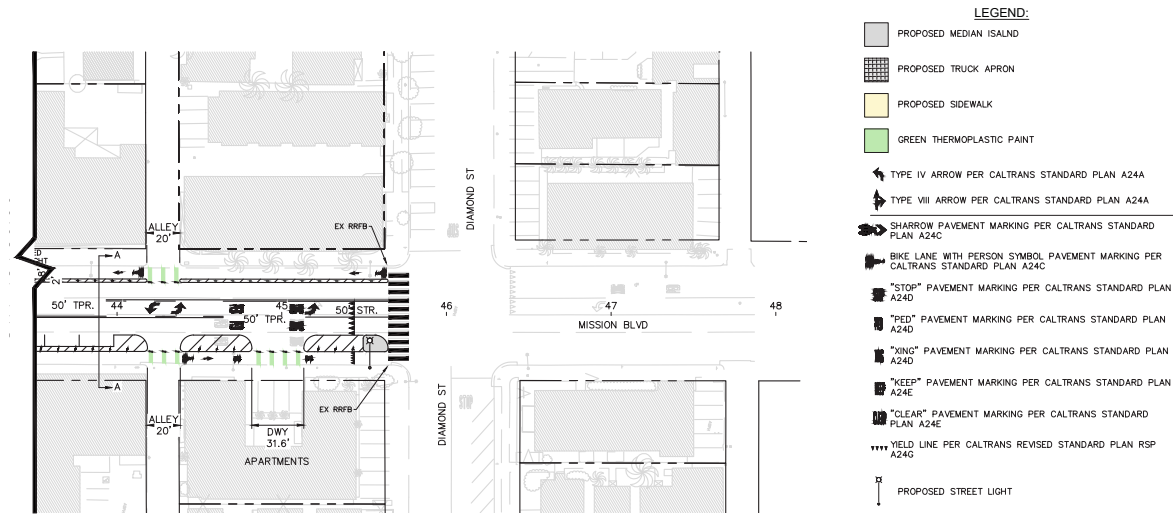


Mission Boulevard Proposed concept - Grand Avenue and Felspar Street Intersections (from Sheet 4)

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FIGURE 6-4: MISSION BOULEVARD PROPOSED CONCEPT - 30% DESIGN (3 OF 3)

(The images below are excerpts from the Technical Report (Appendix A), please refer to Appendix A for complete drawings/notes)



Mission Boulevard Proposed concept - Diamond Street Intersection (from Sheet 5)

6.3 SIDE STREETS CONCEPTS

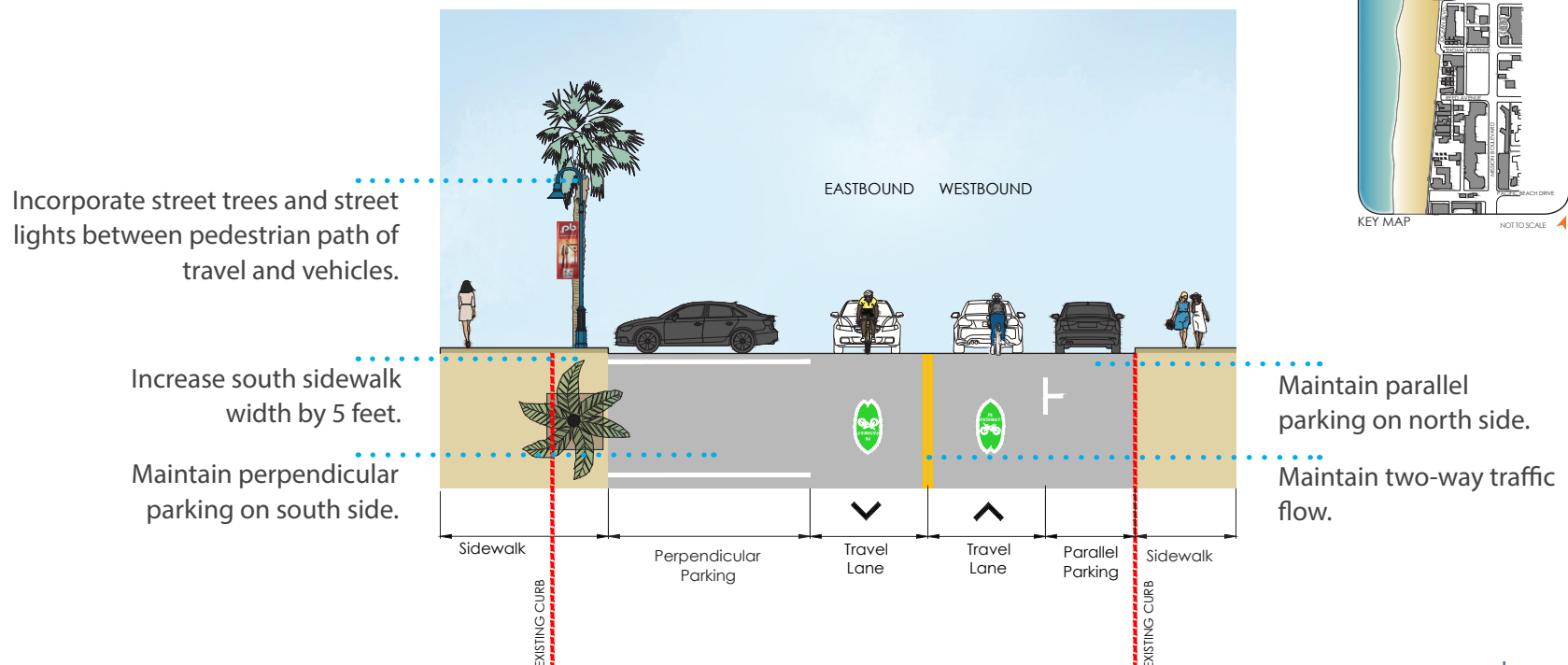
Concurrently to developing a proposed concept for Mission Boulevard and its intersections, different options for improving multi-modal mobility, enhancing access to the beach and providing opportunities for public spaces within the public right-of-way of the side streets between Mission Boulevard and the boardwalk/Ocean Boulevard have been evaluated. The proposed concept for Mission Boulevard for each of those side streets is included in the following pages.

6.3.1 DIAMOND STREET

Diamond Street, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, parallel parking on its north side and perpendicular parking on its south side. At the end of Diamond Street, Ocean Boulevard is currently closed to vehicular traffic mid-block.

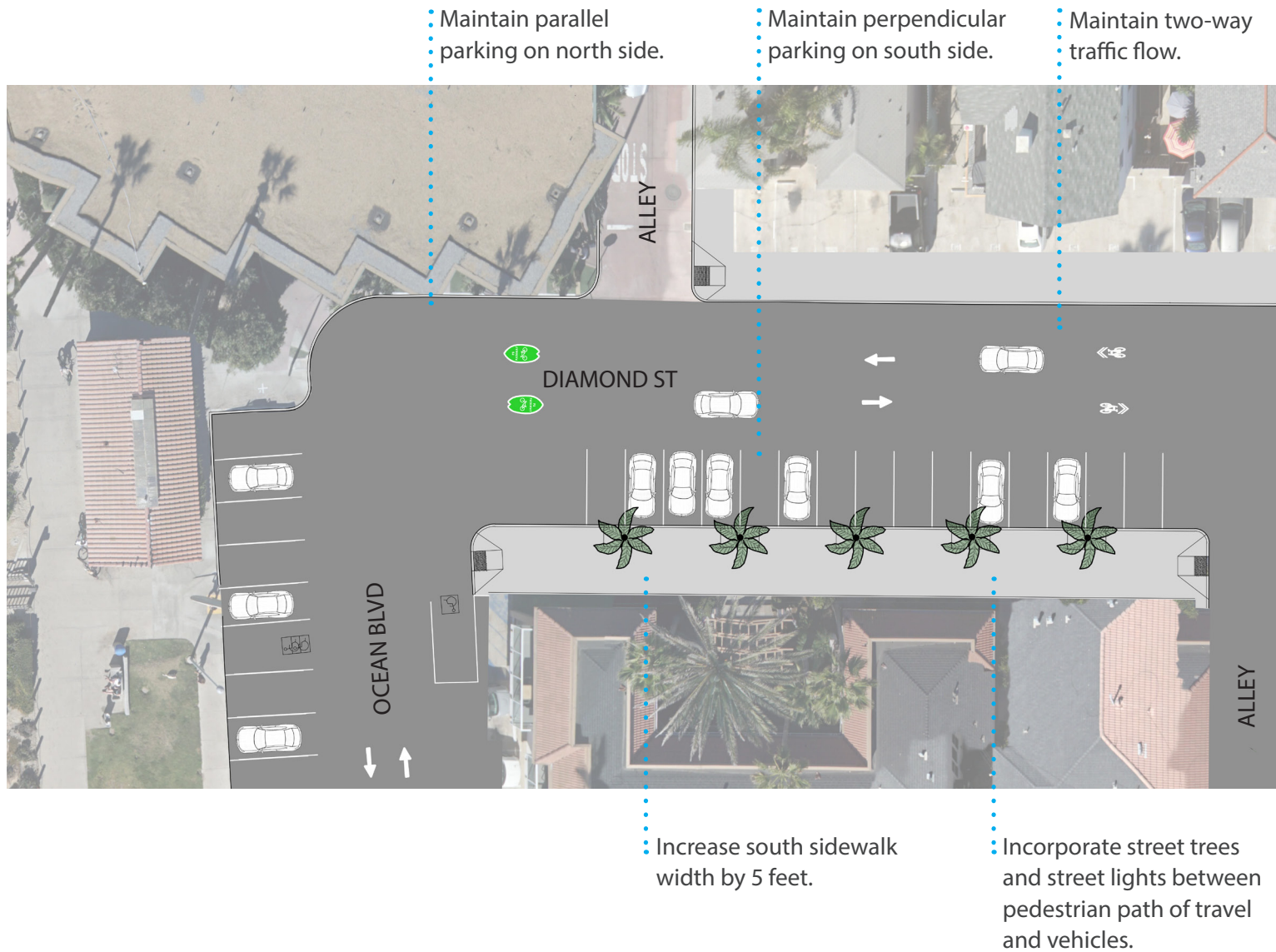
The proposed concept for Diamond Street would increase its sidewalk width on its south side, maintain perpendicular parking on its south side, and parallel parking on its north side. The proposed concept would maintain the two-way traffic flow, and would maintain Ocean Boulevard's mid-block closure.

FIGURE 6-5: DIAMOND STREET CONCEPT - CROSS SECTION



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FIGURE 6-6: DIAMOND STREET CONCEPT - PLAN VIEW

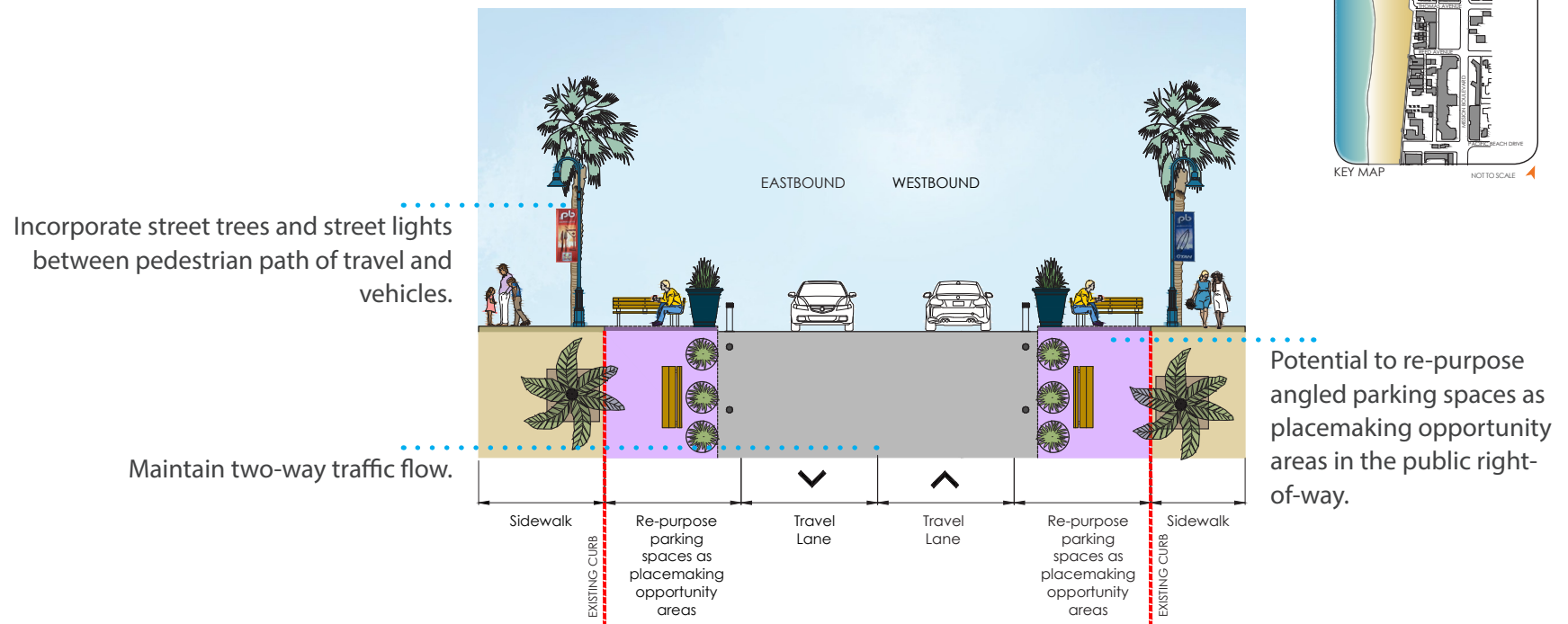


6.3.1 EMERALD STREET

Emerald Street, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, angled parking on its north and south sides. At the end of Emerald Street, Ocean Boulevard is currently closed to vehicular traffic mid-block.

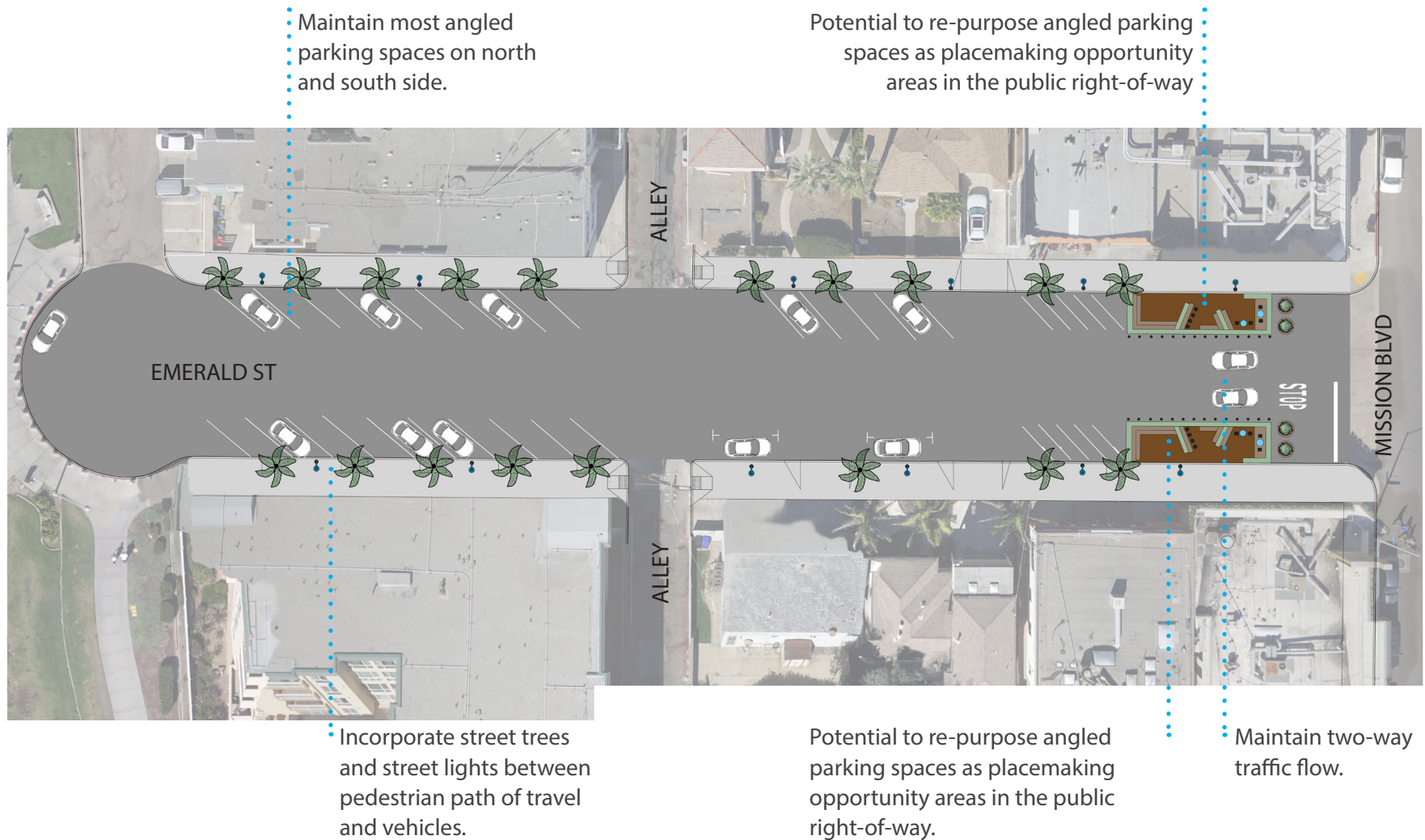
The proposed concept for Emerald Street would maintain its two-way traffic flow, its curb-to-curb width and Ocean Boulevard's mid-block closure. The concept identifies the potential to re-purpose some angled parking spaces (east of alley) as placemaking opportunity areas in the public right-of-way.

FIGURE 6-7: EMERALD STREET CONCEPT - CROSS SECTION



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-8: EMERALD STREET CONCEPT - PLAN VIEW

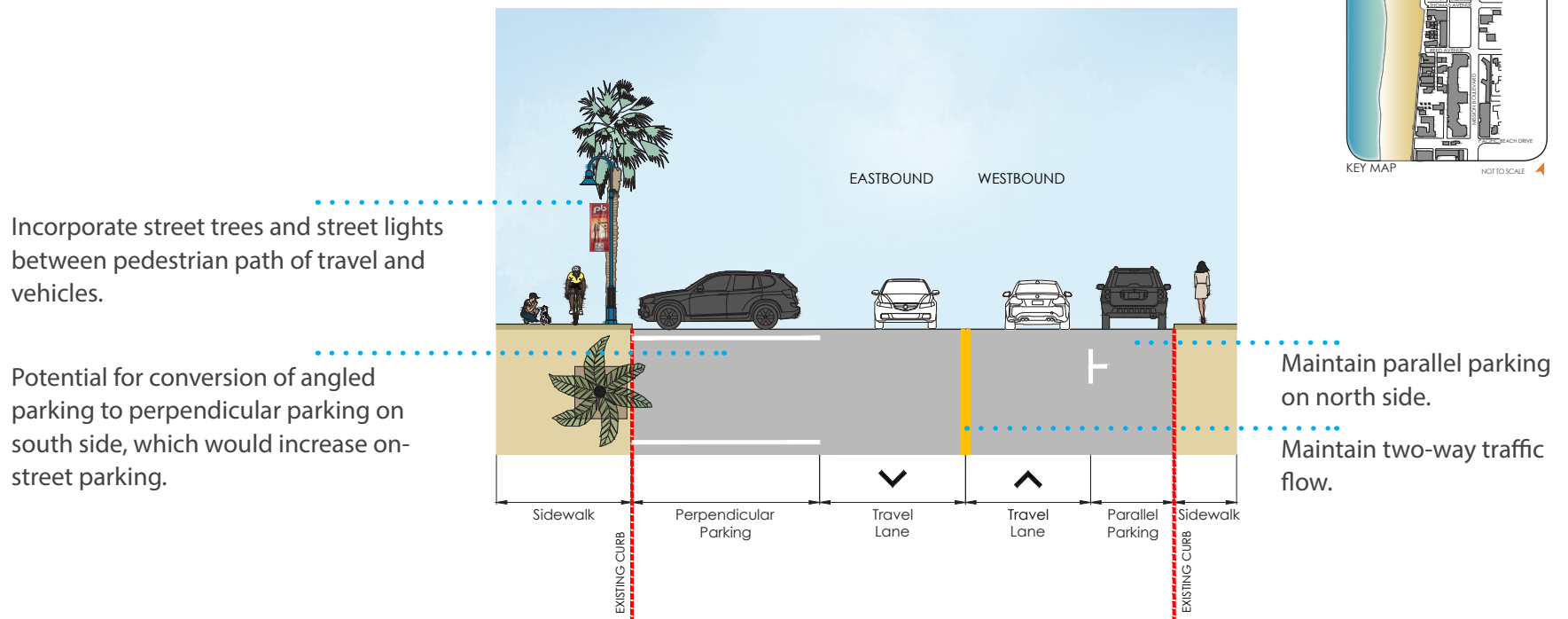


6.3.1 FELSPAR STREET

Felspar Street, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, parallel parking on its north side, and angled parking on its south side.

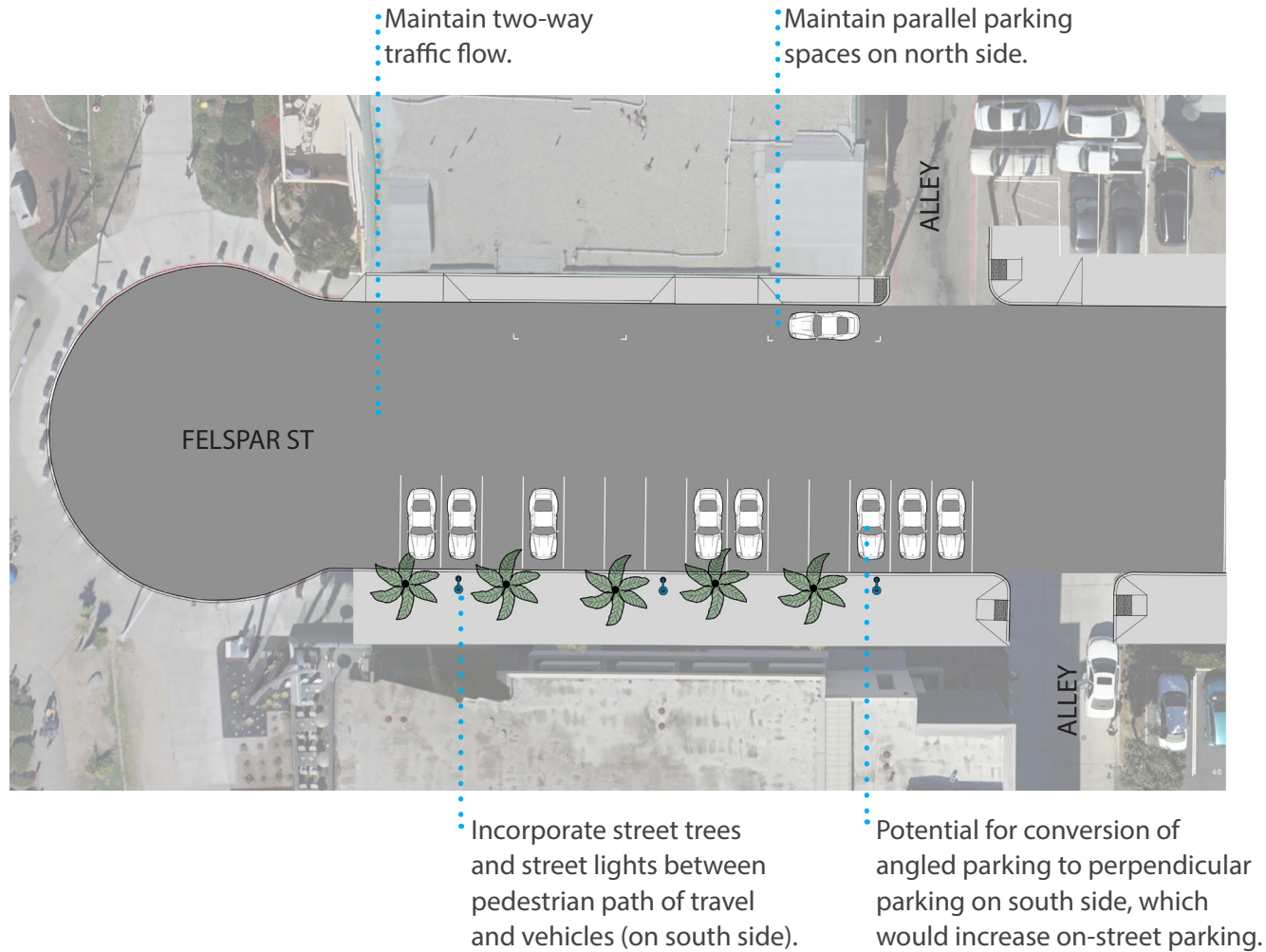
The proposed concept for Felspar Street would maintain its two-way traffic flow, and maintain parallel parking on its north side. The concept proposes the conversion of angled parking to perpendicular parking on the south side of Felspar Street, which would increase the number of on-street parking spaces.

FIGURE 6-9: FELSPAR STREET CONCEPT - CROSS SECTION



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-10: FELSPAR STREET CONCEPT - PLAN VIEW



6.3.1 GARNET AVENUE

Garnet Avenue, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, and angled parking on its north and south sides.

East of alley:

The proposed concept for Garnet Avenue would maintain the two-way traffic flow along the roadway. The concept proposes to maintain angled parking on its south side and identifies the potential to re-purpose angled parking spaces on the north side as placemaking opportunity areas in the public right-of-way.

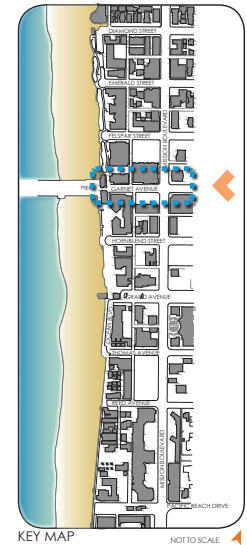
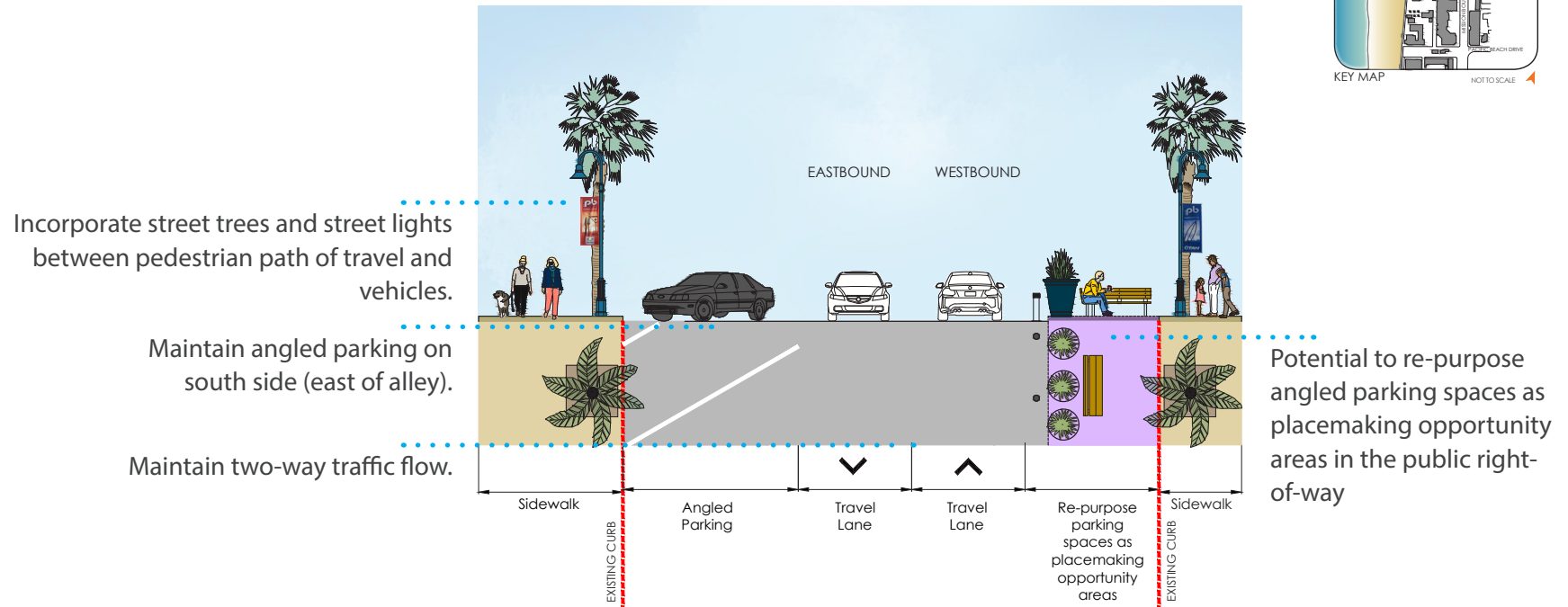
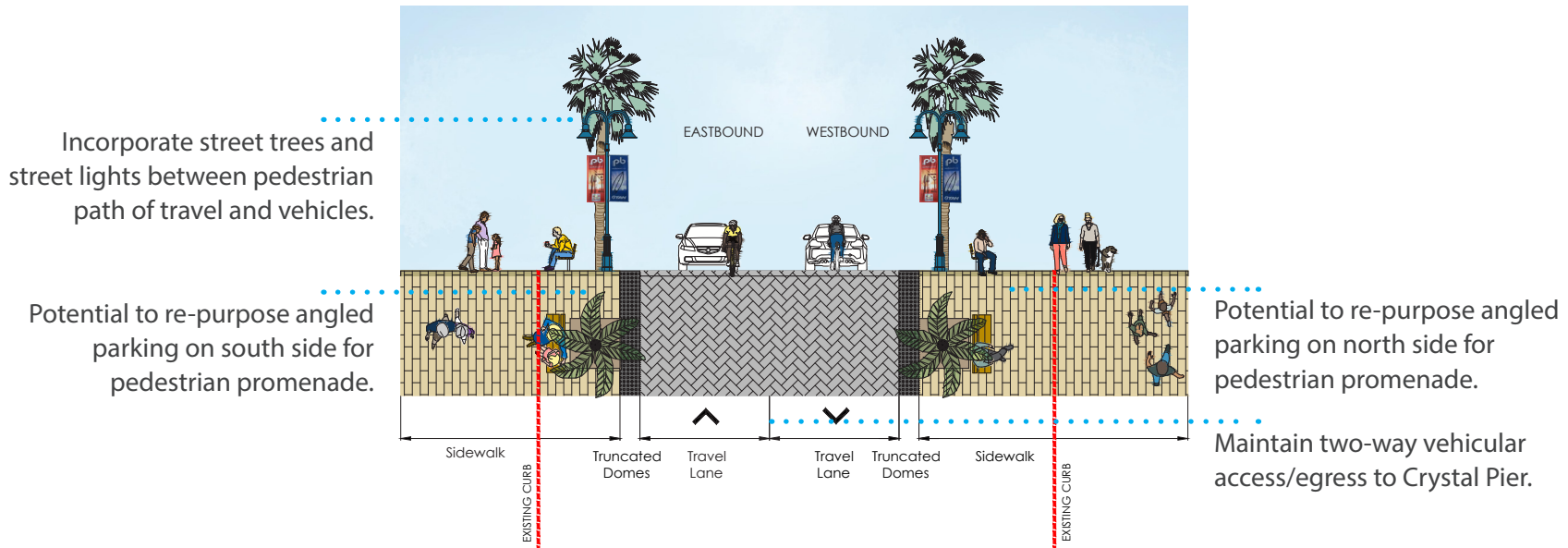


FIGURE 6-11: GARNET AVENUE CONCEPT - CROSS SECTION 1 (EAST OF ALLEY)



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-12: GARNET AVENUE CONCEPT - CROSS SECTION 2 (WEST OF ALLEY)



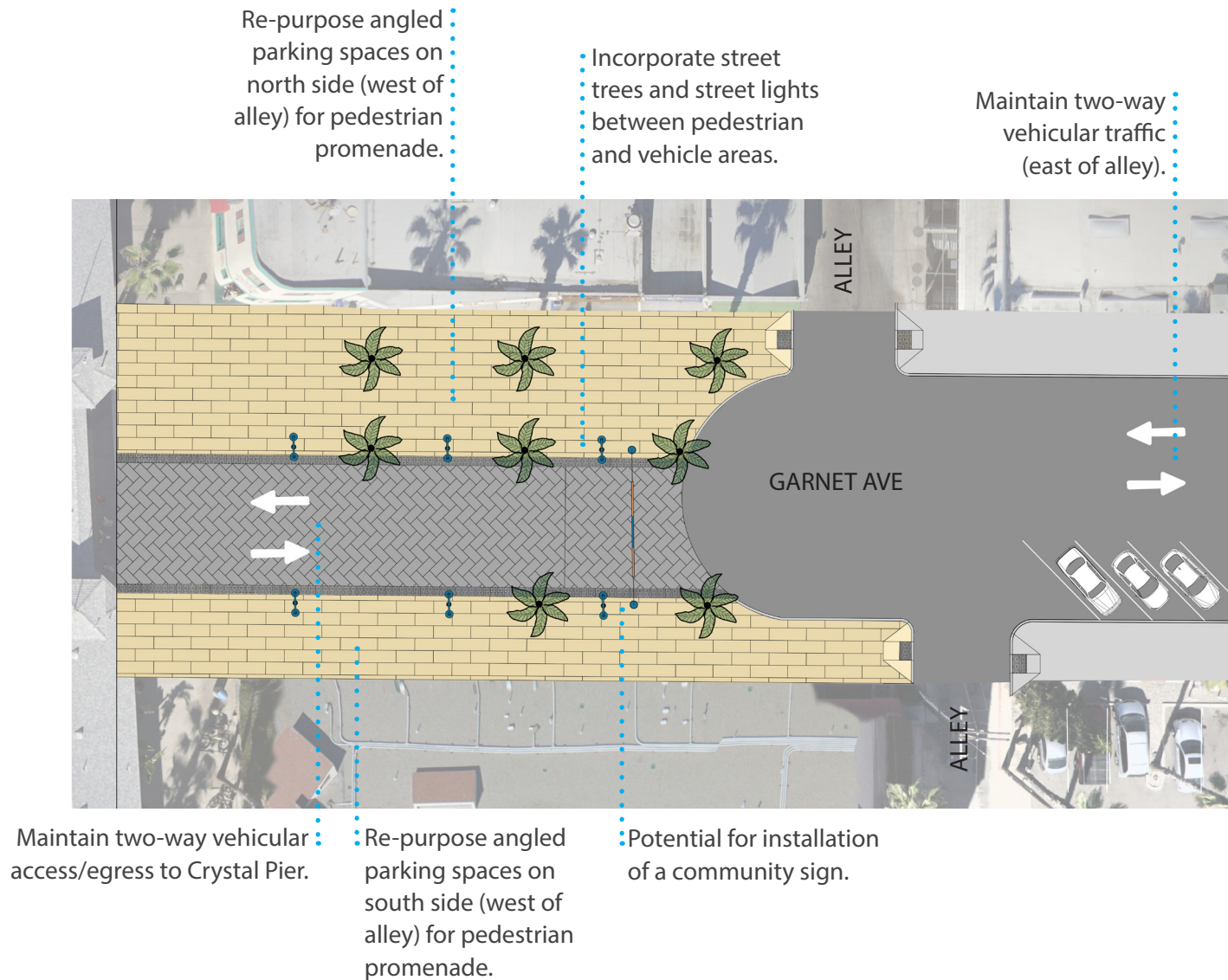
West of alley:

The concept proposes to redesign Garnet Avenue as a “woonerf” street, which consists of a street oriented towards the pedestrian and bicyclists. The concept proposes to re-purpose the parking spaces west of the alley to provide a widened pedestrian area or promenade on the north and south side of Garnet Avenue. Vehicular traffic would still be available, however only to provide access/egress to the Crystal Pier, which reduce the conflicts between pedestrians, bicyclists, and motor vehicles. Pedestrian areas and vehicular areas would be leveled at the sidewalk level, providing a plaza-like environment. A delineation between pedestrian and vehicular areas could be accomplished through the use of a combination of the following elements: truncated domes, different color/texture of paving, as well as vertical elements such as concrete planters, bollars, street lights, and street trees.

WHAT ARE WOONERFS?

A woonerf is a street or portion of a street where motorists, pedestrians, cyclists share the street; however, pedestrians have priority over vehicles. The street is designed without barriers between sidewalks and the roadway, and is generally free of traffic lights, stop signs, and curbs. The removal of barriers and typical roadway infrastructure not only gives pedestrians freedom to roam, but counter-intuitively, improves safety by forcing motorists to slow down, pay attention, and negotiate right-of-way with pedestrians and cyclists. Wooners further promote greater use of the public space by allowing for new features such as planters, street trees, benches, and other street furniture, which in turn increases social interaction opportunities.

FIGURE 6-13: GARNET AVENUE CONCEPT - PLAN VIEW



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-14: GARNET AVENUE CONCEPT (WEST OF ALLEY) - PERSPECTIVE VIEW



This perspective view of Garnet Avenue is for illustrative purposes only. Please refer to plan view, and cross section(s) in previous pages for proposed improvements as part of this concept. Further engineering analysis/design would be required prior to implementation. Textures, materials, colors, and placement of street furnishing is for illustrative purposes only, further refinement/specifications would be required prior to implementation.

6.3.1 HORNBLEND STREET

Hornblend Street, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, parallel and angled parking on north side, and parallel parking on its south side.

The proposed concept for Hornblend Street would maintain the two-way traffic flow and parking configuration along the roadway. The proposed concept identifies a furnishing area for street trees and street lights along its north and south sidewalks.

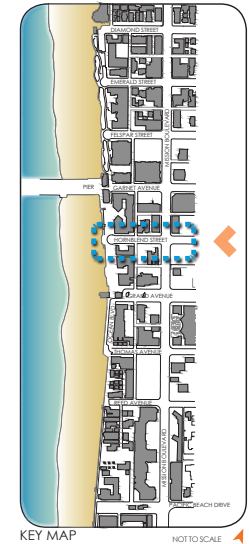
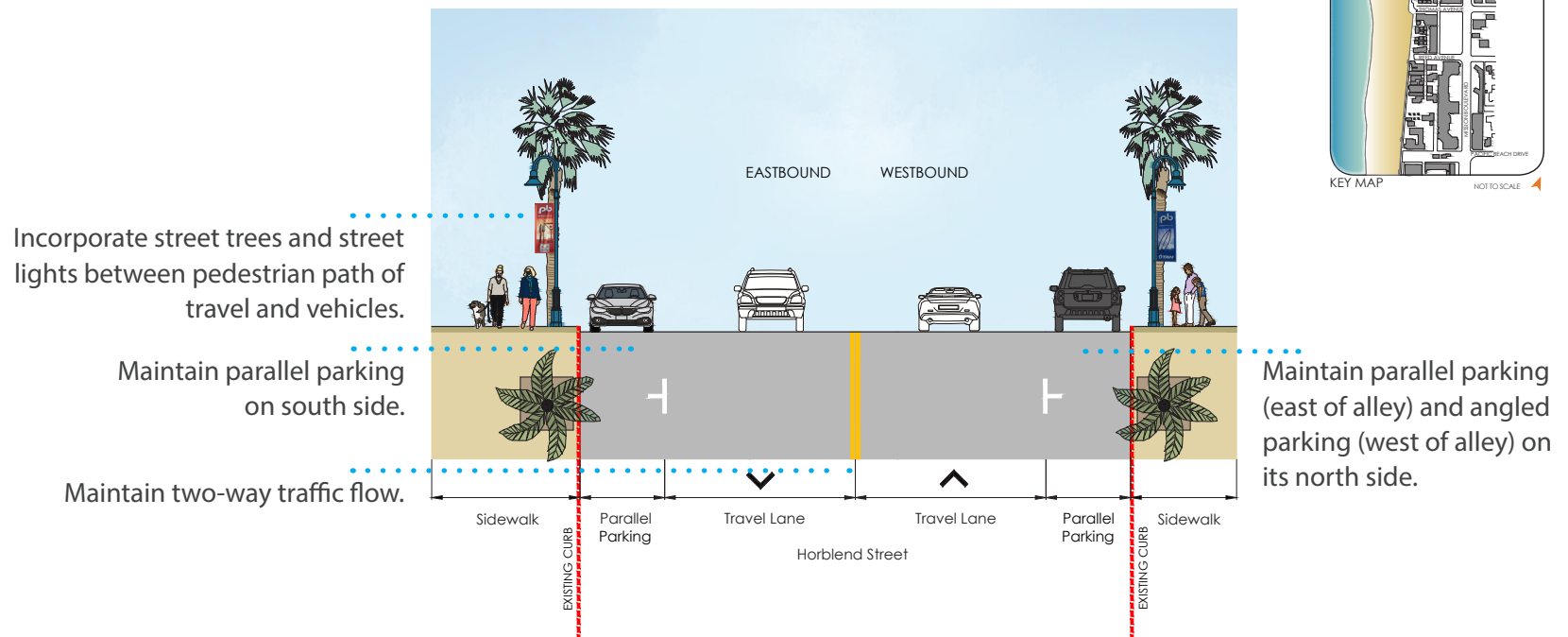
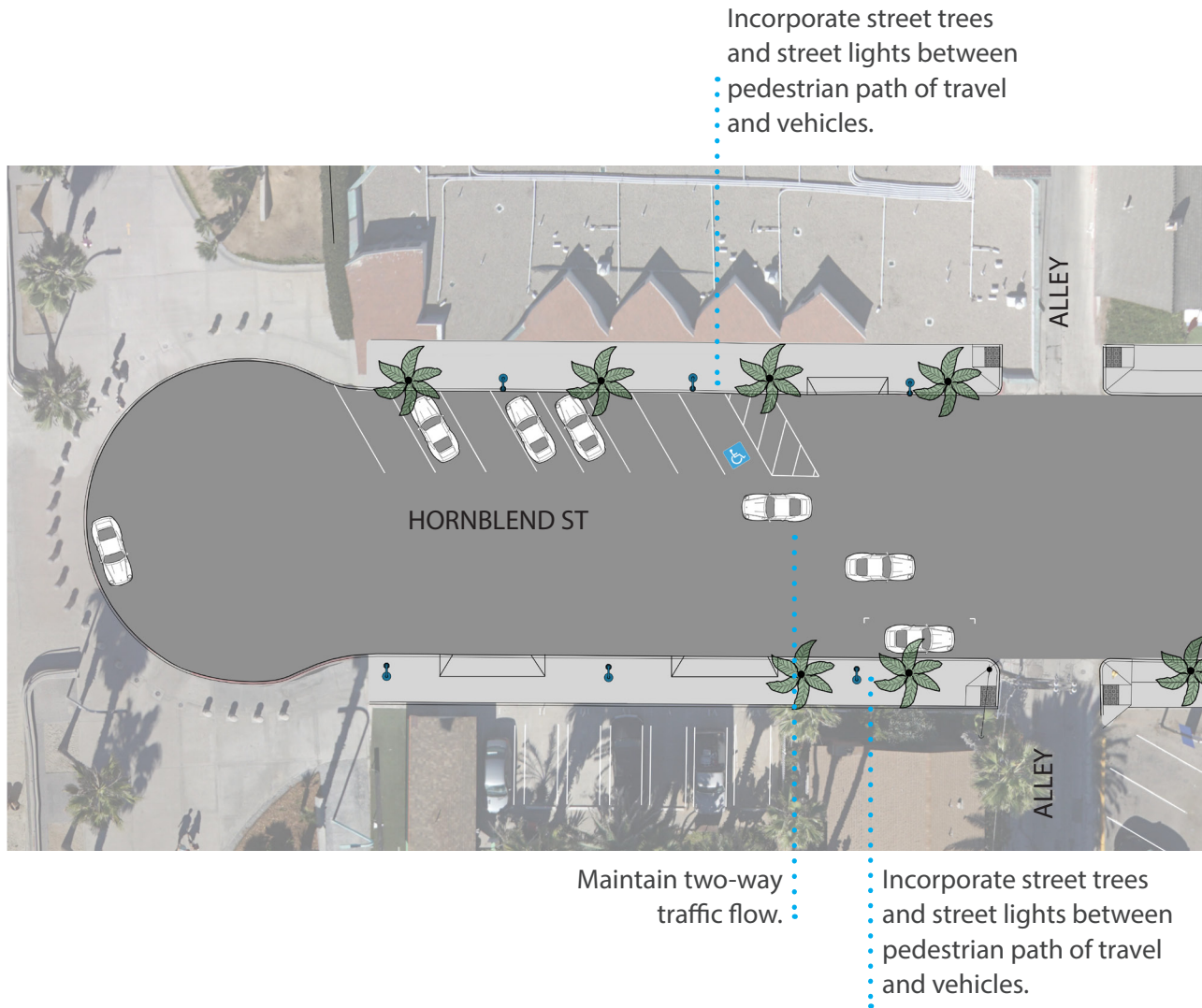


FIGURE 6-15: HORNBLEND STREET CONCEPT - CROSS SECTION



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-16: HORNBLEND STREET CONCEPT - PLAN VIEW



6.3.1 GRAND AVENUE

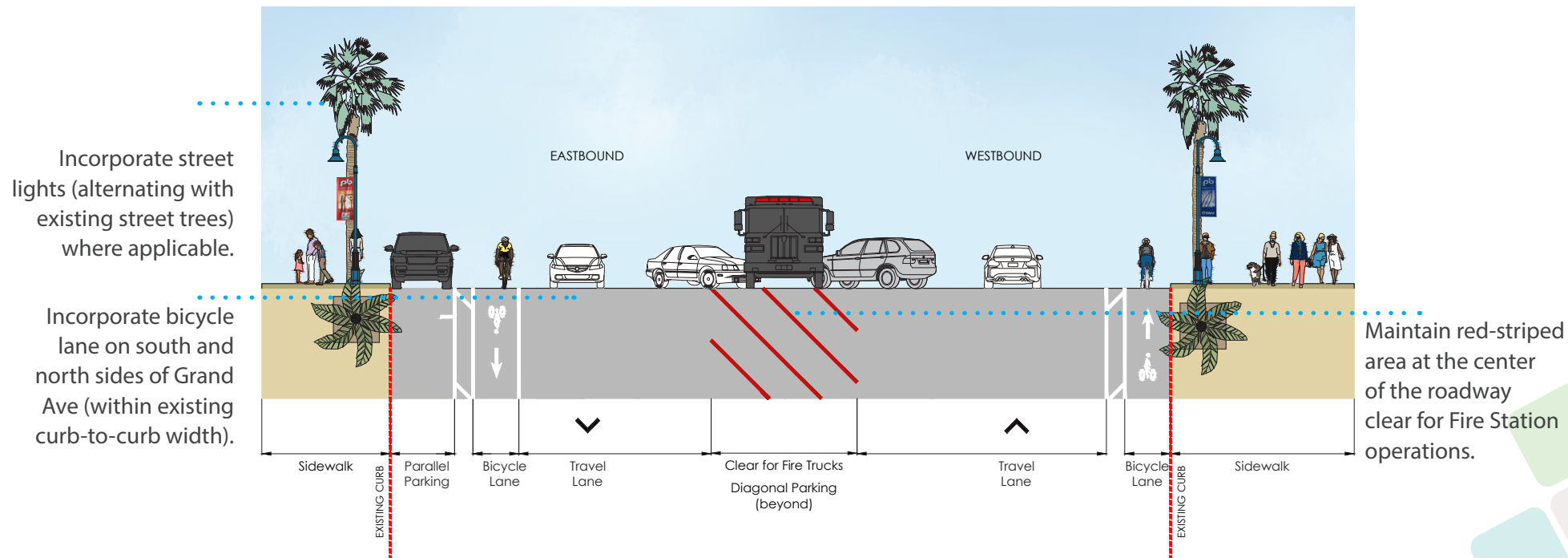
Grand Avenue, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, some parallel parking spaces on south side, and a group of angled parking spaces at the center of the road.

East of alley:

The proposed concept for Grand Avenue would maintain the two-way traffic flow along the roadway, while reducing the travel lane widths to accommodate bicycle lanes on north and south sides east of the alley.



FIGURE 6-17: GRAND AVENUE CONCEPT - CROSS SECTION 1 (EAST OF ALLEY)

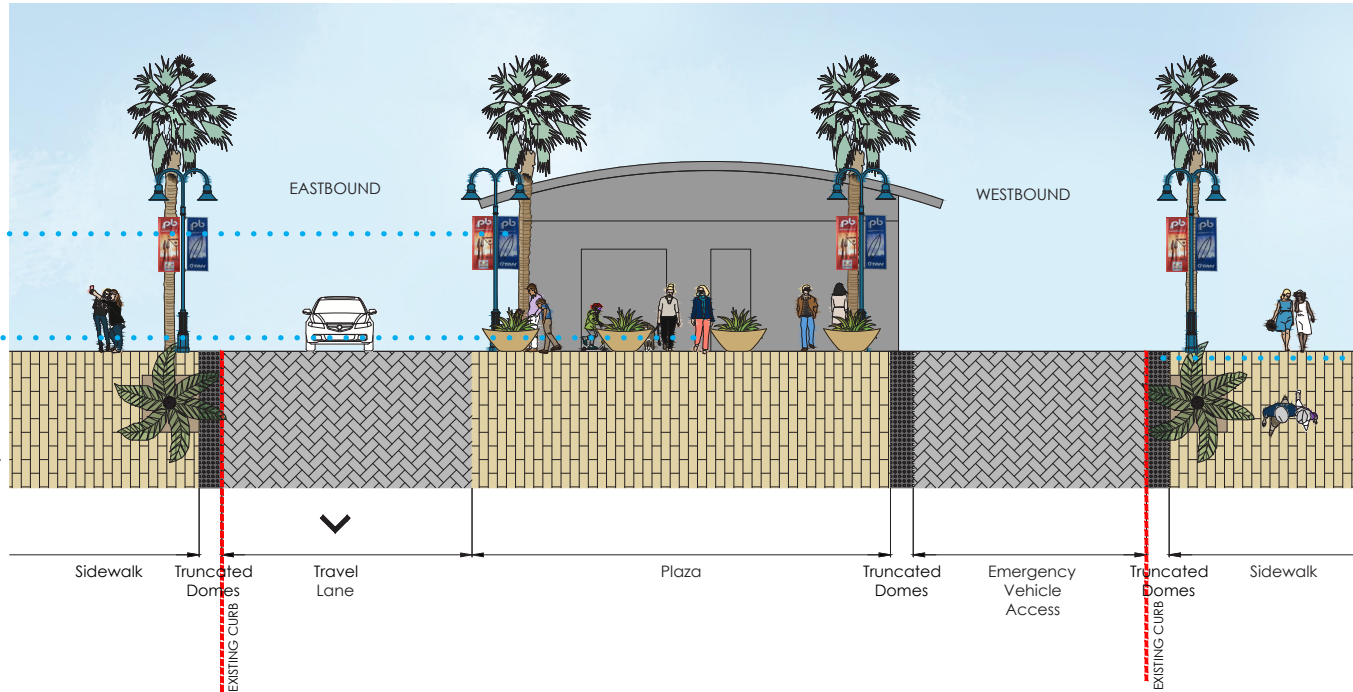


Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-18: GRAND AVENUE CONCEPT - CROSS SECTION 2 (WEST OF ALLEY)

Incorporate street trees, street lights, concrete planters, and bollards, between pedestrian and vehicular areas.

Re-purpose some parking spaces (center of the roadway) to incorporate woonerf treatment/pedestrian plaza west of the alley.



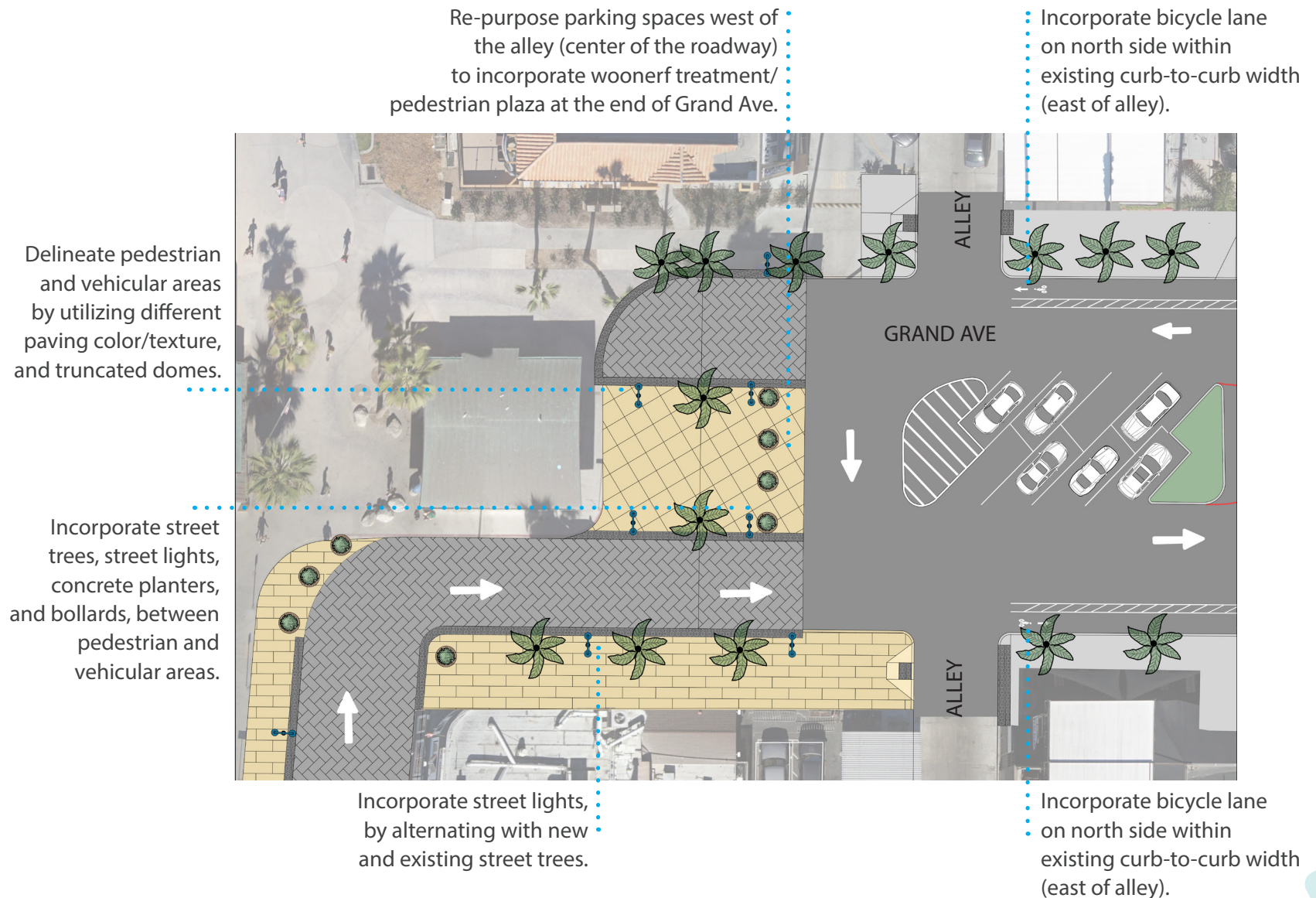
Delineate pedestrian and vehicular areas by utilizing different paving color/texture, and truncated domes.

West of alley:

The concept proposes to redesign the end of Grand Avenue (west of the alley) as a “woonerf” street, which consists of a street oriented towards the pedestrian and bicyclists, but still allows for slow speed vehicular circulation. The concept proposes to re-purpose some of the parking spaces at the center of the road to incorporate a woonerf treatment at the end of Grand Avenue (east of the public restrooms). Pedestrian areas and vehicular areas within the woonerf portion of Grand Avenue would be leveled at the

sidewalk level, providing a plaza-like environment. A delineation between pedestrian and vehicular areas could be accomplished through the use of a combination for the following elements: truncated domes, different color/texture of paving, as well as vertical elements such as concrete planters, bollars, street lights, and street trees.

FIGURE 6-19: GRAND AVENUE CONCEPT - PLAN VIEW



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-20: GRAND AVENUE CONCEPT (WEST OF ALLEY) - PERSPECTIVE VIEW



This perspective view of Grand Avenue is for illustrative purposes only. Please refer to plan view, and cross section(s) in previous pages for proposed improvements as part of this concept. Further engineering analysis/design would be required prior to implementation. Textures, materials, colors, and placement of street furnishing is for illustrative purposes only, further refinement/specifications would be required prior to implementation.

6.3.1 OCEAN BOULEVARD

Ocean Boulevard, between Thomas Avenue and Grand Avenue, currently incorporates one-way traffic flow and angled parking spaces adjacent to the boardwalk.

The proposed concept for this segment of Ocean Boulevard proposes to redesign as a “woonerf” street, which consists of a street oriented towards the pedestrian and bicyclists, but still allows for slow speed vehicular circulation. The concept proposes to re-purpose the parking spaces adjacent to the boardwalk to incorporate a woonerf treatment. The concept proposes to incorporate a pedestrian area immediately adjacent to the boardwalk.

Pedestrian and vehicular areas would be leveled at the sidewalk level, providing a plaza-like environment. A delineation between pedestrian and vehicular areas could be accomplished through the use of a combination for the following elements: truncated domes, different color/texture of paving, as well as vertical elements such as concrete planters, bollars, street lights, and street trees.

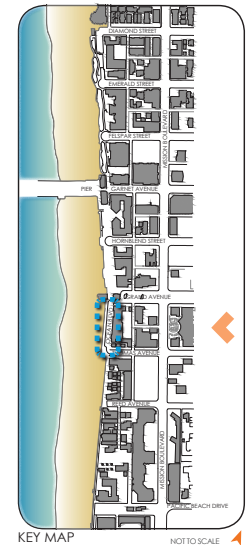
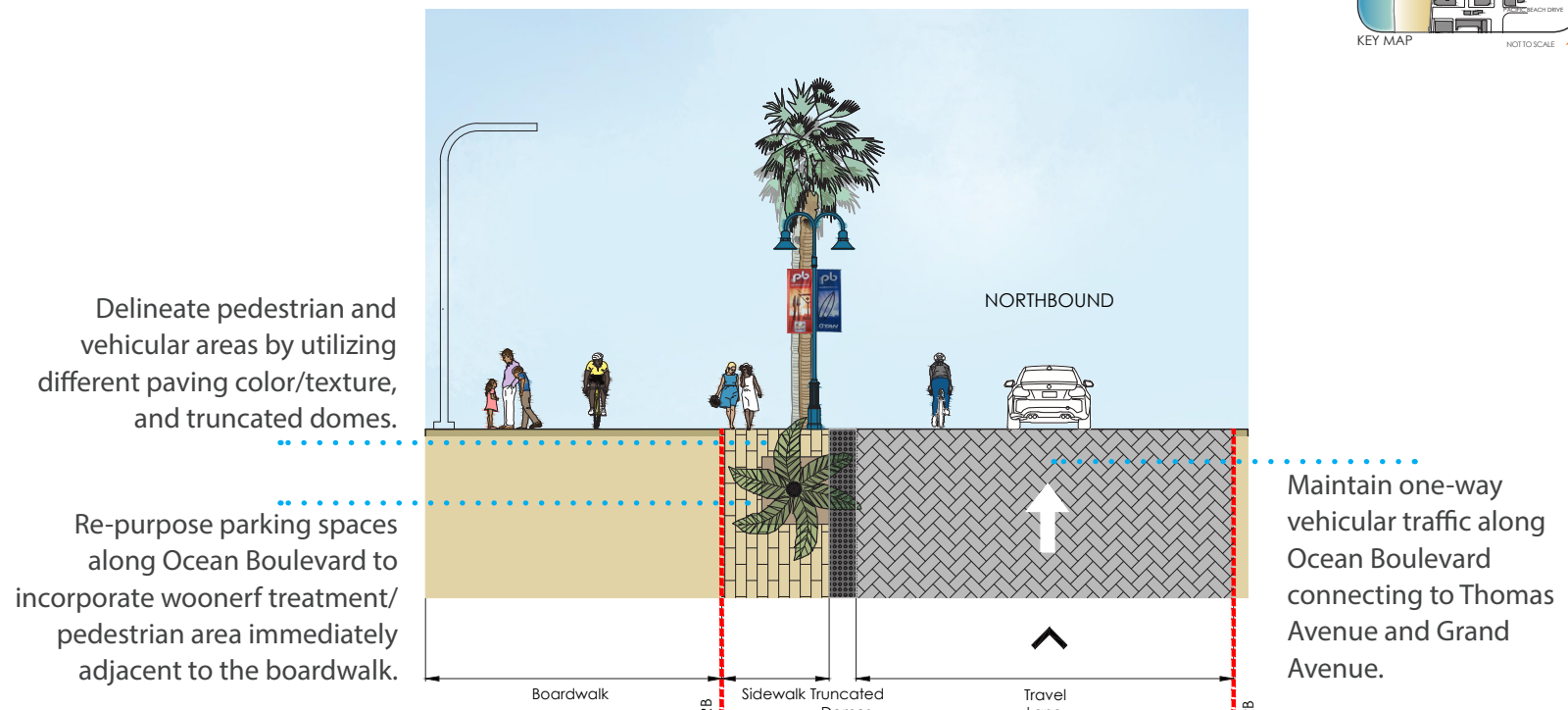


FIGURE 6-21: OCEAN BOULEVARD CONCEPT - CROSS SECTION



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-22: OCEAN BOULEVARD CONCEPT - PLAN VIEW

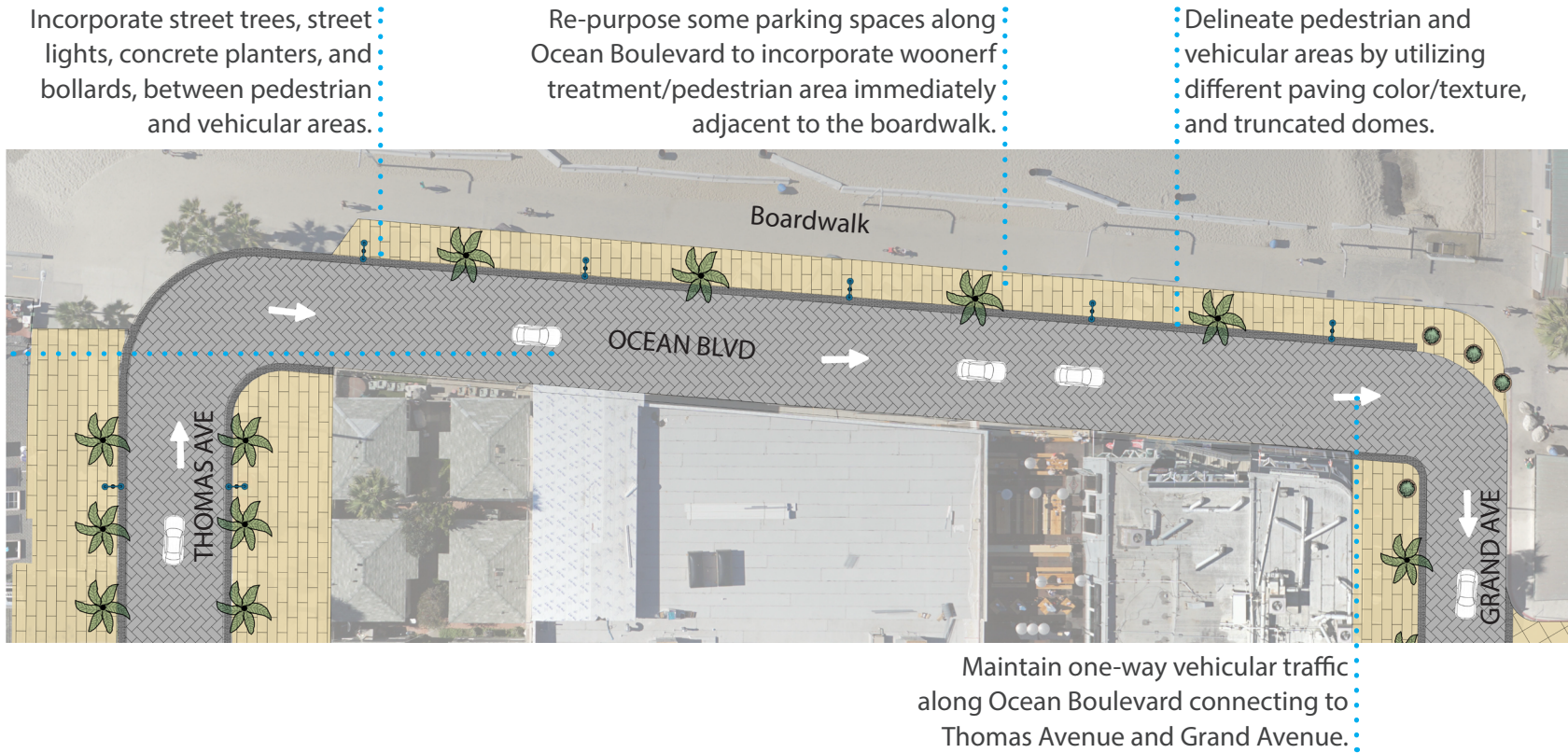


FIGURE 6-23: OCEAN BOULEVARD - PERSPECTIVE VIEW



This perspective view of Thomas Avenue is for illustrative purposes only. Please refer to plan view, and cross section (next page) for proposed improvements as part of this concept. Further engineering analysis/design would be required prior to implementation. Textures, materials, colors, and placement of street furnishing is for illustrative purposes only, further refinement/specifications would be required prior to implementation.

6.3.1 THOMAS AVENUE

Thomas Avenue, between Mission Boulevard and Ocean Boulevard, currently incorporates one-way traffic flow, parallel parking on its north side and angled parking on its south side.

East of alley:

The proposed concept for Thomas Avenue would maintain the one-way traffic flow along the roadway. The concept proposes to maintain parallel parking on its north side and angled parking on its south side.

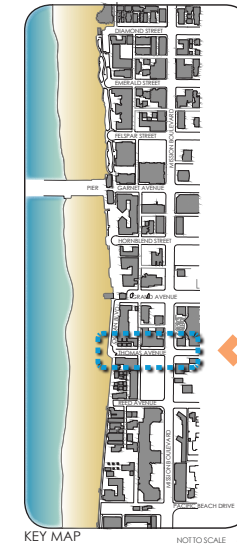
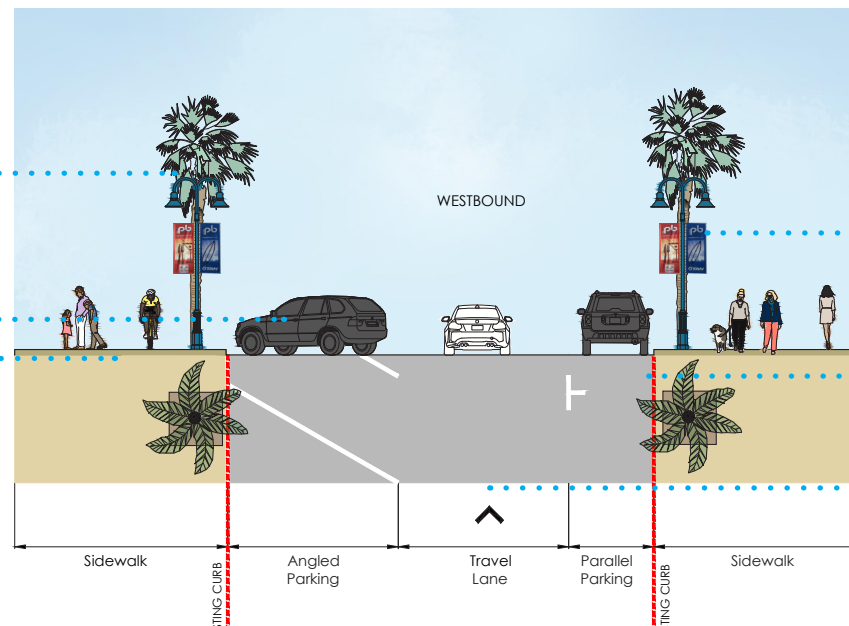


FIGURE 6-24: THOMAS AVENUE CONCEPT - CROSS SECTION (EAST OF ALLEY)

Incorporate street trees, street lights between pedestrian and vehicles on south sidewalk.

Maintain angled parking spaces on south side.

Incorporate shared pedestrian/bikeway facility on south side.



Incorporate street trees, street lights between pedestrian and vehicular areas on north side.

Maintain parallel parking spaces on north side.

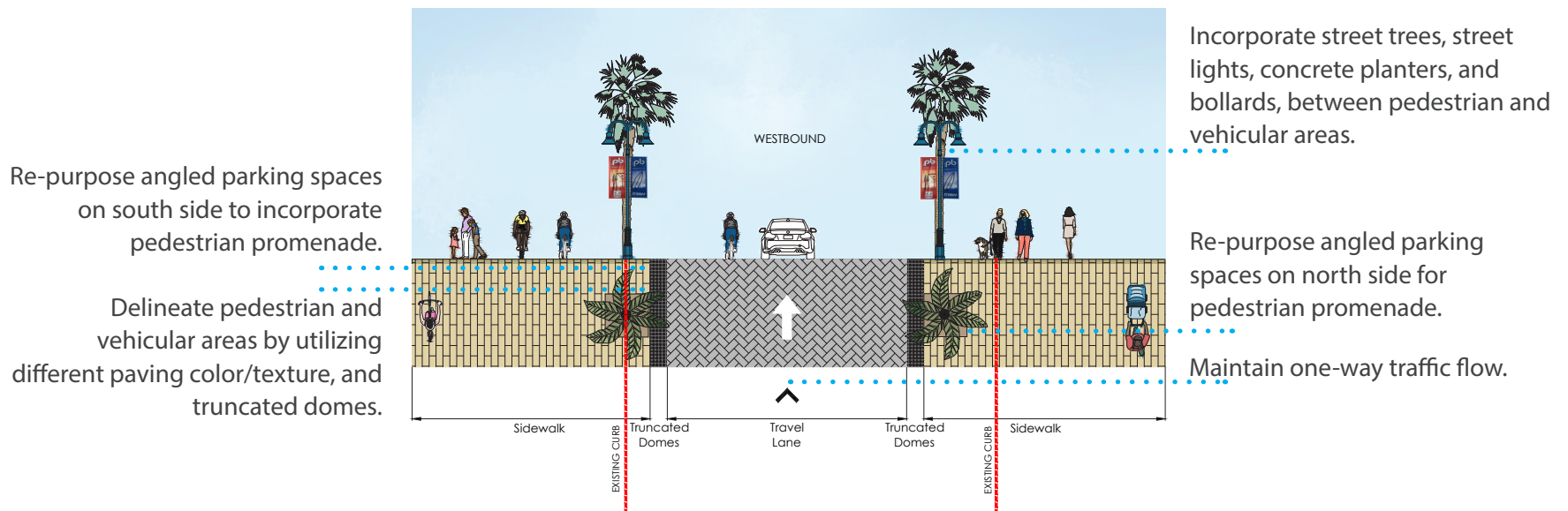
Maintain one-way traffic flow.

West of alley:

The concept proposes to redesign Thomas Avenue as a “woonerf” street, which consists of a street oriented towards the pedestrian and bicyclists, but still allows for slow speed vehicular circulation. The concept proposes to re-purpose the parking spaces west of the alley to provide a widened pedestrian area or promenade on the north and south side of Thomas Avenue. One-way vehicular traffic would be maintained, connecting to Ocean Boulevard and Grand Avenue.

Pedestrian areas and vehicular areas would be leveled at the sidewalk level, providing a plaza-like environment. A delineation between pedestrian and vehicular areas could be accomplished through the use of a combination of the following elements: truncated domes, different color/texture of paving, as well as vertical elements such as concrete planters, bollards, street lights, and street trees.

FIGURE 6-25: THOMAS AVENUE CONCEPT - CROSS SECTION (WEST OF ALLEY)



Mission Boulevard Public Spaces & Active Transportation

FIGURE 6-26: THOMAS AVENUE CONCEPT - PLAN VIEW

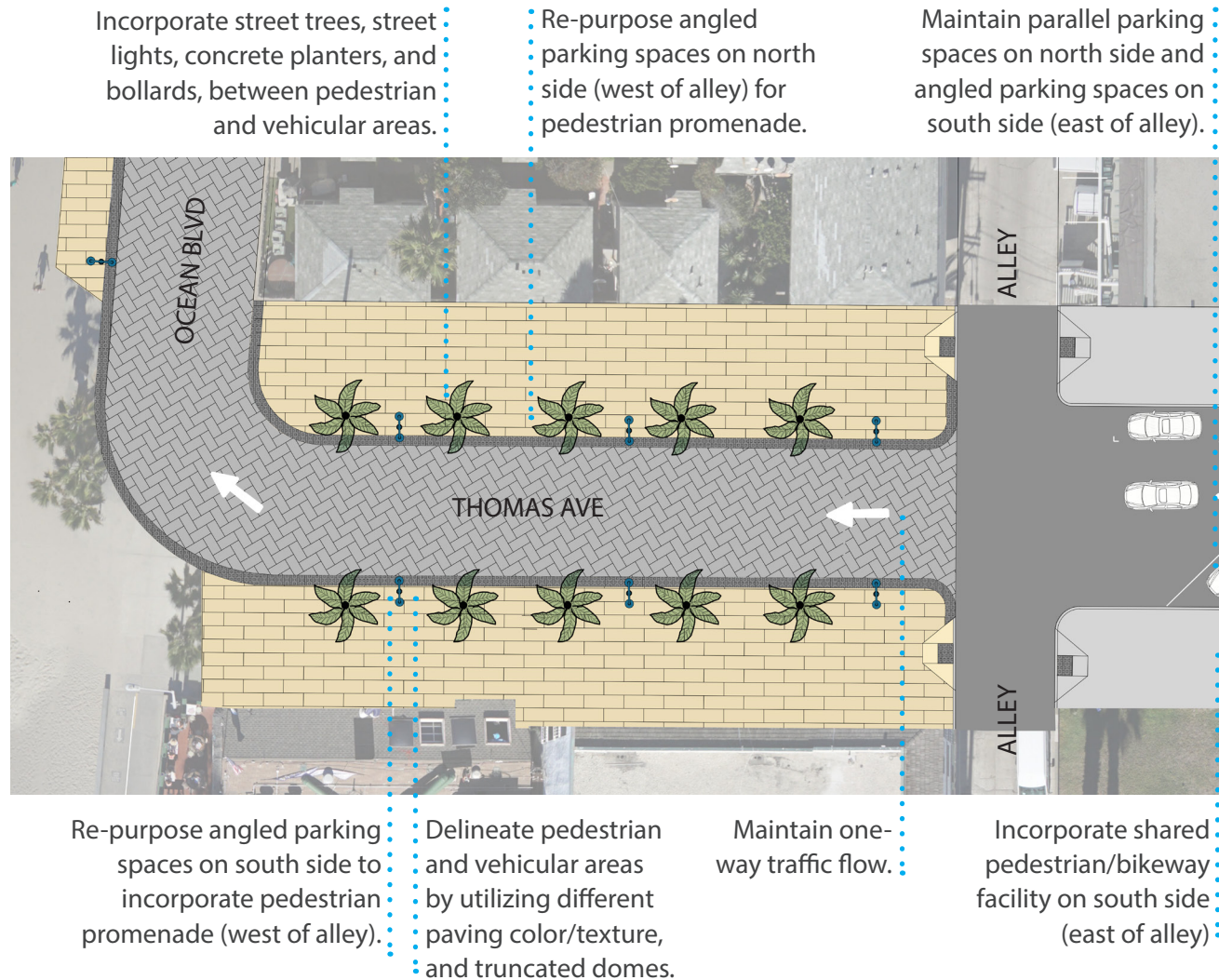


FIGURE 6-27: THOMAS AVENUE CONCEPT (WEST OF ALLEY) - PERSPECTIVE VIEW



This perspective view of Thomas Avenue is for illustrative purposes only. Please refer to plan view, and cross section(s) in previous pages for proposed improvements as part of this concept. Further engineering analysis/design would be required prior to implementation. Textures, materials, colors, and placement of street furnishing is for illustrative purposes only, further refinement/specifications would be required prior to implementation.

6.3.1 REED AVENUE

Reed Avenue, between Mission Boulevard and Ocean Boulevard, currently incorporates two-way traffic flow, parallel parking on both sides. Reed Avenue is also marked as a PB Pathway.

The proposed concept for Reed Avenue would maintain the two-way traffic flow along the roadway and maintains parallel parking on both sides along the roadway.

The proposed concept proposes to incorporate the north sidewalk between the alley and the boardwalk. (a currently incomplete sidewalk segment), and to incorporate walkway connecting the south sidewalk (existing) to the north sidewalk (proposed), as well as incorporating steps down to the boardwalk. The proposed concept identifies a furnishing area for street trees and street lights along its north and south sidewalks.

FIGURE 6-28: REED AVENUE CONCEPT - CROSS SECTION

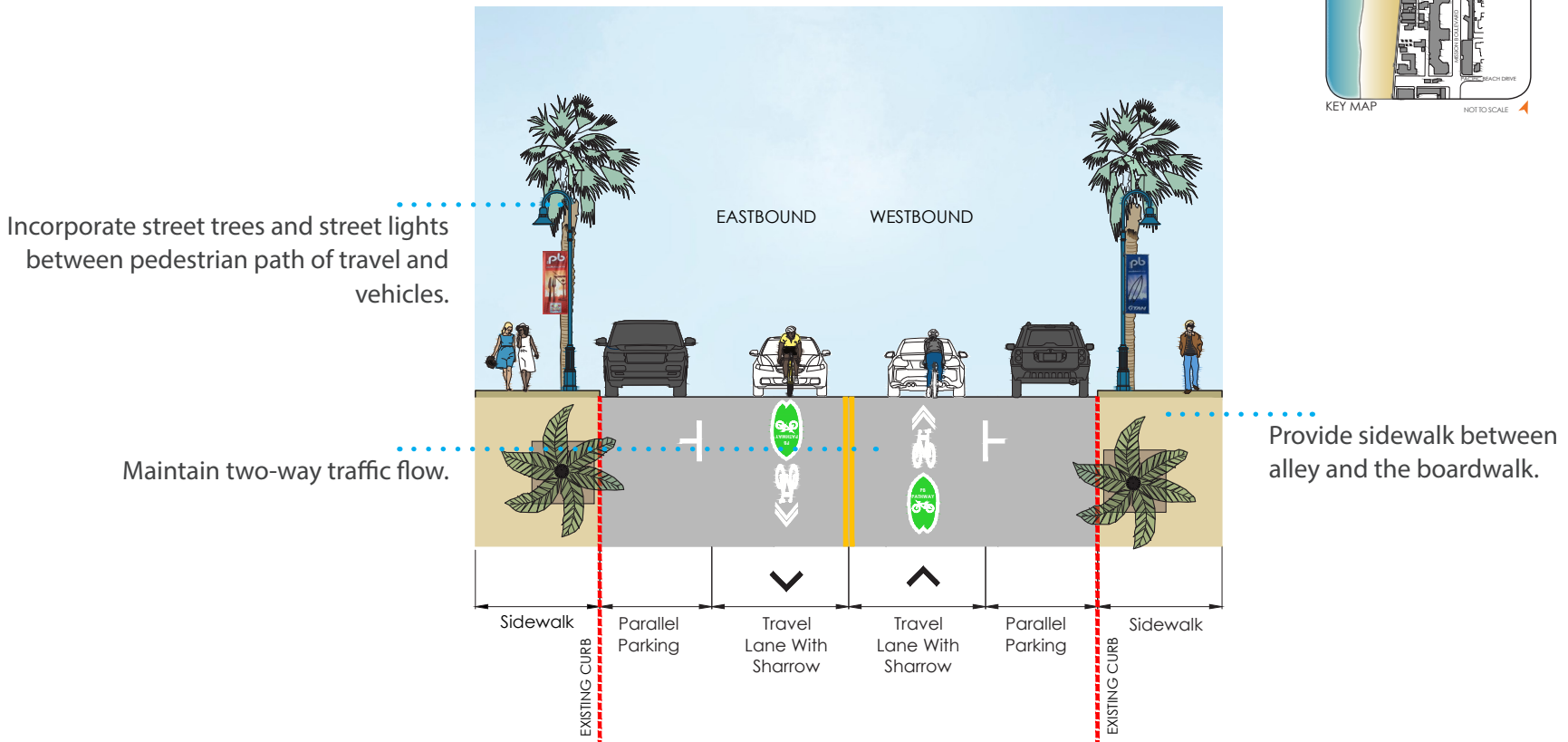
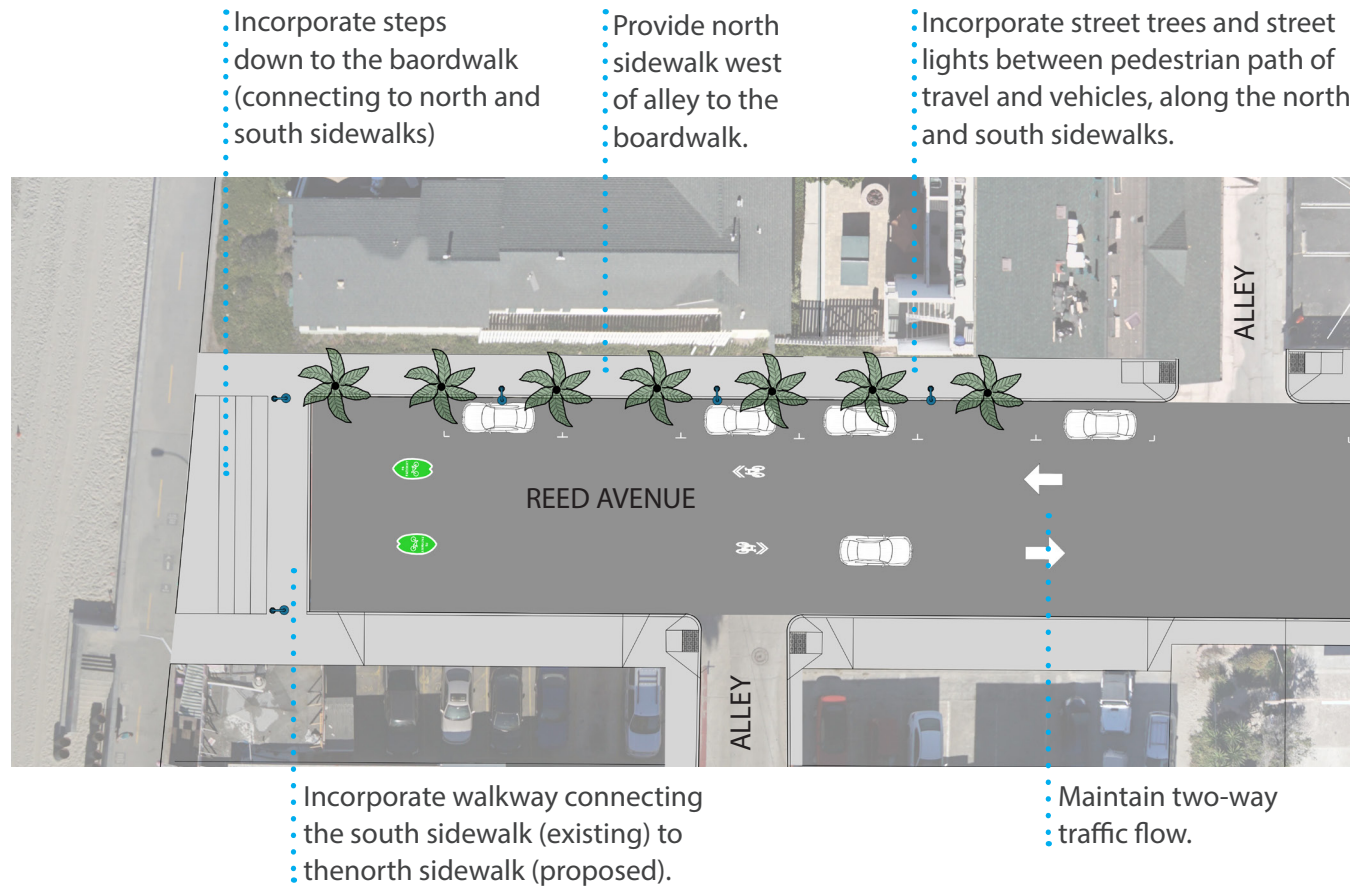


FIGURE 6-29: REED AVENUE CONCEPT - PLAN VIEW



6.3.1 OLIVER AVENUE

Oliver Avenue's concept addresses the existing alleys that connect east of the boardwalk, between Reed Avenue and Pacific Beach Drive, Oliver Avenue, Oliver Court, and Strandway. Oliver Avenue concept proposes the utilization of the underutilized right-of-way at the end of Oliver Avenue, as a pedestrian plaza immediately adjacent to the boardwalk,

providing a space for community gathering and strengthening the pedestrian access to the alleys, and as a result to Reed Avenue and Pacific Beach Drive (to the north and south). The plan view (next page) delineates the proposed configuration of the public parking spaces (currently accessed from the alley), defining circulation and access.

FIGURE 6-30: OLIVER AVENUE CONCEPT - PERSPECTIVE VIEW



Textures, materials, colors, placement and character of furnishing is for illustrative purposes only, further refinement/specifications would be required prior to implementation.

This perspective view of Oliver Avenue is for illustrative purposes only. Please refer to plan view, and cross section (next page) for proposed improvements as part of this concept. Further engineering analysis/design would be required prior to implementation.



FIGURE 6-31: OLIVER AVENUE CONCEPT - CROSS SECTION

Opportunity to utilize public right-of-way (at the end of Oliver Avenue and adjacent to the boardwalk) as a placemaking opportunity area / pedestrian plaza

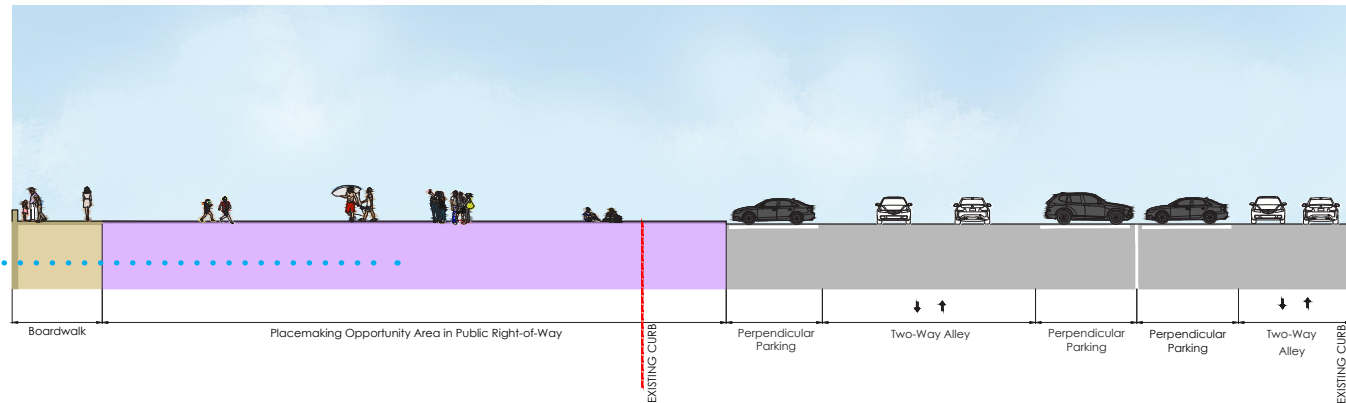
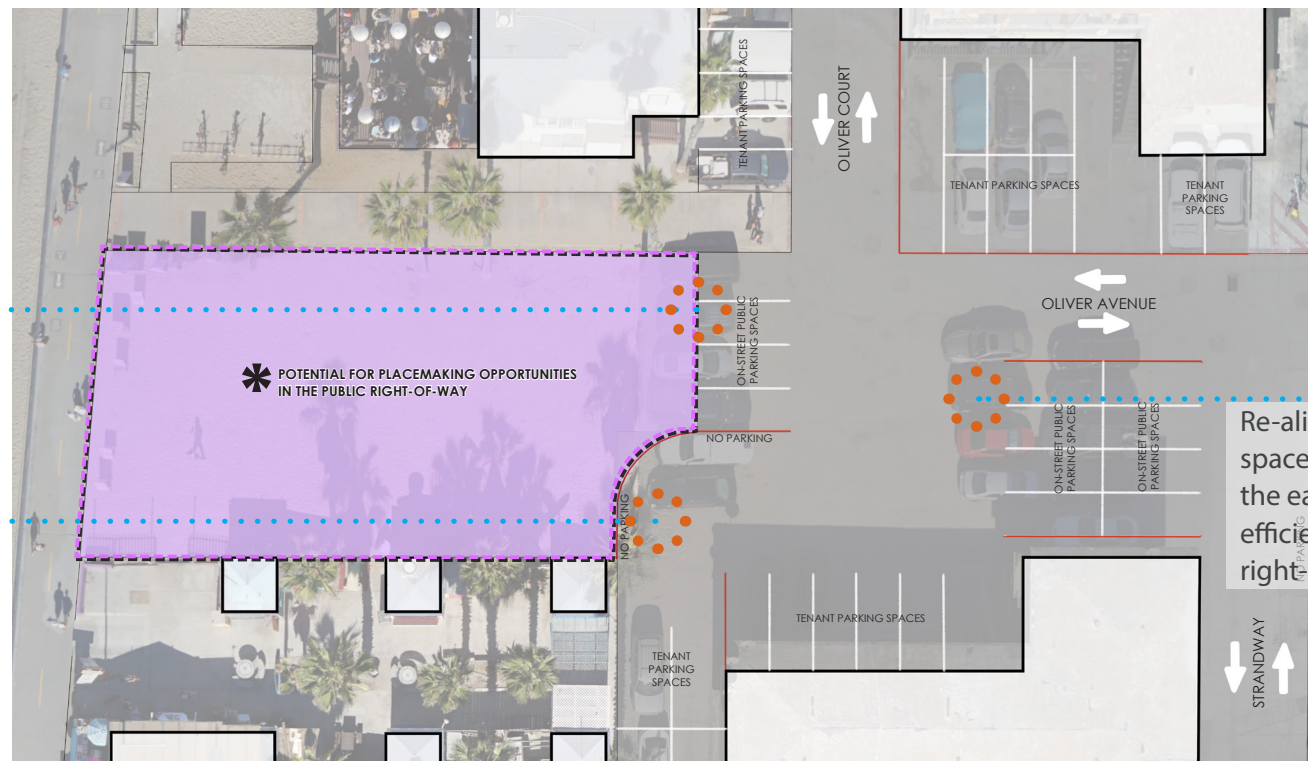


FIGURE 6-32: OLIVER AVENUE CONCEPT - PLAN VIEW

Re-align parking spaces towards the east to allow for larger placemaking opportunity area.

By re-aligning parking spaces towards the east and clearly delineating red curb allows for clear access to off-street tenant spaces.



Re-align parking spaces towards the east to efficiently utilize right-of-way.

6.3.1 PACIFIC BEACH DRIVE

Pacific Beach Drive, between Mission Boulevard and the boardwalk currently includes two-way traffic flow, parallel parking spaces on its north and south sides, as well as central parking spaces. The concept for Pacific Beach Drive maintains the roadway 2-way traffic flow, as well as the parallel parking spaces on the north and south sides.

Pacific Beach Drive concept identifies the opportunity for the removal of two parking spaces from the center of the road to allow for a pedestrian area at the end of Pacific Beach Drive, immediately adjacent to the boardwalk. The additional pedestrian area could incorporate street furnishings such as street trees, street lights, trash cans, planters or wayfinding signage.



FIGURE 6-33: PACIFIC BEACH CONCEPT - CROSS SECTION

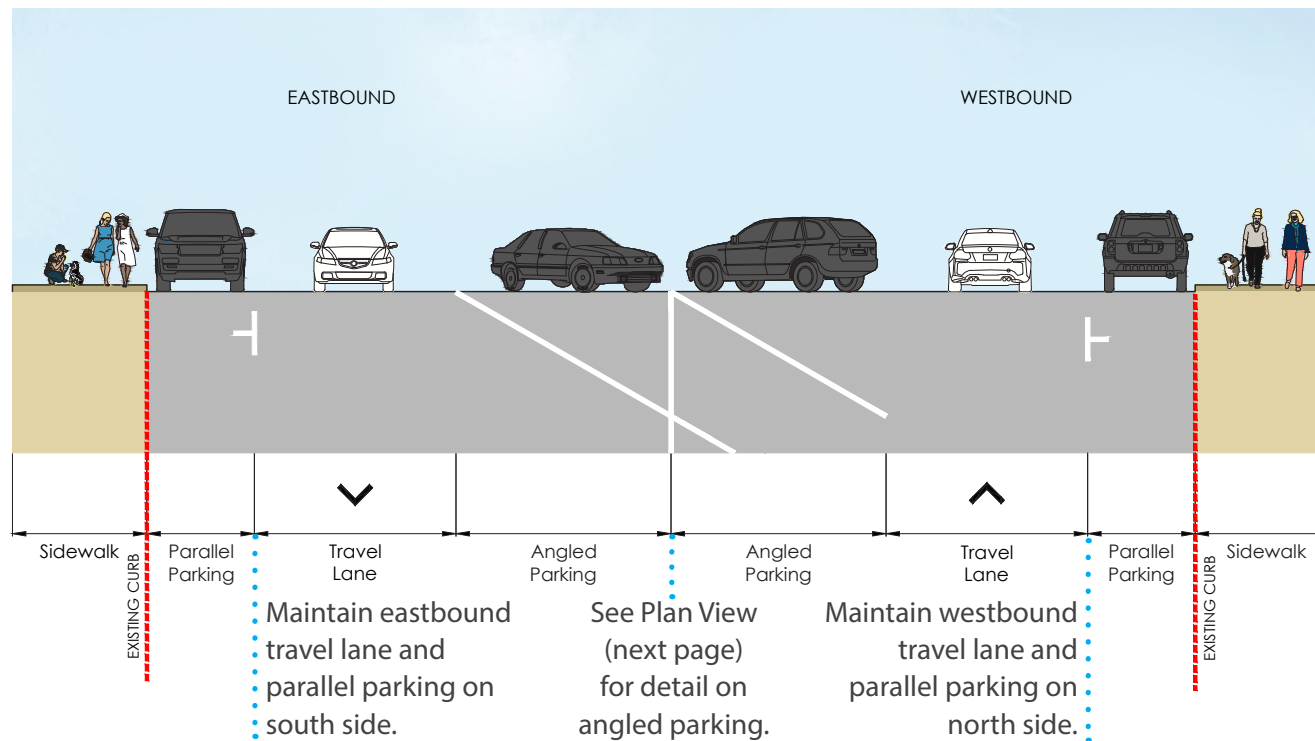
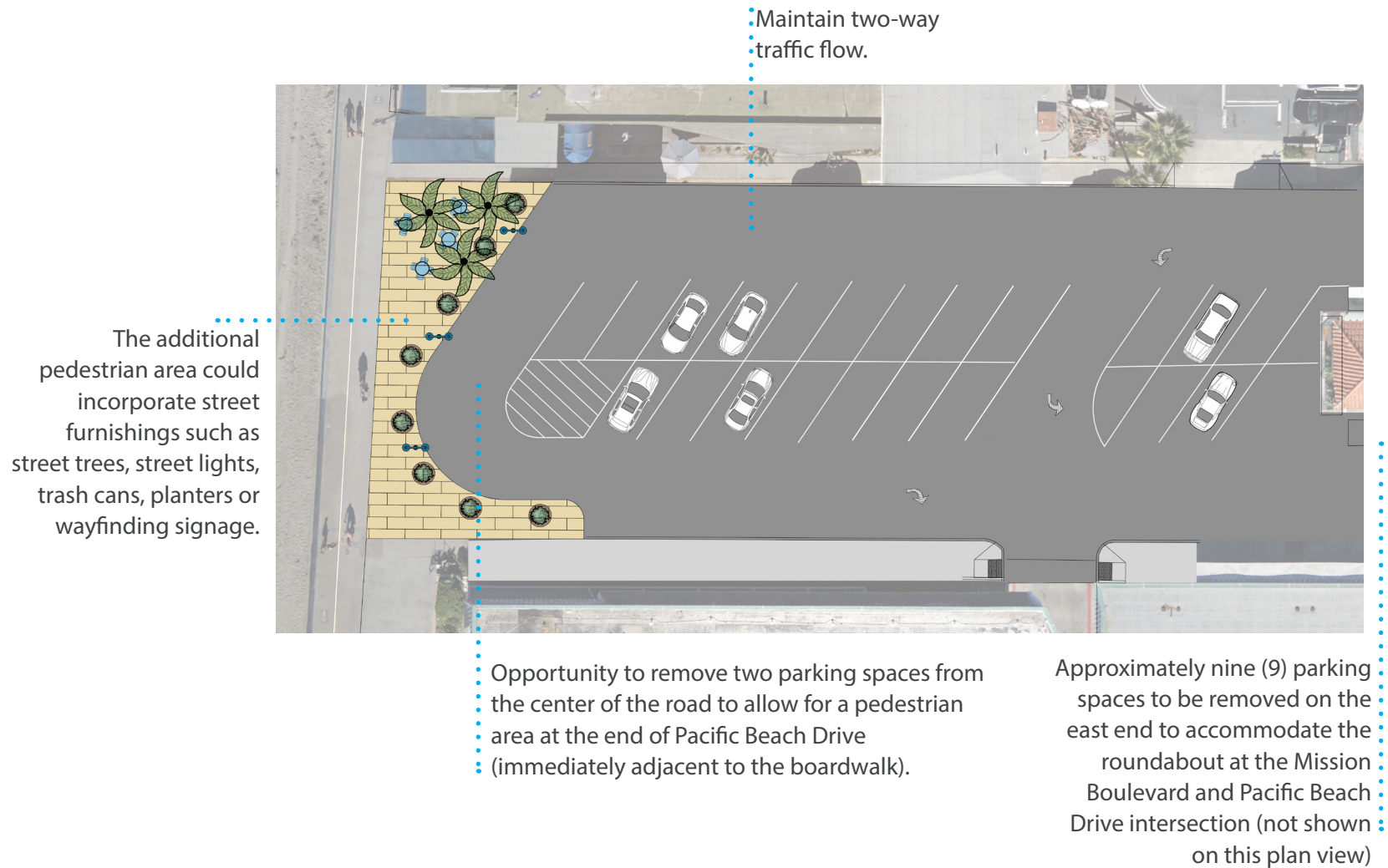


FIGURE 6-34: PACIFIC BEACH DRIVE - PLAN VIEW



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IMPLEMENTATION

7

- 7.1 Introduction
- 7.2 Project Phasing
- 7.3 Cost Estimates
- 7.4 Funding Sources
- 7.5 Pre-Implementation Strategies

7.1 INTRODUCTION

The proposed concepts for Mission Boulevard and the side streets, urban design framework, and operational improvements presented in Chapter 6 create a long-term vision for the study area. This chapter separates the full buildout of the proposed improvements into a set of key individual projects, that, when combined, achieve the long-term vision of the planning study. Creating a list of individual projects is a valuable implementation strategy in that, as funds are identified, individual improvements can be selected rather than looking at the report recommendations in their totality. The key individual projects were categorized based on near-term, mid-term, and long-term implementation.

TABLE 7-1: KEY IMPROVEMENTS AND PHASES

KEY IMPROVEMENTS BY LOCATION	ISSUES IDENTIFIED	KEY RECOMMENDATIONS	PROJECT PHASES
Mission Boulevard from Diamond Street to Pacific Beach Drive	<ul style="list-style-type: none"> No bicycle facilities Varying number of travel lanes Intermittent parking along corridor No buffer from motorists for pedestrians 	<ul style="list-style-type: none"> One travel lane in each direction with two-way left turn lanes Physically separated bicycle facility Consistent parking along east side Horizontal and vertical separation from motorists to pedestrians 	<p>Mid to long-term</p> <ul style="list-style-type: none"> Pending future funding sources and construction materials; this can have mid-term implementation or long-term implementation This improvement can be implemented utilizing striping and flexible post as an interim implementation (near-term); however, it would still require a community plan amendment and further analysis prior to implementation
Pacific Beach Drive and Mission Boulevard	<ul style="list-style-type: none"> No bicycle facilities High pedestrian volumes No community gateway element 	<ul style="list-style-type: none"> Roundabout (one-lane) Bicycle separated facility through intersection (connecting to Mission Boulevard bicycle facilities) 	<p>Mid to long-term</p> <ul style="list-style-type: none"> Pending funding sources for design and construction

7.2 PROJECT PHASING

The proposed improvements identified in the Planning study Planning Study were categorized into key near-term, mid-term, or long-term projects. Near-term projects are relatively low-cost improvements that can be implemented by a private funding source or typical city implementation sources within a 0-5year timeframe. Mid-term projects typically require further coordination or analysis prior to implementation and may also require a separate funding source than the City's General Fund with a timeframe of 5-10 years. Long-term projects could require separate funding sources, such as grants, for design and construction of the improvements, additional analysis and coordination, and may also require going through the City Council adoption process. Table 7-1 presents the key separate projects and their estimated timeframe of implementation along with rationale.

KEY IMPROVEMENTS BY LOCATION	ISSUES IDENTIFIED	KEY RECOMMENDATIONS	PROJECT PHASES
Woonerf <ul style="list-style-type: none"> • Garnet Ave. • Grand Ave. • Ocean Blvd. • Thomas Ave. 	<ul style="list-style-type: none"> • Auto-centric, causing limited space for pedestrians/bikes • No public space other than boardwalk 	<ul style="list-style-type: none"> • Repurpose street from auto-centric to pedestrian/ bike focus which still allow for vehicular circulation but eliminate parking 	<p>Long-term</p> <ul style="list-style-type: none"> • Pending further coordination with Fire and Rescue Department and pending funding source for design and construction
Placemaking <ul style="list-style-type: none"> • Grand Ave. • Emerald Ave. • Reed Ave. • Pacific Beach Dr. • Oliver Ave. 	<ul style="list-style-type: none"> • Obstructions in pedestrian walkway (reduced due to outdoor seating areas) • No public space other than boardwalk • Unutilized public right of way (only applies to Reed Ave., Pacific Beach Dr., and Oliver Ave.) 	<ul style="list-style-type: none"> • Create public spaces • Repurpose parking to remove obstructions from walkways 	<p>Near-term</p> <ul style="list-style-type: none"> • Placemaking grants and permits can be obtained by property owners and community members and constructed utilizing city's placemaking ordinance. These include, parklets, pedestrian plaza's, etc.
Reed Ave.	<ul style="list-style-type: none"> • Incomplete sidewalk on the north side (west of alley connecting to boardwalk) 	<ul style="list-style-type: none"> • Provide sidewalks along north side 	<p>Near-term</p> <ul style="list-style-type: none"> • This improvement has been identified in the City's Transportation Unfunded Needs List; implementation is pending Capital Improvements Program funding opportunity .
Diamond St.	<ul style="list-style-type: none"> • Need for improved pedestrian realm 	<ul style="list-style-type: none"> • Increase the south sidewalk width by 5 feet to create a pedestrian walkway that provides access to the northern gateway of the Boardwalk 	<p>Mid to long-term</p> <ul style="list-style-type: none"> • Pending future funding sources and construction materials; this can have mid-term implementation or long-term implementation

7.3 COST ESTIMATES

Table 7-2 presents cost estimates for the eight improvements recommended by the Mission Boulevard Public Spaces and Active Transportation planning study. The detail for these cost estimates can be found in Appendix A. The cost estimates are reflective of the removal of existing facilities where necessary, roadway striping, infrastructure improvements, and includes a 20% contingency and 15% each for engineering and construction management.

As shown, total buildout of all recommendations for the construction of the Mission Boulevard concept (excludes the side street concepts) is estimated at \$6,750,000.

TABLE 7-2: COST ESTIMATES - MISSION BOULEVARD PROPOSED CONCEPT

PROJECT	ESTIMATED COST
General Costs	\$1,185,000
Civil Improvements	\$2,248,200
Storm Drain System	\$330,000
Traffic Signal Modifications	\$560,000
Construction Sub-Total	\$4,323,200
Contingency (20%)	\$865,000
Construction Grand Total	\$5,188,200
Engineering (15%)	\$779,000
Construction Management (15%)	\$779,000
Sub-Total Soft Costs	\$1,558,000
TOTAL ESTIMATES	\$6,750,000

7.4 FUNDING SOURCES

Potential funding sources to help implement the planning study concepts include federal, state, and local funding sources, such as grants, which are highly competitive, making it necessary for local governments to stay informed about available funds and associated requirements so they are prepared to pursue when applications are open. This is not intended to be a comprehensive list of funding sources to explore and consider.

ACTIVE TRANSPORTATION PROGRAM – CALTRANS

The Active Transportation Program (ATP) was created to encourage the increased use of bicycling and walking. Caltrans administers the ATP to fund capital improvements, including the environmental, design, right-of-way acquisition, and construction phases of a capital improvement project.

SUSTAINABLE TRANSPORTATION GRANT PROGRAM – CALTRANS

The Sustainable Transportation Planning Grant Program was created to support Caltrans' mission of providing a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Sustainable Transportation Planning Grants that are of particular interest for the Planning study are the Sustainable Communities Grants, which encourage local and regional planning to further goals and best policies in the Regional Transportation Guidelines and other state goals. Additionally, the grants serve to promote a balanced, comprehensive multimodal transportation system with an emphasis on transportation planning efforts that promote sustainability. Some of the eligible activities/costs include data gathering and analysis, planning consultants; conceptual drawings and design; and community surveys, meetings, charrettes, and focus groups.

TRANSNET ACTIVE TRANSPORTATION GRANT PROGRAM – SANDAG

SANDAG administers the Active Transportation Grant Program for the San Diego region, funded by TransNet sales tax revenue. Eligible activities include bicycle facilities and connectivity improvements, pedestrian and walkable community projects, bicycle and pedestrian safety projects, and traffic calming projects. All applications must include a resolution passed by the local city council or governing board, detailing source(s) of matching funds. SANDAG's Active Transportation Grant Program fourth cycle has been recently awarded to local jurisdictions. At the time of the next cycle Planning study proposed improvements could pursue this funding source.

TRANSNET SMART GROWTH INCENTIVE PROGRAM – SANDAG

SANDAG administers the Smart Growth Incentive program, funded by TransNet sales tax revenue. Funds may be used within designated Smart Growth Opportunity Areas to fund local agency salaries, professional services, preliminary engineering, right-of-way acquisition, construction, project management costs, and other direct expenses incurred on behalf of the projects. SANDAG's Smart Growth Incentive Program fourth cycle has been recently awarded to local jurisdictions. At the time of the next cycle Planning study proposed improvements could pursue this funding source.

Mission Boulevard Public Spaces & Active Transportation

In addition to the grants mentioned above, below are other methods to help implement certain aspects of the concepts:

- Business Improvement District (BID) – City of San Diego Economic Development Department
 - » The City of San Diego's BID program, the largest tenant-based program in the state of California. BID is initiated by local business owners petitioning the City to establish a BID on their behalf. Once the City Council has approved a resolution of intention, a copy of the BID proposal and resolution is sent to all affected businesses. The methodology for determining assessment amounts is formulated by the business association that initiates the BID process. The respective business group takes into account the type, size, and location of the businesses and the activities and improvements to be funded.
- Placemaking within the Public Right-of-Way
 - » The City of San Diego Placemaking Ordinance allows residents to reimagine and creatively reinvent unused or underutilized spaces in their neighborhoods to cultivate a sense of community. Placemaking projects are temporary (up to 5-years) small-scale developments in the public right-of-way and on private property. An application for a Public Right-of-Way Permit must be approved prior to installation. Through the Placemaking Ordinance, Pedestrian Plazas can be approved within the public right-of-way. A Pedestrian Plaza is the temporary use of space in the dedicated public right-of-way (parking

spaces, unused bus stops, or other vehicular areas) for public use as seating or bicycle racks. Pedestrian Plazas are publicly accessible to all and are intended to provide a space for enjoyable public interaction. Pedestrian Plaza construction and maintenance is privately funded. It is envisioned that Pedestrian Plazas will be located in areas with heavy pedestrian activity, where there is a desire to foster a more walkable, pedestrian-friendly environment, and as additional seating areas for pedestrians and patrons of the surrounding businesses.

- Maintenance Assessment District (MAD)
 - » A MAD is legal mechanism by which property owners can vote to assess themselves to pay for and receive services above-and-beyond what the City normally provides. The purpose of a MAD is to finance special benefit services, including installation or maintenance of open space, street medians, rights-of-way, mini-parks, street lighting, security, flood control, and/or drainage.
- City of San Diego Storefront Improvement Program:
 - » The Storefront Improvement Program (SIP) revitalizes building facades visible to customers, neighboring merchants and residents. The City of San Diego provides free professional design assistance and financial incentives to small business owners who wish to make a creative change to and improve the curb appeal of their storefronts.

7.5 PRE-IMPLEMENTATION STRATEGIES

COORDINATION

Prior to implementation of improvements identified in the Mission Boulevard Public Spaces and Active Transportation (MBPSAT) planning study, coordination with the following, but not limited to, agencies/departments at the project-level will be needed to ensure proper design of multimodal infrastructure and public gathering spaces:

- Fire and Rescue Department to address fire access and emergency response. Designs for woonerfs, medians, and cycle tracks will be reviewed by Fire Department to ensure specific areas are designed to withstand a 7,500 lb load of a fire truck as well as ensuring the drive-able space for fire trucks is provided.
- SANDAG and MTS to address first-mile/last-mile connectivity. Incorporate pedestrian scale lighting, photovoltaics powered shelters with additional seating, wayfinding signage, shade-producing street trees, real-time transit schedules and trash receptacles, where feasible. Also, having transit priority improvements along Mission Boulevard particularly where bus islands and bus stop modifications are identified in the planning study.
- California Coastal Commission as it relates to waterfront access.
- City of San Diego Public Arts Commission, to identify and develop public art opportunities in the MBPSAT area. Support community groups efforts to incorporate local public art, and establish funding for on-going maintenance. Design and installation of artwork should be planned in conjunction with the design of public realm improvements, and coordinated with the installation of street furniture, utilities, and planting. The artwork will reflect the history and local themes of the community, particularly the corridor's connection to the beach.

DESIGN CONSIDERATIONS

During the design and implementation phase of the MBPSAT planning study, the following will be considered:

ACTIVE TRANSPORTATION

- Consolidation of driveways or access points along Mission Blvd to reduce conflicts between motorists and active transportation users (pedestrians and bicyclists), and promote shared driveways where possible.
- Increasing pedestrian visibility and a clear pedestrian space thus reducing conflicts between other modes.
- Different buffer treatment options for the cycle track (i.e., planters, shrubs, elevated cycle track, raised pavement markers, etc.).
- Enhancements for pedestrians which can include but is not limited to: pedestrian scale lighting, street trees, wayfinding signs, landscaped buffers, and planters to enhance the walking environment.
- Improve pedestrian and bicycle connections to/from bus transit stops and key destinations with wayfinding signage.
- Placement of scooter corrals in the future refined designs of the Mission Boulevard corridor and the side streets.

PARKING

- Parking management programs, which include shared parking solutions, park once strategy, creation of a parking district, and/or smart meter technology. These actions can help increase turnover and parking availability throughout Mission Boulevard.

TRAFFIC STUDIES

- Propensity for diversion of traffic on parallel facilities to Mission Boulevard.
- Additional locations that may benefit from a roundabout, such as the intersection of Mission Boulevard and Loring Street/La Jolla Boulevard to complement the Planning Study's proposed roundabout at Mission Boulevard and Pacific Beach Drive. This potential roundabout could serve as a northern gateway element into the Pacific Beach community.

PRIVATE DEVELOPMENT

- Upgrading the existing turnabouts or cul-de-sacs and providing opportunities for additional public spaces, upon redevelopment of study area side streets.
- Encourage the use of landscaping and architectural components to define publicly accessible spaces and express neighborhood identity.

URBAN DESIGN

- Business improvement district should promote and invest in the beautification of the study area, which could include landscaping, public art, and public spaces through cultural enrichment, which promote economic vitality, enhance community identity and pride, and provide performance and festival space for community events.
- Private development should enhance active streetscapes in building frontages by creating gathering places that showcase public art and illuminated landscape. These spaces could function as neighborhood focal elements and areas of community engagement where appropriate.

- The design and siting of community wayfinding and branding elements that would complement Preferred Alternative concepts, which could include, but no limited to, the woonerfs and the Pacific Beach Drive/Mission Boulevard roundabout.
- The installation and maintenance of non-standard items such as planting, streetscape materials, street furniture, transit shelters, etc. should be coordinated with the appropriate entities to ensure timely upkeep and consistent quality and lifespan of all public realm improvements.

