City of Long Beach
Working Together to Serve

Memorandum

Date: April 28, 2016

To: Patrick H. West, City Manager

From: Amy J. Bodek, Director of Development Services

For: Mayor and Members of the City Council

Subject: **Downtown and Transit-Oriented Development Pedestrian Master Plan**

On July 23, 2013, the City Council authorized the City Manager to accept a Transit-Oriented Development (TOD) Planning Grant award from the Los Angeles County Metropolitan Transportation Authority (Metro) for the preparation of the Downtown and TOD Pedestrian Master Plan (Plan). The purpose of the grant program is to create a framework to achieve new public and private investment around Metro light rail stations; support increased walking and transit use as an appealing alternative to automobile travel; and improve economic conditions for residents of the community by enhancing access to jobs and services.

The goal of the Plan is to reduce barriers and increase access to, and around, the eight Metro Blue Line stations in Long Beach (Attachment – Plan). The Plan was prepared to implement multi-modal policies related to increased transit use contained within the Mobility Element of the Long Beach General Plan. As such, once adopted, the Plan will serve as a technical appendix to the Mobility Element.

The Plan was developed through a comprehensive and collaborative process that included community outreach, an analysis of existing conditions, City departmental coordination meetings and stakeholder interviews. Public outreach was organized around fun, innovative, and meaningful community events to solicit input from Long Beach residents, including the "Walk Forth" sidewalk workshop. During the "Walk Forth" event, the project team invited residents to explore temporary demonstration projects along 4th Street, complete with food trucks, retail installations, pedestrian improvement demonstrations and local businesses. Participants also used a large map to indicate areas that are problematic for pedestrians in the study area.

The Plan is an implementation-oriented document containing a menu of pedestrian treatments and a prioritized list of 33 pedestrian improvement projects. The menu of pedestrian treatments includes a variety of "quicker, faster, and cheaper" pedestrian infrastructure treatments, best practices from other cities, cost estimates, and design guidelines that can be used by City staff.

The 33 priority projects developed for the Plan represent seven types of improvements:

- Stitch Streets are the backbone of the Downtown Long Beach pedestrian network, connecting residents to the Anaheim Avenue, 5th Street, Pacific Avenue, 1st Street and Downtown Long Beach stations.

- Neighborhood Greenways are secondary, lower-volume collector streets that link residential areas to the main arterials of the plan area.

- Green alleys serve as an urban trail that can provide an important alternate and accessible route for pedestrians.

- Shared street, as exemplified in the Pedestrian Gallery, will serve as a flexible space that can accommodate events and traffic, all in a protected, shared environment.

- Streetlets, typically occurring at mid-block crossings or at T-intersections, improve pedestrian connections to major transit corridors and provide shade and resting places for pedestrians.

- The Greenbelt will serve to provide neighborhoods near the Wardlow and Willow Stations with a safe, direct pedestrian connection.

- Transit Access Projects are smaller, more strategic projects that will make a significant impact on the safety and livability of neighborhoods near the Metro Blue Line.

The grant required that detailed conceptual plans and cost estimates be prepared for each project. The grant budget, however, was sufficient only to prepare plans and estimates for the 14 highest-rated pedestrian improvement projects. These projects, which total $71 million, are to be implemented in the next 15 years. When implemented, these projects will provide safer, more accessible, and attractive connections to Metro Blue Line stations, ultimately boosting ridership and leveraging economic development opportunities in the Plan area. The priority projects represent a range of improvements, including a greenbelt connection to two Metro stations and increased beach access from the First Street station.

On April 7, 2016, the Planning Commission recommended the City Council adopt a Resolution approving the draft Plan. City Council is scheduled to take action on May 24, 2016, as the grant with Metro for this project requires grant close-out by June 2016.

For more information on the Plan, please contact Christopher Koontz, Advanced Planning Officer, at (562) 570-6288.

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Attachment: Downtown and TOD Pedestrian Master Plan

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City of Long Beach Downtown & TOD Pedestrian Master Plan

Draft February 2016

City of Long Beach Development Services Department

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City of Long Beach Downtown & TOD Pedestrian Master Plan

Draft February 2016

City of Long Beach Development Services Department

Los Angeles County Metropolitan Transportation Authority

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First Street east of Long Beach Boulevard is an excellent example of typical “Stitch Street” improvements.

i. executive summary

The Long Beach Downtown and Transit-Oriented Development Pedestrian Master Plan provides a blueprint for achieving a multi-use vision – for streets that provide safe and direct connections to the Metro Blue Line - while at the same time reach their potential for enhanced community life, recreational opportunities, and ecological benefits.

The Downtown and TOD Pedestrian Master Plan (PMP) identifies high-priority, catalytic infrastructure investments that the City of Long Beach can implement over the next 15 years, as well as policies, funding strategies, and programs for implementation. The PMP is consistent with, and further defines, the Downtown Plan and Pedestrian Priority Areas identified in the Mobility Element and serve as a model for the rest of the city. The PMP will also provide guidance to Public Works, Development Services, and community development advocates on urban design issues.

This project was funded by a grant from the Los Angeles County Metropolitan Transportation Authority (Metro) through the Transit-Oriented Development (TOD) Planning Grant Program. The PMP was developed through a comprehensive and collaborative process that included community outreach, an analysis of existing conditions, City departmental coordination meetings and stakeholder interviews.

Plan Goals

Equity
Invest in pedestrian infrastructure that is legible, safe, predictable, and allows a broad range of transit users, including commuters, the disabled, youth, and elderly populations, and those who are transit-dependent, to easily access the system. Balance investments throughout the plan area.

Alternative Transportation
Increase the use of walking and transit for commuting and meeting daily needs.

Sustainability
Encourage sustainable investments in the public realm that utilize renewable materials and alternative energy sources, reduce water consumption, and infiltrate and clean stormwater.

Placemaking & Economic Development
Build upon the unique cultural and institutional assets and investments of the City by linking key destinations, creating new public spaces for recreation, relaxation, and socializing, and investing in art and other public realm enhancements that build an identity and sense of place for Long Beach. Leverage investments in attractive and walkable streetscapes to promote vibrant commercial corridors with economic activity throughout the day.

Public Health, Safety, and Legibility
Improve the safety of critical pedestrian corridors and increase physical activity and access to active transportation. Make streets more legible by improving wayfinding for residents and visitors and promote consistency in the design of new pedestrian improvements.

Executive Summary | Chapter 2.0: Existing Conditions

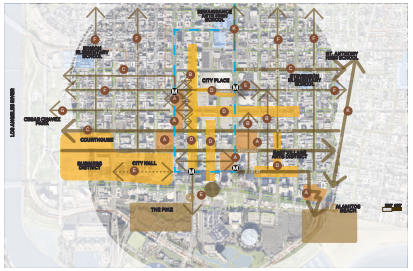
The fundamentals of the plan area are strong, but there is more work to be done.

The Downtown, Midtown, and Wardlow/Willow planning areas have a number of positive characteristics, including a relatively well-connected grid, access to the Metro Blue Line and connecting local bus routes, and important shopping and recreational amenities. These amenities, however, are not evenly distributed throughout the plan area. Anaheim Street, for example, is home to a number of small businesses, but the narrow sidewalks and fast moving traffic create unsafe conditions for pedestrians. Between 2008 and 2012, the Anaheim Street corridor near the Metro Blue Line station saw over 10 collisions involving pedestrians and moving traffic - the highest in the plan area. The PMP proposes specific streetscape treatments to improve the safety of the pedestrian environment. By coupling these investments with new transit-oriented development projects, the City can increase foot traffic and boost local businesses, and mitigate vehicular traffic congestion by making transit a safe and attractive option.

SEE CHAPTER 2.0 FOR THE FULL EXISTING CONDITIONS REPORT

key findings

Downtown Stations: Fifth, First, Pacific, Transit Gallery

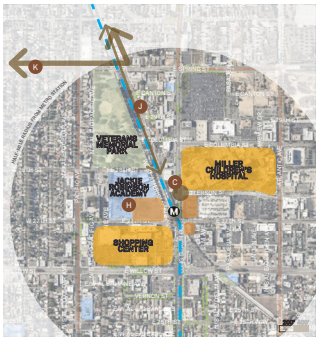


- Street furniture, lighting, wayfinding signage, and other elements are not coordinated, leading to higher maintenance costs, clutter, and a lack of a coherent identity.
- Downtown's alleys offer opportunities for new public space.
- Connections between the Blue Line and East Village, Alamitos Beach could be improved.
- Large vacant parcels near Blue Line stations present opportunities for redevelopment and improved pedestrian connections.
- at least 71% of Blue Line passengers at the Transit Mall, 1st Street, and 5th Street stations arrive on foot.

Midtown Stations: Anaheim, Pacific Coast Highway

- Anaheim Street near the Blue Line station has experienced a much higher than average rate of pedestrian collisions, due to a poorly-designed pedestrian environment. Ten collisions occurred along this corridor between 2008-2012.
- Almost 40% of all pedestrian collisions occur in Midtown.
- Midtown has relatively few public spaces near Blue Line stations.
- The street grid in Midtown is fairly well connected to the Blue Line, but wide arterials and narrow sidewalks make walking difficult.
- St. Mary Medical Center, with over 1,400 employees, could become a major source of ridership with improved pedestrian connections.

Wardlow/Willow Stations: Wardlow, Willow



- The Wardlow station area is home to a number of senior memory care, adult daycare, and assisted living facilities.
- Excess land along the Metro Blue Line right-of-way presents an opportunity to create a multi-use path.
- The street grid is not well connected to the Wardlow and Willow stations, limiting opportunities for residents nearby to use the Blue Line.
- Miller Children's Hospital and a shopping center, located close to the Willow Station, generate a significant amount of pedestrian traffic.

Executive Summary | Chapter 3.0: Public Engagement

The project team organized fun, innovative, and meaningful community events to solicit input from Long Beach residents, visitors, and business owners.

During the "WalkForth" event, the Project Team (Team) invited residents to explore temporary demonstration projects along 4th Street, complete with food trucks, retail installations, pedestrian improvement demonstrations and local businesses. Participants also used a large map to indicate areas that are problematic for pedestrians in the study area. A second community event, held at Hellada Art Gallery and a nearby pedestrianized alley, encouraged residents to provide feedback on initial concepts. Participants also shared their "Sidewalk Stories" and experiences walking in Long Beach, using an exciting Pecha Kucha format that encourages speakers to describe an image in no more than seven seconds. The event led to fruitful conversations about the opportunities and issues for the team to consider.

The Team also engaged the community through a series of stakeholder interviews. Ongoing Technical Advisory Committee (TAC) meetings with Public Works and Development Services Staff drew on an extensive and diverse array of expertise.

SEE CHAPTER 3.0 FOR MORE INFORMATION ON THE PUBLIC ENGAGEMENT PROCESS

outreach methods

Executive Summary | Chapter 4.0: Pedestrian Toolkit

Toolkit treatments can be implemented strategically, as part of smaller demonstrations that pave the way for priority projects

The pedestrian toolkit includes a variety of pedestrian infrastructure treatments, best practices from other cities, cost estimates, and design guidelines that can be used by City staff and community advocates. Projects can be implemented using a "quick, fast, and cheap" approach to build support.

SEE CHAPTER 4.0 FOR THE COMPLETE PEDESTRIAN TOOLKIT

Toolkit Treatments

- Curb Extensions
- Bioswale Parkways
- Enhanced Crosswalks
- Scramble Crosswalks
- Traffic Circles
- Pedestrian Refuge Islands
- Traffic Diverters
- Chicanes
- Pocket Parks
- Wayfinding
- Treelets
- Curb Ramps
- Pedestrian-Level Lighting
- Street Furniture
- Landscaping
- Pedestrian Push Buttons
- Pedestrian Countdown Signals
- Permeable Paving
- Transit Shelters
- Waste Receptacles
- Demonstration Projects

demonstration projects + best practices

1 Flexible Bollards

Can be used to define pedestrian-only zones, curb extensions, cycle tracks, and other areas where cars are not permitted.

Cost Estimate **$50** per bollard

2 Striping

Used to define areas where curbs will eventually be installed, new lanes of traffic, parking stalls, crosswalks.

Cost Estimate **$25** per linear foot

3 Planters

Temporary planters can bring shade and refuge to sidewalks, plazas, and pocket parks.

Cost Estimate **$200** per planter

4 Surface Painting

Temporary painting can be used to create colorful plazas and pocket parks. They can also be used to delineate important zones such as parking stalls, pedestrian areas, or medians.

Cost Estimate **$50** per square foot

Temporary Curb Extension "Lincoln Hub," Chicago, IL

Temporary curb extension treatments can be created by defining the edge of a curb extension with bollards, striping, planters, and similar features that will protect the extended sidewalk corner without requiring extensive construction to bring the level of the curb extension up to the sidewalk.

examples of toolkit projects

scramble crosswalk

bioswale planter

parklet

wayfinding

refuge island

curb extension

traffic circle

treelet

Executive Summary | Chapter 5.0: Priority Projects

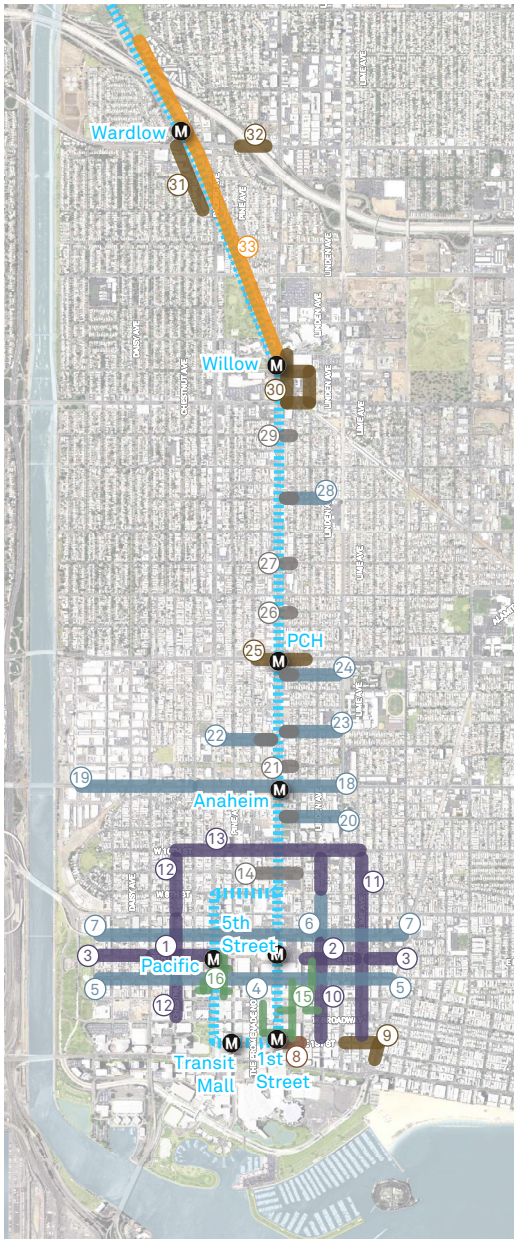
The PMP proposes $71 million in pedestrian improvement projects that will be implemented over the next 15 years.

These projects will provide safer, more accessible, and attractive connections to Metro Blue Line stations, ultimately boosting ridership and leveraging economic development opportunities in the plan area.

SEE CHAPTER 5.0 FOR MORE INFORMATION ON THE PRIORITY PROJECTS

High Priority Projects

	Project Name	Est. Cost ($ millions)
1	Pacific Station Neighborhood Greenway	7.86
2	5th Street Station Neighborhood Greenway	5.23
4	4th Street Stitch Street	5.61
6	6th Street Stitch Street	5.35
8	1st Street Pedestrian Gallery	2.90
9	Metro Beach Access Gap Closure	4.98
15	1st Street Station Green Alley Network	3.16
16	Pacific Street Green Alley Network	1.45
18	Anaheim Stitch Street	9.87
20	11th Street Streetlet and Stitch Street	3.24
24	Esther Streetlet and Stitch Street	3.41
30	Willow Station Transit Access Project	6.73
31	Wardlow-Pacific Place Transit Access Project	5.61
33	Del Mar Greenbelt	5.28
	TOTAL FOR ALL PROJECTS	$70.68 million



Priority Project Types

Green Alley

Greener, safer ways and courts that manage stormwater, generate economic development, and create more direct connections to the Blue Line.

Greenbelt

Repurposing Metro right-of-way to create a pedestrian and bicycle connection between Los Cerritos Park, and the Wardlow and Willow Blue Line Stations.

Neighborhood Greenway

Local, largely residential streets that are safer for pedestrians and bicyclists through traffic calming measures. These corridors feed into busier arterials with direct connections to Blue Line stations.

Shared Street

A flexible street that allows for vehicles and bicycles during normal operation and can be converted to a pedestrian-only corridor during festivals and events.

Stitch Street

Largely commercial streets with heavier traffic volumes that intersect with the station. Stitch Streets provide amenities, safer sidewalks and crossings for customers, commuters, and visitors

Streetlet

Short, pedestrianized streets along Long Beach Boulevard that will become hubs for community activity.

Transit Access Project

Projects that use a number of traffic calming devices to create safer connections to Blue Line stations in areas with a high pedestrian collision rate or significant percentage of residents who are transit-dependent.

Executive Summary | Chapter 6.0: Implementation

Goals, objectives, policies, and new programs for the plan area.

Many of the policies outlined in the PMP are based on previously-adopted plans, including the Mobility Element, Downtown Plan, and Land Use Element. Each policy, objective, program and initiative is tied to one of five major goals. This suite of policies and programs is intended to support the major capital investments presented in Chapter 5.0 and create a culture of walking, biking, and taking transit near the Metro Blue Line. In addition, the PMP also proposes a possible expansion of the existing Property-Based Business Improvement District (PBAD) for ongoing maintenance of new infrastructure projects.

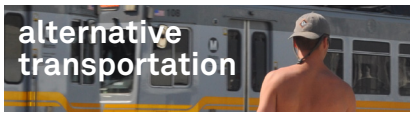
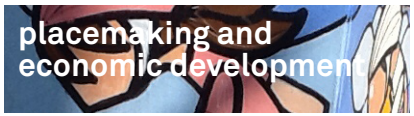
SEE CHAPTER 6.0 FOR THE IMPLEMENTATION PLAN

Recommended Funding Approach

Capital Improvements
Based upon Long Beach's successful track record of securing grants, and informed by these two case studies, the PMP recommends that the construction of Plan improvements be primarily funded with grants and taxes, like the City of San Francisco.

Maintenance and Operation
Maintenance of proposed improvements should be funded with fees and assessments borne primarily by those properties directly benefiting from the investment, as in the case of the City of Santa Monica. Similar to Santa Monica, Long Beach has a Downtown Long Beach Property-Based Business Improvement District. The PMP recommends expnding the PBAD to fund the ongoing costs of maintenance and operation.

programs and initiatives

goals	programs
equity	Infrastructure Equity Task Force Transportation Equity Assessment Accessible Sidewalk Initiative
OBJECTIVES: increase number of residents within plan area; improve access to stitch streets; increase percentage of funding spent on non-motorized improvement projects; incorporate universal design techniques into all streetscape improvement projects.	
 alternative transportation	Car-free Long Beach Multi-Modal Metrics
OBJECTIVES: increase commuter mode share of non-motorized modes; reduce personal vehicle miles traveled in plan area; double percentage of households with 0-1 vehicles; increase Blue Line boardings by 5% every 5 years; prioritize projects that improve pedestrian safety and access to transit.	
sustainability	Transition to VMT Measurement Long Beach Eco-Streets
OBJECTIVES: mitigate urban heat island effect; reduce percentage of impervious surface area within right-of-way; reduce Long Beach greenhouse gas emissions by 9% per capita over 25 years; reduce energy usage within right-of-way.	
 placemaking and economic development	Green Alley Improvement Program Streetscape Kit of Parts
OBJECTIVES: expand the supply of seating areas; incorporate public art into all new PMP priority projects; increase sales tax revenue along PMP priority project streets by 20%; increase the number of TOD units within Blue Line station areas; design streets that reinforce the culture, history, and unique character of Long Beach, create a consistent design language for all streetscapes.	
Public Health, Safety, & Legibility	Vision Zero Long Beach Wayfinding Program
OBJECTIVES: reduce pedestrian fatalities along PMP priority project streets to zero within 20 years; create a comprehensive wayfinding program to standardize Citywide signage; use innovative technology to help residents and visitors navigate streets in the plan area; Expand the City's data collection and analysis efforts to provide regular updates on pedestrian safety conditions to target infrastructure investments in poorly performing areas.	

1.0 introduction

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1.1 Background

Long Beach is ranked near the top nationally for being one of the most walkable and bike-friendly communities

Long Beach is one of Southern California's most unique waterfront urban destinations to live, work, and play. As California's seventh-largest city, Downtown Long Beach is centrally located and a mere 20 minutes from both Los Angeles and central Orange County. Additionally, visitors can easily access Downtown via public transit and explore its many shops, restaurants, and attractions by bike or on foot. Downtown Long Beach offers all the amenities and variety of a major urban center within a clean, safe community and is enhanced by the temperate climate and breathtaking ocean views.

More than 30,000 residents live in Downtown Long Beach. Residential development opportunities continue to grow based on recent entitlement activity. Dedicated bike lanes in Downtown promote safe road sharing between motorists and cyclists. Additionally, the well-connected grid, array of retail amenities, and excellent transit service of the plan area allows residents and visitors to forgo their cars to walk or bike for nearly all errands.

Frequent special events, such as conventions, the jazz festival, the Grand Prix, Summer and Music series, Pride festival and many others, generate significant pedestrian, vehicular, and transit demand. Evening usage, particularly on summer weekends, is especially high. The highest pedestrian demand is in areas such as the Pine

Figure 1.1 A pedestrian crosses Daisy Avenue.

Figure 1.2 Browsing merchandise along First Street.

Avenue corridor, in the East Village Arts District, and along Shoreline Drive between The Pike and the oceanfront area, where there are more and more pedestrians walking between activity centers such as restaurants, the Aquarium, shops at The Pike, the convention center, hotels and the Long Beach Arena.

As Long Beach continues to mature and evolve, the City faces many challenges in supporting this vision of itself as a world-class city. (Streets and other public rights-of-way make up over 20% of the City of Long Beach's land area). Pedestrian injuries and fatalities continue to occur on busy streets. Each year, the City spends millions of dollars maintaining and improving City streets, yet too often the streets serve only a single purpose—the movement of automobiles. By building on previous planning efforts such as the Mobility Element and Complete Streets Criteria, Long Beach could achieve a number of important goals, including enhancement of all modes of travel, improved ecological performance, encouragement of physical activity for public health, and restoration of the streets' rightful role as the heart of the City's public life.

Through a careful existing conditions analysis, the project team has identified a number of issues in the study area relating to safety, barriers to accessing transit, and opportunities for enhancing connections to the Blue Line. This analysis was informed in part by Metro's First/ Last Mile Strategic Plan, which outlines a "layer

Figure 1.3 Reflecting the creativity of artists and residents in Long Beach, the City has funded a utility box painting program, costing about $2,000 per box. The enhanced boxes enhance the pedestrian experience.

Figure 1.4 Lime Avenue is the first of several bike boulevards that have been planned for Downtown and Midtown.

Figure 1.5: Mobility Milestones

1990 Blue Line opens

2007 Construction begins on the Promenade, spurring TOD investment

2011 First protected bike lanes (cycle track) in California

2011 Long Beach Transit Gallery remodeled

2014 WalkScore.com names Long Beach the 14th most walkable city in the nation

cake" approach to identifying gaps in the pedestrian network.

The PMP provides a blueprint for achieving this multi-use vision of streets – streets that continue to function as corridors of movement - while at the same time reach their potential for enhanced community life, recreational opportunities, and ecological benefits. The PMP also creates safer, more direct connects to the Metro Blue Line, to increase ridership and encourage residents and visitors to take alternate modes of transportation. As Long Beach continues to grow, the PMP will help to ensure that it can fulfill its vision of a world-class city – one that is renowned for the quality of its streets and the vibrant public life that they foster.

A Growing Population

More than **5% of Long Beach's population lives Downtown**, with a density of 15,770 residents/ square mile, twice the Citywide average

Downtown Long Beach's **population has steadily grown by 8%** since 2000, compared to less than 1% Citywide

Nearly **30,000 people** call Downtown home

20% of residents work in the Educational Services and Health Care fields

Figure 1.6 Third Street in Downtown.

1.2 Project Boundary

The study area is divided into three major planning areas, roughly along the Blue Line between Interstate 405 and the Waterfront. Each planning area presents a unique set of challenges and opportunities, and the project team undertook an extensive analysis to understand each area and develop a list of capital improvement projects that will eliminate barriers to accessing the Blue Line. The PMP includes a list of high priority projects that strikes a balance between the Wardlow, Midtown, and Downtown planning areas.

1.2.1 Wardlow + Willow

The Wardlow and Willow station areas are home to a concentration of assisted living facilities and disconnected streets that terminate at the Blue Line. An underutilized Metro right-of-way presents an opportunity to better connect pedestrians to both stations.

1.2.2 Midtown

Anaheim Street and Pacific Coast Highway, each with a station at Long Beach Boulevard, are major corridors with high levels of traffic and a high incidence of pedestrian collisions.

1.2.3 Downtown

The Downtown planning area boundary is largely drawn from the City of Long Beach Downtown Plan, which includes five sub-planning areas: North Pine, East Village, West End, and the Downtown Core. This planning area encompasses four Blue Line Stations at 1st Street, the Transit Gallery, Pacific, and 5th Street.

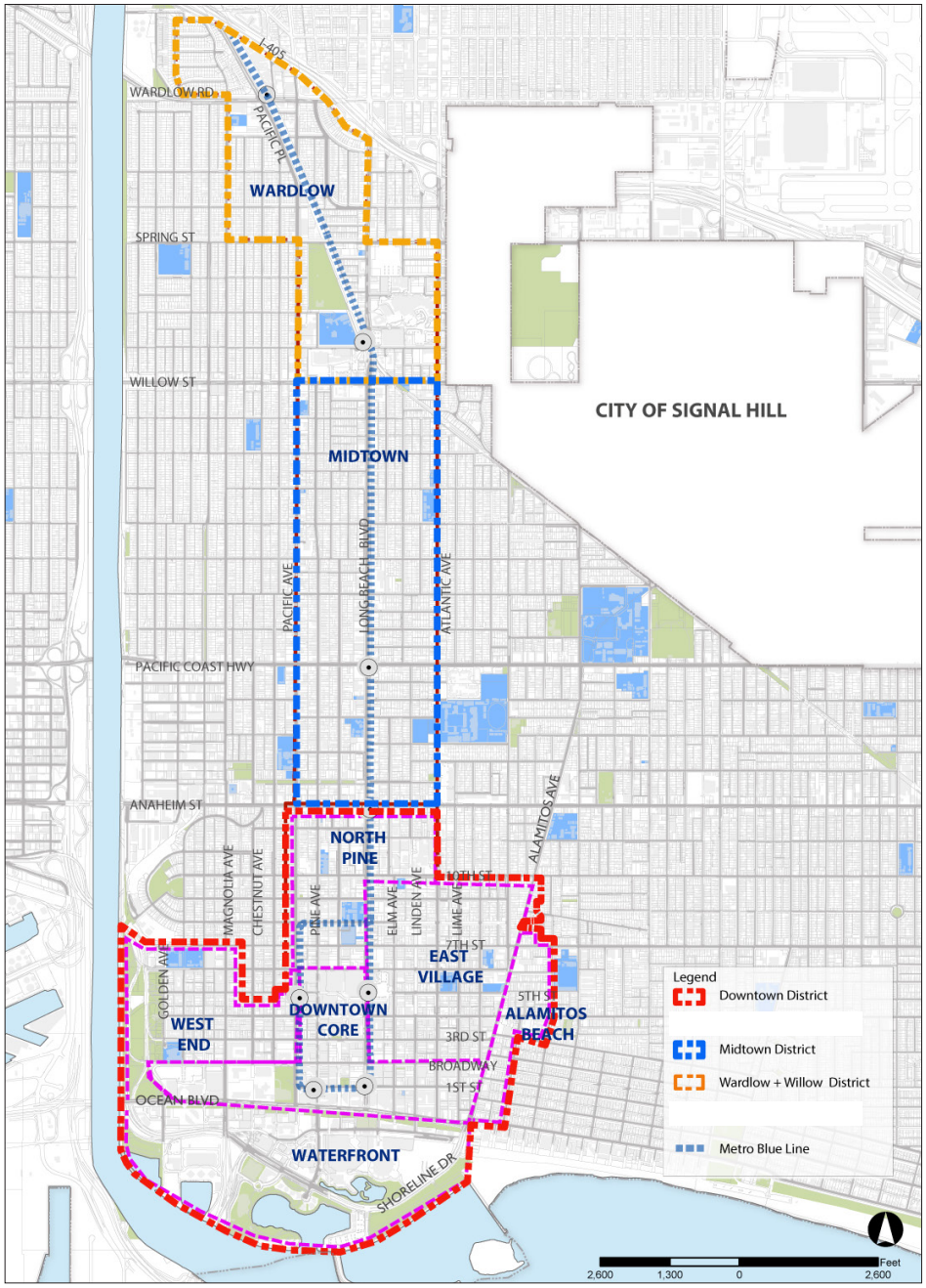

Figure 1.7

Project Boundary and planning areas used for analysis.

Figure 1.8 A father and daughter cross Shoreline Drive.

2.0 existing conditions

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2.0 existing conditions

The Existing Conditions Report (ECR) provides a snapshot of pedestrian conditions in the planning areas. The ECR includes a current profile of pedestrians in the study area in order to understand the audience for pedestrian improvements. This part of the report also provides a discussion on proximity to transit, as the closer residents are to effective transit, the more likely they might be to walk to it. Second, it describes the existing infrastructure, such as sidewalks, street trees and lighting, and gaps in the existing sidewalk network. Finally, the ECR explores the array of programs and plans already in place. The City has made great strides towards improving the pedestrian environment thus far. Its Pedestrian Priority Street Standards, Mobility Element, and Downtown Plan are all examples of internal policies that will help the City meet its goals. These documents and other citywide education and enforcement programs are highlighted. The existing pedestrian conditions are discussed in the report by planning area.

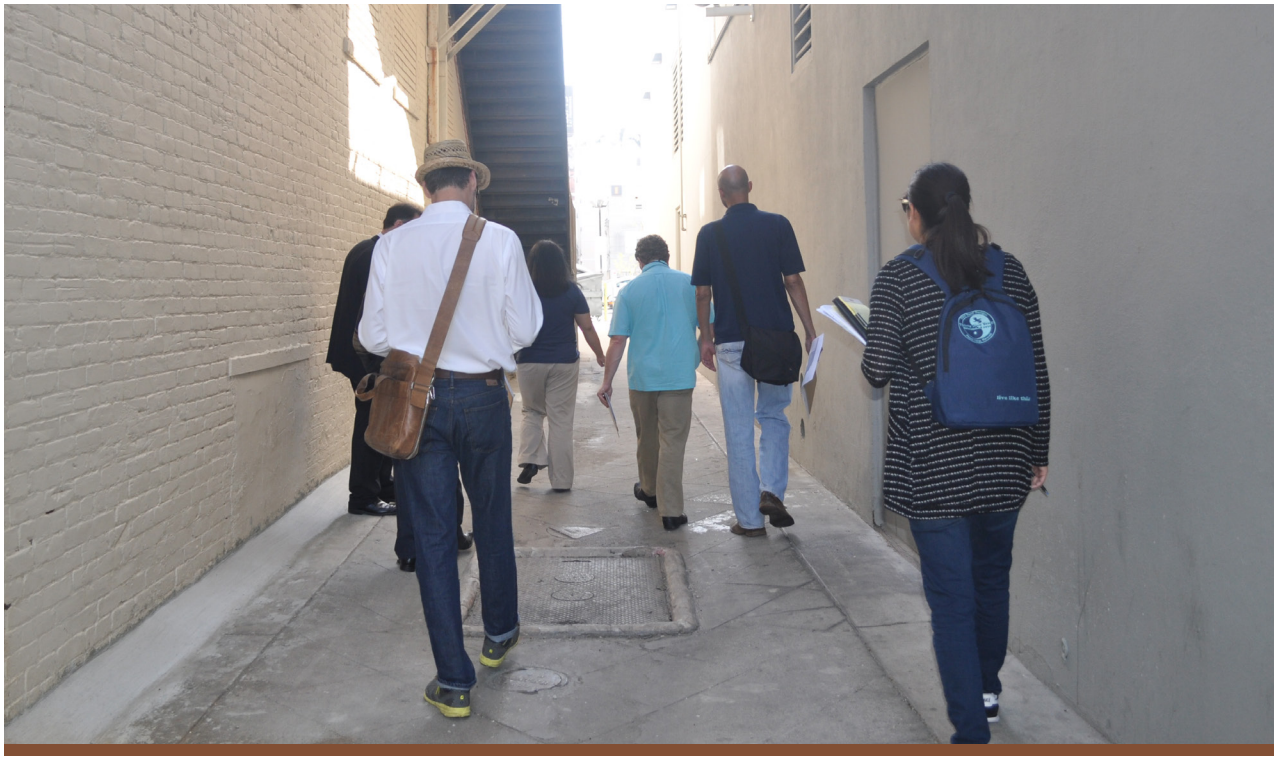


Figure 2.1 The PMP project team conducting a site visit to examine existing conditions.

2.1 Built Environment Analysis

To focus the built environment analysis, the team conducted a survey of key mobility corridors. These corridors include major arterials, alleyways, local streets, and the Promenade in the Downtown, Midtown, and Wardlow/Willow planning areas. A map of these corridors is presented in Figure 2.2. Key mobility corridors were selected using the following criteria:

- high level of retail activity
- iconic character
- connect major destinations, including Blue Line Stations
- representative of conditions along other corridors in study area

An understanding of the condition of existing pedestrian facilities in the plan area is necessary for determining future opportunities for improvement. While sidewalks and street lighting are identified in the Pedestrian Master Plan (PMP), other pedestrian infrastructure conditions such as street crossings and street connectivity were also evaluated.

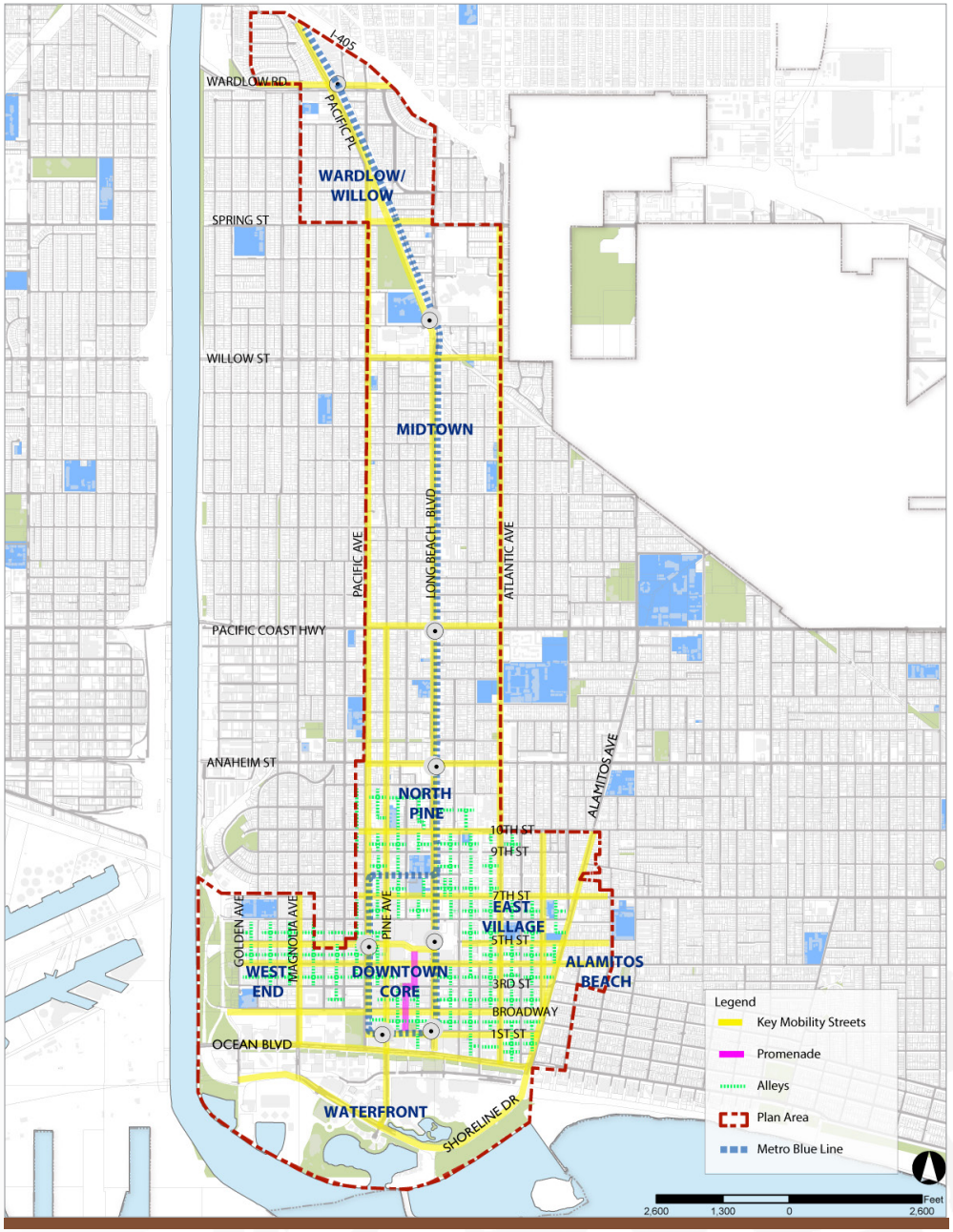


Figure 2.2 Key mobility corridors evaluated for the Built Environment Analysis.

2.1.1 Sidewalks

Sidewalks exist along both sides of most streets in the plan area, with the exception of a few locations in the north area of the city. Sidewalk design varies from wide sidewalks with street trees, such as along segments of Pine Avenue, Ocean Boulevard, Long Beach Boulevard to narrow sidewalks with limited pedestrian facilities, such as along Anaheim Street, Pacific Coast Highway, Willow Street and Wardlow Road. Traditional residential neighborhoods and areas that have seen recent redevelopment generally have street trees and landscaping, while other areas provide only basic pedestrian amenities.

According to the Geographic Information System (GIS) analysis, there are currently about 226 linear miles of sidewalk within plan area. Approximately 192 miles of a total 226 miles of publicly maintained roadways (or roughly 84% percent) provide sidewalks within the right-of-way. Approximately 5 percent, or 29 miles, of sidewalks within the plan area are no more than 7 feet, ranging from 4 feet to 7 feet. Most of the wider sidewalks are located in the Downtown District along Pine Avenue, Ocean Boulevard, Long Beach Boulevard and 1st Street. The sidewalk widths for these key mobility streets are shown in Figure 2.5.

Opportunities and Constraints: Sidewalks >> Downtown > 4th, Transit Mall

4th Street
between Golden Avenue and Pacific Avenue; Long Beach Boulevard to Alamitos
OPPORTUNITY: a pedestrian-scaled street with a mix of retail and residential
CONSTRAINTS: lacks shade trees and pedestrian-supportive infrastructure. Sidewalks and curbs are in need of repair.

Figure 2.3

1st Street Transit Mall
between Pacific and Long Beach Boulevard
OPPORTUNITIES: Comfortable pedestrian environment, connections to promenade, and excellent transit access provides anchor for future pedestrian improvements in the West End and East Village

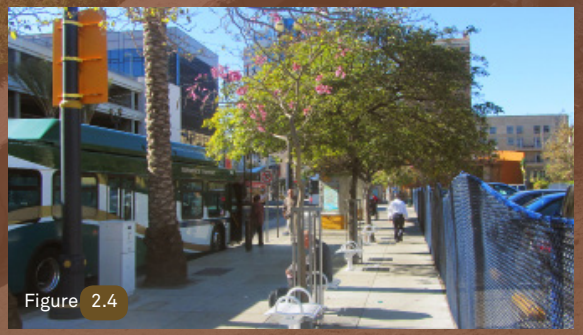


Figure 2.4

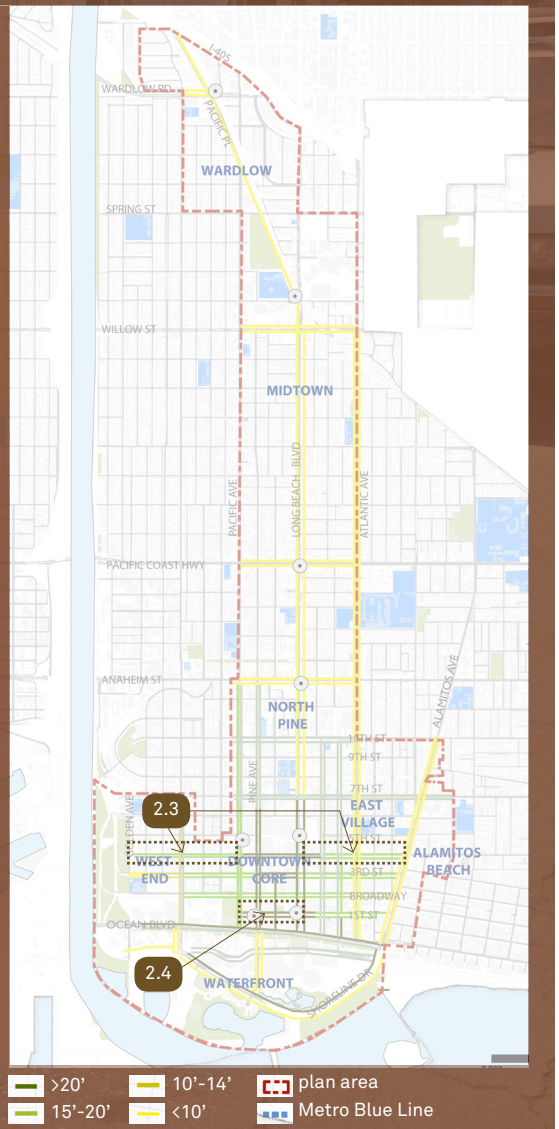


Figure 2.5: Sidewalk Widths

Constraints and Opportunities: Sidewalks >> Downtown > Alamitos

Alamitos
between Ocean and 7th Street

OPPORTUNITIES: connection to 1st street bike boulevard east of Alamitos, access to beach, Shoreline Gateway redevelopment project, possible median

CONSTRAINTS: Narrow sidewalks (<10'), short turning radii, limited ROW, curb cuts and surface parking lots, acceleration lane north of Ocean Boulevard.

Figure 2.6

Alamitos
at Ocean Boulevard, looking east

Figure 2.7

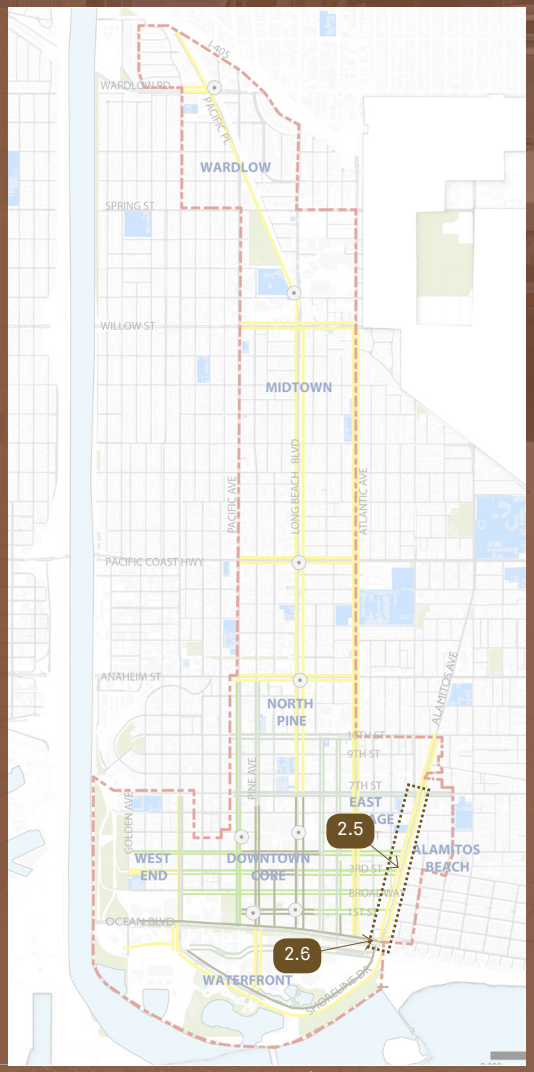


Figure 2.8: Sidewalk Widths

Downtown

In the Downtown District, the city street network is basically a traditional grid pattern. In several locations, the public right-of-way is reserved for pedestrians, most notably the Promenade, which links City Place to the Convention Center. A fairly complete sidewalk system (with sidewalks on both sides of streets) exists in the Downtown District. The Downtown District sidewalk environment includes a variety of pedestrian-supportive facilities such as ADA-compliant curb ramps, pedestrian-scale lighting, and street furniture such as benches and trash receptacles. Sidewalk widths vary by location, with the narrowest sidewalks measuring eight feet wide along Atlantic Avenue and Alamitos Avenue (see Figure 2.8). Sidewalk widths in and near the Downtown District vary by location. Just south of 6th Street, sidewalk widths range from 15 to 20 feet, including parkway or tree wells. Landscaping is, however, inconsistent.

The inner portions of the Downtown Core, East Village, and West End benefit from a relatively complete sidewalk system, with sidewalks present on both sides of most major and minor streets. However, the presence and width of boulevard landscaping also varies. There are a few areas with demonstration stormwater infiltration systems that have been implemented along 4th Street and 1st Street, but this is not typical.

Constraints and Opportunities: Sidewalks >> Downtown > 5th, 4th, north-south local streets

5th Street
between Golden and Pacific

OPPORTUNITIES: direct connection to Pacific Avenue Blue Line station, wide boulevards and sidewalks, mix of pedestrian-scale houses and multi-family buildings
CONSTRAINTS: limited pedestrian-level lighting, wide crosswalks at select intersections

Figure 2.9

4th Street
between Elm and Alamitos

OPPORTUNITIES: Berlin Cafe parklet and active pocket park across street activates 4th and Frontenac, possible alley enhancement, medians, and bumpouts, proximity to 5th Street station, existing retail and restaurants
CONSTRAINTS: turning movements into alley potentially make mid-block crosswalk difficult,

Figure 2.10

Daisy, Chestnut, Linden, Lime
between 7th Street and 3rd Street

OPPORTUNITIES: future bike boulevards, higher density residential, trees and landscaped medians
CONSTRAINTS: angled parking on one side, limited ROW

Figure 2.11

Figure 2.12 Lime Avenue

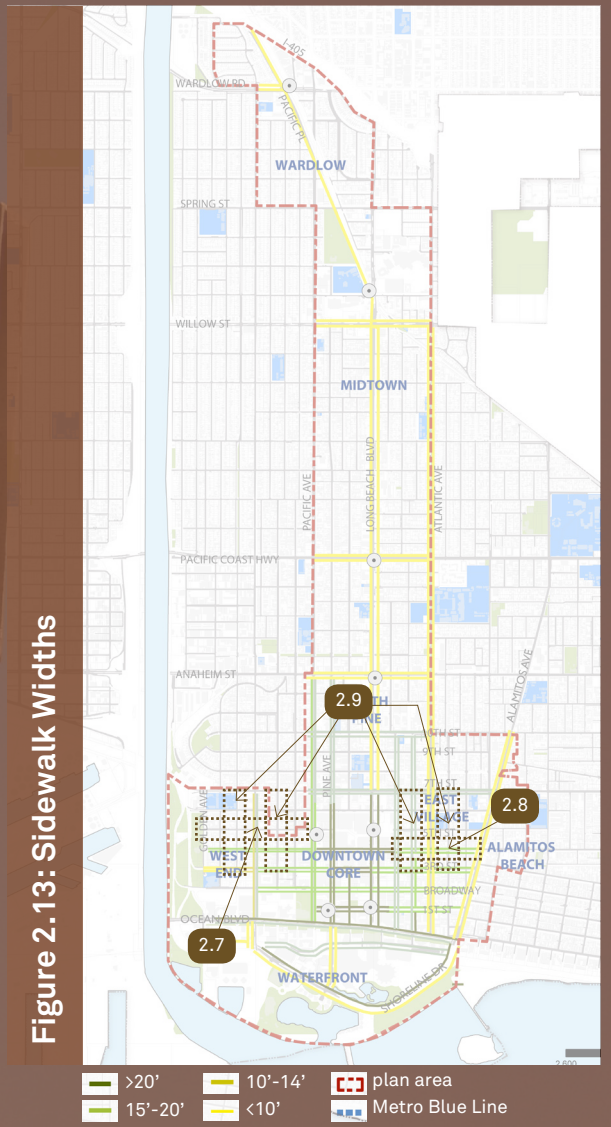


Figure 2.13: Sidewalk Widths

Constraints and Opportunities: Sidewalks >> Midtown

Anaheim
between Pacific and Atlantic

OPPORTUNITIES: potential median with pedestrian refuge, widen sidewalks over time through redevelopment setbacks

CONSTRAINTS: Narrow right-of-way, narrow sidewalks, most buildings located at lot line, no shade trees or protection from moving traffic, heavy traffic volumes

Figure 2.14 Typical conditions along Anaheim Street.

Midtown

While most major streets in the Midtown District include sidewalks on both sides, the sidewalks along east-west streets are narrow and measure approximately seven feet. The existing condition of the pedestrian environment along Anaheim Street between Pacific Avenue and Atlantic Avenue is poor with narrow and/or obstructed sidewalks and minimal inconsistent street trees in various sized tree wells. Pedestrian obstructions such as parking meters, power poles and road signs can be found in the sidewalks, narrowing the accessible sidewalk. The street primarily provides driveway entrances to parking structures and surface lots, and businesses as well as access to service entrances for a majority of businesses. This street is also characterized by fencing and/or walls directly adjacent to the back of the sidewalk, with no setback for planting. Parallel on-street parking lines both sides of the street.

A new multi family development project just west of Anaheim Station could serve as a model for future redevelopment projects. The building is situtated eight feet south of the lot line, providing enough room for a 15'-wide sidewalk with a planted boulevard. The image at left shows the Long Beach Senior Arts Colony (right side of image), a marked contrast from typical conditions across the street.

Constraints and Opportunities: Sidewalks >> Wardlow/Willow

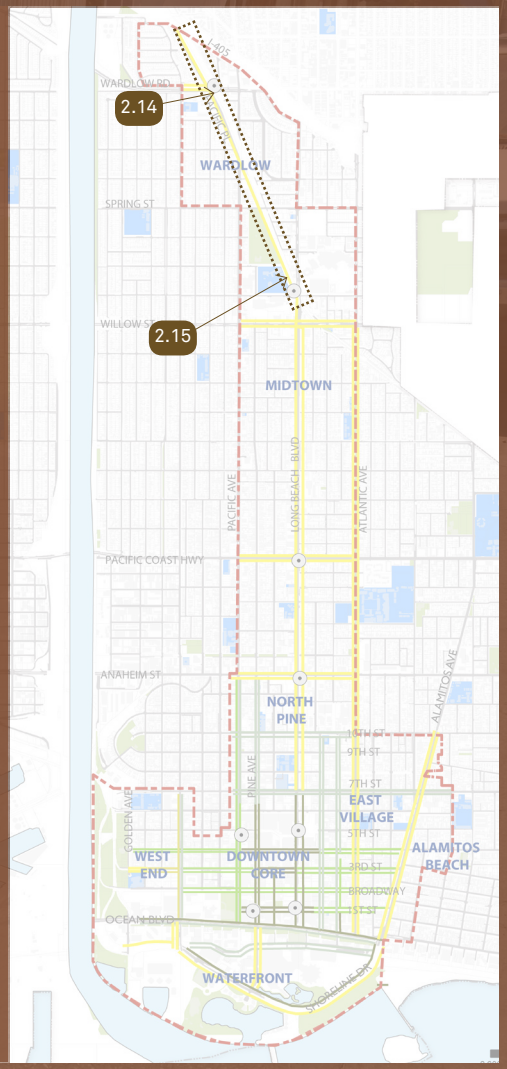
Wardlow/Willow Stations

OPPORTUNITIES: create connection to station using Metro Blue Line ROW, large senior population, Daisy bike boulevard will connect both sides of tracks north of Willow
CONSTRAINTS: no crossings south of Wardlow Road on Pacific Place, gap in sidewalk, wide crossing distances to station, substandard sidewalks widths

Figure 2.15 Wardlow Station

Figure 2.16 Poor connectinos across Pacific Place to Willow Station.

Figure 2.17: Sidewalk Widths



Wardlow/Willow

With the exception of several recently-constructed residential subdivisions Willow District's far northeastern areas, the sidewalk system in outlying areas is somewhat fragmented. Notable major streets lack sidewalks including segments of Pacific Place and segments of Wardlow Road.

Figure 2.18 An underutilized Metro right-of-way could serve as a connection between adjacent neighborhoods and the Wardlow/Willow Stations

Figure 2.19 Missing sidewalk and pedestrian crossings south of Wardlow

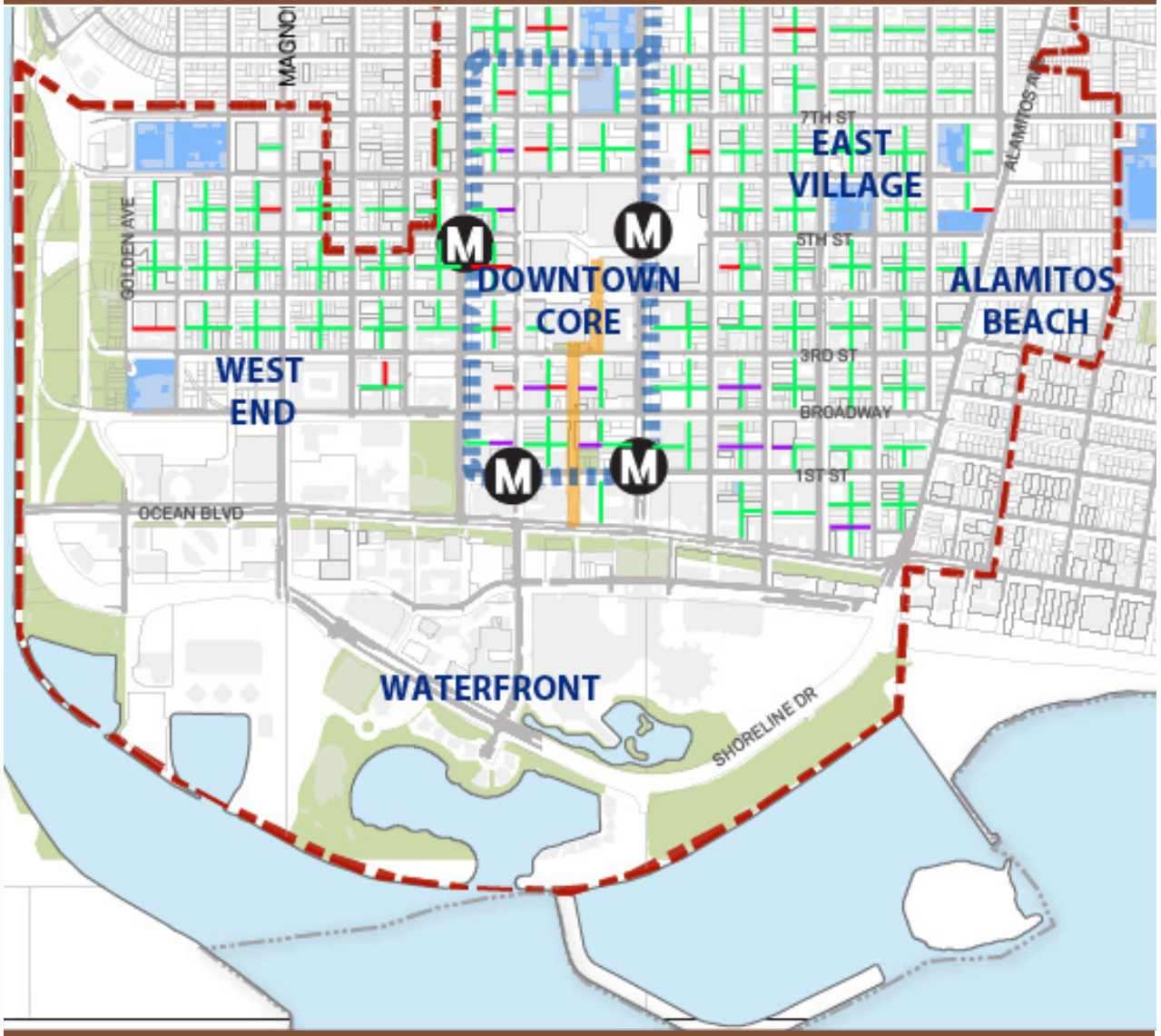
2.1.2 Alleys

Alleys and passages in cities across the world have traditionally provided a functional purpose, such as access for service vehicles collecting trash, deliveries for adjacent businesses, back door access for employees or corridors for power lines, water lines, sewer lines and drainage. Alleys usually run behind or along the sides of buildings to keep these service functions hidden from view and out of the street.

The City of Long Beach has many alleys located downtown and throughout the city. These alleys and passages vary in character, function, and condition. Each alley has the potential for some degree of improvement. In tight urban conditions, alleys and passages provide intimate corridors for pedestrians, and allow for convenient shortcut routes to adjoining streets and destinations.

Encouraging activity to spill out from adjacent buildings into alleys and passages can strengthen retail, provide additional space for outdoor dining and special events, and expand the pedestrian and bicycle network linking many different areas. Public investment designed to improve the aesthetics of alleys and passages, such as paving upgrades, the addition of furniture, lighting or landscaping, will attract people to these spaces, and can potentially revitalize adjacent properties. Ultimately, once a more complete network is established, alley improvements will help to make more direct connections to the Metro Blue Line.

Figure 2.20: Opportunities and Constraints: Alleys

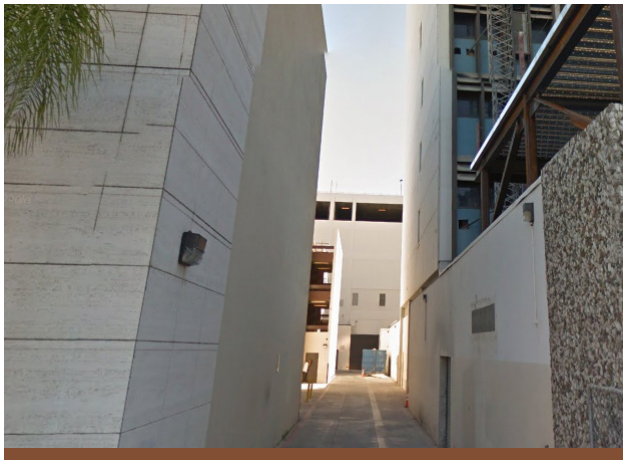


There are a number of alleys in downtown Long Beach that are currently substandard (<20 feet) and provide great opportunities to create unique urban spaces in Downtown. There is a concentration of substandard alleys (pedestrian only) along Pine Avenue that have been enhanced with paving, lighting, and public art.

Figure 2.21 Opportunities and Constraints: Alleys

STANDARD **SUBSTANDARD**

OPPORTUNITY: wide alleys, some with curbs, that could be shared by pedestrians, and service vehicles.



OPPORTUNITY: substandard alley in the downtown district that could be programmed as a pedestrian path.

OPPORTUNITY: simple improvements, including landscaping, paving, and lighting, can make residential alleys inviting to pedestrians.

Conversion of Alta Way to a pedestrian-walkway and green alley, with sidewalk cafes, trees, and lighting.

2.1.3 Traffic/Pedestrian Signals

There are 163 signals within the plan area, as shown in Figure 2.22. There are three primary types of traffic signal operation used throughout the plan area - pre-timed, actuated signal operation, and semi-actuated.

Pre-Timed Signals

There are 56 pre-timed signals within the plan area. At pre-timed traffic signals, each signal phase or traffic movement is serviced in a programmed sequence that is repeated throughout the day. Major street traffic receives a fixed amount of green time followed by the amber and red clearance intervals. The same interval timing is then repeated for the minor or side street. The amount of time it takes to service all conflicting traffic movements is referred to as the cycle length. The signal timings and cycle lengths may vary by time of day to reflect changes in traffic volumes and patterns. For example, during peak traffic periods, cycle lengths may range from 90 - 128 seconds to accommodate heavier volumes, particularly on the busier arterial roadways. During off peak times of day, cycle lengths are reduced as traffic volumes are much lighter and therefore not as much green time is required to effectively service all movements. With pre-timed signals, pedestrian walk/don't walk signal indications are automatically displayed in conjunction with the green signal for vehicles.

Pre-timed signals can provide fairly efficient operation during peak traffic periods, assuming signal timing settings reflect current conditions. However, during off-peak times, particularly at night, traffic on the major roadways often stops for no reason because of little or no traffic or pedestrians on cross streets. With pre-timed signals, the only method to avoid this unnecessary delay is to program the signals for flashing operation during the night time hours, generally 12:30 - 6:00 a.m. Night flash operation was once common practice by many cities and municipalities, but with advancements in signal technology and detection devices, it is rarely used.

Actuated Signals

Actuated signal control differs from pre-timed in that it requires "actuation" by a vehicle or pedestrian in order for certain phases or traffic movements to be serviced. Actuation is achieved by vehicle detection devices and pedestrian push buttons. The most common method of detecting vehicles is to install inductive loop wires in the pavement at or near the painted stop bar. Video detection is used at 4 select locations i.e. Long Beach and Pacific Coast Highway, Long Beach and Wardlow Road, Long Beach and Anaheim Street and Pacific Avenue and 1st Street. Actuated signals consist of two types: semi-actuated and fully-actuated.

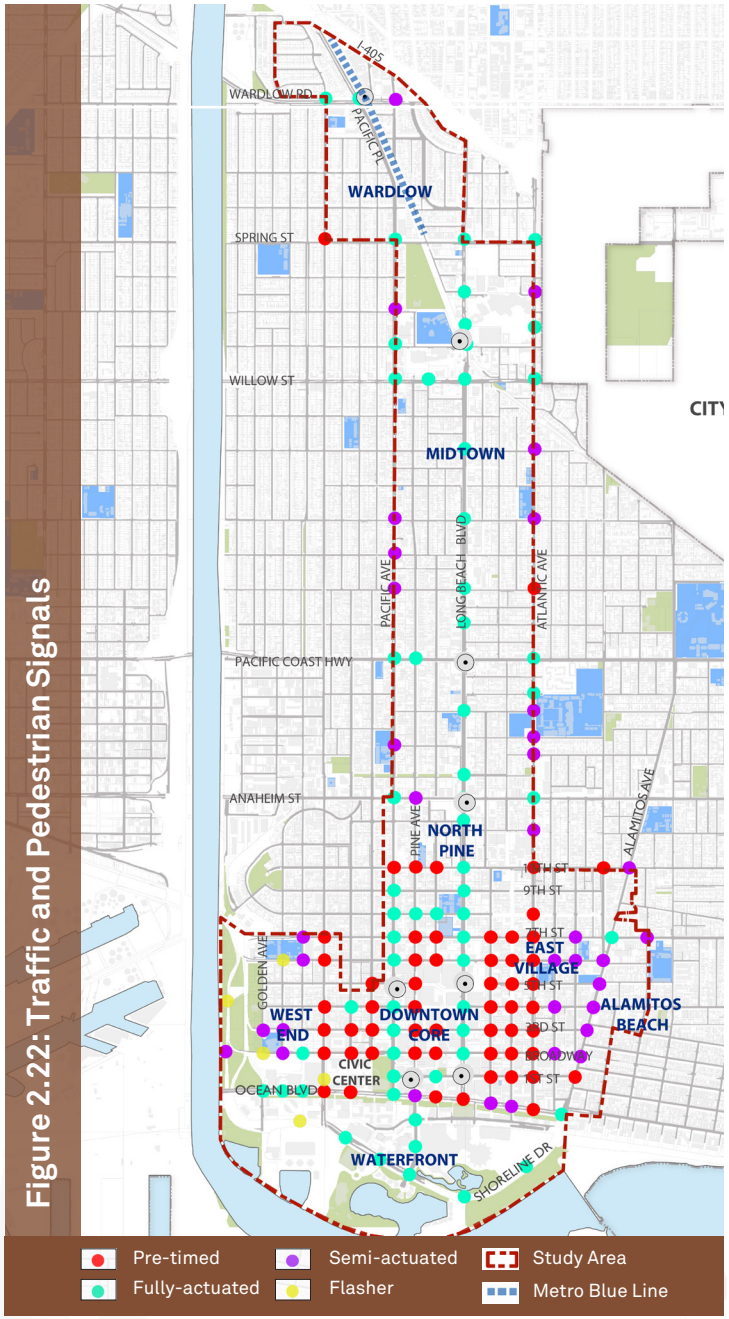


Figure 2.22: Traffic and Pedestrian Signals

Semi-Actuated Signals

There are 35 semi-actuated signals within the plan area. Vehicle loop detectors are installed on the minor street approaches and push buttons are provided for pedestrians wanting to cross the major roadway. The traffic signals remain green on the major roadway until either a cross street vehicle is detected or a pedestrian pushes the button. When this occurs a "call" is sent to the traffic signal controller and at the appropriate time in the cycle the main street green will terminate and time its clearance intervals before the minor street is serviced. If the side street is servicing vehicle demand only, a minimum green of 5-7 seconds is provided which can extend up to a preset maximum provided additional vehicles are being detected. After the last vehicle passes over the detector loop or the preset maximum green time has been reached, the signals will return to a green state on the main street. If the side street is servicing a pedestrian demand, the "walk" & "flashing don't walk" signal indications will be displayed, again at the appropriate time in the cycle. At pedestrian actuated signals, the "walk" indication is displayed for 5-7 seconds. This allows the pedestrian to enter the crosswalk and begin crossing. At the end of the "walk" signal the "flashing don't walk" indication is displayed which provides the pedestrian already in the crosswalk sufficient time to safely complete their crossing and clear the intersection before conflicting traffic receives a green signal. Pedestrians who are already in the crosswalk at the start of this interval continue to have the right of way over turning vehicles. Pedestrians who have not begun to cross when this interval begins should wait until the next cycle.

Fully-Actuated Signals

There are 67 fully-actuated signals within the plan area. Vehicle detector loops and pedestrian push buttons are installed on all approaches. All signal phases including left turn arrows have preset minimum and maximum greens and are serviced on demand only. Pedestrians must activate the push buttons in order to receive the "walk" & "flashing don't walk" indications. A single press of the button locks the "call" in the controllers memory that a pedestrian has requested service. Fully-actuated signals are most efficient at isolated locations where coordination with adjacent signals is not a concern and where the intersecting roadways have similar traffic volumes. Actuated signal control provides greater efficiency compared to pre-timed signals by servicing cross street traffic and pedestrians only when required. The primary disadvantage with pre-timed signals is avoided as street traffic is not interrupted unnecessarily. This is particularly beneficial during off peak conditions. The result is fewer stops and delays to traffic on the major arteries, while still providing for safe pedestrian crossings as and when required, which ultimately leads to a decrease in fuel consumption and pollution.

Flasher

There are 5 flasher signals within the plan area. Flashers encourage drivers to slow down for pedestrians who are about to cross the street.

Figure 2.23 Signalized intersection with a pedestrian refuge at Martin Luther King Jr. Avenue.

Figure 2.24 A fully-actuated traffic signal at the intersection of Pacific Avenue and 4th Street.

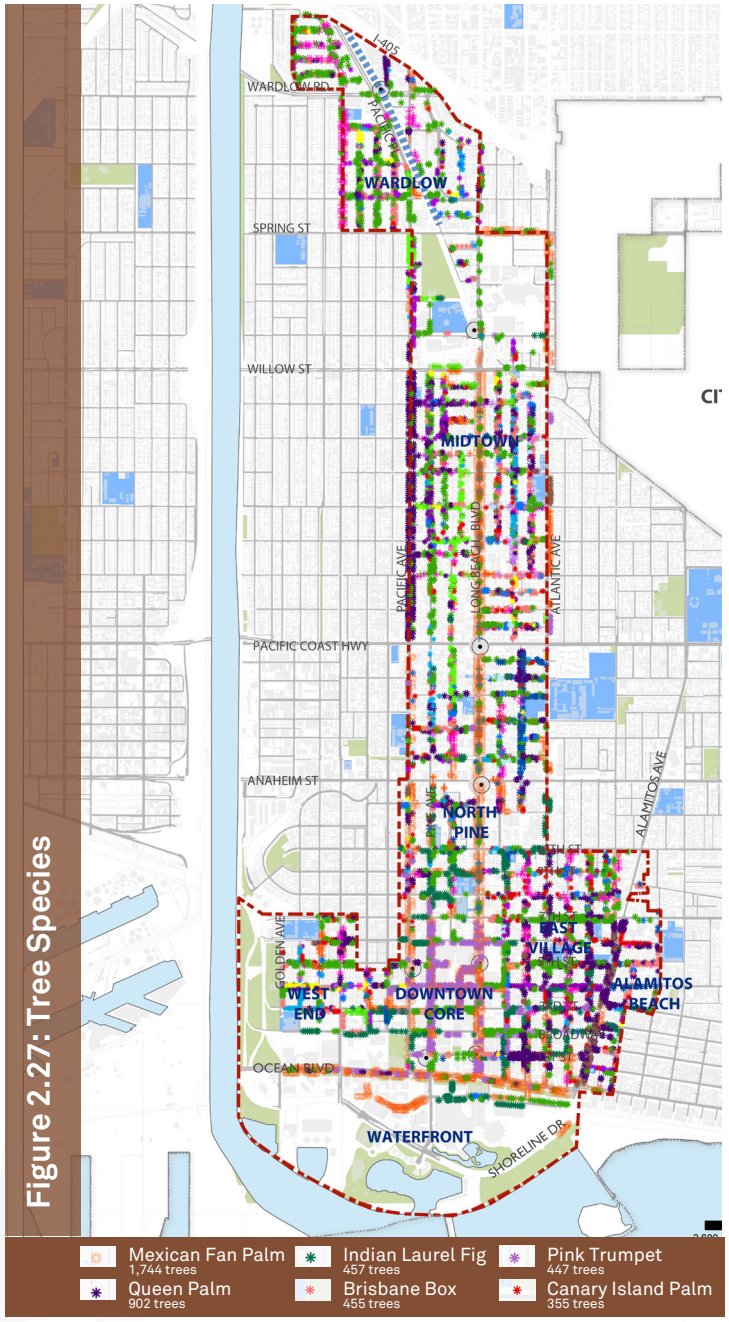
2.1.4 Street Trees

Trees have both functional and aesthetic benefits. One very basic benefit is the widely shared opinion that trees make neighborhoods look better and more cared for. Streets with trees attract more use and pedestrian activity. Research by the Human Environment Research laboratory at the University of Illinois found that apartment buildings surrounded by trees and greenery are dramatically safer than buildings devoid of planting, suffering 52 percent fewer crimes overall and 56 percent fewer violent crimes. Carefully-placed trees also provide a multitude of direct functional benefits. Drivers perceive tree-lined streets as narrower and tend to reduce speed. Tree-planting strips establish a buffer between sidewalks and auto lanes. Safe, appealing streets encourage walking, which, in turn, has health benefits. A California study found that tree-lined streets within a half mile of schools were among the factors that encourage more students to walk to school. Also, studies support that trees lower surface and air temperatures by providing shade. Shaded surfaces, for example, can be 20–45°F (11–25°C) cooler than the peak temperatures of unshaded materials.

There are an estimated 8,700 street trees on public rights-of-way within the plan area, as shown in Figure 2.27. The predominant trees in the plan area include Mexican Fan Palm, Brisbane Box, Canary Island Date Palm, Indian Laurel Fig, Jacaranda, Pink Trumpet tree, Queen Palm and Southern Magnolia.

Figure 2.25 Mexican fan palm trees line iconic streets such as Long Beach Boulevard (above) and Ocean Boulevard, but do not offer protection from the sun for pedestrians.

Figure 2.26 Queen palm trees are common throughout the East Village. The image above is of Alamitos, where queen palms provide shade along a narrow sidewalk.



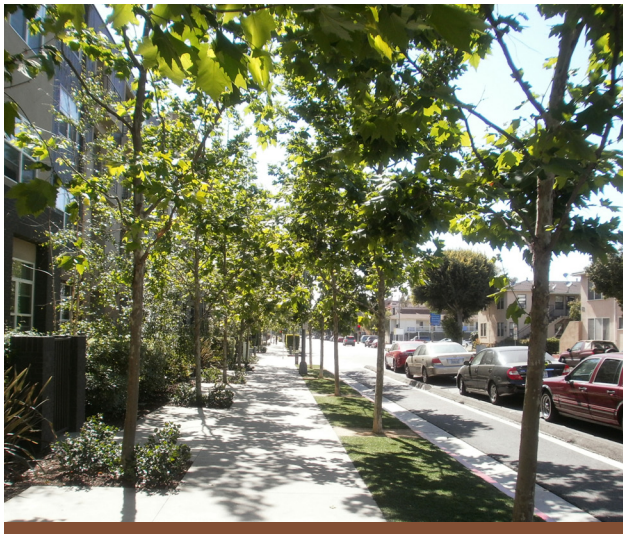


Figure 2.28 A double-row of London plane trees along 3rd Street creates an inviting pedestrian environment.

Figure 2.29 Ornamental pink trumpet trees are found throughout the downtown core, particularly along Pine Ave. and 4th Street.

Figure 2.30 Indian Laurel Fig (ficus) trees along Broadway, showing damage to the sidewalk from extensive root systems. Ficus trees should be phased out over time.

The existing palm trees (Canary Island Palms and Mexican Fan Palm) along segments of Long Beach Boulevard, Pine Avenue, Pacific Avenue and Ocean Boulevard are among the plan area's most positive assets, providing a strong, visual unity to the street edges as seen from a distance. Shade trees provide better cover from a wider and lower canopy and frame pedestrian spaces to enhance feeling of enclosure on sidewalks. Limited shade is provided on sidewalks to shield pedestrians and bicyclists from the harsh sun. There is also a lack of shade trees along the Waterfront.

In the Midtown and Wardlow/Willow districts, there are gaps in the tree canopy and a general lack of consistent tree palette. Additionally, parkway landscaping and maintenance is lacking in many areas, which diminishes the condition of the pedestrian environment.

The Public Works Department (DPW) is responsible for all tree plantings in City parkways, medians and right-of-way and for trimming of trees. DPW has a goal of pruning street trees every two to eight years depending on the tree species; however, tree trimming related to safety (tree limbs that interfere with safe passage of vehicles or pedestrians) are scheduled immediately. Other trims are scheduled as funds are available.

2.1.5 Boulevards

Much of Downtown and main streets in Midtown do not have boulevard conditions, but have tree wells with permeable concrete grates, metal grates or dirt to create more walkable areas for pedestrians. The residential areas of East Village and West End, Midtown, and Wardlow incorporate parkways with a variety of groundcover solutions. Grass is the groundcover choice for most parkways, but there are several planted boulevards throughout the districts including stormwater boulevards on 1st and 4th Streets. Other solutions to lower maintenance requirements include large scale pots, synthetic turf, gravel, decomposed granite and drought-tolerant plantings.

Landscaped parkways provide a number of benefits. They can help to infiltrate and clean stormwater before it is released into the ocean, protect pedestrians from moving traffic, protect pedestrians from the sun, and add to the overall vitality of a corridor. However, when selecting parkway treatments, the City should be sensitive to ongoing maintenance costs. While treatments that require extensive irrigation should be avoided, shade trees, succulents, and other green vegetation should be used where appropriate.

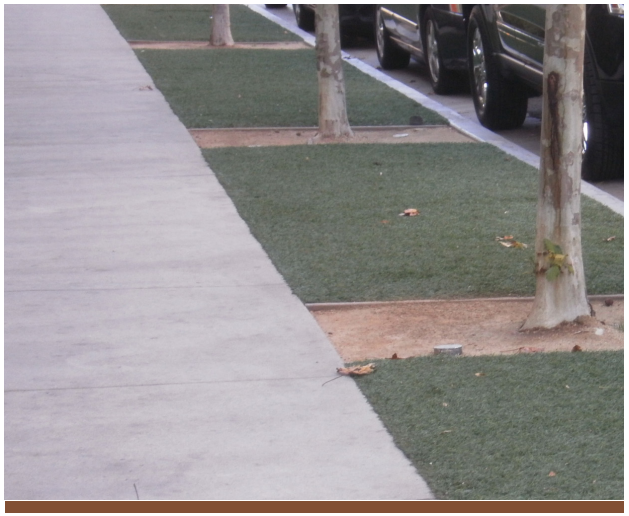


Figure 2.31 Synthetic turf used as a low-maintenance solution.

Figure 2.32 Gravel and natural stone is used along some boulevards to decrease water use.

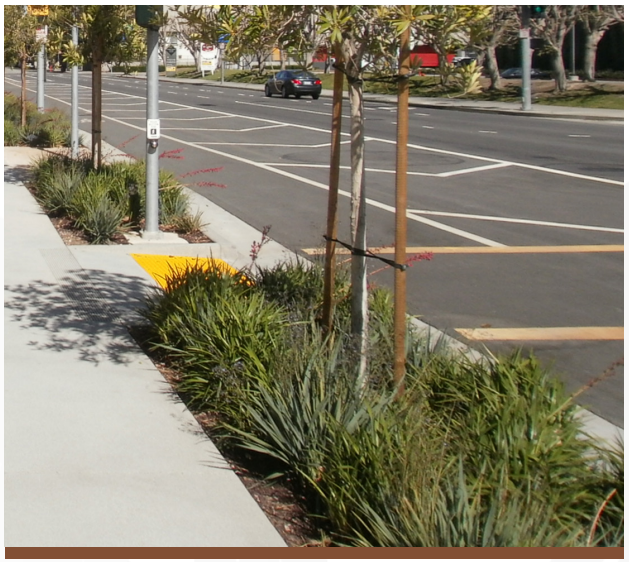


Figure 2.33 Planted parkways along Broadway are attractive and protect pedestrians from moving bikes and traffic.

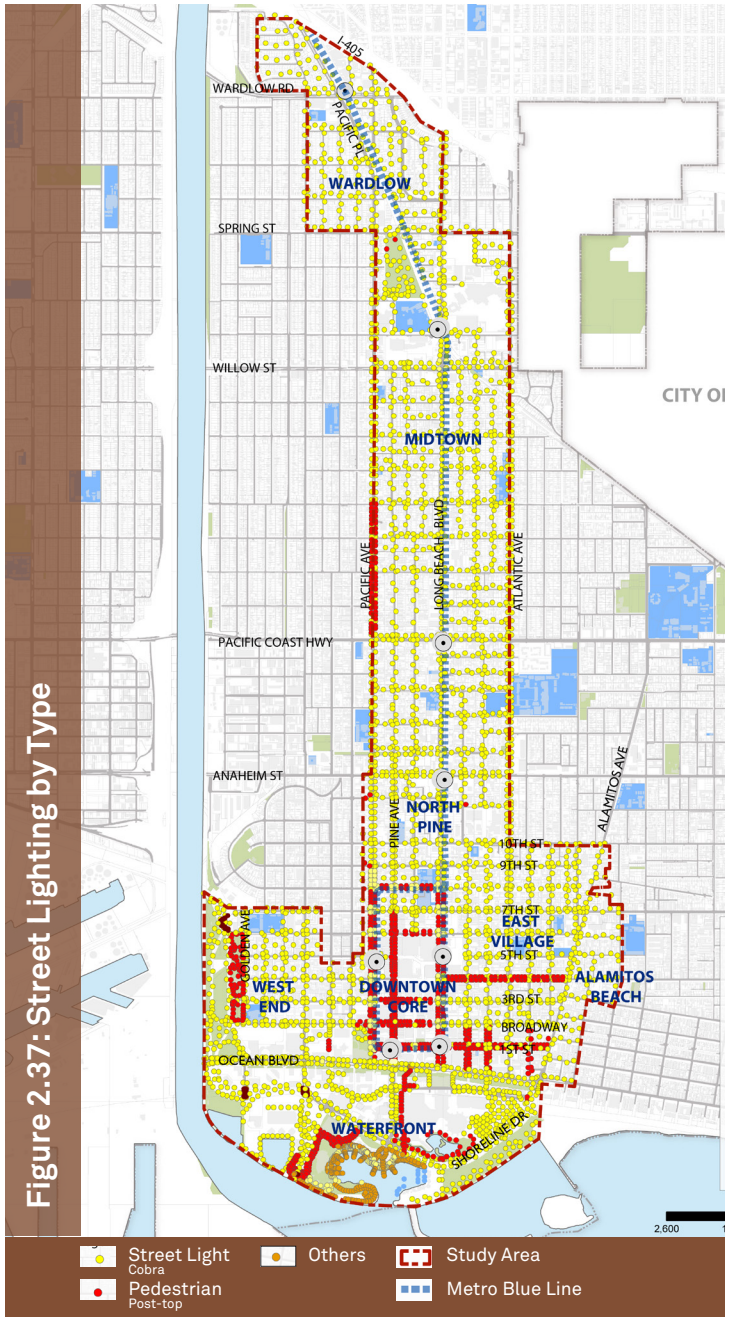
Figure 2.34 Tree grates along Pine Avenue.

2.1.6 Street Lighting

The map at right is an inventory of street lights in the plan area. There are a total of approximately 4,680 street lights in plan area. Nearly 18% of the existing lights are pedestrian lights. Segments of Pine Avenue, Pacific Avenue, Long Beach Boulevard and 1st Street within the Downtown District have the highest concentration of pedestrian street lights, averaging about one every 50 feet. Greater distances between street lights exist along the other east-west arterial roadways and north of 4th Street. Street lighting along these roadways is typically spaced about 150 feet to 200 feet apart, although in some cases, exceeds 500 feet.

Figure 2.35 Historical street lighting along Long Beach Boulevard and Pacific Avenue.

Figure 2.36 Modern inverted conical pedestrian lighting in East Village, found along 1st Street and intersecting avenues.



2.1.7 Street Furniture

Clear and uncluttered pedestrian pathways are vital for an efficient and accessible streetscape and the importance of placing street furniture to enhance this activity is central to a successful plan. Benches and other street furniture also provide respite for pedestrians walking to and from Metro Blue Line Stations.

Benches and Trash Receptacles

The existing street furniture palette is inconsistent throughout the districts and does not occur along the streets in a standardized way. Standard metal backless benches are found at transit stops and distinctive district bench and trash receptacles can be found at City Place but there is not an observable palette that can be discerned for each district.

Bike racks

Long Beach has a long history of providing a variety of bike parking options for its cyclists. The City, through its Bicycle Parking Rack Program provides many unique racks to business owners that can be installed in the public right-of-way free of charge. Bike racks can contribute greatly to a district identity and encourage the use of bikes and walking as a viable form of transportation. The program has created a colorful and vibrant streetscape in many districts, but has also contributed to a certain degree of clutter and inconsistency.

Figure 2.38: Opportunities and Constraints: Street Furniture

CONSTRAINT: Street furniture is diverse and often creative, but has resulted in a variety of styles that lack a consistent identity.

Trash Receptacles

Benches

Bike Racks

Transit Shelters

A well-designed bus shelter is an essential part of any successful urban mass-transit system. A well-designed shelter provides visibility, accessibility, comfort and convenience and information.

Many transit agencies and cities have specific guidelines for locating bus shelters. Specific Federal Transportation Administration (FTA) guidelines for locating bus shelters are:

- Bus shelters near intersections should be set back from the crosswalk approximately 10 feet to avoid conflicts with pedestrian traffic. If a bus stop is on the far side of an intersection, the shelter should be located a minimum of 40 feet from the crosswalk to allow adequate room for the bus to stop.
- A distance of four feet should be allowed between the bus shelter and the curb for free movement in boarding and exiting from the bus.
- Bus shelters should have their long side parallel to the sidewalk to minimize interference with pedestrian traffic.
- Exit and entry openings should be oriented so that people are protected from the wind. However, it is important to keep the side of the shelter facing the street open to allow passengers to board or exit the bus easily.
- Elements such as information kiosks or vendors that can obstruct the view of oncoming buses should be located “down-stream” from the shelter.

The plan area includes various transit shelters. The Long Beach Transit Mall extends along 1st Street between Pacific Avenue and Long Beach Boulevard. As the City’s major transit center, this section of 1st Street is closed to private vehicles and only light-rail trains and transit vehicles are allowed. In 2010, a $7 million project was undertaken by Long Beach Transit to upgrade the transit mall. New bus shelters were constructed, with improved lighting and new artwork. These new shelters are unique to the area and create an iconic statement for the mall. A kaleidoscope system with solar lighting is the standard Long Beach Transit shelter; however, many aging bus shelters are located within the plan area. In some locations, the bus stops only have a sign and a bench.

Figure 2.39 An innovative bus shelter that doubles as public art and helps to create a sense of place.

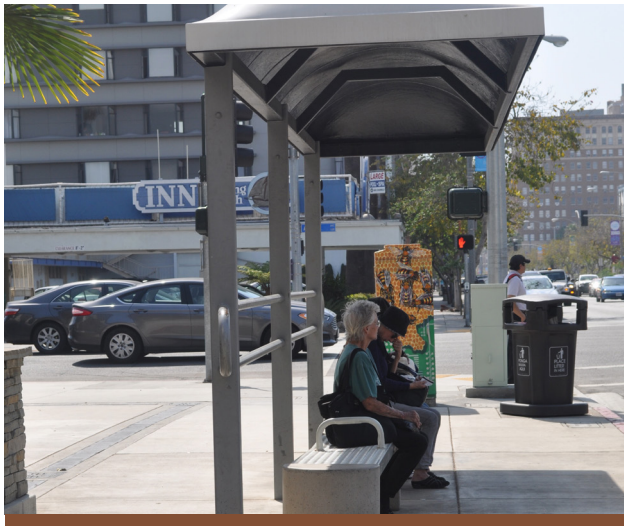


Figure 2.40 A standard bus shelter.

Figure 2.41 The recently-renovated Long Beach Transit Gallery.

2.1.8 Public Art

Public art has a distinctive place within the public realm and the City of Long Beach understands the importance and value of this resource. Public art is free and available for everyone to enjoy. There are many examples of public art projects that are represented within the plan area. The former Long Beach Redevelopment Agency implemented an ambitious plan to transform traffic signal controller cabinets into pieces of art in the City and these installations can be found throughout the plan area. Larger sculptural pieces of modern art are found throughout the East Village and the Downtown Core Sub-districts. These are generally located along Broadway, 4th Street and Ocean Boulevard. These create opportunities to support an urban art walk that spans neighborhoods. Unique tile artwork has been installed on buildings along First Street in East Village. The vibrant sidewalk mosaic tile artwork at the Transit Mall supports dynamic urban design along this important connector street.

Figure 2.42 Painted utility boxes installed as part of a City-sponsored improvement program.

Figure 2.43 Public art along Broadway Avenue.

Figure 2.44 Decorative art planters installed along protected bike lanes on 3rd and Broadway.

2.1.9 Parklets and Pocket Parks

There is currently one parklet on 4th street between Elm and Linden Streets and another on 1st Street that accommodates bicycle parking. This is the only example of additional seating or amenities within parking spaces that were formerly occupied by cars. As initially conceived, a parklet is always open to the public; however, Long Beach has a unique program that allows parklets for restaurants use only. The parklet is a temporary installation, part of the City's approach to using "quick, fast, and cheap" treatments that pave the way for future, more permanent solutions.

Figure 2.45 Pocket park along 4th Street.

Figure 2.46 An enlarged curb extension at 2nd Street and Orange Avenue (outside of the plan area) that has been turned into a sidewalk cafe.

Figure 2.47 Berlin Cafe, which participates in the CIty's parklet program, operates a sidewalk cafe in an area once reserved for on-street parking.

2.1.10 Crosswalks

Crosswalks are either “marked” or “unmarked.” The California Vehicle Code defines a “crosswalk” as the portion of a roadway at an intersection, which is an extension of the curb and property lines of the intersecting street or is any other portion of a roadway that is marked as a pedestrian crossing location by painted lines. A “marked crosswalk” is any crosswalk, which is delineated by white or yellow painted markings placed on the pavement. All other crosswalk locations are therefore “unmarked.” Marked crosswalks are an essential part of the pedestrian realm that enable safe, convenient pedestrian travel across roadways. In special cases, they may also be a unique urban design treatment.

The standard treatment for marked crosswalks at intersection locations consists of two 12”-wide white stripes that delineate the sides of pedestrian walking area. Near a school, these standard crosswalks are yellow per state code. Crosswalks should be no less than 10 feet in width. A more desirable width for high pedestrian areas is 15 feet to 20 feet. Crosswalks must be outfitted with curb ramps and tactile warning strips per federal accessibility guidelines and the Manual on Uniform Traffic Control Devices (MUTCD) standards and guidance on crosswalk warning signs and supplementary markings.

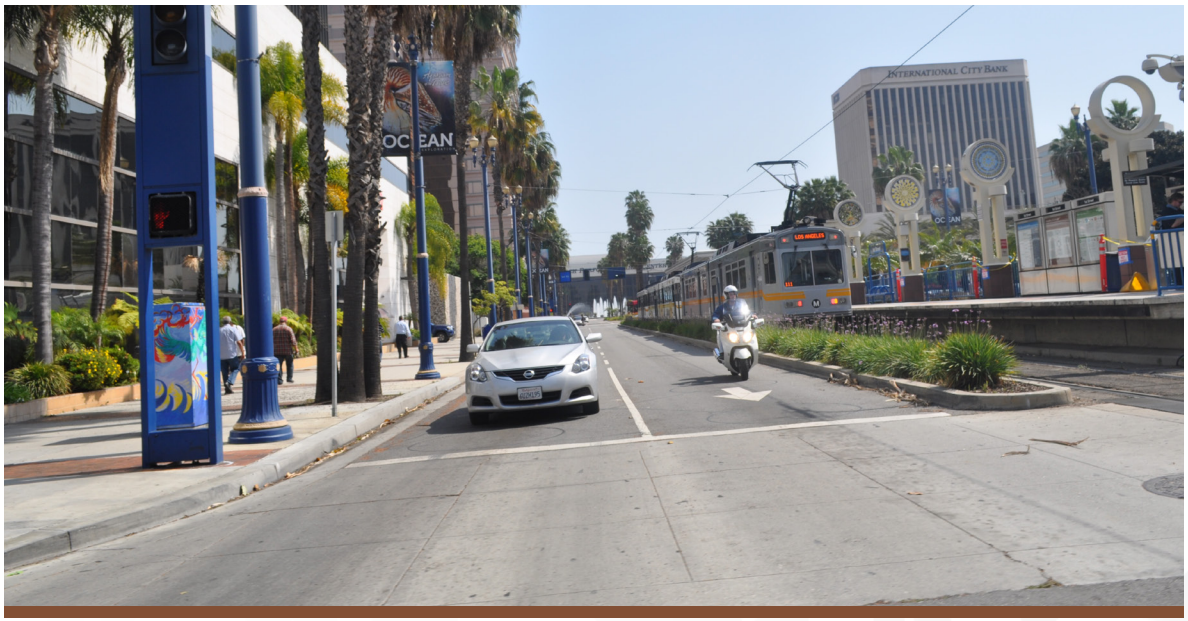
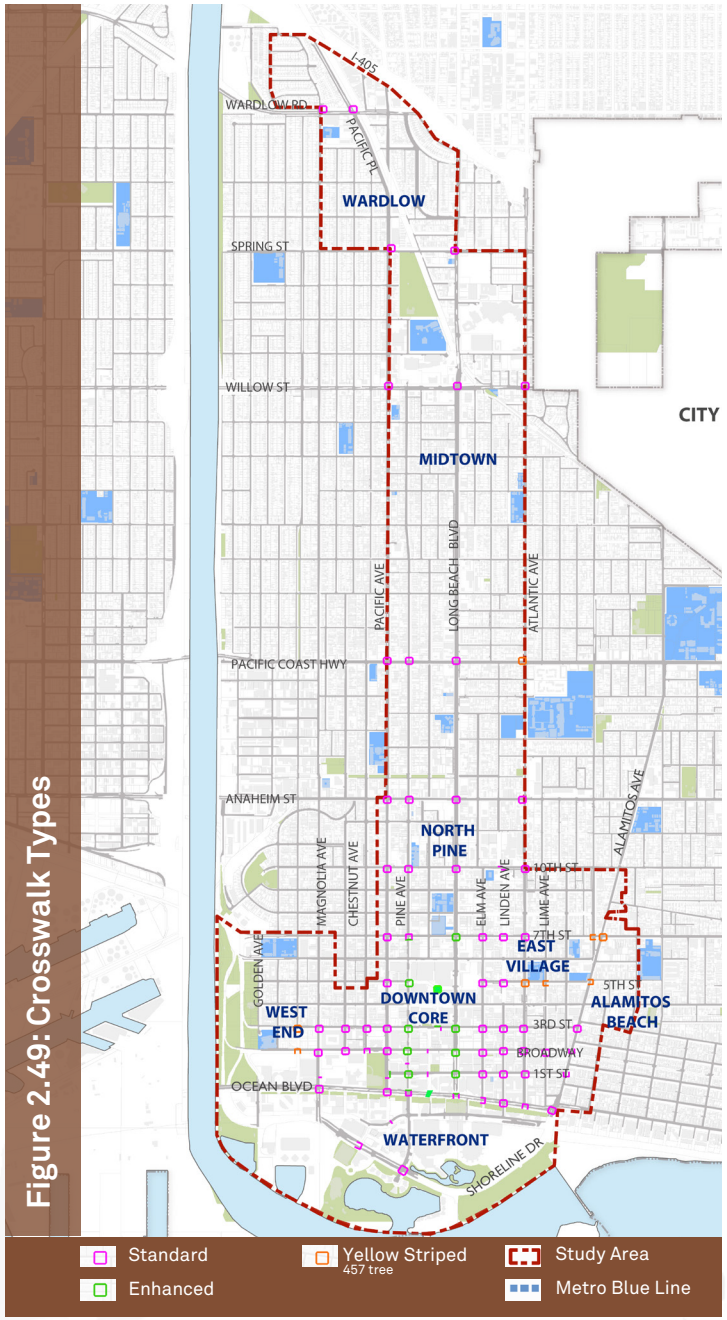


Figure 2.48 Missing crosswalk markings along Long Beach Boulevard.



The majority of crosswalks in the plan area are standard retro-reflective thermoplastic or painted 12”-wide white lateral markings; however, stamped crosswalks are employed in a few locations, especially along Pine Avenue and Long Beach Boulevard intersections in the Downtown District. A few schools in the plan area employ yellow crosswalks near schools consistent with MUTCD recommendations. Generally, there is a lack of high-visibility crosswalks such as continental crosswalks in the plan area with exception of a few enhanced crosswalks within the Downtown District. In some locations the crosswalks are not as wide as the sidewalk. In many locations, the crosswalks are not marked clearly. In some locations at signalized intersections there are no marked crosswalks. In addition, the mid-block crossings along Long Beach Boulevard near the Blue Line stations do not have any markings.

2.1.11 Curb Ramps

Pedestrian accommodations within the project area include concrete sidewalks with curb ramps at intersections to allow for safe crossing. The sidewalks are generally in compliance with ADA/ Title 24 path of travel slope requirements. However, some areas have abrupt vertical changes exceeding 1/2” due to heaving pavement, some of which has been repaired by grinding and/or floating-out the pavement. There are also isolated locations with obstructions an non-compliant surface elements. A number of curb ramps are not ADA compliant due to their slope, missing truncated domes, or general condition.

Figure 2.50 Standard crosswalk at Elm and 3rd Street.

Figure 2.51 Enhanced crosswalk at Pine Avenue and 5th Street.

Figure 2.52 Non-compliant zero curb face lacks truncated domes. This condition is common along many streets in East Village and Alamitos Beach.

2.1.12 Stormwater Infrastructure

Stormwater within the plan area is collected through storm drain facilities that flow generally to the west and into the Los Angeles River. The Los Angeles River is the largest regional drain flowing through the City of Long Beach. In 2008, the City enacted a Low Impact Development Standards ordinance to control runoff and manage storm water on site. There is no large-scale regional treatment in place within the project area.

Downtown

The drainage pattern in this district is from east to west. There are three storm drain systems that outfall to the Los Angeles River. Two of these systems outfall by pumping at 6th Street and at pumping station south of Shoreline Drive with a maximum operating capacity of 109 cubic feet/second (cfs) and 221cfs, respectively. The third system outfalls by gravity at 3rd Street. The storm drain facilities and conveyance systems are owned by either the City of Long Beach, County of Los Angeles or the California Regional Water Control Board. Existing catch basins intercept runoff and convey flows into the storm drain system.

There is a specialized demonstration planter installed in the sidewalk on 1st Street that is designed for runoff to flow into the planter through an inlet at street level. These planters manage stormwater by providing storage, infiltration, and evapotranspiration of runoff. There is also an area along 4th Street between Long Beach Blvd and Elm Street that employs a permeable paving system to manage stormwater, but these are rare occurrences within the public right-of-way.

Midtown Plan Area

Stormwater runoff is collected by existing storm drain facilities that generally flow west towards the Los Angeles River. These facilities are owned and maintained by various agencies including the City of Long Beach, Los Angeles County and Caltrans. A few scattered and privately maintained systems can be found within this subarea. Storm drain sizes vary from 12 to 96 inches of reinforced concrete pipes. Existing catch basins throughout this area intercept runoff and convey flows into the storm drain system.

Wardlow Plan Area

The drainage in this district generally flows to the southwest. There are two main storm drain systems in this district that outfall to the Los Angeles River through the pump at 34th Street and the Willow Pump Station. The storm drain facilities and conveyance systems are owned by either the City of Long Beach, County of Los Angeles or the California Regional Water Control Board. Existing catch basins intercept runoff and convey flows into the storm drain system.

Figure 2.53 Tree trenches infiltrate sidewalk stormwater runoff at the intersection of 1st Street and Pacific Avenue .

Figure 2.54 Permeable boulevard plantings along 4th Street helps reduce polluted runoff and recharge groundwater.

2.2 Pedestrian Generation Analysis

Everyone is a pedestrian at some point during the day, whether walking the entire way to a destination, walking to transit, or simply walking to and from a car into a building. One goal of the PMP is to evaluate indicators of current or potential pedestrian demand across the plan area, such as presence of schools, transit centers, youth, and elderly. Studying the distribution of certain population segments and land use types in the plan area helps to understand where the greatest potential for a walking trip might be, and will thereby allow the PMP to focus its resources in these areas.

In addition to understanding the potential demand for walking, it is also important to understand current and potential barriers to walking, such as freeways, rail rights-of-way, unsafe intersections, and poor infrastructure connectivity. The key outcome of the Pedestrian Generation Analysis presented in this chapter is a thorough understanding of current and potential pedestrian demands and barriers in the City, which will then become the focus for project recommendations.

The Pedestrian Generation Analysis identifies the location and intensity of existing and proposed pedestrian generating land uses and subpopulations across the plan area. This analysis guides the planning process toward those areas where investments in pedestrian facilities is most beneficial in terms of the current propensity for pedestrian activity.

Figure 2.55 A pedestrian walks along Magnolia Avenue.

2.2.1 Blue Line Station Walkshed

Frequently in transit access analyses, simple distance-based buffers are applied around each station to estimate the extent of a 10-minute (half-mile) walk to the station. Increasingly, however, distance-based buffers are making use of route finding software to better reflect the true travel distance from a station as determined by the street network. Figure 2.5.7 shows the 10-minute walkshed for plan area stations.

2.2.2 Total Population and Employment Density

Population density, measured as the number of persons per acre of residential land, is a strong indicator of potential pedestrian activity. Generally, higher population densities are associated with more urban environments, which tend to support pedestrian travel through mixed land uses and interconnected street networks.

Figure 2.58 displays population density for the plan area. As shown, areas of East Village, the West End near Pacific station, and the area west of Anaheim Station have some of the highest residential densities in the plan area. Low population densities can be found in the Waterfront, Downtown Core, and north of Willow Street. While the Downtown Core currently has a low population density, there are several planned multi-family housing projects that will bring new residents to the area.

Figure 2.59 displays employment density for the plan area. There are several locations with high concentrations of employment, including the Waterfront and Downtown Core, and the area along Long Beach Boulevard between Spring Street and Willow Street which is the site of the Long Beach Memorial Hospital. Low employment densities occur in the northwest quadrant, in the area bordered by I-405 and Wardlow Road and southwest quadrant.

2.2.3 Pedestrian-Dependent Populations

This section summarizes demographic characteristics associated with higher levels of walking, including youth, elderly, physically disabled, and median household income. Certain population characteristics, such as age and household income, have been shown to influence pedestrian activity. For example, youth tend to walk more since they cannot legally drive; elderly and physically disabled tend to walk or use sidewalk facilities more due to physical impairments which may restrict their ability to drive; and finally, lower income households tend to walk more given their lack of access to vehicles for driving. Mixed land uses tend to generate higher levels of pedestrian activity since multiple and varying opportunities within close proximity of each other creates shorter trip lengths, which in turn increases the propensity to make a trip on foot. Figure 2.60 displays the distribution of population younger than 17 years across the plan area. The distribution and intensity of youth generally follows overall population density patterns, although there is a notable concentration of youth in the East Village, Alamitos Beach and Midtown District. Figure 2.61 displays the distribution of population older than 65 years. The distribution of higher concentrations of elderly population generally follow similar patterns to the overall population, with notable concentrations near the Wardlow and Willow Stations and portions of West End, North Pine and East Village neighborhoods.

2.2.4 Pedestrian Generator Map

Figure 2.62 displays the composite generator map of all pedestrian generation factors, including population and employment densities, demographics, and major destinations. This map was developed using a GIS tool called Spatial Analyst which combines all of the individual generators, as discussed in the previous sections, into a single, composite file. The pedestrian generators are weighted individually, with higher values assigned to locations with higher levels of pedestrian-generating features. Differing multipliers are also applied to each factor to account for the relatively greater importance of some factors over others. Figure 2.56 displays the pedestrian generators, along with the associated weights and multipliers.

Interpreting the weight and multiplier values assigned to one of the generators is useful for understanding this process. In the case of population density, five classes of density were defined (<15 persons per acre, 15 - 30 persons per acre, 30 - 45 persons per acre, 45 - 60 persons per acre, and >60 persons per acre).

Point values were then assigned to the different classes, with higher population densities receiving higher point values. A multiplier value of 1 or 2 was

applied to all factors. Factors receiving a multiplier of 2 should have a greater impact on pedestrian activity than those receiving a multiplier of 1. The population density generator was assigned a multiplier of 2, meaning that it is more highly correlated with walking than some of the other pedestrian generators. The point and weight values were assigned in accordance with the relative impact of these characteristics on pedestrian activity understood through planning practice, academic research, and professional judgment.

As shown in Figure 2.62, the final pedestrian generator map identifies several high-generator areas within the plan area, especially within the Downtown and several smaller, high generation areas within the Midtown and Wardlow and Willow station areas.

Figure 2.56: Pedestrian Generation Analysis Weights and Multipliers

Pedestrian Generator	Weights	Multipliers	Final Score
Pedestrian Density (persons per residential acre by TAZ)			
<15	0	2	0
15-30	1		2
30-45	2		4
45-60	3		6
>60	4		8
Employment Density (employees per non-residential acre by TAZ)			
<40	0	2	0
40-80	1		2
80-120	2		4
120-160	3		6
> 160	4		8
Youth (population younger than 17 years per acre by TAZ)			
<5	0	2	0
5-10	1		2
10-20	2		4
Elderly (population older than 65 years per residential acre by TAZ)			
<10	0	1	0
10-25	1		1
25-30	2		2
30-40	3		3
Land use Adjacencies			
Presence of major destination (Figure 1.3)	1	3	3

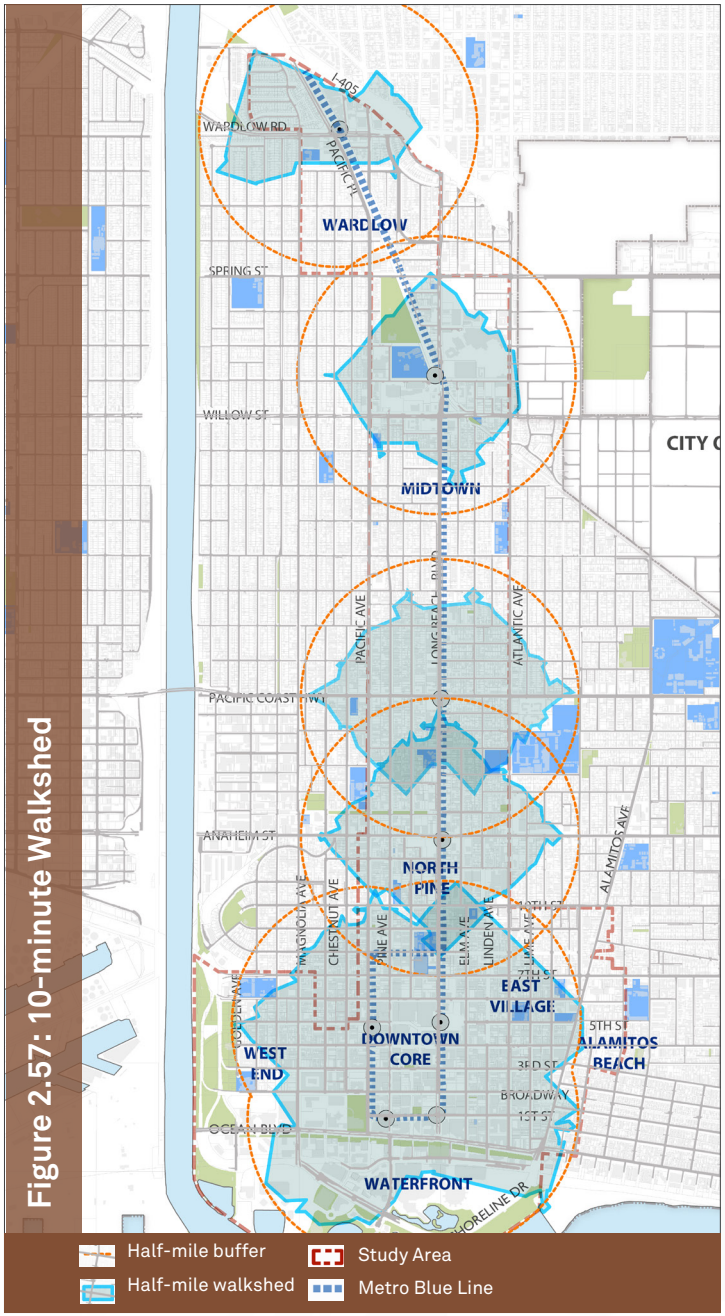


Figure 2.57: 10-minute Walkshed
WARDLOW
MIDTOWN
NORTH PINE
EAST VILLAGE
DOWNTOWN CORE
WEST END
ALAMITOS BEACH
WATERFRONT
WARDLOW RD
SPRING ST
WILLOW ST
PACIFIC COAST HWY
ANAHEIM ST
OCEAN BLVD
PACIFIC AVE
LONG BEACH BLVD
ATLANTIC AVE
ALAMITOS AVE
PINE AVE
GOLDEN AVE
SHORELINE DR
Half-mile buffer
Half-mile walkshed
Study Area
Metro Blue Line

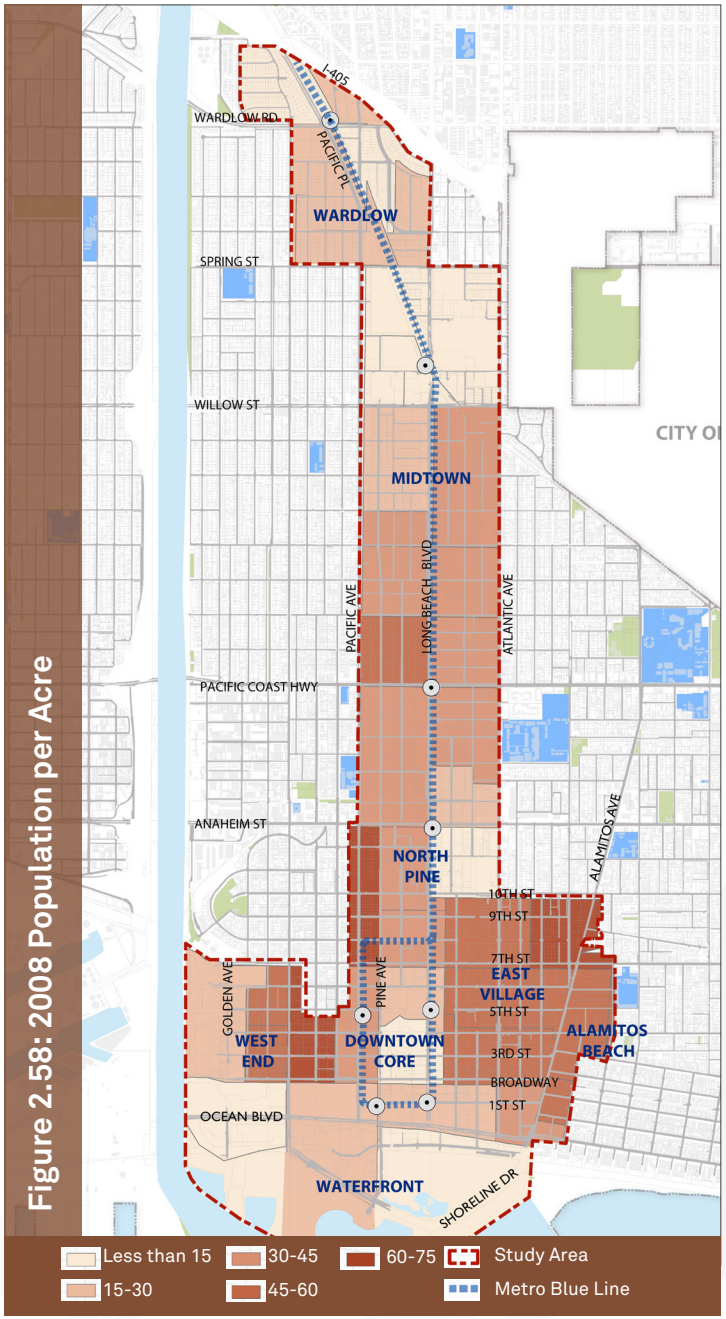


Figure 2.58: 2008 Population per Acre
WARDLOW
MIDTOWN
NORTH PINE
EAST VILLAGE
DOWNTOWN CORE
WEST END
ALAMITOS BEACH
WATERFRONT
WARDLOW RD
SPRING ST
WILLOW ST
PACIFIC COAST HWY
ANAHEIM ST
OCEAN BLVD
PACIFIC AVE
LONG BEACH BLVD
ATLANTIC AVE
ALAMITOS AVE
PINE AVE
GOLDEN AVE
SHORELINE DR
Less than 15
15-30
30-45
45-60
60-75
Study Area
Metro Blue Line

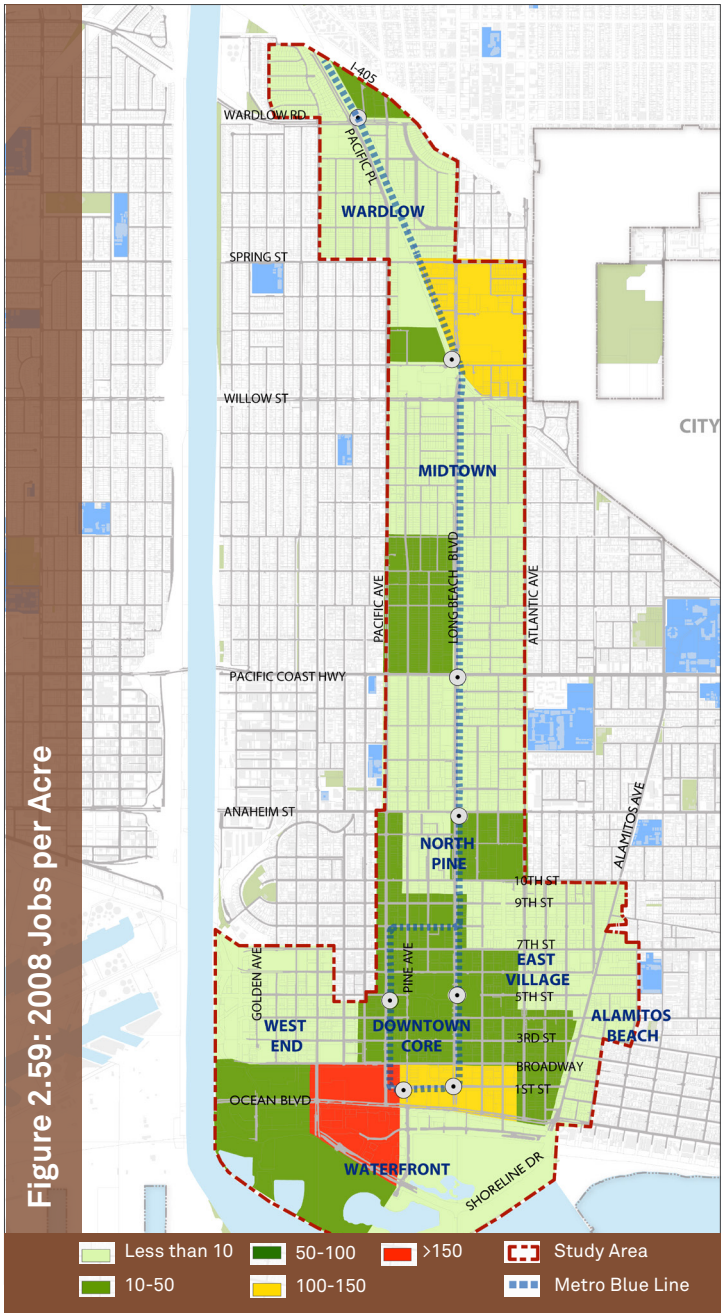


Figure 2.59: 2008 Jobs per Acre

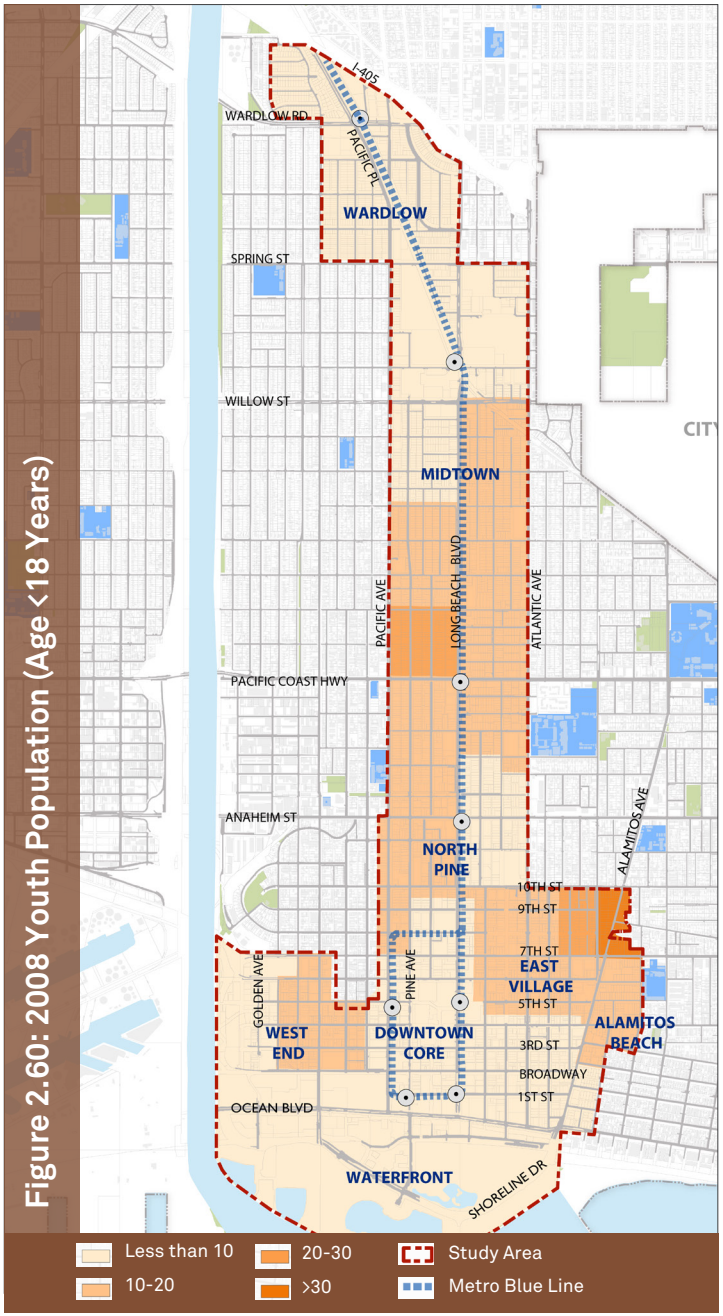


Figure 2.60: 2008 Youth Population (Age <18 Years)

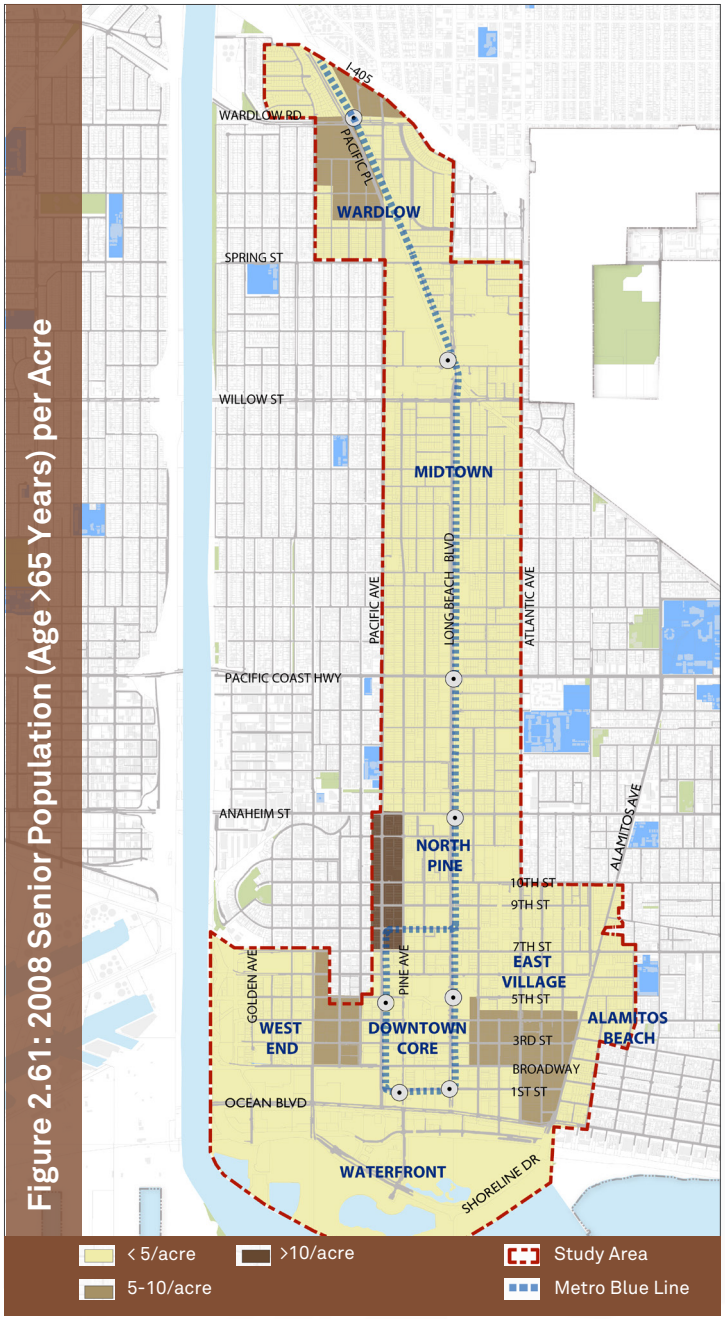


Figure 2.61: 2008 Senior Population (Age >65 Years) per Acre

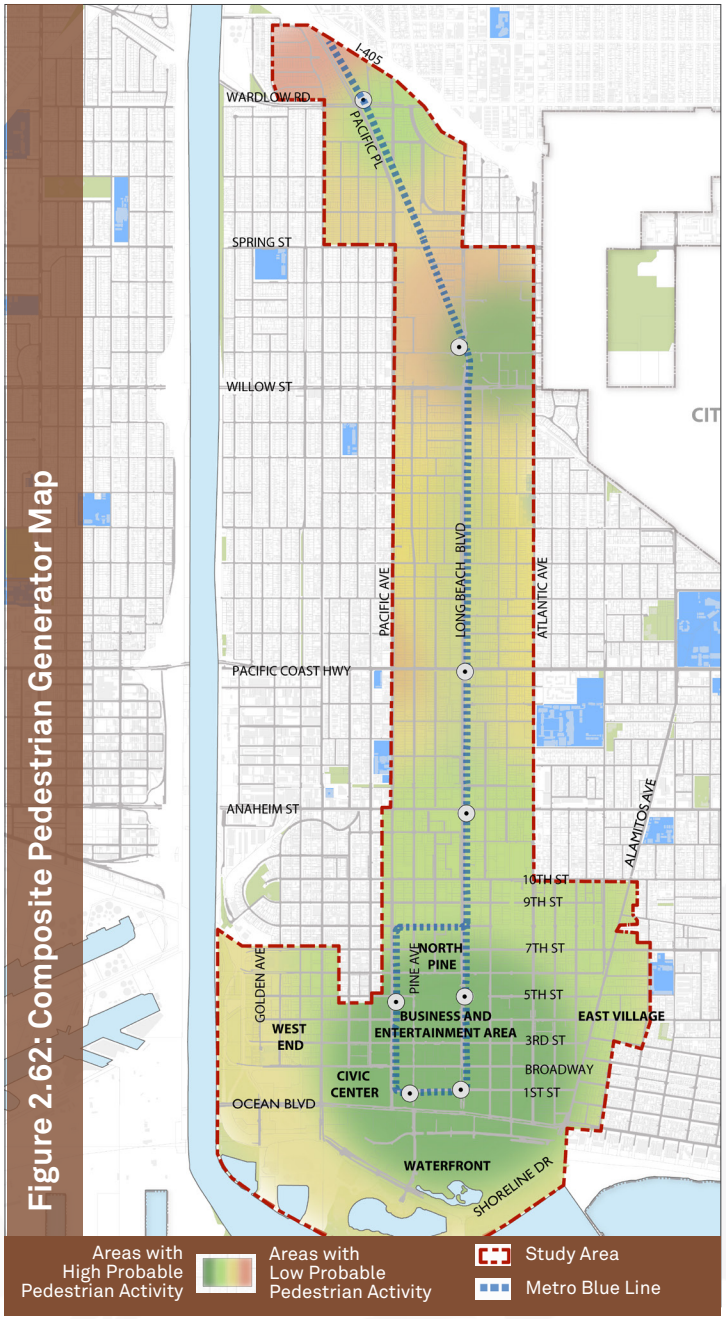


Figure 2.62: Composite Pedestrian Generator Map

2.3 Pedestrian Conditions

This section focuses on modal split, major pedestrian activity generators, transit ridership, and collision patterns.

2.3.1 Modal Split

In downtown Long Beach, much of the transit usage is directly related to pedestrian travel by residents and downtown employees who travel to and from the downtown area via transit. A mode share cordon study was conducted in 2008 for the Downtown Long Beach Specific Plan, utilizing traffic counts and boardings (outbound) and alightings (inbound) in downtown Long Beach. In 2008, it was estimated that approximately 72.7 percent of trips were made via automobile, 18 percent were made via transit, 6.5 percent were made via walking, and 2.8 percent were made via bicycle or another means of transportation. In addition, the Metro Blue Line Bicycle and Pedestrian Access Improvement Study prepared in March 2011 examined mode of travel to access Metro Blue Line Stations.

The input variables from the 2008 downtown Long Beach cordon evaluation were updated to reflect 2014 conditions, and included new boarding/alighting counts on Long Beach Transit (LBT) buses, Metro buses, and the Metro Blue Line. Table 1 shows the percentage breakdown of unlinked trips, by mode, according to the US Census and the downtown Long Beach cordon evaluation. As shown, approximately 86.3 percent of trips in Long Beach are made via car or truck, 6.6 percent are made via transit, 2.5 percent are made via walking, and 1.7 percent are made via bicycle or another means of transportation. In Downtown Long Beach, the percentage of trips made via car or truck is lower than the City of Long Beach overall (73.4 percent in downtown versus 86.3 percent in Long Beach as a whole), and the percentage of trips made via transit, walking and bicycling is higher (17.3 percent, 6.5 percent and 2.8 percent in downtown versus 6.6 percent, 2.5 percent and 1.7 percent in Long Beach, respectively). The boarding and alighting data obtained by LBT and Metro for the 2014 cordon evaluation also confirms a similar mode split in downtown Long Beach, with approximately 70.2 percent of trips made via car/truck and 20.5 percent of trips made via transit.

As the mode split analysis shows, the Downtown area is ideal for leveraging the existing high transit mode split to improve the pedestrian environment in and around transit stations.

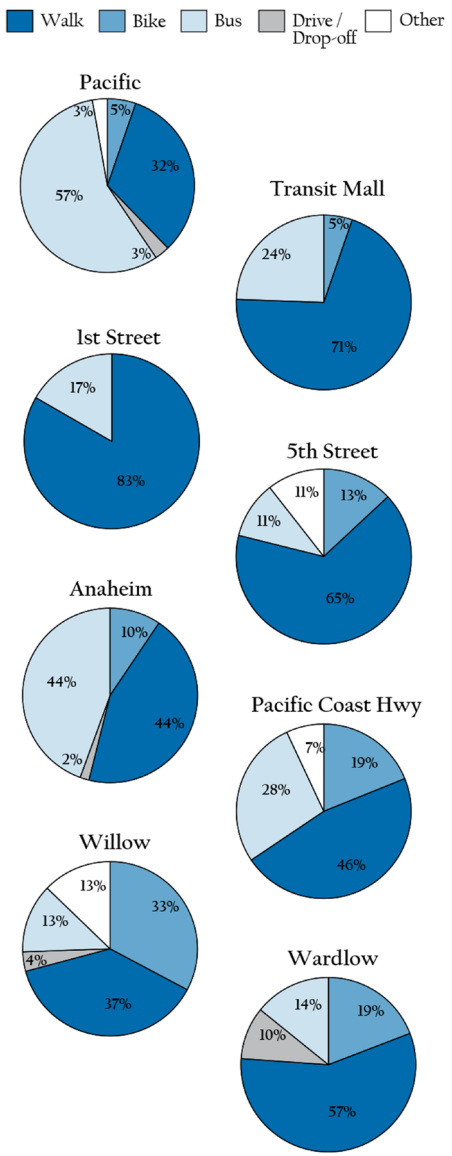


Figure 2.63 2008 Modal Split by Station
Source: Metro Blue Line Bicycle and Pedestrian Access Improvement Plan, 2011.

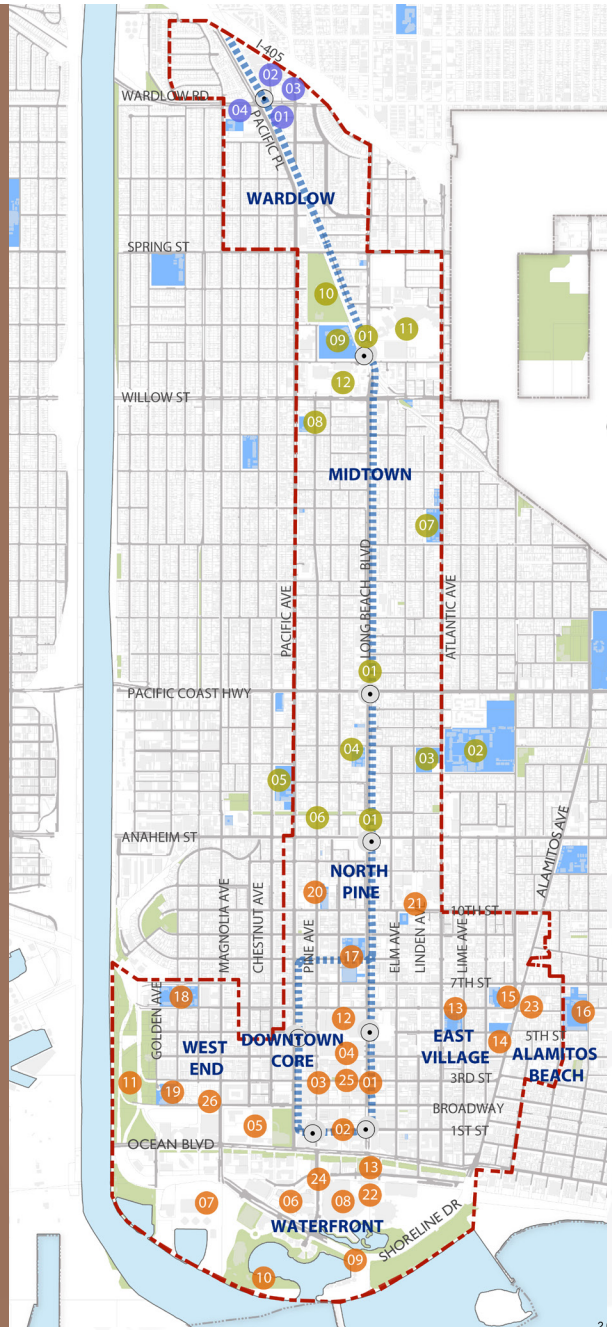
2.3.2 Major Pedestrian Activity Generators

One of the many goals of the PMP is to develop a network of infrastructure facilities for pedestrians that directly link transit stations and bus stops to major activity centers in the plan area. These may include educational activity centers (elementary schools, middle schools, high schools, preschools), community activity centers (the Civic Center), recreational sites (parks), retails centers (shopping areas, restaurants or movie theaters), or other significant land uses that may generate significant pedestrian traffic such as the Aquarium of the Pacific or the Long Beach Convention Center. Figure 2.64 shows the location of each activity center within each District i.e. Downtown District (he Downtown District encompasses North Pine, Downtown Core, East Village, West End, Alamitos Beach and Waterfront Sub-districts), Midtown District and Wardlow District. These main activity centers are also listed at right.

Downtown

The high density of Metro Blue Line stations in Downtown Long Beach (Pacific Station, the Downtown Station, 1st Street Station, and 5th Street Station) reflects the dense urban environment. Downtown has a large number of activity centers relating to employment, shopping, residential and recreation uses. Employment areas in the Central Business District, the Civic Center, and Convention Center draw a large number of weekday pedestrians. Additional destinations in downtown include the City Place Shopping Center and recreational activities along Shoreline Drive. The City is already working to improve conditions

Figure 2.64: Major Pedestrian Activity Generators



1. The Blue Line Transit Corridor i.e. 5th, 1st, Downtown, Pacific
2. Transit Mall and the Long Beach Transit Gallery
3. Pine Avenue
4. The Promenade
5. Civic Center & Lincoln Park
6. The Pike at Rainbow Harbor
7. Aquarium of the Pacific
8. Long Beach Convention Center
9. Shoreline Village
10. Shoreline Aquatic Park
11. Caesar E. Chavez Park
12. City Place
13. Victory Park
14. Robert L. Stevenson Elementary School
15. St. Anthony Elementary School
16. St. Anthony High School
17. Benjamin Franklin Middle School
18. Thomas A. Edison Elementary School
19. Cesar Chavez Elementary School
20. First Baptist Church
21. Montessori on Elm
22. International City Theater
23. Museum of Latin American Art
24. Motorsports Walk of Fame
25. Downtown Friday Farmer's Market
26. Governor George Deukmejian Courthouse

MIDTOWN DISTRICT

1. Blue Line Stations i.e. Anaheim Street, PCH and Willow Street
2. Long Beach Polytechnic High School
3. Theodore Roosevelt Elementary School
4. Poly Academy of Achievers and Leaders
5. George Washington Middle School
6. Linear Park
7. Peter H. Burnett Elementary School
8. Holy Innocents Elementary School
9. Jackie Robinson Academy
10. Veterans Memorial Park
11. Long Beach Memorial Medical Center
12. Wrigley Market Place

WARDLOW DISTRICT

1. Blue Line Station i.e. Wardlow Road
2. Hillcrest Care Center
3. Grace Lutheran Preschool
4. Vista Del Mar Senior Living

for bicyclists by installing curb extensions, bike boxes, bike corrals, and new bike lanes. The Promenade is reserved for pedestrians, which links City Place to the Convention Center. An icon for the City, Ocean Boulevard features wide setbacks that support a pedestrian-oriented environment. Several educational facilities are also located in this area, including Robert L. Stevenson Elementary School, St. Anthony Elementary School, St. Anthony High School, Benjamin Franklin Middle School, Thomas A. Edison Elementary School, Cesar Chavez Elementary School.

Midtown

Blue Line Stations in Midtown, including Anaheim Street, Pacific Coast Highway and Willow Street, as well as Memorial Medical Center, Wrigley Market Place, and Veterans Memorial Park are key pedestrian destinations in this area. Several educational facilities include the Jackie Robinson Academy, Oakwood Academy, Holy Innocents Parish Church and Child Development Center, and Long Beach Polytechnic High School.

Wardlow/Willow

The Blue Line Stations at Wardlow Road and Willow Street, Hillcrest Care Center and Grace Lutheran Pre-School are key pedestrian destinations in this area.

Figure 2.65 A group of schoolchildren explores the Promenade.

2.3.3 Transit Boardings/Alightings

To gain a better understanding of where transit riders are boarding the system, daily boarding and alighting data was requested from Long Beach Transit and Metro. Bus stops within the plan area were analyzed and sorted according to the total number of daily boardings and alightings. Figure 2.66 at right shows all bus stops within the plan area with over 500 daily boardings or alightings. As shown, the top three boarding locations are all located in the Waterfront, East Village, West End, and Business and Entertainment and North Pine Districts and are all along Long Beach Boulevard at 6th Street (1,427), 1st Street (1,074), and Anaheim Street (1,034).

The top three alighting locations were located in the Waterfront, East Village, West End, Business and Entertainment and North Pine Districts, as well as the Midtown District along Long Beach Boulevard at Pacific Coast Highway (1,175) and 7th Street (1,026), and on 1st Street at Shelter D N (899). Figures 2.67 through 2.69 graphically show the daily boarding and alighting data. None of the LBT or Metro stops in the Wardlow District had over 500 weekday boardings or alightings.

Figure 2.66: Downtown Long Beach Daily Bus Boardings and Alightings
Source: Long Beach Transit

Districts	Stop Name		Routes Served	Weekday Boardings	Weekday Alightings
Downtown District	6th St and Long Beach Blvd SE		91, 92, 93, 94, 96	1,427	26
Downtown District	1st St and Shelter H S		21, 22, 81, 121, 151	1,074	434
Downtown District	Anaheim St and Long Beach Blvd SE		45, 46	1,034	110
Downtown District	1st ST and Shelter G S		51, 61	840	547
Downtown District	1st St and Shelter C N		111, 112, 191, 192	789	899
Downtown District	1st St and Shelter E S		91, 92, 93, 94	745	525
Downtown District	5th St and Long Beach Blvd		46, 51, 81	680	56
Downtown District	10th St and Pine Ave NW		Passport, 81	570	749
Downtown District	Aquarium of the Pacific N E		Passport	554	313
Downtown District	7th St and Long Beach Blvd N W		51, 81, 91, 92, 93, 94, 96, 172, 173, 174	173	1,026
Downtown District	1st St and Shelter D N		1, 71, 72, 121, 151	293	976
Downtown District	Long Beach Blvd and Anaheim St S W		1, 46, 51	136	960
Downtown District	5th St and Pacific Ave S W		51, 81, 91, 92, 93, 94, 172, 173, 174, 182	108	705
Downtown District	Anaheim St and Long Beach Blvd N W		45	50	532
Midtown District	Pacific Coast Highway and Long Beach Blvd SE		171, 172, 173, 174, 176	870	171
Midtown District	Pacific Coast Hwy and Pacific Ave S E		1, 171, 172, 173, 174, 176	566	138
Midtown District	Willow Ave and Long Beach Blvd SE		101, 102, 103, 104	561	118
Midtown District	Pacific Coast Hwy and Long Beach Blvd NE		171, 172, 173, 174, 176	336	1,175
Midtown District	Willow Ave and Long Beach Blvd NW		101, 102, 103, 104	162	592

Source: Long Beach Transit

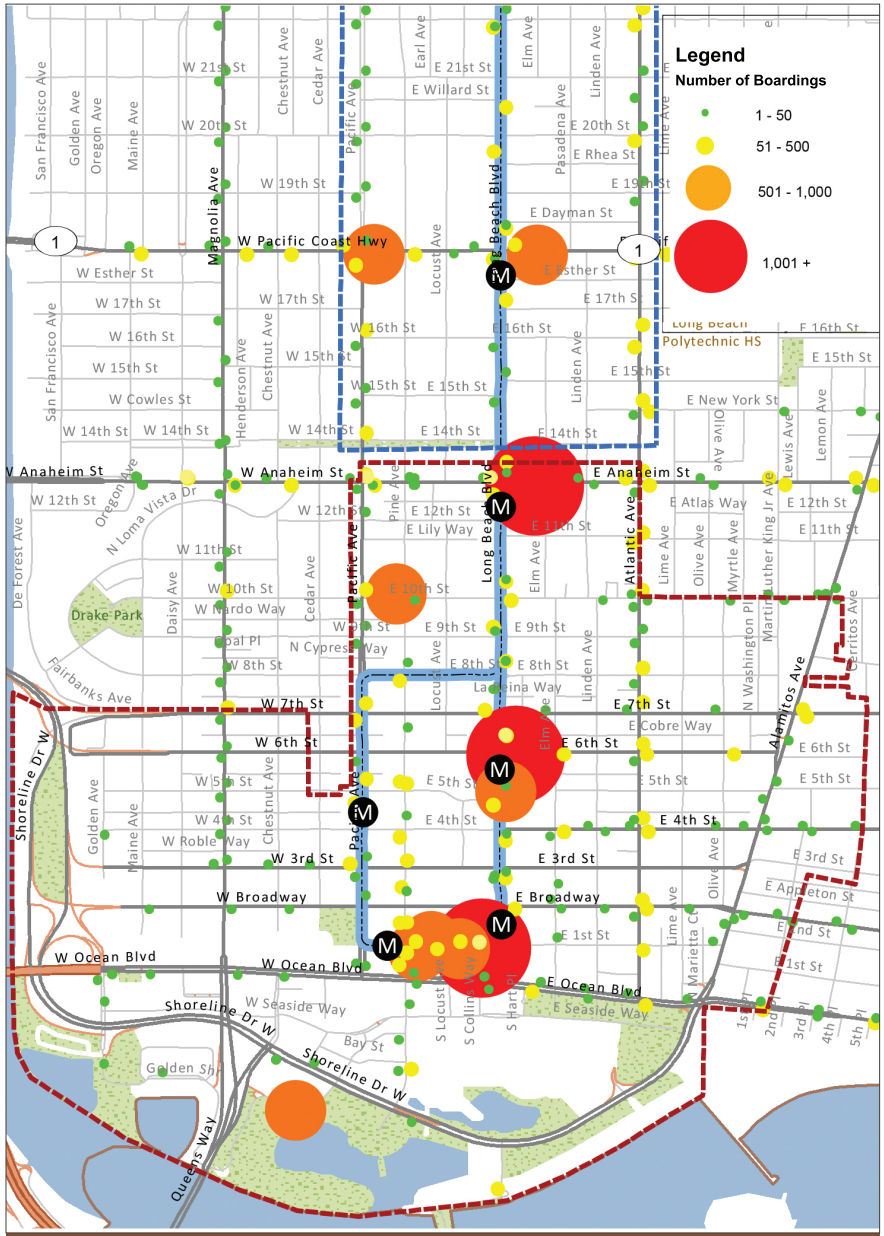


Figure 2.67: Downtown Daily Boardings

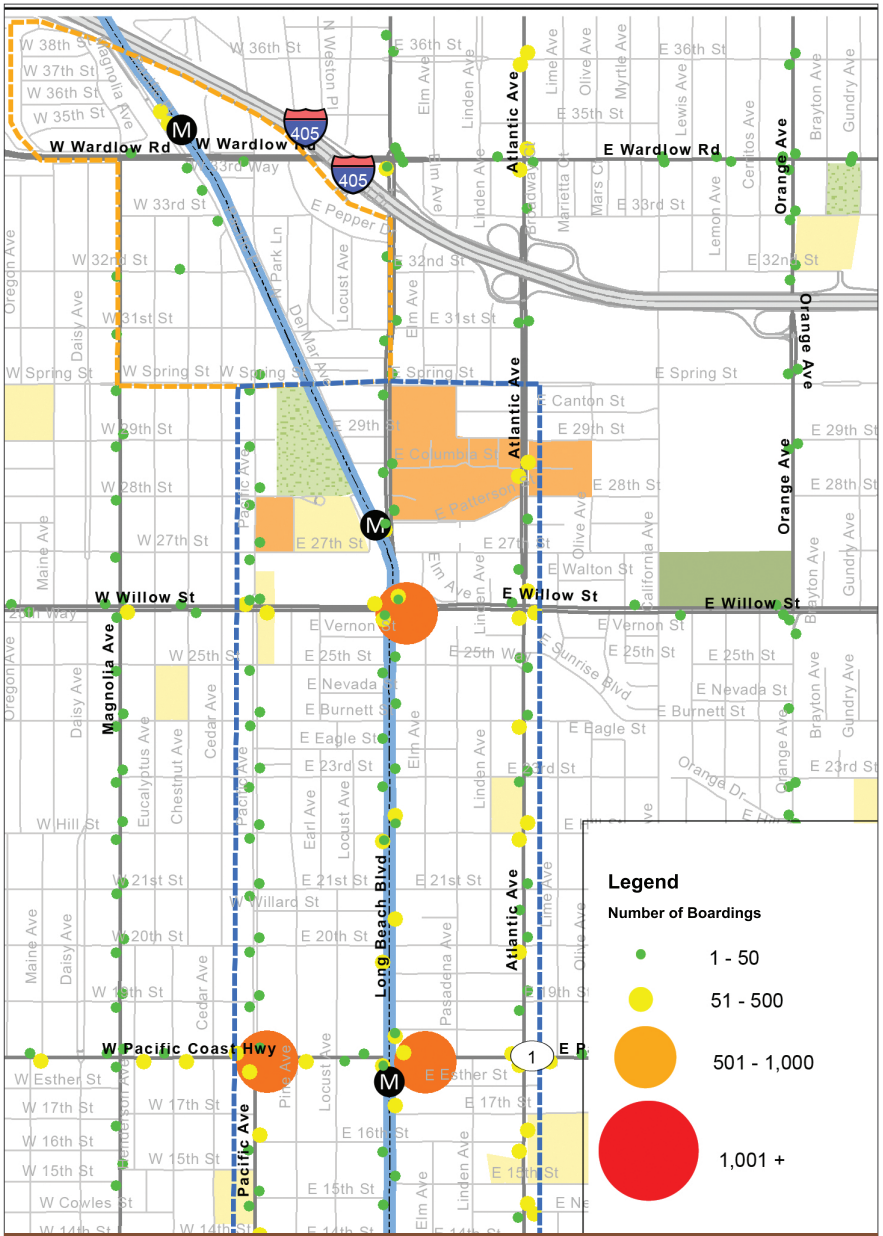


Figure 2.68: Midtown Daily Boardings

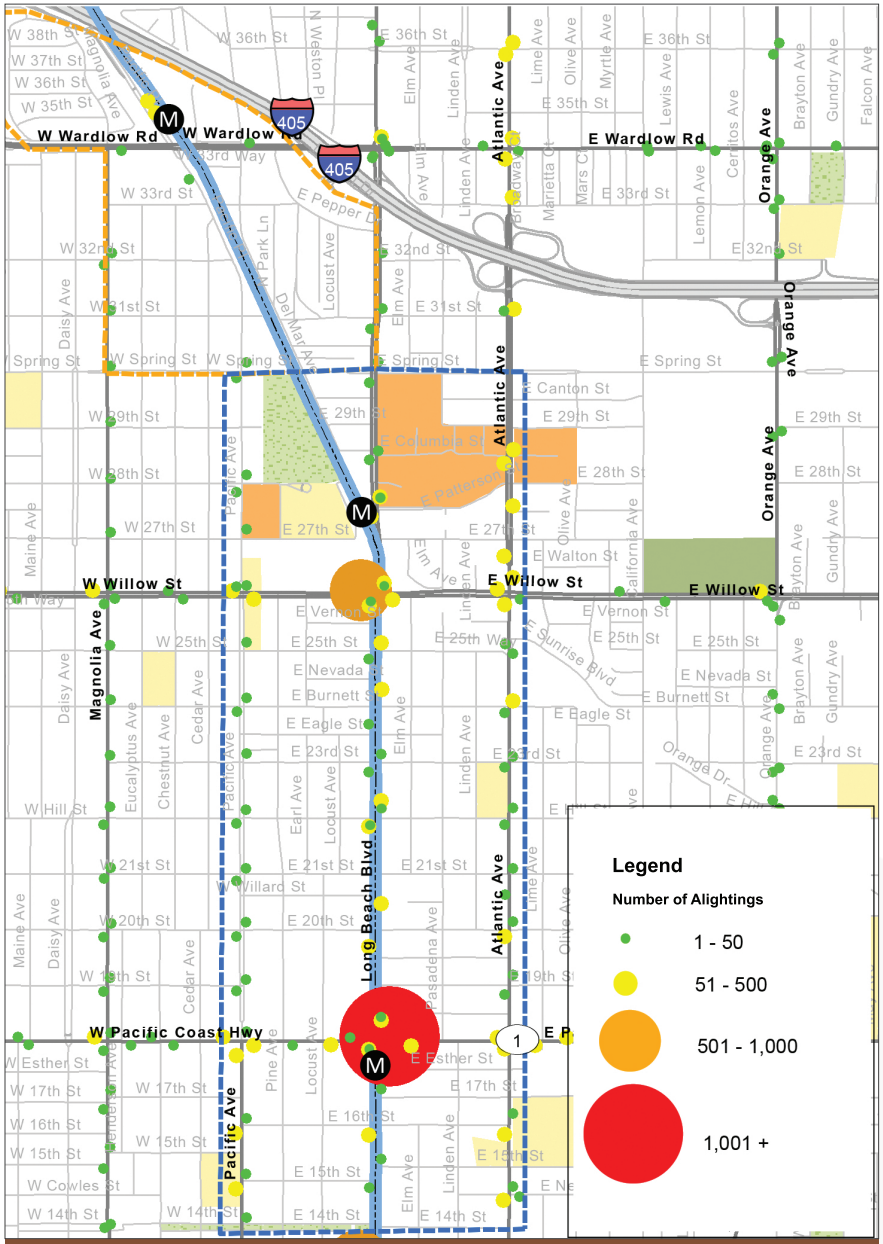


Figure 2.69: Wardlow/Willow Daily Boardings

2.3.4 Bicycle and Pedestrian Collisions

Bicycle Collisions

The bicycle collision analysis examined a total of 425 reported vehicle-bicycle collisions in the plan area between 2008 and 2012. Figure 2.70 lists the primary collision factors and Table 6 lists the collision type for vehicle-bicycle collisions. As shown, of the 425 total vehicle-bicycle collisions in the plan area, approximately 17 percent (72 collisions) occurred as a result of an auto violation, and approximately 43 percent (183 collisions) occurred as a result of a bicyclist violation. The cause of the remaining 40 percent of the bicycle collisions was either unknown, not stated, or was a result of a miscellaneous factor.

The vehicle-bicycle collision types are broken down into the following categories; broadside, hit object, rear-end, sideswipe, vehicle/pedestrian, head-on, overturned, or other. Of the 425 vehicle-bicycle collisions, 11 percent (47 collisions) were categorized as broadside collisions with bicycles, three percent (12 collisions) were sideswipe collisions, and two percent (seven collisions) was either rear-end or head-on collisions. The collision type for the remaining 84 percent of the collisions were either unknown, not stated, or was a result of a miscellaneous factor.

In total, 22 percent of the bicycle collision locations (93 locations) had two or more collisions reported between 2008 and 2012, and of those, 14 locations had five or more collisions. The following intersections observed between five and 10 bicycle-related collisions between 2008 and 2012:

Long Beach Boulevard and 6th Street (6 Collisions)
Long Beach Boulevard and Willow Street (6 Collisions)
Long Beach Boulevard and 20th Street (7 Collisions)
Alamitos Avenue and Ocean Boulevard (7 Collisions)
Atlantic Avenue and Anaheim Street (10 Collisions)

Two-thirds (330 collisions) of the reported vehicle-bicycle collisions resulted in an injury, and two collisions resulted in fatalities. Both bicyclist fatalities occurred within the Waterfront, East Village, West End, Business and Entertainment and North Pine Districts at following locations:

6th Street at Magnolia Avenue
Shoreline Drive and Shoreline Village Drive

Figures 2.71 and 2.72 graphically show the location and number of the bicycle-related collisions in the plan area.

Figure 2.70: Bicycle Collision Factors

Primary Collision Factor	Downtown District	Midtown District	Wardlow District	Total	
				Total	Percent
Auto R/W Violation (Auto Violation)	43	28	1	72	16.9%
Brakes (Bicyclist Violation)	1	0	0	1	0.2%
Following Too Closely (Bicyclist Violation)	2	0	0	2	0.5%
Improper Passing (Bicyclist Violation)	4	0	0	4	0.9%
Improper Turning (Bicyclist Violation)	22	13	0	35	8.2%
Lights (Miscellaneous Cause)	2	0	0	2	0.5%
Not Stated (Miscellaneous Cause)	13	2	0	15	3.5%
Other (Miscellaneous Cause)	20	5	1	26	6.1%
Other Hazardous Movement (Bicyclist Violation)	21	5	1	27	6.4%
Other Than Driver (Miscellaneous Cause)	2	1	0	3	0.7%
Pedestrian R/W Violation (Bicyclist Violation)	12	7	1	20	4.7%
Pedestrian Violation (Bicyclist Violation)	8	4	0	12	2.8%
Traffic Signals (Miscellaneous Cause)	26	10	0	36	8.5%
Unknown (Miscellaneous Cause)	56	31	1	88	20.7%
Unsafe Lane Change (Bicyclist Violation)	4	2	0	6	1.4%

Bicycle Collisions (2008-2012)

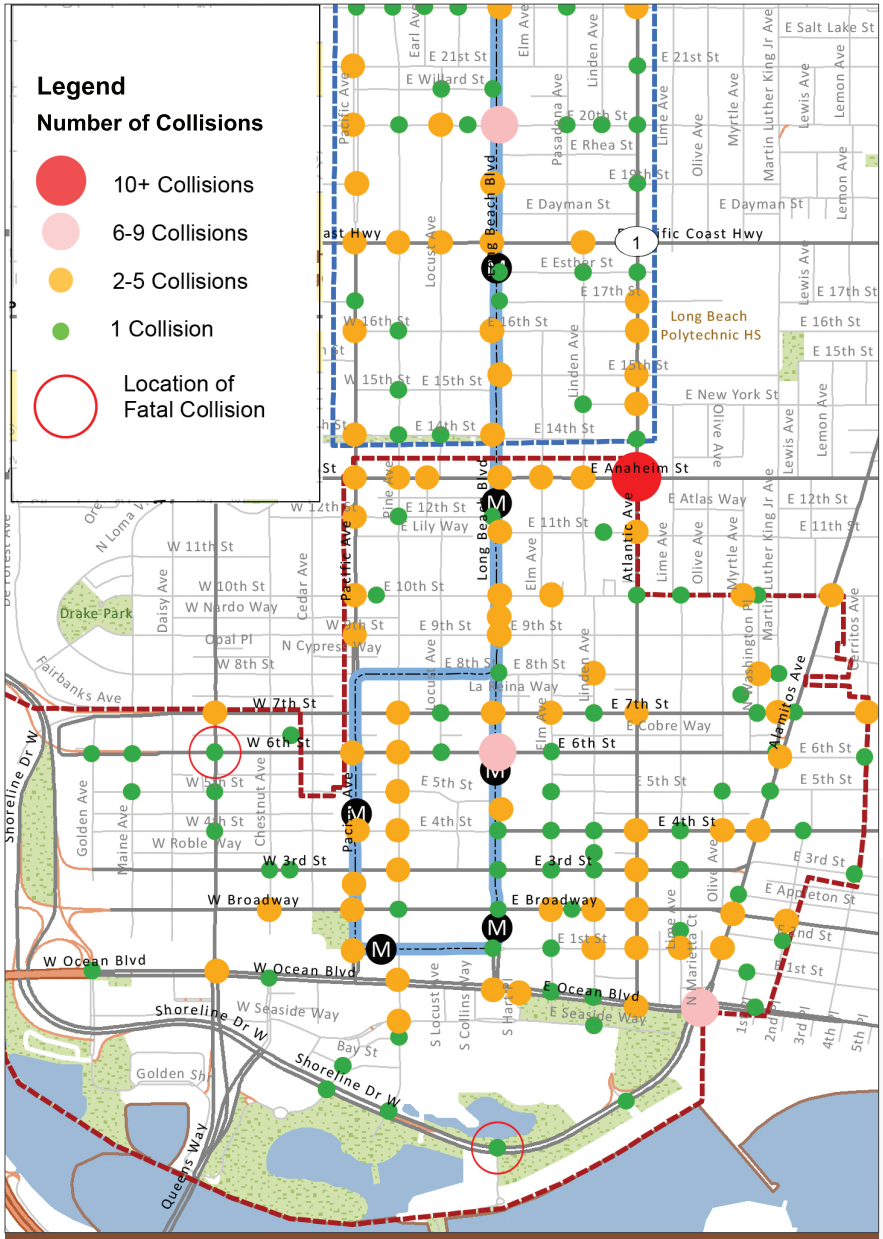


Figure 2.71: Downtown Bicycle Collisions

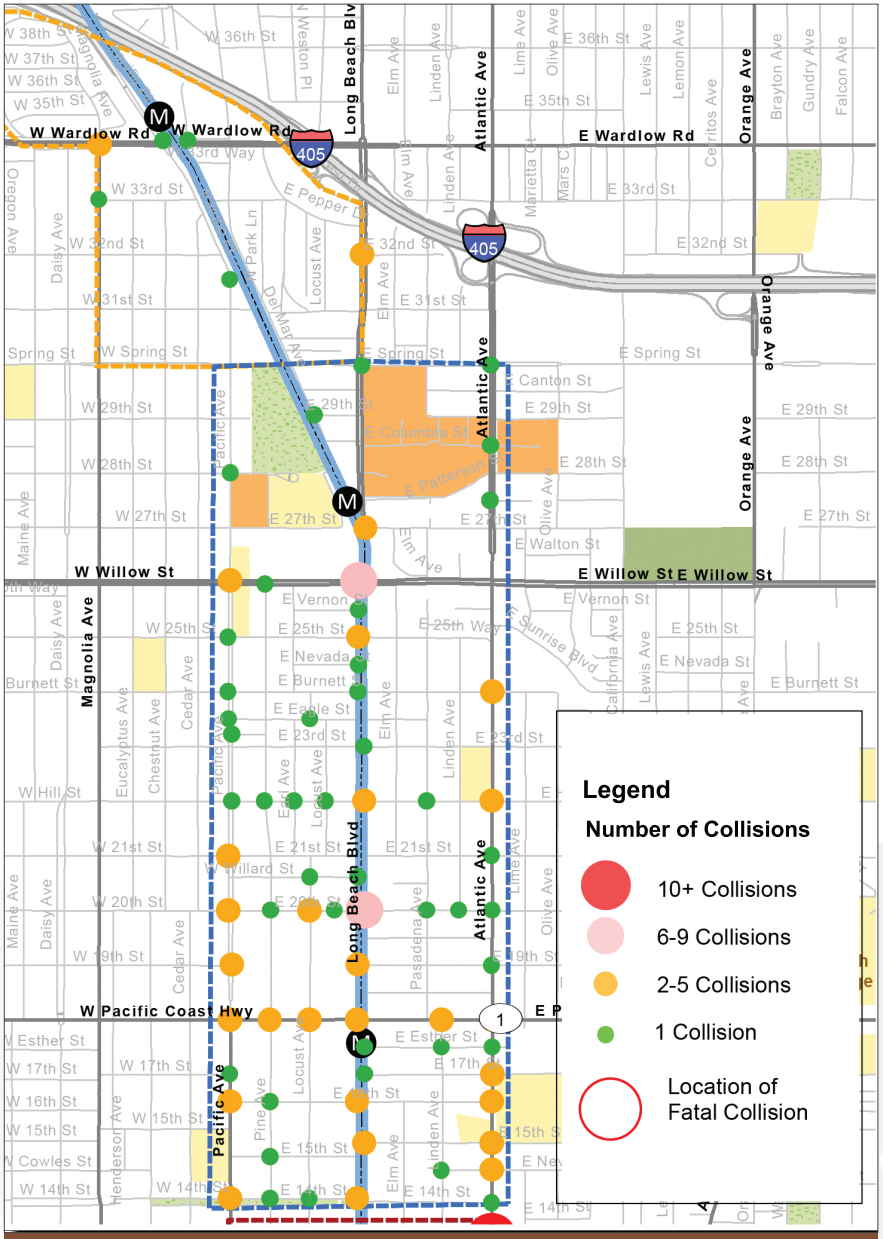


Figure 2.72: Wardlow/Willow Bicycle Collisions

Pedestrian Collisions

The pedestrian collision analysis examined a total of 378 reported vehicle-pedestrian collisions in the plan area between 2008 and 2012. Table 7 shows the collision statistics for vehicle-pedestrian collisions in the plan area. As shown, of the 378 vehicle-pedestrian collisions between 2008 and 2012, nearly half occurred as a result of a pedestrian violation (180 collisions), and approximately 14 percent occurred as a result of an auto violation. The cause of the remaining 39 percent of the collisions were either unknown, not stated, or were a result of a miscellaneous factor.

In total, 19 percent of the pedestrian collision locations (72 locations) had two or more collisions reported between 2008 and 2012, and of those, 12 locations had five or more collisions. The following intersections reported between five and 10 bicycle-related collisions between 2008 and 2012:

Pine Avenue and Pacific Coast Highway (5 Collisions)
Pacific Avenue and Willow Street (5 Collisions)
Magnolia Avenue and Ocean Boulevard (5 Collisions)
Long Beach Boulevard and 7th Street (5 Collisions)
Locust Avenue and Pacific Coast Highway (6 Collisions)
Pine Avenue and 7th Street (6 Collisions)
Elm Avenue and Anaheim Street (6 Collisions)
Long Beach Boulevard and Willow Street (7 Collisions)
Long Beach Boulevard and PCH (8 Collisions)
Atlantic Avenue and Anaheim Street (8 Collisions)
PCH and Pacific Avenue (10 Collisions)
Long Beach Blvd. and Anaheim Street (10 Collisions)

Of the 378 reported collisions, 91 percent (344 collisions) resulted in an injury and eight collisions resulted in fatalities. Five of the eight pedestrian fatalities occurred within the Waterfront, East Village, West End, Business and Entertainment and North Pine Districts, and three pedestrian fatalities occurred in the Midtown District at the following locations:

Linden Avenue and Anaheim Street
Lime Avenue and Anaheim Street
Pine Avenue and 7th Street
Pacific Avenue and 7th Street
Atlantic Avenue and 4th Street
Pasadena Avenue and 27th Street
Pasadena Avenue and Willow Street
Pacific Avenue and 25th Street

Figures 2.74 and 2.75 graphically show the location and number of pedestrian-related collisions in the plan area.

Table 2.73: Pedestrian Collision Factors

Primary Cause	Downtown District	Midtown District	Wardlow District	Total	
				Total	Percent
Auto R/W Violation (Auto Violation)	9	4	0	13	3.4%
Driving Under Influence (Auto Violation)	0	1	0	1	0.3%
Improper Turning (Auto Violation)	7	8	0	15	4.0%
Not Stated (Miscellaneous Cause)	9	5	2	16	4.2%
Other (Miscellaneous Cause)	18	13	1	32	8.5%
Other Hazardous Movement (Auto Violation)	4	2	0	6	1.6%
Other Improper Driving (Auto Violation)	0	1	0	1	0.3%
Other Than Driver (Miscellaneous Cause)	1	1	0	2	0.5%
Pedestrian R/W Violation (Pedestrian Violation)	60	30	1	91	24.1%
Pedestrian Violation (Pedestrian Violation)	41	32	2	75	19.8%
Traffic Signals and Signs (Miscellaneous Cause)	6	2	1	9	2.4%
Unknown (Miscellaneous Cause)	51	35	2	88	23.3%
Unsafe Speed (Auto Violation)	8	5	0	13	3.4%
Unsafe Starting or Back (Pedestrian Violation)	7	7	0	14	3.7%
Wrong Side of Road (Auto Violation)	2	0	0	2	0.5%
Total	**223**	**146**	**9**	**378**	

Source: City of Long Beach

Pedestrian Collisions (2008-2012)

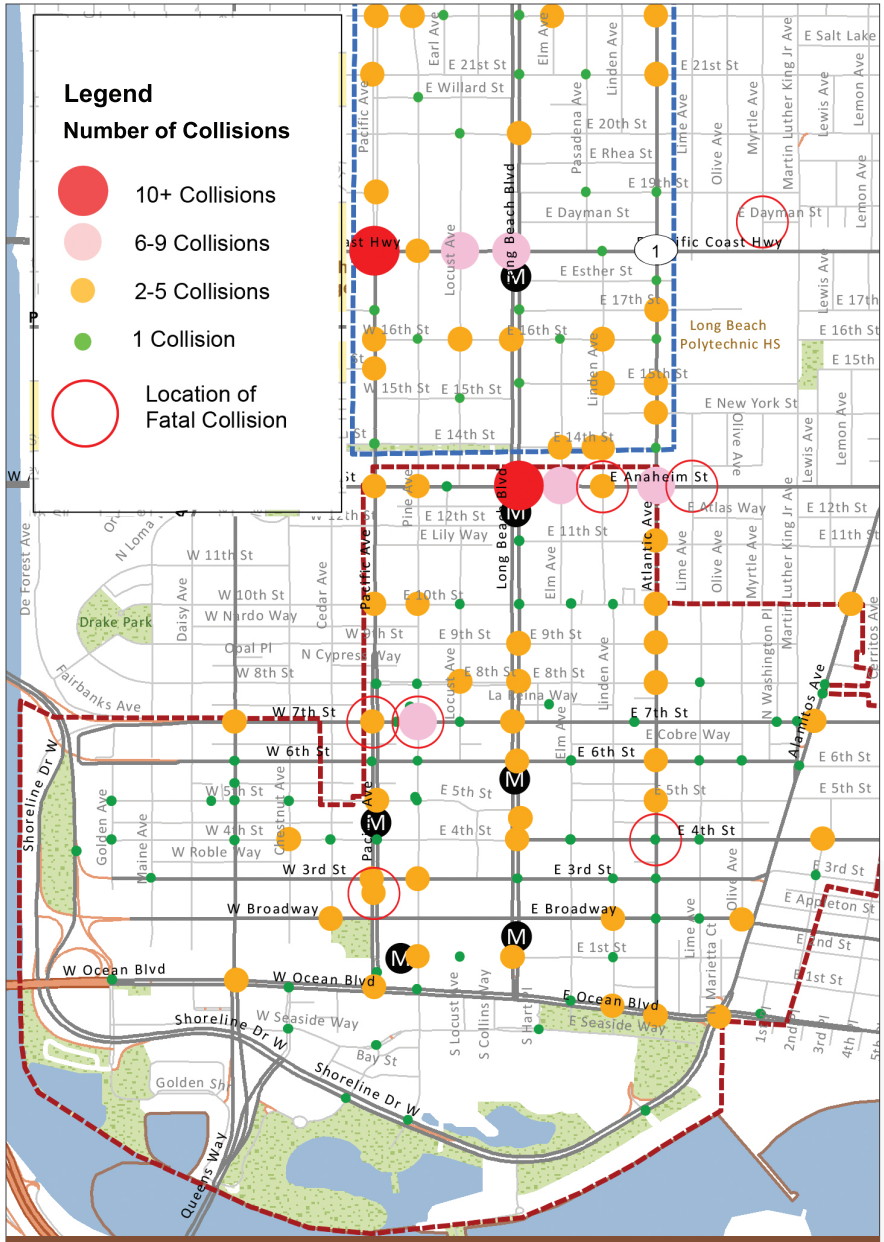


Figure 2.74: Downtown Pedestrian Collisions

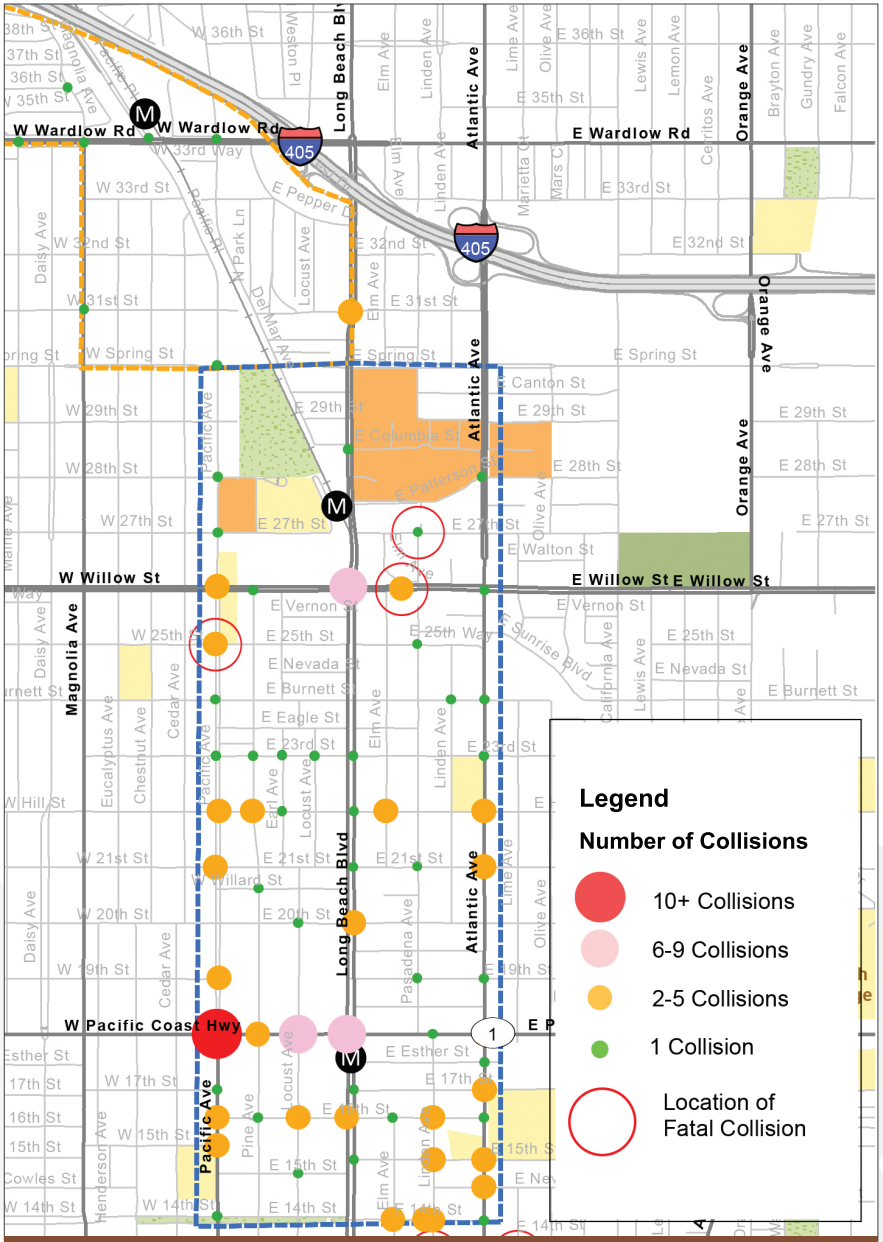


Figure 2.75: Wardlow/Willow Pedestrian Collisions

2.4 Policy Analysis

Through its recent planning efforts, The City of Long Beach has committed to improving walking conditions for residents and visitors. The PMP is intended to address remaining obstacles to increased walking, such as deficient facilities, concerns about safety, attractiveness and appeal, and lack of connectivity, in order to boost transit ridership and encourage residents and visitors to explore the city on foot. The PMP, as guided by existing and proposed goals and policies, sets forth specific obtainable strategies that will result in tangible improvements over the next 20 years.

Many policies pertaining to pedestrians exist in current City documents. To achieve the goal of making City of Long Beach a pedestrian-friendly city, current planning practices should have a unified and coherent vision. The existing documents and policies pertaining to pedestrian and transportation planning were reviewed to highlight pedestrian-related policies. It is important for the vision, goals and objectives of the PMP to be aligned and consistent with relevant existing plans and policies. The following section summarizes the policy guidance and past planning efforts to inform the goals and strategies of the PMP. A full examination of existing and proposed policies, goals, and objectives is presented in Chapter 6.

2.4.1 Mobility Element

Adopted October 2013

The Mobility Element outlines the structure of the City's existing and future multi-modal transportation system by mode -- pedestrian, bicycle, transit, motor vehicle -- and also contains information about various transportation-related topics including parking, transportation demand management, goods movement, airports, seaports, transportation funding, and regional transportation.

To create a more efficient, balanced, and multi-modal mobility network, the Mobility Plan focuses on:

- Establishing a network of complete streets and prioritized travel corridors for different modes of transportation.
- Reconfiguring streets to emphasize modal priorities.
- Strategically improving congested intersections and corridors.
- Establishing a more flexible level of service approach to traffic analysis and improvements.
- Reducing the environmental impacts of the transportation system.
- Managing the supply of parking

In addition, the Mobility Element also serves as a guide for a wide range of City planning documents and programming activities, such as the Capital Improvement Program (CIP), transportation-related master plans, development permit applications and regional planning documents.

The Mobility Element establishes a vision, goals, strategies, policies and implementation measures necessary to achieve a balanced mobility system that serves the needs of all users of the public rights-of-way, guided by complete streets and context-sensitive design principles. The Mobility Element is the first element to be adopted as part of a larger comprehensive general plan update.

The Mobility Element places an emphasis on enhancing the mobility of people by making walking easier, safer and more enjoyable. It identifies pedestrian-priority areas (see Figure 2.76 at right) where the City plans to place importance on capital and operational improvements that promote safe and enjoyable pedestrian travel. The Mobility Element recommends the development of PMP that details future improvements for the pedestrian environment, including the pedestrian-priority areas. The Mobility Element also introduces a "Pavement to Plazas" scheme to temporarily reclaim unused swaths of roadway and turn them into small public plazas.

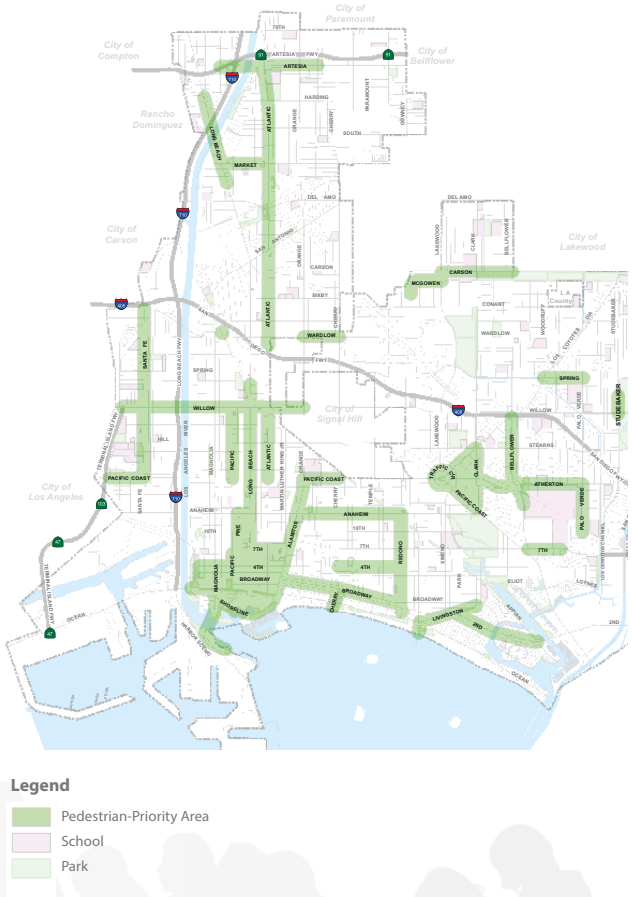


Figure 2.76 Pedestrian Priority Areas in Long Beach.

2.4.2 Downtown Plan

Adopted January 2012

In January 2012, the Long Beach City Council approved the Downtown Plan, a zoning document that established the permitted land uses, zoning, development, and other design standards for Downtown. The Downtown Plan recognizes many facets that contribute to Downtown's unique sense of place including a social heart (Pine Avenue and the waterfront), a civic core (Civic Center, City Hall, Courthouse) and major attractions (Convention Center, aquarium and major hotels, restaurants and beaches).

The Downtown Plan calls for a multi-modal transportation network to reinforce the role of Downtown as the focal point of the City. The Plan identifies standards and guidelines for an interconnected pedestrian network of open spaces, urban parks, plazas, community gardens, courtyard and paseos. It encourages a balance of transportation modes through good planning, design and development. The Downtown Plan focuses on the relationship of buildings to the street and creating a livable, walkable downtown. Topics include: sidewalks, setbacks, street wall design, ground floor treatment, tower treatment, circulation and parking, on-site open space, other building elements, streetscape improvements and sustainable design.

The Downtown Plan calls for creating a city-wide multi-modal transportation network that reinforces the role of Downtown as the focal point of the City by:

- Facilitating walkability using initiatives such as the recent Pine Avenue Streetscape Improvement Project as a model for other pedestrian right-of-way enhancements in Downtown.
- Strengthening connectivity between Downtown and areas south of Ocean Avenue, such as the convention center, The Pike, Shoreline Village and the Alamitos Beach bike path, to attract visitors to and from the waterfront.
- Emphasizing pedestrian safety improvements such as the installation of decorative street lighting, pedestrian crossings and curb extensions - such as those recently installed in Downtown East Village - to calm automotive traffic.
- Exploring linkages between Downtown and Alamitos Beach.
- Creating plazas, paseos, and walkways that interconnect various Downtown attractions and facilitate pedestrian activity.

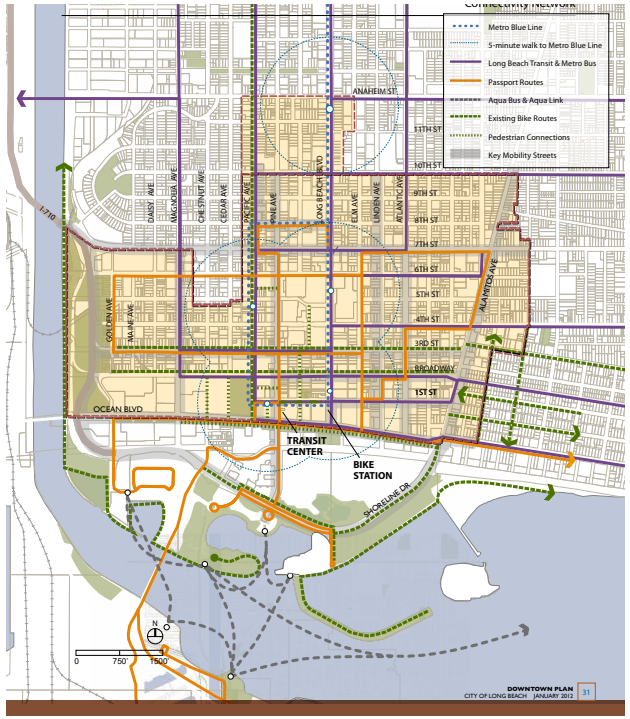


Figure 2.77 Existing connectivity network.

The Downtown Plan identifies standards and guidelines for an interconnected pedestrian network of open spaces, urban parks, plazas, community gardens, courtyards and paseos. The Plan places great importance on streetscape design, a critical aspect of the City's public realm.

2.4.3 Midtown Specific Plan

The Midtown Specific Plan and Program Environmental Impact Report (EIR) is a project to redevelop a 2.5-mile stretch of Long Beach Boulevard directly north of Downtown Long Beach.

The Midtown Specific Plan enforces Planned Development District 29 and regulates the project area through the application of four development districts: Transit Node, Corridor, Medical, and Open Space. Each district has its own development standards and land use patterns. Overall, the 358-acre Specific Plan could ultimately support roughly 7,000 homes and 10,000 jobs in 3.8 million square feet of building space, concentrating and intensifying development at key transit and employment nodes.

The mobility and streetscape plan for Midtown is guided by the City's General Plan Mobility Element. Creating an efficient, balanced, multi-modal mobility network is a priority for both plans. While, Long Beach Boulevard is already a multi-modal corridor, the PMP emphasizes combining autos, public transit, bicycles, and pedestrians into a complete street. Synchronizing traffic signals, reconfiguring streets and freeway ramps, and applying a context-sensitive approach to balance the mobility system along the boulevard are just a few of the strategies that will help to create an enjoyable area for all users of the corridor.

The Midtown Specific Plan reclassifies the streets into Regional Corridor, Boulevard, Major Avenue, Minor Avenue, Neighborhood Connector, and Local Street. The reclassifications are consistent with the General Plan Mobility Element. Long Beach Boulevard has been classified as a Boulevard and Pacific and Atlantic Avenues as Major Avenues.

The plan proposes six catalytic projects referred to as "Big Six" to offer improvements to key aspects of life within Midtown, confidence in the community, and inspiration for further investment. These include :
Willow Transit Village, Hancock Container Village, Space Designed for Feet and Pedals, Shade and Streetscape, Wellness Parks, and streetlets.

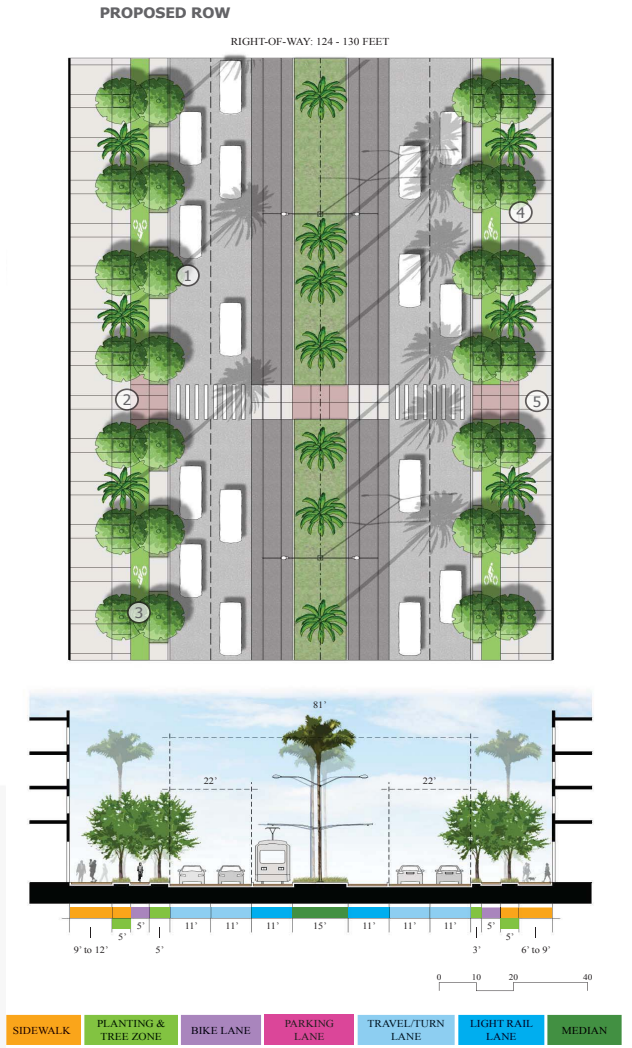


Figure 2.78 Proposed cross section of long Beach Boulevard.

2.4.4 Bicycle Master Plan

The overarching commitment of the Bicycle Plan is to increase, improve and, enhance bicycling in the City as a safe, healthy, and enjoyable means of transportation and recreation. In order to fulfill this commitment the Plan establishes three goals:

- Make bicycling safer, more convenient and more enjoyable for all types of bicyclists, transportation and recreation related, with a goal to increase bicycle use by 5% by the year 2020.

- Encourage more people to bicycle for transportation to provide an attractive and healthy transportation option, which will reduce traffic congestion, air pollution, and noise pollution.

- Develop an economical transportation option that promotes social equity.

Long Beach is using PLACE Program funds to update the City's General Plan (Long Beach 2030) with active living policies and programs and amend the City's Bicycle Master Plan. The plans will include pedestrian and bike friendly principles that are based on community input and best-practice research. They will emphasize complete streets; i.e. streets that meet the needs of all users of the roadway, including pedestrians, bicyclists, children, and the elderly, as well as motorists. Additionally, the Bicycle Master Plan will identify potential bike lanes and facilities to be placed throughout the city.

2.4.5 Safe Routes to School

The Safe Routes to School Program (SRTS) was established in August 2005 as part of SAFETEA-LU. Section 1404 of this legislation provided funding (for the first time) for State Departments of Transportation to create and administer SRTS programs.

The administration of Section 1404 was originally assigned to FHWA's Office of Safety. At the beginning of FY 2013, FHWA's Office of Planning, Environment, and Realty assumed program oversight.

The purpose of the SRTS program is to address these issues head on. At its heart, the SRTS Program empowers communities to make walking and bicycling to school a safe and routine activity once again. The program makes funding available for a wide variety of programs and projects, from building safer street crossings to establishing programs that encourage children and their parents to walk and ride safely to school.

2.4.6 Pine Avenue Streetscape Plan

The project will replace sidewalks; install new pedestrian-friendly landscaping and install modern amenities such as scrambler crosswalks and removable bollards.

The current project represents a scaled-down version of the one originally envisioned for the stretch back when it began as a Long Beach Redevelopment Agency streetscape improvement plan in 2009.

Now, with $500,000 in capital improvement money from the DLBA along with additional help from Long Beach's Department of Public Works, Metro, and infrastructure funds from both the 1st and 2nd Council Districts, the Pine Avenue Improvement Project is again moving forward.

The raised planters between Ocean Boulevard and 7th Street, for example, will be removed to allow more pedestrian traffic on Pine's busiest blocks. Removable bollards will also be placed at Broadway, 3rd St., 7th Street and 8th Street, allowing for street closures to accommodate DLBA and Historic Old Pine Avenue events such as Summer and Music and Party on Pine. The street itself will also be re-paved with rubberized asphalt.

Figure 2.79 Perspectives from the Pine Avenue Streetscape Plan.

2.5 Summary of Existing Conditions

2.5.1 Downtown Opportunities

Downtown Long Beach is one of the most walkable destinations in Southern California, with a WalkScore consistently at or above 90. Upon arriving at one of four Downtown Blue Line stations, pedestrians can access a number of retail, entertainment, business, and recreational destinations. Pedestrian conditions along the walk route to these destinations vary considerably, however, often making it difficult for riders to access the system. Recent investments in the Pine Avenue streetscape and Promenade have brought renewed vitality to Downtown, but adjacent connections from the Blue Line are often lacking. Several surface parking lots near Metro stations, including some on sites owned by the City, offer an opportunity to improve connections to key Downtown destinations as new development projects are proposed.

A number of bike boulevards and class II bike lanes have been proposed as part of the City's Bicycle Master Plan. There are also several schools within walking distance of the Blue Line. The City should prioritize pedestrian improvements along corridors that have previously been identified for improvement, leveraging multiple sources of funding.

The map on the following page shows opportunities for pedestrian improvements in Downtown Long Beach.

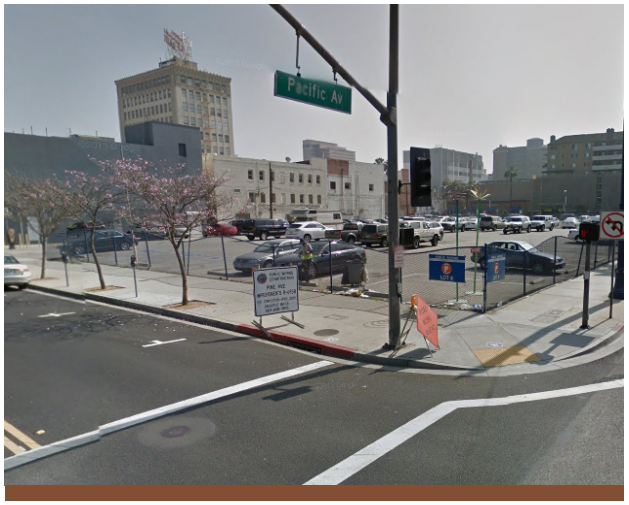


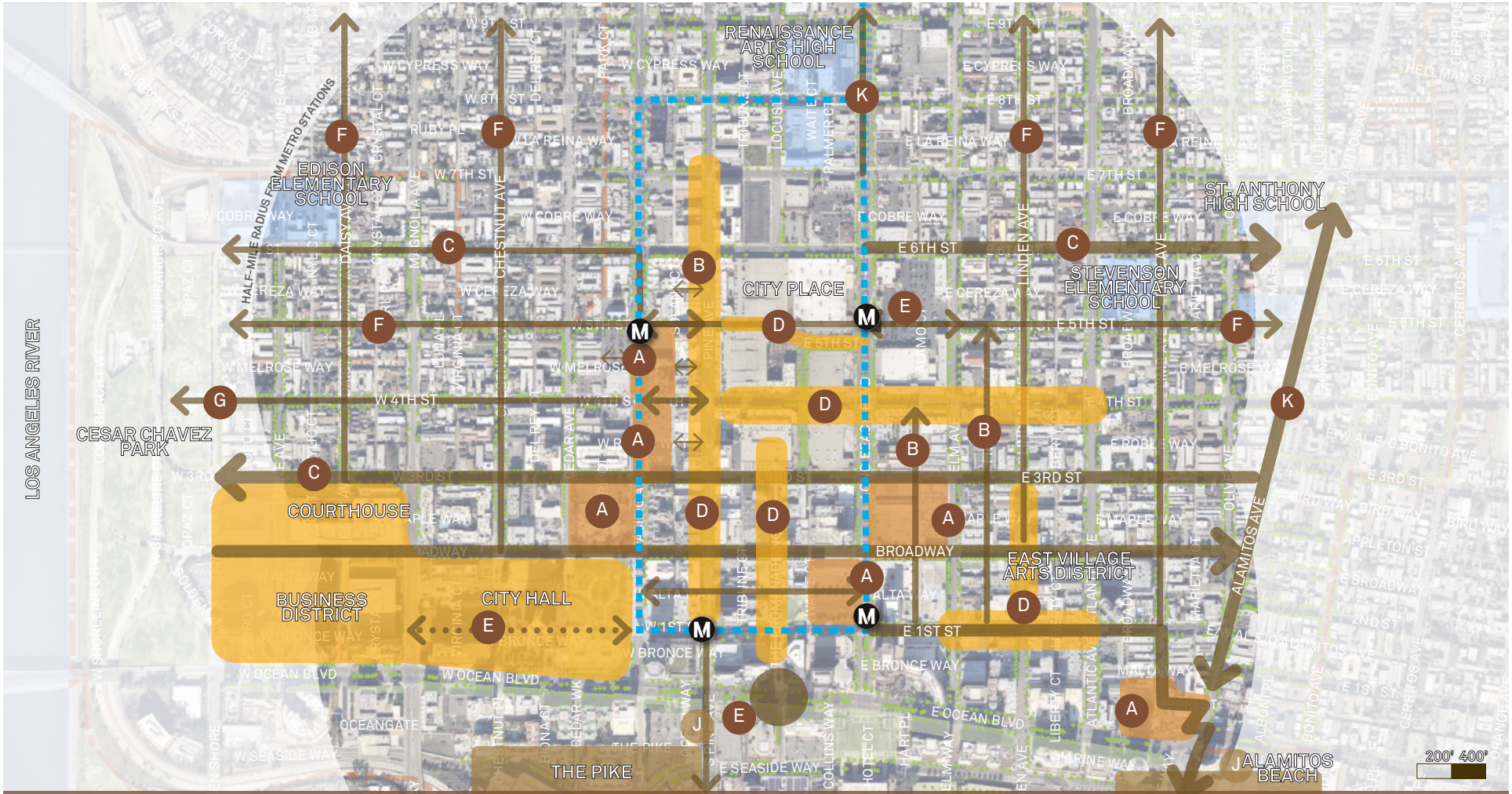
Figure 2.80 There are several surface parking lots downtown, several of which are located between Pacific and Pine Avenues and west of First Street Station, presenting opportunities for new pedestrian improvements.

Figure 2.81 The Long Beach Bicycle Master Plan identifies local corridors such as Daisy, Chestnut, Linden, and Lime as candidates for future bike boulevards.

Figure 2.82 Pedestrian improvements have been made along 1st Street in East Village, but there is a gap between this vibrant neighborhood and First Street Station.

Figure 2.83 The plan area is home to a number of schools that are within walking distance of transit.

Figure 2.83: Downtown Opportunities



Opportunities

- A Possible TOD Redevelopment Opportunities
- B Opportunities to Strengthen Alley Connections
- C Strengthen Connections to Schools
- D Connect to Key Activity Zones
- E Close Gaps in Street/Alley Grid
- F Future Bicycle Infrastructure Improvements
- G Connect to Park/LA River
- H Close Gaps in Street/Alley Grid
- I Future Bicycle Improvements
- J Improve Connections to Waterfront
- K Widen/Improve Sidewalks
- L Future Bicycle Improvements
- M Metro Blue Line Station
- Metro Blue Line Tracks
- Schools

2.5.2 Midtown Opportunities

In Midtown, the Blue Line includes the Anaheim Street and Pacific Coast Highway stations. These intersecting corridors are some of the most dangerous for pedestrians in the study area. Along Anaheim Street, there are no traffic calming devices to slow drivers though the corridor, resulting in high speeds and dangerous conditions. Between 2008 and 2012, there were over 10 pedestrian collisions at the intersection of Anaheim and Long Beach Boulevard alone. There were several additional collisisons between Long Beach Bouelvard and Atlantic Avenue. The collisions are a direct result of difficult pedestrian conditions along the corridors, including narrow sidewalks, wide lanes, and no barriers between moving traffic and pedestrians.

There are a number of institutions within walking distance of the stations, including St. Mary Medical Center and four schools. The Long Beach Senior Arts Colony, a multi-family residential project located just west of the Anaheim Street Blue Line Station, can be a model for future development projects along the corridor. The building is set back 8 feet to allow for wider sidewalks and landscaping. This strategy should be coupled with more immediate improvements to the right-of-way, which could include new medians, enhanced crosswalks, and landscaping. Additional opportunities are presented in the map on the next page.

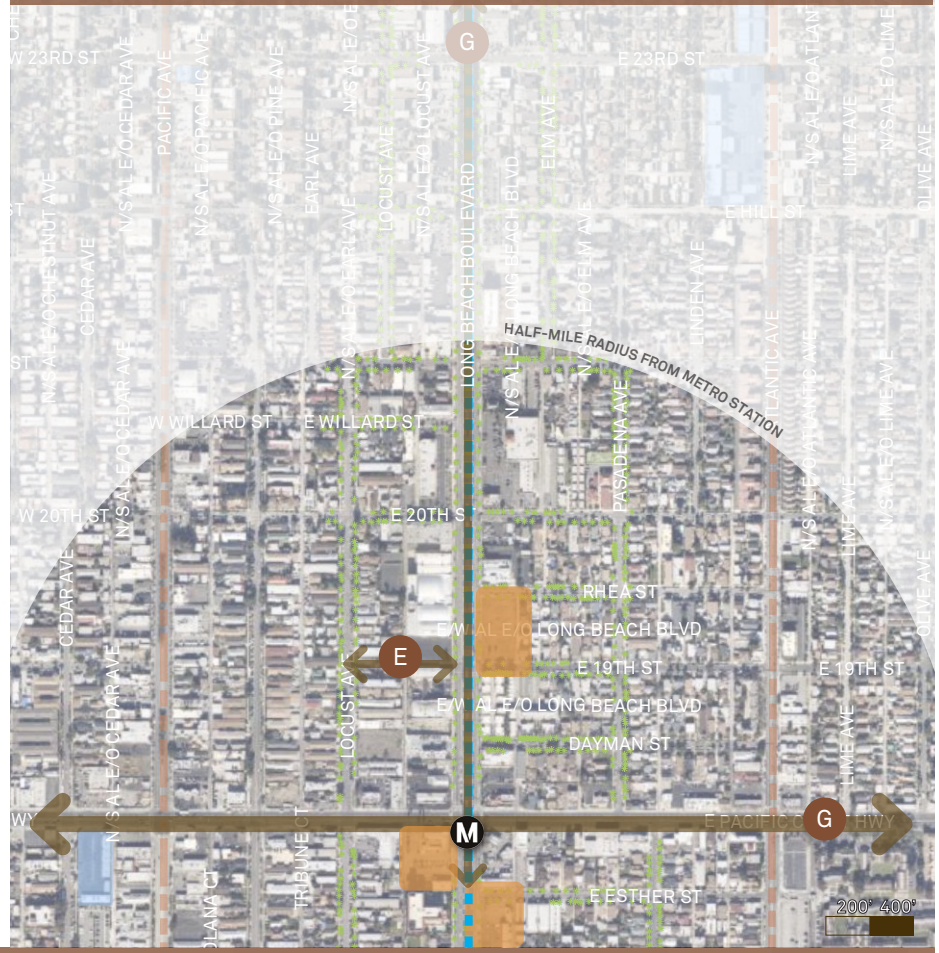
Figure 2.84 With narrow sidewalks, little to no landscaping and pedestrian amenities, and a high incidence of pedestrian collisions, Anaheim Street is an unsafe and unattractive environment for pedestrians.

Figure 2.85 St. Mary Medical Center, with over 1,400 employees, is located within walking distance of Anaheim Station and could become a major source of ridership with improved pedestrian connections.

Figure 2.86: Midtown Opportunities Map

Anaheim Station Area

Pacific Coast Highway Station Area



Opportunities

- A Possible TOD Redevelopment Opportunities
- B Opportunities to Strengthen Alley Connections
- C Strengthen Connections to Hospital
- D Connect to Key Activity Zones
- E Close Gaps in Street/Alley Grid
- F Future Bicycle Infrastructure Improvements
- G Widen/Improve Sidewalks, Crosswalks
- H Strengthen Connections to Schools
- I Open Space Opportunity
- M Metro Blue Line Station
- Metro Blue Line Tracks

2.5.3 Wardlow/Willow Opportunities

The Blue Line provides regional transit access at the Wardlow and Willow stations, but due to steep slopes along the right of way and very few marked crossings, the corridor effectively acts as a barrier for pedestrians. The underutilized public right-of-way along the Blue Line north of Willow Station, however, presents an opportunity to reconnect neighborhoods near the Wardlow and Willow stations. Travel time from these stations to Downtown Los Angeles is only 50 minutes, presenting an opportunity to connect more residents with major regional job centers. The City is currently preparing plans for a bike boulevard that would connect Downtown Long Beach to the Wardlow Station Area and beyond, along Spring Street and Del Mar Avenue. Some sections of the bike boulevard would run parallel to the Blue Line corridor.

At the Wardlow station, the City should prioritize pedestrian improvements that enhance mobility for the area's senior population. Along the west side of the Wardlow Station Area, there are very few opportunities to cross Pacific Place, making it difficult for residents to access the station. Additionally, there is no sidewalk along Pacific Place leading from the 405 offramp to the station.

The Wrigley Shopping center, a transit-oriented development, and Miller Childrens Hospital are major destinations near Willow Station. While a paseo connects the station to the shopping center, the connection between Willow Station and the hospital is poor.

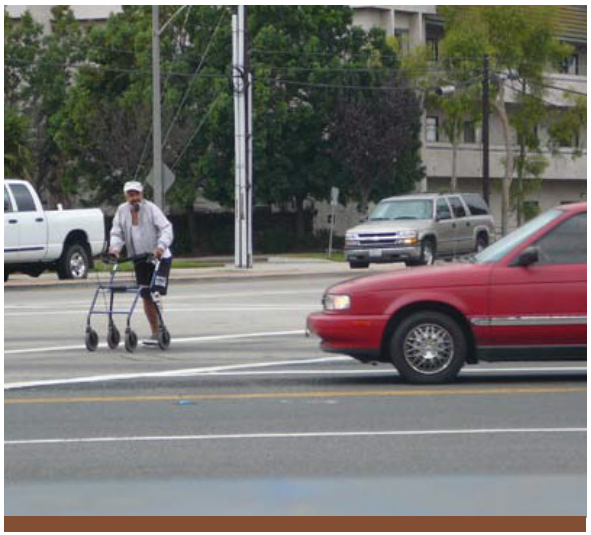
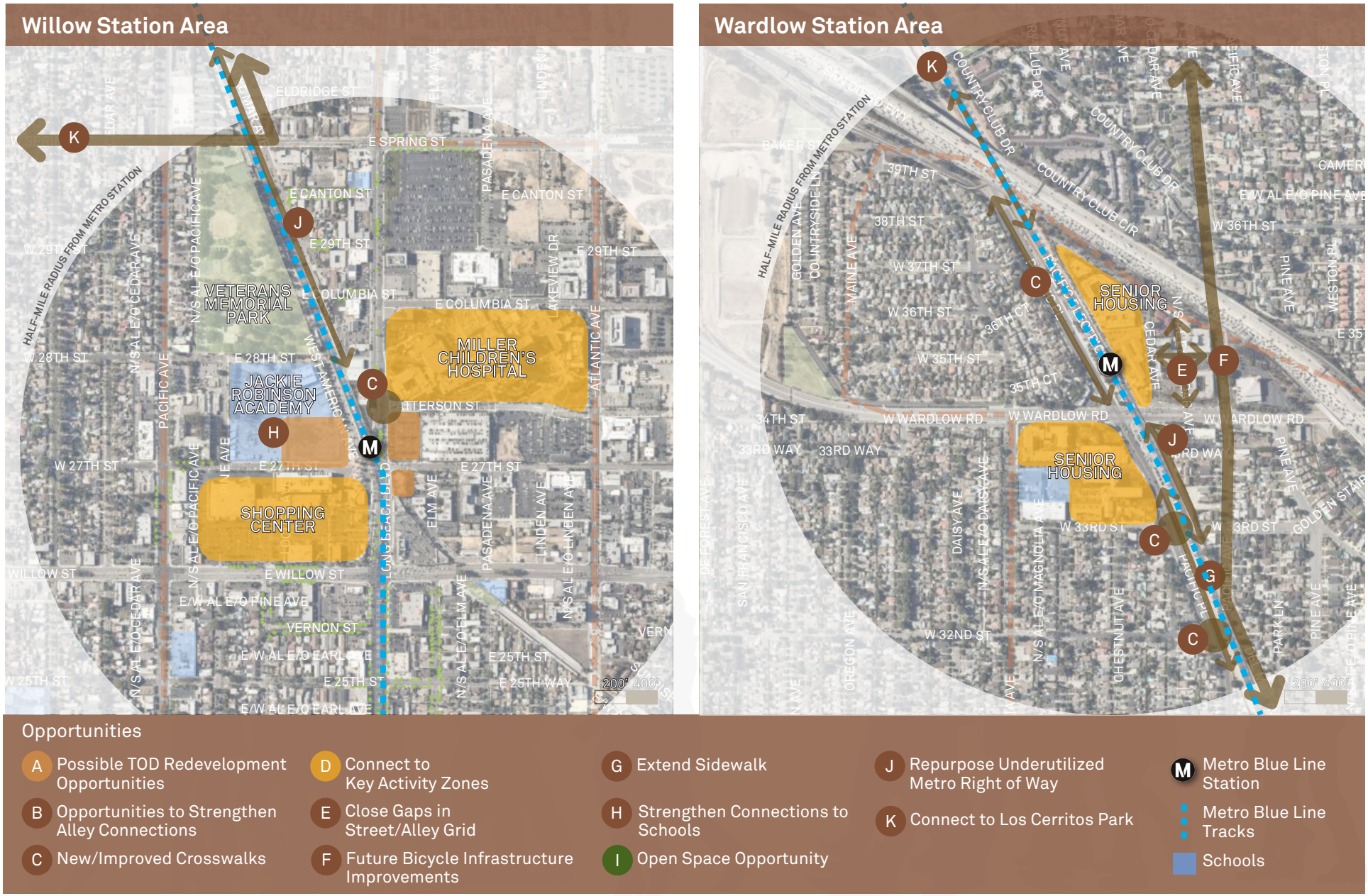


Figure 2.87 The Wardlow Station Area is home to a number of senior memory care, adult daycare, and assisted living facilities, affording the opportunity to improve mobility for Long Beach's senior population.

Figure 2.88 Excess land within the Metro Blue Line right of way could be converted to a path that connects several neighborhoods between the Wardlow and Willow stations.

Figure 2.89: Wardlow/Willow Opportunities



Exit to Street
1st Street Station
LOS ANGELES
OCEAN

3.0 public engagement

3.1	Overview of Public Engagement Approach and Process	3-2
3.2	Community Meeting #1: WalkForth	3-5
3.3	Community Meeting #2: Sidewalk Stories	3-8
3.4	Stakeholder Outreach	3-13

3.0 public engagement

3.1 Overview of Public Engagement Approach and Process

Community outreach has played an important role in the development of the Long Beach Downtown TOD Pedestrian Master Plan and will help to determine how to most effectively improve the quality of the pedestrian environment for Long Beach residents and visitors.

The community engagement process for the Transit-Oriented Development (TOD) Pedestrian Master Plan (PMP) consisted of three (3) Community events and monthly Stakeholder meetings that that occurred throughout the process. During the preliminary investigation, the team conducted a walking tour of the main corridors with the project limits of the Downtown area.

The team held the first community event “Walk Forth” in September 2014 and gathered many different stakeholders and community members to create a street installation with temporary urban

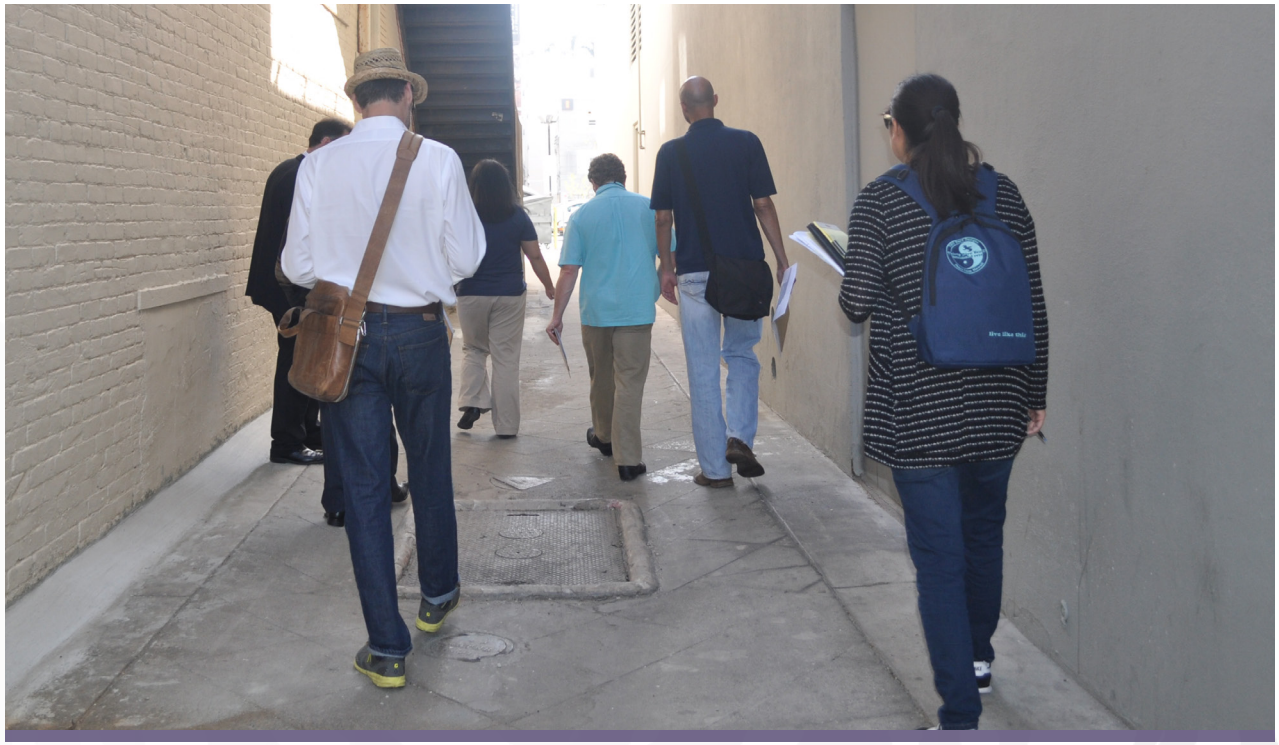


Figure 3.1 Kick-off meeting and Downtown walking tour

interventions or “pop-up” installations on 4th Street, between Alamitos Ave. and Long Beach Blvd. This event was created in an effort to demonstrate the benefits of pedestrian improvements and generate activity along the Metro Blue Line access corridor. The event encouraged the community to envision proposed improvement concepts for a more walkable city. The event attracted over 150 members of the public and the participants were able to experience the temporary mid-block crossing, landscaped medians, and curb extensions along the street and gave the project team input on areas in the city that they felt needed attention.

The team conducted stakeholder and focus group meetings throughout the process to engage the public in the identification of issues and potential solutions, and encourage stewardship of the plan. Through the public outreach, participants could give their input in multiple ways, including facilitated small group stakeholder meetings, online surveys, questions and answer sessions, comment sheets, and informal discussion and correspondence.

Figure 3.2 Community members indicate pedestrian barriers and opportunities on the interactive WalkForth Map.

Figure 3.3: Public and Stakeholder Engagement Process

3.2 Community Meeting #1

WalkForth

WalkForth was an outdoor festival and event timed to take place on the same day as the original pop-up urban intervention, Park(ing) Day. PARK(ing) Day is an annual global event where community members, artists and activists work together to temporarily convert metered parking spaces along the street into spaces for people instead of cars.

WalkForth and PARK(ing) Day have the same aspirations: to increae and enhance the usable space for the pedestrian and provokes conversations about the lack of gathering spaces in our cities and the dominance of cars over people. During the WalkForth event, community members had the opportunity to see a temporary pedestrian improvement such as a midblock crossing and participate in the process and design.

WalkForth partnered with Stakeholders to create an activated street along 4th street with food trucks, retail installations, pedestrian improvement demonstrations, and local businesses having a presence "on the street." The Long Beach Office of Sustainability, Health Department "Active Living/ Healthy Living," Downtown Long Beach Associates (DBLA) and California State University Long Beach (CSULB) participated and engaged the public with various booths and interactive programming. A large, interactive aerial map was mounted in the pedestrianized alley and the WalkForth team was available to answer questions about the PMP and gather information from the community members about potential pedestrian barriers and opportunities that only a resident can provide.

WalkForth created the temporary installations with donated items and recycled materials. Long Beach Public Works provided trees and various plants to create the "landscaped" medians and curb extensions. Erosion wattles and safety cones marked the edges and created the temporary curbs of the project. Local artists collaborated to create an original chalk artwork that marked the midblock crossing and reflected the east village art district's roots. Temporary spray chalk signage gave playful directions to local destinations such as Pine Ave and the Blue Line Metro stop that is a few blocks away.

Figure 3.4 WalkForth Event Flyer and Map.

WalkForth Community Event >>

Temporary Wayfinding
Lightweight, playful signs that were attached to telephone or street lamp poles with zip ties provided a temporary "guerilla wayfinding" network.

Mid block Crosswalk at Frontenac Ct.
A temporary midblock crosswalk was created with cooperation from the City Public Works department and local East Village artists.

Parking Day Installations
Health Department: Active Living/Healthy Living, DLBA , Office of Sustainability Community Gardening and members of the community participated in "taking over" parking spaces for usable space during the event.

Temporary Wayfinding
Chalk paint on the sidewalk created additional directional signage for the Blue Line Station.

Curb Extension
Temporary curb extensions extend the sidewalk into the street and take back needed space for the pedestrians.

Pop-up Retail
Temporary retail installations helped stimulate and generate pedestrian activity along the street.

Figure 3.5: Barriers and Opportunities Map - Input from the Community

Barriers

- **A** Limited access to Alamitos Beach
- **B** Ocean Boulevard/Alamitos Avenue: long distance to cross, fast-moving traffic
- **C** 3rd Street/Alamitos: disorienting for pedestrians
- **D** MLK/Alamitos Avenue: narrow sidewalks, dangerous for pedestrians south of 7th Street and Alamitos due to intersecting streets
- **E** Waite Court/5th Street: limited street life in spite of commercial activity
- **F** Long Beach Boulevard/5th Street: weak connection to neighborhood through parking lot
- **G** Civic Center/1st Street: few trees, poorly marked connection between station and Civic Center
- **H** Cedar/7th: crosswalk striping barely visible, sidewalks in poor condition
- **I** Maine/7th: fast-moving traffic, narrow sidewalks, unsafe to cross street

Opportunities

- **A** Pike feels safe, friendly for pedestrians; extend this character along Pine
- **B** Performing Arts Center is a key destination; create safer connections across Ocean Boulevard
- **C** Promenade/3rd Street: Harvey Milk park is an important asset
- **D** 1st Street between Elm and Linden: extend retail, pedestrian friendly sidewalks along corridor
- **E** 4th/Elm: enhance retail and parklet through wider sidewalks, vegetation, lighting
- **F** 4th/Golden: create better connections from downtown to Cesar Chavez Park, LA River

M Metro Blue Line Station

Metro Blue Line Tracks

3.3 Community Meeting #2

Sidewalk Stories

The second community meeting was conducted in May 2015 during the East Village Art Walk. The event was held in Hellada Art Gallery and nearby Alta Way Alley, inviting visitors to participate in a community conversation about walking and livability, and comment on proposed priority projects identified by the project team. The Pecha Kucha format allowed the project team to discuss key issues and opportunities in a fast-paced, engaging format. The "Sidewalk Stories" event also invited members of the community, local stakeholders, residents, employees, business and property owners, and Art Walk visitors to participate and to tell their personal stories of walking on the streets, sidewalks and alleys of Long Beach.

In addition, a supporting exhibition of potential projects was displayed in the Alta Way Alley for community members to study and provide feedback. A survey was available to respond to each project board to gather feedback on the conceptual priority projects.

This meeting served as a forum for the community to be updated on the most recent project developments,voice their concerns, and ask questions.

Figure 3.6 Sidewalk Stories Presentation Boards.

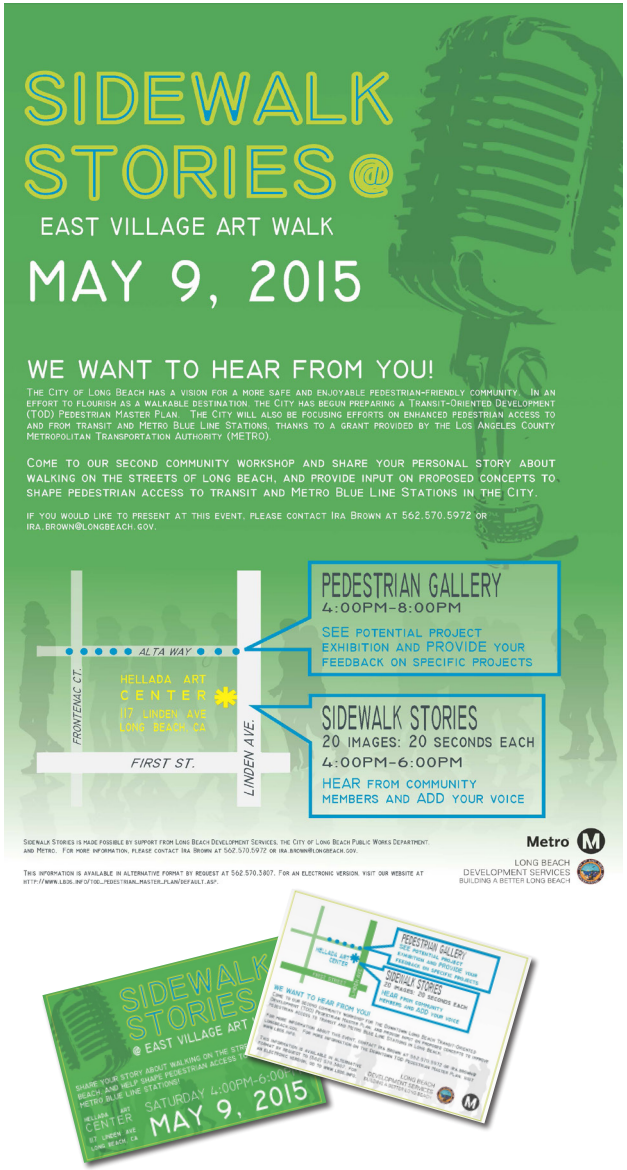


Figure 3.7 Sidewalk Stories marketing materials.

Figure 3.8 Sidewalk Stories Pecha Kucha presentation and exhibition in Alley during Art Walk.

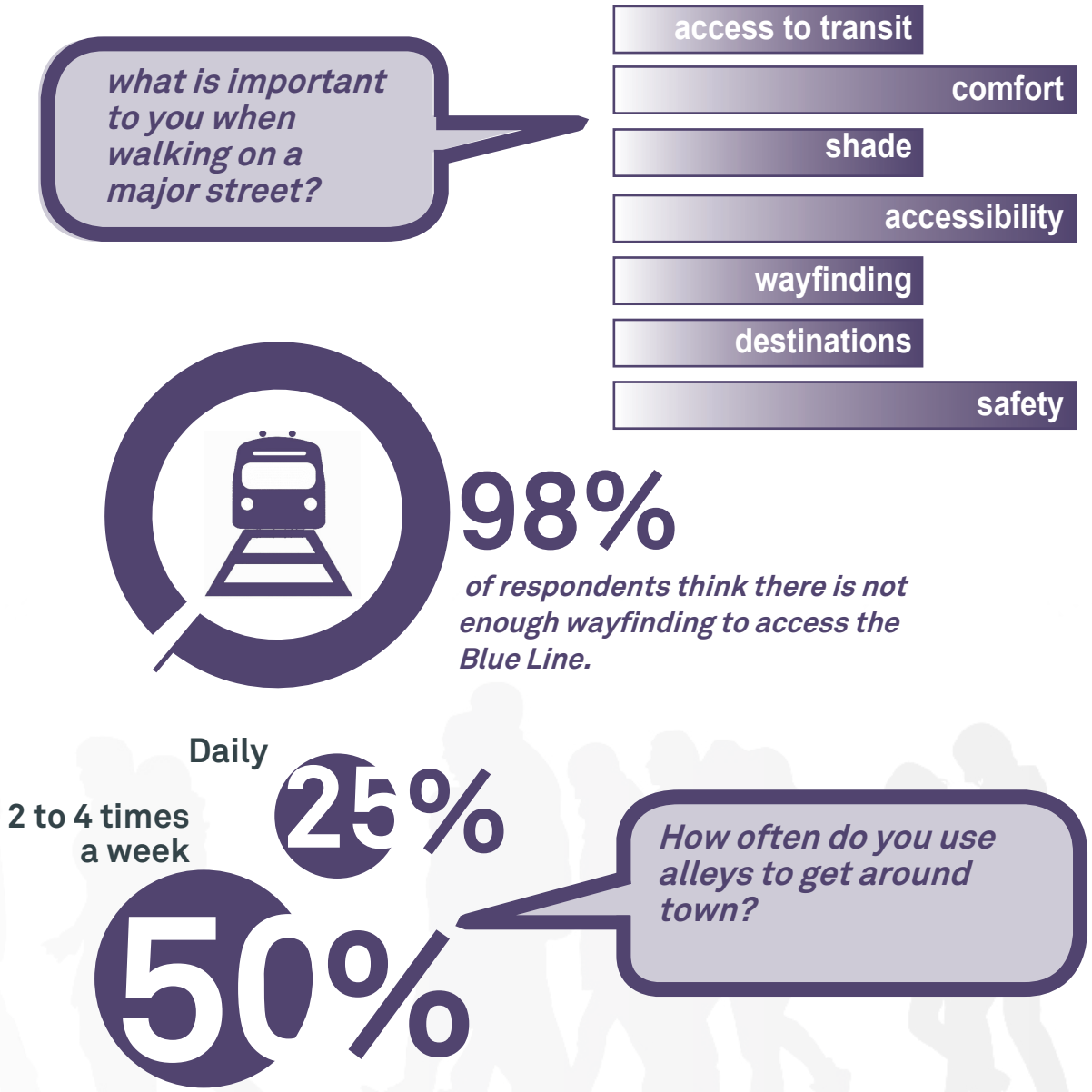
Community Survey

Participants in the Sidewalk Stories event were also encouraged to comment on proposed priority projects through a survey. The survey was used to gauge the primary concerns of Long Beach residents in regards to pedestrian safety, wayfinding, accessibility, and key destinations. The vast majority of survey participants live within the study area, with over 85% of participants living within walking distance of Downtown Long Beach. Most visitors to Art Walk and Sidewalk Stories walked, took public transit, or biked.

Many residents were in favor of the pedestrian friendly elements that were proposed and in general were very supportive. Accessibility, safety and comfort were the driving factors linked to walkability with the most preferred streetscape amenities being sufficient seating, wayfinding, pedestrian lighting, and enhanced crosswalks. Interestingly, art in the public realm was very important to many residents and felt it was vital to a healthy and stimulating walking environment.

Alleys

Over 50% of survey respondents have safety concerns about using alleys and ways in Long Beach. To address this concern, participants suggested creating more activated, people-friendly alleys through better lighting, seating, trees and other vegetation, and murals. Alleys should also be accessible and safe for the disabled. One participant suggested a strategic approach to improving the alley system by focusing on smaller clusters of alleys near major activity centers.



Neighborhood Greenways

These north-south avenues in Downtown Long Beach currently provide important connections for survey participants. Over 25% of respondents use these corridors when commuting to work. Forty percent reported regularly using avenues to walk to restaurants and shops. Respondents identified enhanced crosswalks, lighting, seating, wayfinding, and bike facilities as key improvements for proposed neighborhood greenways.

Pedestrian Gallery

Most participants were unfamiliar with the pedestrian gallery/shared street concepts and voiced concerns about a curbless environment. The shared street concept has proven to be successful in many European cities, by reclaiming the streets as public spaces for people's use. Since this is a relatively newer concept in the United States, the City of Long Beach and its partners will need to provide more information about the function and benefits of shared streets. Respondents reported that public art, space for farmers markets and other vendors, seating and gathering areas, bike facilities, and enhanced transit stops are important elements to include in shared streets.

Streetlets

Streetlets are pedestrianized corridors less than a block in length. This project type was first proposed in Long Beach as part of the Midtown Specific Plan. Streetlets can be 100% pedestrianized or closed to pedestrians only during community events. They are viewed as destinations for neighborhood residents and workers that promote social interaction and provide safer pedestrian connections to the Blue Line. To reinforce the neighborhood orientation of streetlets, survey respondents favored community gardens, farmers markets, public art, outdoor movie screens, food trucks, and bike facilities.

Wardlow Parkway

The project team proposed a parkway along the underutilized Metro Blue Line right of way that could provide better connections to Wardlow and Willow stations. Over 70% of respondents reported taking transit, walking, or biking to these stations, reinforcing the importance of improving pedestrian conditions near the Blue Line. Key elements suggested by participants include wayfinding, a multi-use path, bridges or tunnels for better east-west connections, bioswales, and seating.

Wayfinding

Survey respondents appreciated recent wayfinding improvements in Long Beach, particularly around the Pike, Promenade, and Pine Street, but 98% reported that wayfinding infrastructure is insufficient outside of these areas. Seventy-five percent of respondents would use wayfinding infrastructure primarily to assist with their daily commute.

3.4 Stakeholder Outreach

External Stakeholders

The project team met with stakeholders representing a variety of interests in Long Beach. The goal was to identify key issues and opportunities for partnerships and funding, and review preliminary priority project concepts with City staff. Key stakeholders included:

Long Beach Senior Center
DLBA
Metro
Long Beach Aquarium of the Pacific
The Pike
Long Beach Convention & Visitors Bureau

These stakeholders identified the following issues and opportunities:

- Emphasize key corridors with wayfinding signage and art, existing signage should be more oriented to pedestrians
- Create uniform approaches for street trees and street furniture
- Consider scramble and table crosswalks along Ocean Boulevard
- Adjust timing of existing signals to allow pedestrians more time to cross street
- Enhance alley connections between Pacific Station and Pine Avenue, Promenade
- DLBA plans to launch a wayfinding initiative in Downtown to enhance pedestrian connectivity and promote unique districts
- Consider relaunching 2% for public art program
- Identify prime redevelopment sites and use plan to leverage pedestrian improvements

Technical Advisory Committee

Throughout the process, a Technical Advisory Committee (TAC), comprised of representatives from the Development Services and Public Works Departments, provided input on the selection and conceptual design of priority projects.

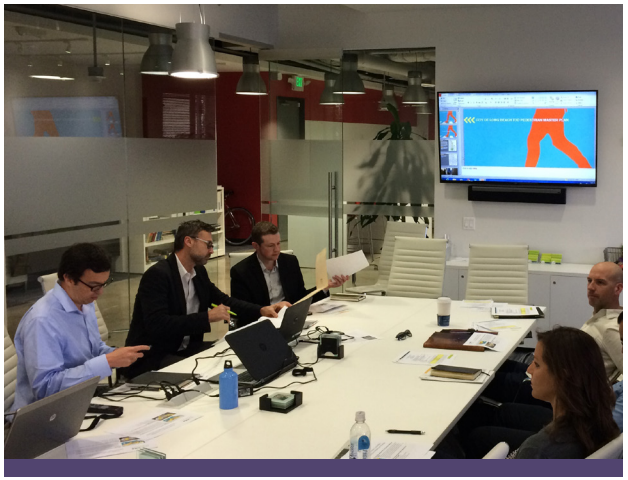


Figure 3.10 Meeting with DLBA's Public Realm Committee.

Figure 3.9 Exploring opportunities for enhanced alley connections Downtown as part of a design charrette with City staff.

Figure 3.11 Meeting with DLBA's Public Realm Committee.

PARKING
425

4.0 pedestrian toolkit

4.1 Pedestrian Toolkit

The pedestrian toolkit includes smaller projects that are less expensive and easier to manage, both in terms of construction and maintenance.

There are several toolkit treatments that are included as part of "Priority Projects" along stitch and connector streets. While it is often less expensive to build enhanced crosswalks, traffic circles, and other toolkit items as part of more comprehensive priority projects due to construction mobilization, it is often difficult to generate political and financial support for these projects. In the short-term, the City of Long Beach and its partners should consider demonstration projects to build support for more extensive reconstruction efforts. Examples of temporary treatments are presented in this section.

The toolkit includes bioswale parkways, traffic diverters, refuge islands, enhanced crosswalks, traffic circles, scramble crosswalks, curb extensions, and pocket parks, among other potential locations for these items, as part of standalone or priority projects, are shown on the map in section 5.1 "Priority Projects." The toolkit also includes design guidelines drawn from national best practices.

Toolkit Treatments

- Curb Extensions
- Bioswale Parkways
- Enhanced Crosswalks
- Scramble Crosswalks
- Traffic Circles
- Pedestrian Refuge Islands
- Traffic Diverters
- Chicanes
- Pocket Parks
- Wayfinding
- Demonstration Projects
- Treelets
- Curb Ramps
- Pedestrian-Level Lighting
- Street Furniture
- Landscaping
- Pedestrian Push Buttons
- Pedestrian Countdown Signals
- Permeable Paving
- Transit Shelters
- Waste Receptacles

4.1.1 Curb Extensions

A curb extension is a portion of the sidewalk that is extended into the parking lane and typically occur at intersections.

This reduces the distance that pedestrians need to walk to cross the street, **makes pedestrians more visible** to motor vehicles, and causes drivers to reduce speeds by narrowing the roadway. Curb extensions offer **space for amenities** such as street furniture, bike racks, public art, and landscaping. Curb extensions must be installed with curb ramps that comply with ADA standards. Curb extensions are typically installed at corners but they can be used at mid-block crossings as well.

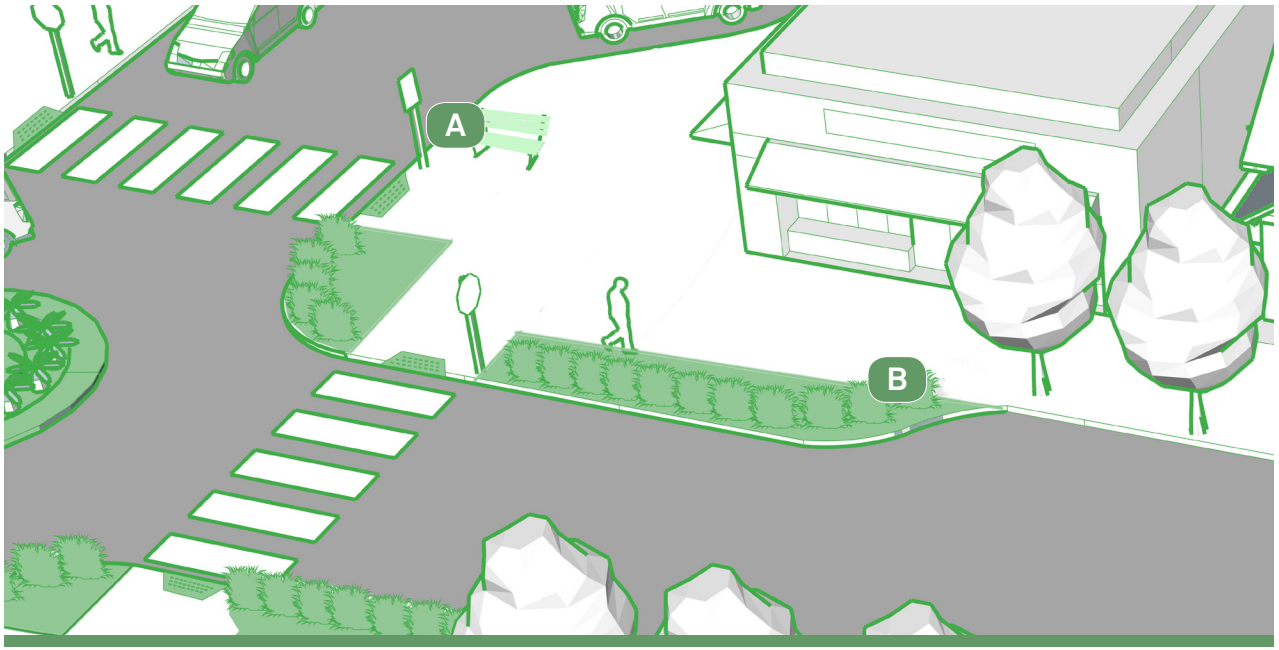


Image 4.1 Curb Extension -1st Street and Linden Avenue, Long Beach, CA.

Design Guidelines

A Planters, Bollards or other elements should be used as necessary to protect pedestrians.

B Curb extensions should extend the full width of the existing parking lane. Streets with striped bike lanes, curb extensions should not conflict with cyclists' lane. Curb extensions may divert stormwater flow and the street could require redesigning to accommodate this conditions. The catch basin can be relocated or an ADA compliant grated channel could be designed to redirect stormwater into the existing catch basin.

Curb extension should not obstruct sight-lines and allow approaching motorists to clearly see pedestrians. Well-designed curb extensions could include landscape planting, bioswale planting (see 4.1.2 Bioswale Parkways), bike parking or seating as space permits.

Cost Estimate

$14,000
per corner

Best Practices: Curb Extension >> Stormwater Curb Extension, Portland, OR

Completed in 2005, this was the first Green Street project jointly conceived and designed by the Portland Bureau of Environmental Services (BES) and the Portland Bureau of Transportation (BOT). BOT proposed a curb extension at the site to provide a safe pedestrian crossing that would accommodate school children in particular. BES suggested making it a vegetated facility that could also provide stormwater management.

Scope

This project removed 300 square feet of paved street surface and transformed it into a vegetated system for stormwater management. This is Portland's first Green Street project to integrate an ADA-compliant pedestrian crossing into the design of a stormwater curb extension facility.

Benefits

The curb extension captures runoff from 4,500 square feet of paved surfaces. It treats and infiltrates most of the runoff it receives, providing volume and flow control and water quality benefits.

Cost

$20,000

includes: project management, construction
excludes: design

Of this, construction of the stormwater curb extension cost $16,400, or $3.64 per square foot of impervious area managed. The remaining $4,000 was required for ancillary sidewalk repairs and construction of a new ADA ramp on the opposite side of the street. These costs are not necessarily typical of other Green Street projects.

4.1.2 Bioswale Parkways

Stormwater runoff is a major cause of water pollution in urban areas. Bioswales meet an increasing demand to mitigate urban pollution from our streets and impermeable surfaces in our cities.

Bioswale parkways between the street and sidewalk work to **collect and filter runoff** from neighborhood streets. Curb cut-outs direct street runoff into the permeable soils and native plants or grasses to help reduce the flow of water and to filter out pollutants such as sediment, trash, and heavy metals. Drainage pipes installed beneath the soil carry the filtered water to the storm drain system.

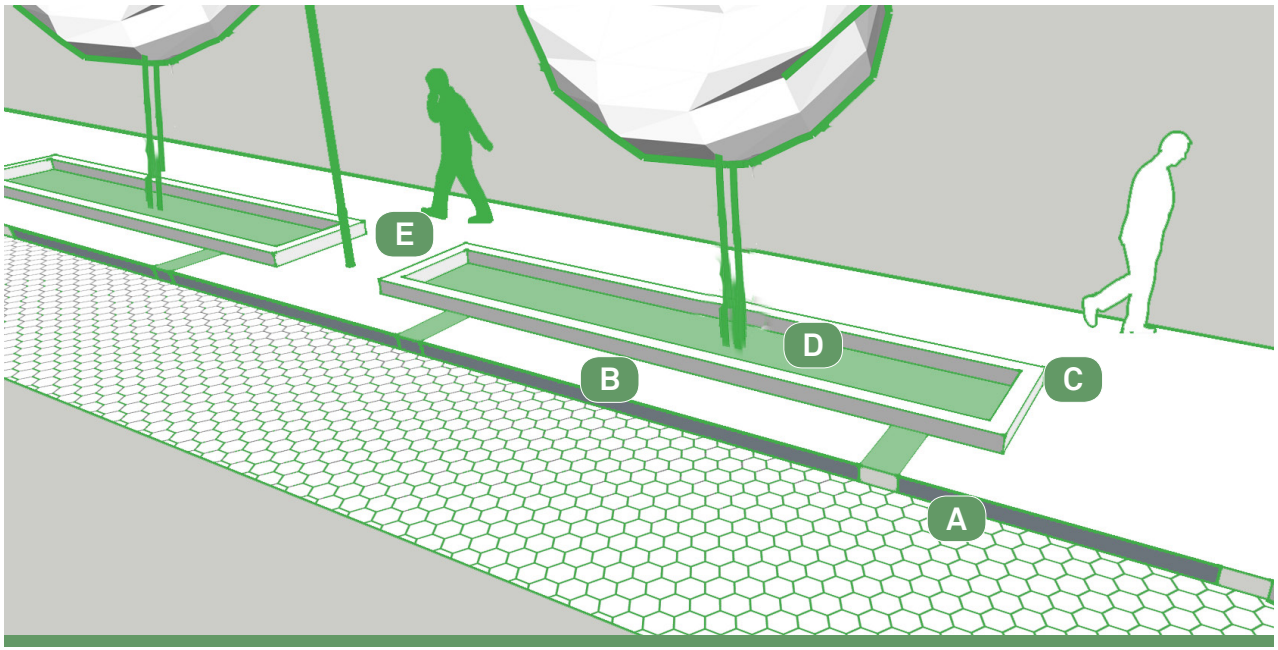


Image 4.2 Hope Street bioswale - Los Angeles, CA.

Design Guidelines

- **A** Curb cut and warped gutter to allow stormwater runoff to flow into bioswale with ADA accessible grate surfacing
- **B** Accessible area at curb if on-street parking is desired. If there is no on-street parking, bioswale can be at back of curb.
- **C** Bioswale curb wall.
- **D** Bioswale planting to be California native planting or adapted to comply with drought tolerant, low maintenance goals.
- **E** Minimum 4' wide walkway shall be provided at each end of swale for pedestrian traffic.

Cost Estimate

$50
per square foot

4.1.3 Enhanced Crosswalks

Installing crosswalks helps pedestrians to identify ideal locations at which to cross a street.

Marked crosswalks also indicate to motorists where pedestrians have right-of-way and where to yield. Crosswalks should be **highly visible** to both drivers and pedestrians and can be installed with basic striping or decorative pavers. Crosswalks can also be supplemented with in-pavement flashing lights, elevated "table crosswalks," or freestanding beacons to increase visibility, which is particularly important for mid-block crossings.

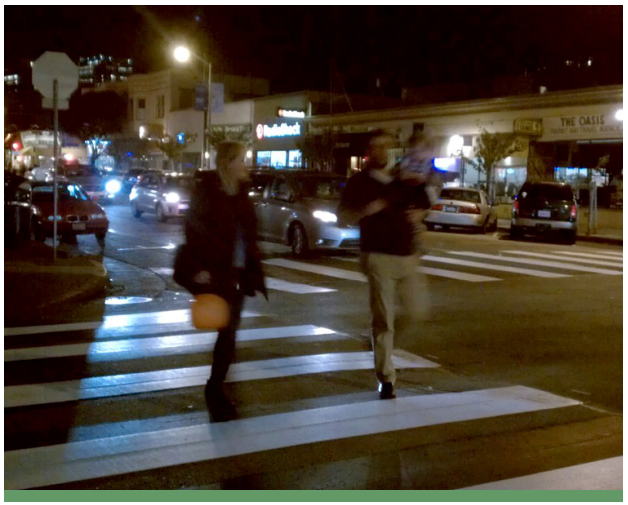


Image 4.3 "Continental" crosswalk - San Francisco, CA.

Design Guidelines

A Curb ramp and tactile warning strips at each end to meet ADA guidelines

B Minimum 10' wide crosswalk on neighborhood greenway streets and 15' wide on stitch streets.

- Enhanced Crosswalks are defined as "Continental" crosswalks. Stripes are 2 feet in width that are placed 3 feet apart. The striping should be perpendicular (or transverse) to the direction of pedestrian travel and parallel to the direction of vehicular travel. School crosswalks must be yellow per CA code.
- Decorative crosswalks should be unit pavers or scored concrete. Use integrated color, texture, and pattern along corridors and within districts.

Cost Estimate

$13
per square foot

4.1.4 Scramble Crosswalks

When activated, scramble crosswalks stop traffic at all legs of the intersection to allow pedestrians to cross in any direction.

The crossings can be striped with paint, or pavers can be used to direct pedestrian movement. Scramble crosswalks are advantageous in areas with high pedestrian traffic, as they **more efficiently allow pedestrians to cross** directly to their desired corner, as opposed to having to wait for successive crossing signals.

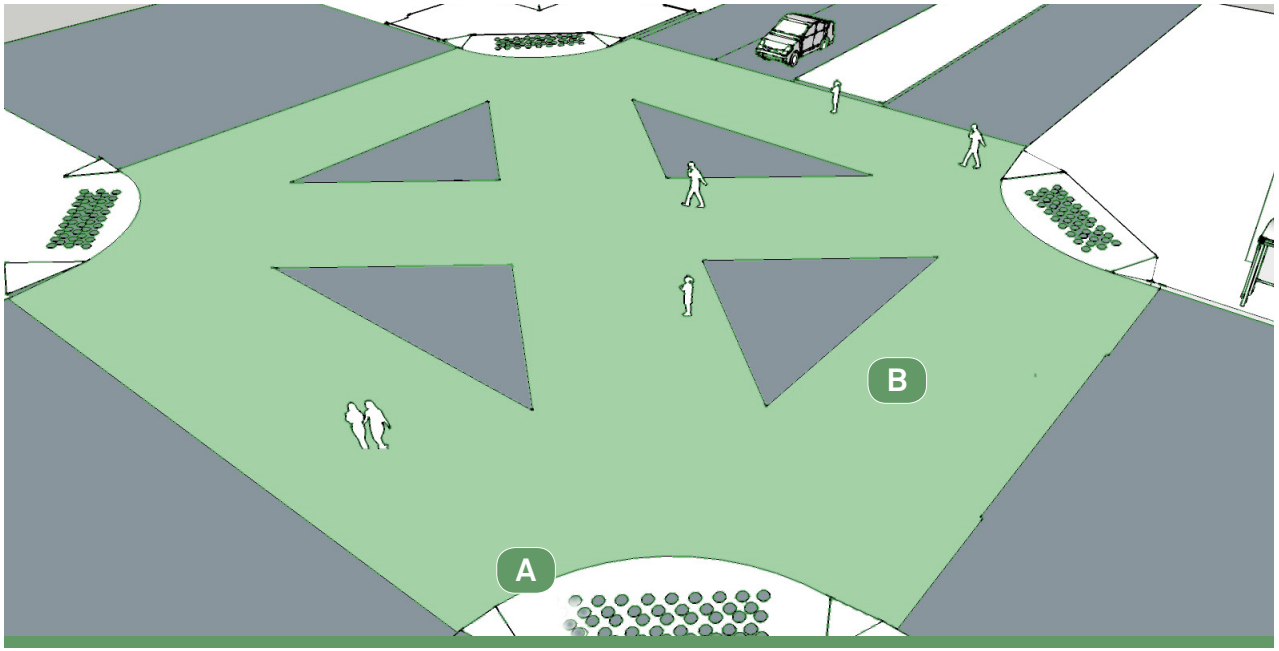


Image 4.4 Scramble Crosswalk - Pasadena, CA.

Design Guidelines

A Curb ramp and tactile waring strips at each end to meet ADA guidelines

B Minimum 10’ wide crosswalk on neighborhood greenway streets and 15’ wide on stitch streets.

- Enhanced Crosswalks are defined as “Continental” crosswalks. Stripes are 2 feet in width that are placed 3 feet apart. The striping should be perpendicular (or transverse) to the direction of pedestrian travel and parallel to the direction of vehicular travel. School crosswalks must be yellow per CA code.
- Decorative crosswalks should be unit pavers or scored concrete. Use integrated color, texture, and pattern along corridors and within districts.

Cost Estimate

$15
per square foot

4.1.5 Traffic Circles

Traffic circles are circular islands in the center of intersections that control the flow of traffic.

Drivers that enter the traffic circle must travel in a counter clockwise direction around the island to get to the other side. Intersections with traffic circles can be signalized, stop-controlled, or yield-controlled. Traffic circles slow the flow of vehicular traffic into intersections, which creates a more safe and comfortable environment for bicyclists and pedestrians. Studies have shown traffic circles improve air quality and roadway circulation by eliminating the stop-and-start movements associated with a four-way stop.

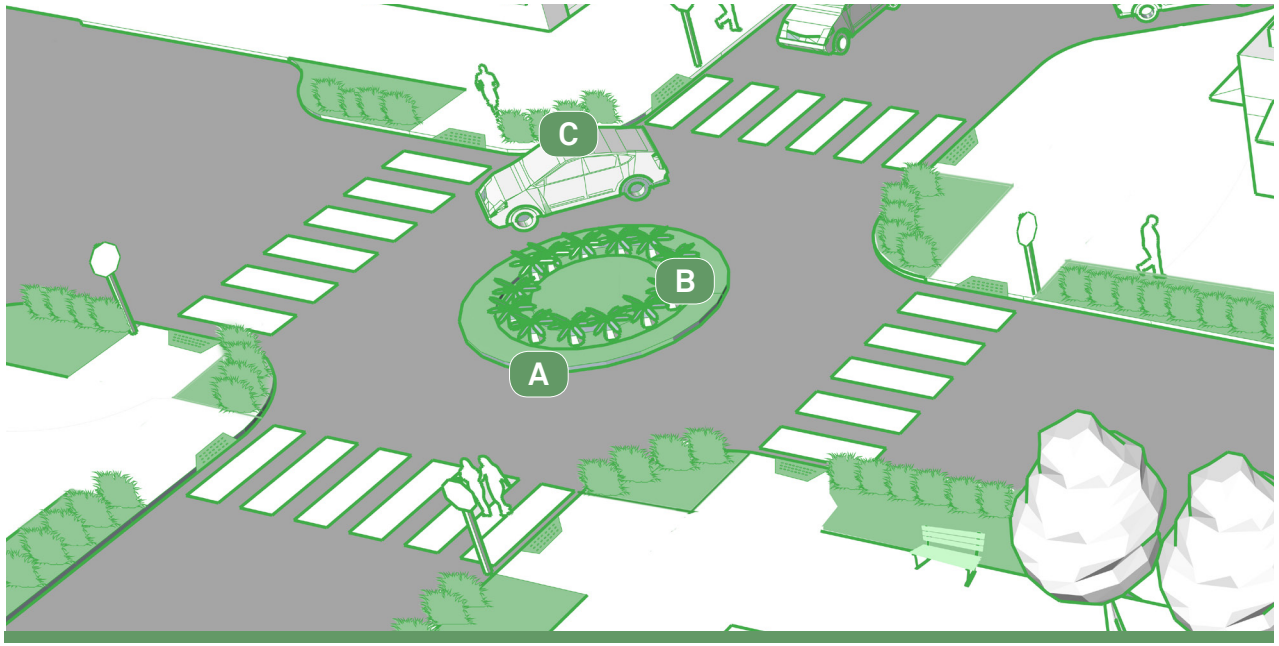


Image 4.5 Traffic circle, Long Beach, CA.

Design Guidelines

A Use signs within the center island and reflective paint on the curb to improve center island visibility.

B Use permeable materials and drought tolerant landscaping within traffic circle if space allows to maximize stormwater infiltration.

C Design speeds for vehicular movement around the traffic circle should be kept 10 to 15 mph.

Cost Estimate

$22,000
per traffic circle

The cost to construct a traffic circle varies by size and materials. Landscaped traffic circles are generally more expensive because of maintenance costs.

4.1.6 Pedestrian Refuge Island

Pedestrian refuge islands can provide a protected space for pedestrians crossing the street and allow pedestrians to focus on crossing one direction of traffic at a time.

Medians are elevated barricades that divide the roadway down the center. A refuge island can provide additional protection for pedestrians along busy corridors. They are especially recommended for wide streets and arterials that pedestrians may have trouble crossing before the end of the signal phase.

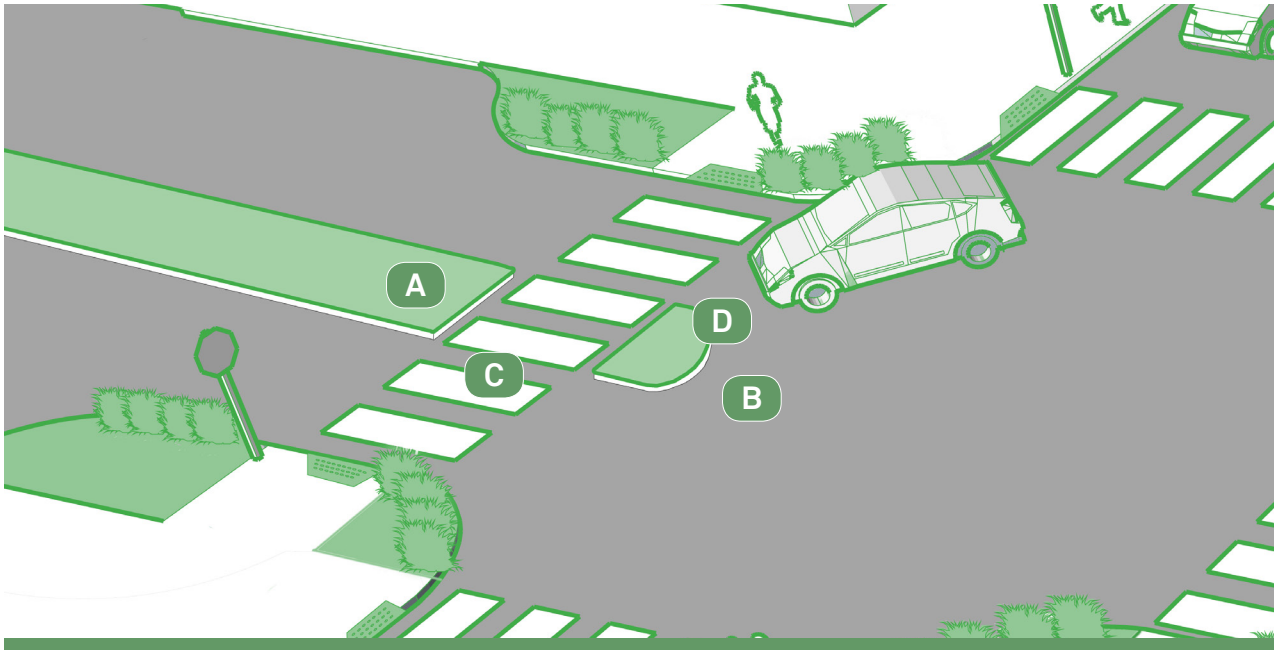


Image 4.6 Pedestrian refuge island.

Design Guidelines

A The refuge island width should be at least 5' wide. Use low-growing shrubs and plants that are no taller than 3' to promote visibility.

B The refuge island should extend beyond the crosswalk at intersections, while accommodating vehicle turning movements.

C Provide detectable paving for visually impaired users, to indicate the line between the travel lanes and the pedestrian refuge.

D Use permeable paving or drought tolerant landscaping within island if space allows to maximize stormwater infiltration.

Cost Estimate

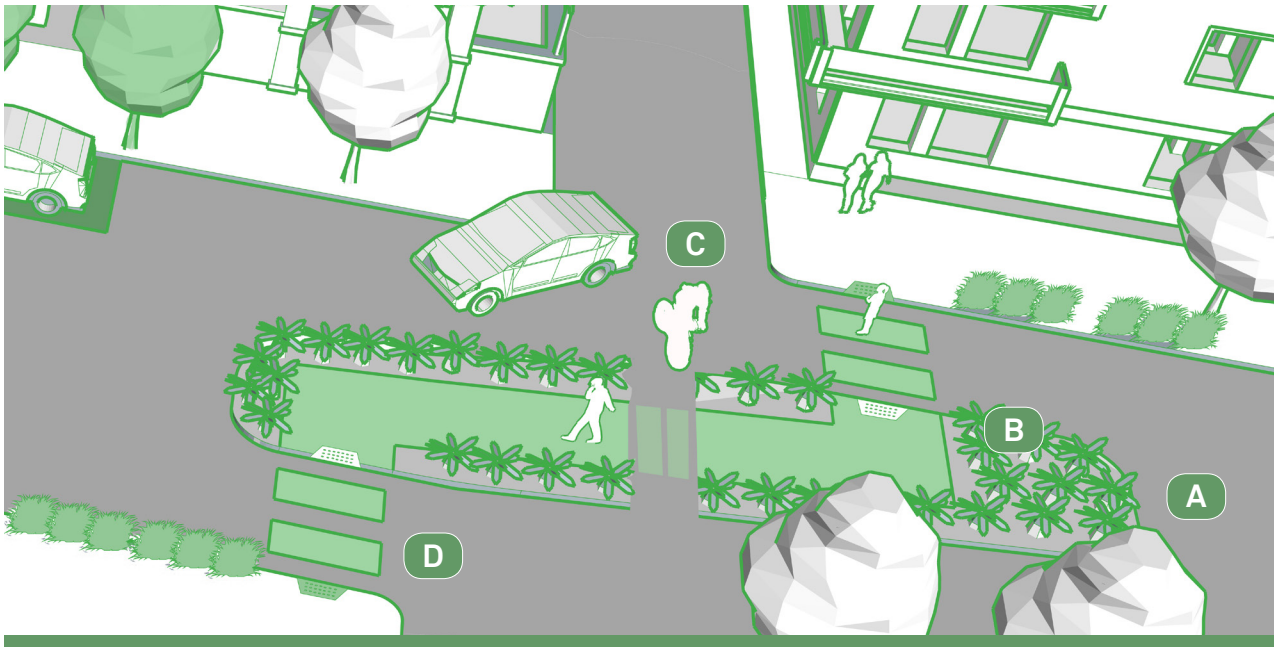
$14,000
per refuge island

4.1.7 Diverter

A traffic diverter is a roadway design feature which is placed upon a street or roadway in order to prohibit vehicular traffic from entering into, or from any street.

While a diverter is typically appropriate for smaller residential streets, installing raised median diverters can improve a Bike Boulevard Street where it meets with a larger arterial street. A raised median diverter allows through traffic for bicycles along a Bike Boulevard Street while directing drivers onto an arterial street more appropriate for car traffic. Diverters also make the crossing much easier and safer for pedestrians. Diverters may call for drought-resistant landscaping that can, with the support of the community or Business Improvement Districts, tie them into the feel and fabric of the surrounding neighborhood.

Image 4.7 Diverter - Vancouver, BC
Photo: Richard Drdul.



Design Guidelines

- **A** Use signs within the diverter and reflective paint on the curb to improve center diverter visibility.
- **B** Use permeable materials and drought tolerant landscaping within diverter if space allows to maximize stormwater infiltration.
- **C** Diverter should allow bicycles to freely pass through as cars and trucks are diverted to cross street.
- **D** Use enhanced crosswalks for safer pedestrian access.

Cost Estimate

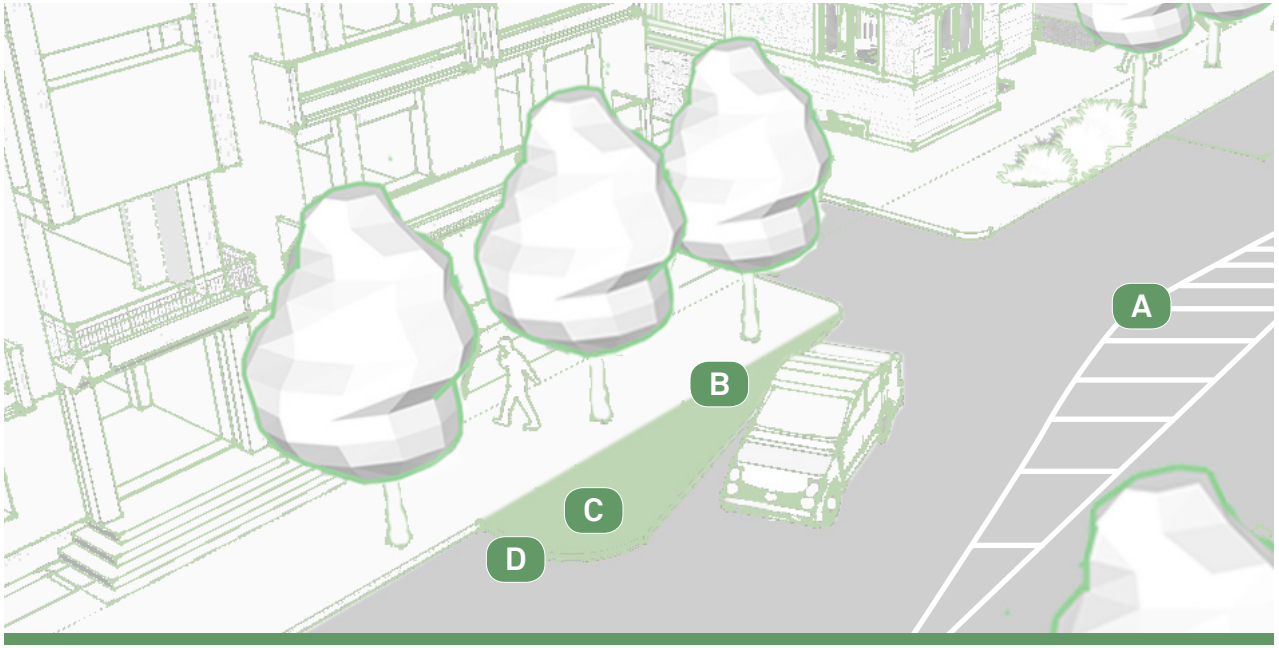
$18,000
per traffic diverter

4.1.8 Chicane

These treatments can reduce vehicle speeds by visually narrowing the roadway and requiring vehicles to shift their positions horizontally.

Chicanes and chokers are curb extensions that alternate from one side of the street to the other. If supplemented with landscaping, bike parking, seating and other amenities, chicanes can also create a more pleasant walking environment and a buffer between the sidewalk and the street.

The City of Seattle found an 18-35% reduction in travel speeds and a 32-45% decrease in average daily traffic (ADT) volumes at locations with chicanes.



Design Guidelines

A A chicane design may require additional striping to ensure drivers are aware of the slight bend in the road.

B Use signs within the chicane and reflective paint on the curb to improve visibility.

C Use permeable materials and drought tolerant landscaping within chicane if space allows to maximize stormwater infiltration.

D Chicanes may be designed using a return angle of 45 degrees, or a more gradual transition.

Cost Estimate

$10,000
per chicane

Image 4.8 An example of a chicane from Austin, TX.

4.1.9 Parklets

Parklets convert curbside parking spaces into vibrant community spaces.

A parklet repurposes parking spots along the street into a neighborhood gathering spaces. By converting one or two parking spots into public space, parklets extend the sidewalk and provide additional enhancements like public art, seating, greening/landscaping, and public art. This unique urban intervention has been a growing trend, with parklets popping up in cities such as Boston, Los Angeles, San Francisco, and Chicago. Long Beach currently has a pilot parklet program with a number of downtown restaurants. Each business added 18 to 20 more seats, enhancing seating by as much as one-third.

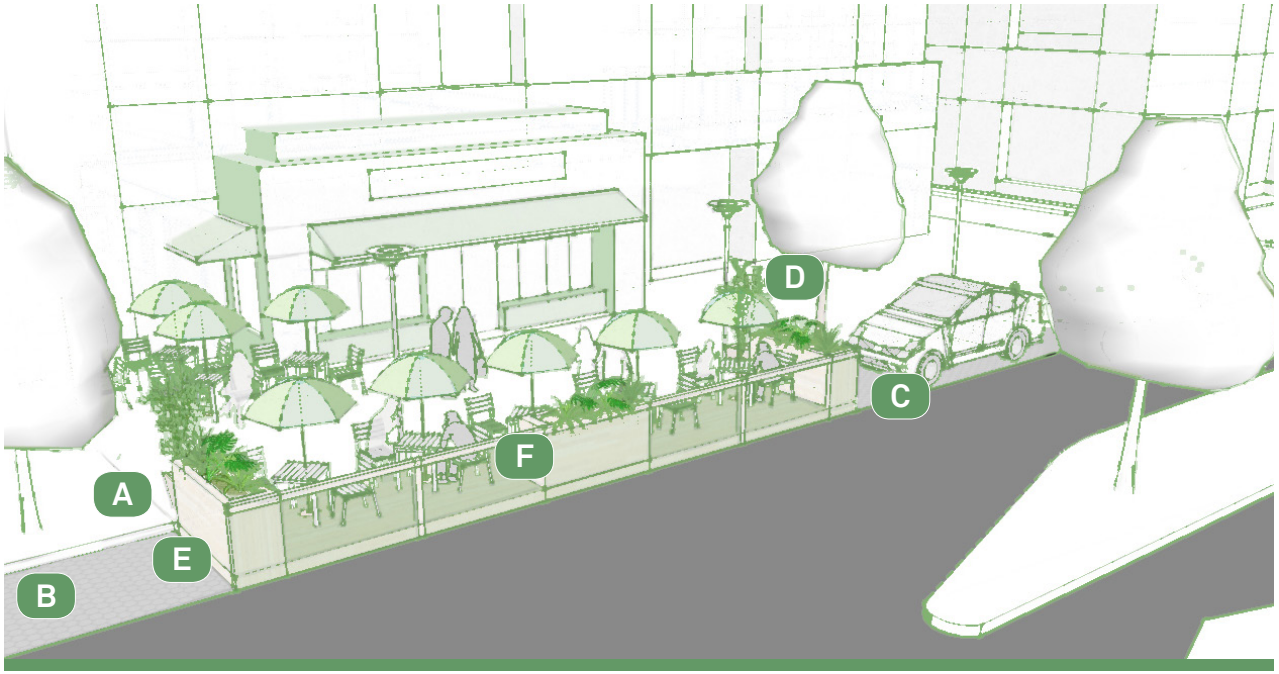


Image 4.9 Parklet, 4th Street, Long Beach, CA.

Design Guidelines

- **A** Parklets should have a flush transition at the sidewalk and curb to permit easy access.
- **B** Parklets have a desired minimum width of 6 feet (or the width of the parking lane).
- **C** To ensure visibility to moving traffic and parking cars, parklets must be buffered using a wheel stop at a desired distance of 4 feet from the parklet.
- **D** Parklets should have vertical elements that make them visible to traffic.
- **E** The design of a parklet should not inhibit the adequate drainage of stormwater runoff.
- **F** Designs may include seating, greenery, bicycle racks or other features, but should always strive to become a focal point for the community.

Cost Estimate

$18,000-$25,000
per parklet, including permitting costs

Best Practices: Parklet >> San Francisco, CA

San Francisco's Parklet Program, part of the larger Pavement to Parks Program, repurposes underutilized street space into neighborhood amenities. By converting one or two parking spots into public space, parklets extend the sidewalk and provide enhancements like seating, landscaping, bike parking, and art. Since the initial parklet's creation in 2010, San Francisco has installed 38 parklets across the city.

Scope

A mix of permanent and temporary seating is encouraged, as well as bicycle parking and landscaping using native plants. The City encourages parklet sponsors to incorporate high-quality, durable materials, using locally-sourced, recycled, or reclaimed materials where possible, and low-emission, sustainable woods and paints. Parklet construction materials need to resist scratches, impacts, UV and moisture exposure.

Benefits

In addition to providing much needed public space, the project has been beneficial to the neighborhood's economy. Automaker Audi was a major corporate sponsor, which allowed the project to proceed with minimal public funding.

Cost

$25,000
includes: project management, construction
excludes: design

4.1.10 Pocket Parks

Similar to parklets, pocket parks offer small areas for sitting, dining, and recreation.

On private land, pocket parks typically occupy vacant space or underutilized parking lots, and are typically constructed and maintained by the property owner. In this case, they are known as “POPS,” or privately-owned public space. Pocket parks can also occupy underutilized vestigial spaces within the public right of way. Pocket parks should support a variety of open space functions including social activities, and ornamental functions. Pocket parks may include lighting, tables and chairs, seating, play or fitness equipment, turf or planting, enclosed dog parks, public art, wayfinding and community bulletin boards.

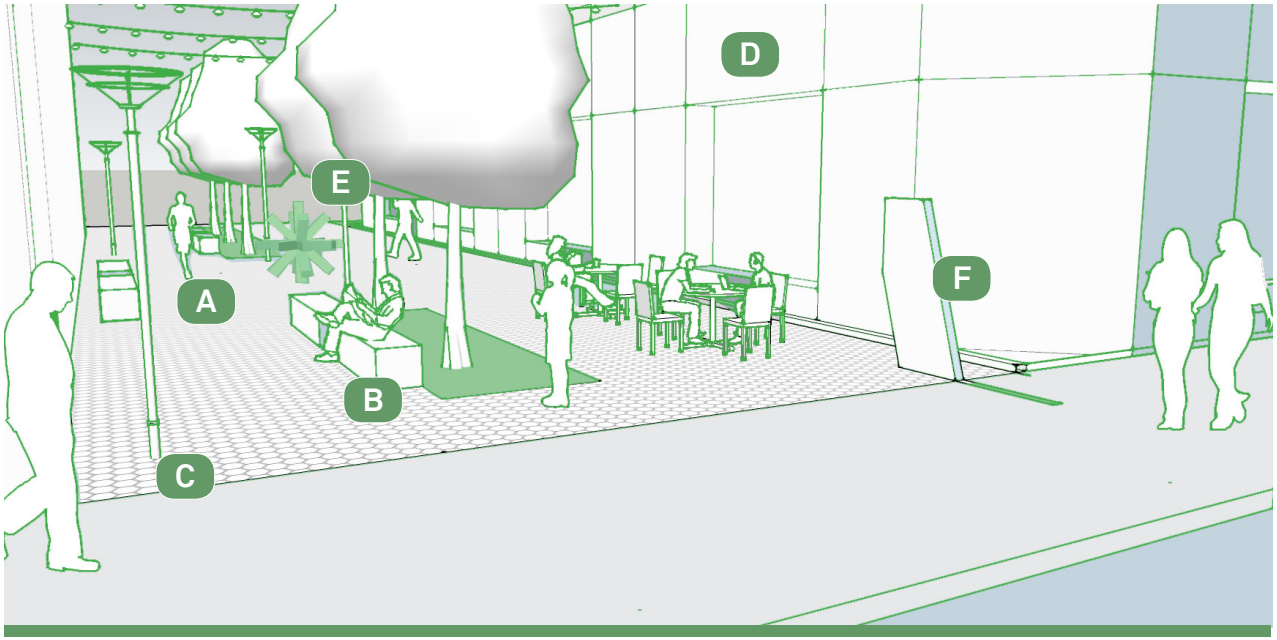


Image 4.10 ParkD Pocket Park provides a space for pop-up retail, Frontenac Ct/ 4th Street, Long Beach, CA.

Design Guidelines

A Design the park to be welcoming and appealing to a diverse set of users.

B Seating with a variety of exposures should be provided at a minimum.

C Incorporate sustainable features such as pervious surfaces, bioswales, LED lighting, and solar-powered amenities.

D If possible, frame with mixed-use buildings to create a partially enclosed space that is both inviting and intimate.

E Look for opportunities to incorporate public art.

Provide way-finding features, such as signage, special pavement and art, to direct people to the pocket park and other points of interest in the immediate area.

Cost Estimate

$18,000-$600,000
per pocket park

Pocket park costs vary greatly depending on the size, purpose, elements and maintenance of the park. When preparing high-level pocket park concepts, the per-unit cost estimates for design elements included in this toolkit can be used.

4.1.11 Demonstration Projects

Demonstration projects are temporary, low-cost public realm improvements that serve to introduce new pedestrian safety techniques to the general public

The City of Long Beach has had great success with the installation of temporary, painted cycle track markings on 3rd Street and Broadway as well as the ParkD pocket park on 4th Street. During the pre-design phase for each of the priority projects, the City and its community partners should consider installing temporary elements such as curb extensions, plastic bollards, or striping. These improvements typically last no longer than one-two years. These temporary projects can help the City to demonstrate the benefits of pedestrian improvements to the general public, as well as potential funders as the City seeks financial support through public and private grants, and sponsorship opportunities.

Temporary Curb Extension "Lincoln Hub," Chicago, IL

Temporary curb extension treatments can be created by defining the edge of a curb extension with bollards, striping, planters and similar features that will protect the extended sidewalk corner without requiring extensive construction to bring the level of the curb extension up to the sidewalk.

1 Flexible Bollards

Can be used to define pedestrian-only zones, curb extensions, cycle tracks, and other areas where cars are not permitted

Cost Estimate **$50** per bollard

2 Striping

Used to define areas where curbs will eventually be installed, new lanes of traffic, parking stalls, crosswalks

Cost Estimate **$25** per linear foot

3 Planters

Temporary planters can bring shade and refuge to sidewalks, plazas, and pocket parks

Cost Estimate **$200** per planter

4 Surface Painting

Temporary painting can be used to create colorful plazas and pocket parks. They can also be used to delineate important zones such as parking stalls, pedestrian areas, or medians

Cost Estimate **$50** per square foot

Best Practices: Demonstration Project >> Public ROW >> Silverlake, Los Angeles, CA

The Silver Lake Sunset Triangle Plaza opened in March of 2012, the first of many planned for the city as part of the program Streets for People. This particular plaza is a pilot project that closes a small strip of Griffith Park Boulevard, from its intersection with Sunset Boulevard to Edgecliffe Drive. The pilot program that was temporary has now become a permanent addition to the neighborhood.

Scope

Large scale planters with planting, movable tables and chairs, umbrellas, and street paint.

Benefits

In addition to providing much needed public space, the project has been beneficial to the neighborhood's economy.

Cost

$25,000

includes: project management, construction
excludes: design

4.1.12 Wayfinding

Wayfinding improvements can help visitors navigate to major destinations and transit connections.

Wayfinding signage can be divided into three categories. Identification signs mark important destinations, while informational signage provides more background information on a point of interest. Directional signage shows the optimal route between key destinations. A successful wayfinding strategy for Long Beach should make use of all three types of signage. As part of this strategy, the City should develop directional signage for Metro Stations and informational signage for major destinations.

Types

A Directional

Pavement markings, using medallions or linear wayfinding markings, can guide pedestrians to and from Metro Stations

Cost Estimate
$2,500
per medallion

B Identification

Freestanding signage identifies points of interest

Cost Estimate
$2,500
per identification sign

C Informational

Informational kiosks can tell a story of neighborhoods and destinations, or provide information such as real-time transit schedules

Cost Estimate
$2,500
per kiosk

Design Guidelines

1. Directional and informational signage should use a consistent color palette, fonts, materials, and graphics.
2. A system of Metro-specific signage should be developed, potentially using a combination of informational signage and directional medallions, to guide pedestrians between major destinations and Metro Blue Line stations.
3. Major destinations should be prioritized. These include Alamitos Beach, the Performing Arts Center, East Village, Pine Avenue, and the Aquarium of the Pacific, among others. Specific businesses should not be listed on wayfinding signage, but retail clusters and business districts should be featured.
4. Metro directional signage should be considered for major stitch streets, neighborhood greenways, transit access projects, and alleyways that are within 1/4-mile of a Metro station.

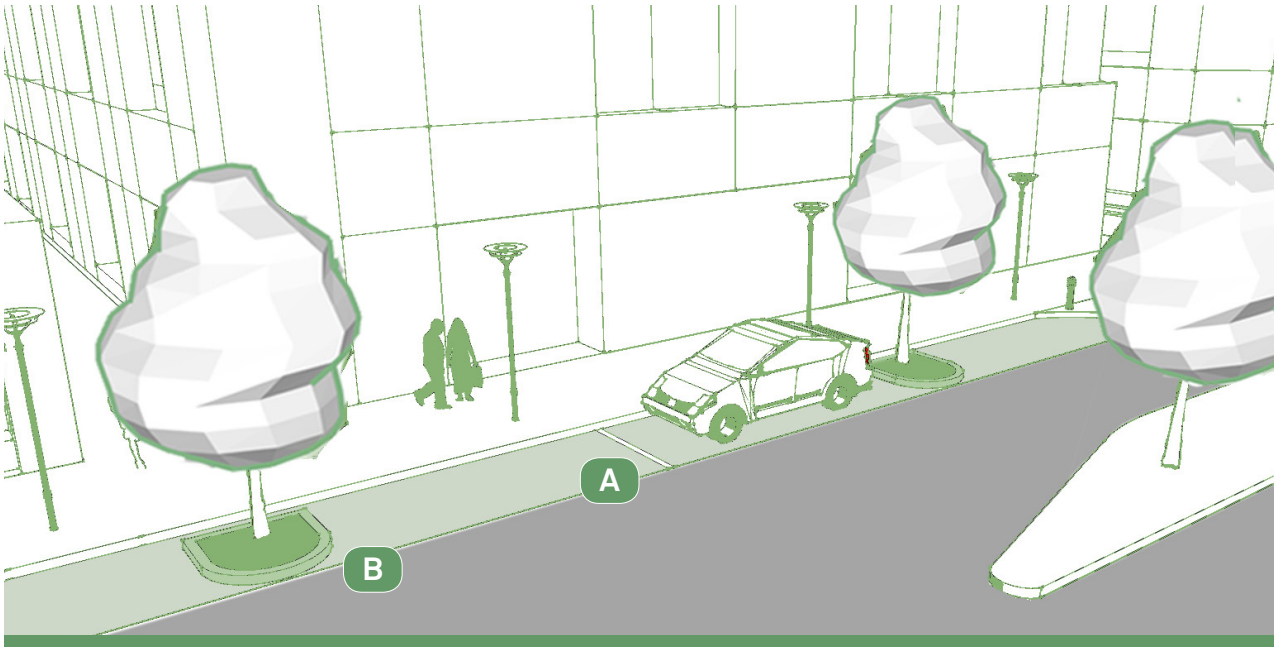
4.1.13 Treelets

A treelet is a curbed tree well that is extended into the parking lane and typically occur between on-street parking spaces.

Treelets are typically used as an alternative to planting strips in business districts where the existing sidewalk width is narrow and it is important to maintain the maximum width to accommodate pedestrian volumes.

These treelets can be accommodated between existing parking spaces and typically do not impact the number of parking spaces along the street. A tree pit is saw-cut out of the street and a curb extension is built outside the gutter dimensions to prevent conflicts with existing drainage infrastructure.

Image 4.11 Treelet precedent - Downtown Phoenix, AZ.



Design Guidelines

A Parallel parking spaces per city standards.

B Treelet island length and width shall vary with on-street parking conditions and existing utilities. Typically the treelet should extend the full width of the existing parking lane without conflicting with the existing curb and gutter. Streets with striped bike lanes, treelets should not conflict with cyclists' lane. Treelets should not obstruct sight-lines and allow approaching motorists to clearly see pedestrians.

Cost Estimate

$10,000-$15,000
per treelet

4.1.14 Curb Ramps

$2,500 per curb ramp

Curb ramps allow persons in wheelchairs, with walkers, with strollers, and with disabilities convenient access to the sidewalk from the street. The Americans with Disabilities Act (ADA) requires curb ramps to be installed at all locations where pedestrians cross. Curb ramps for each crossing approach are recommended rather than one curb cut per corner so that visually impaired persons have better orientation. Warning strips should be installed on all ramps. Curb ramps cost approximately $2,500 each to construct.

4.1.15 Pedestrian Level Lighting

$5,000 per fixture

Street lighting improves streetscapes by improving security and visibility for both bicyclists and pedestrians. Streetlights should be installed on both sides of the street and the level of lighting should be consistent throughout the segment. Providing pedestrian scale lighting creates a more aesthetically pleasing and comfortable environment to walk in. Intersections often require additional lighting to allow motorists to see pedestrians crossing.

4.1.16 Street Furniture

standard bollard:	**$2,300** each
illuminated bollard:	**$3,000** each
waste receptacles:	**$2,000** each
bike rack:	**$1,200** each
table:	**$2,000** each
chair:	**$500** each
bench:	**$2,000** each

Providing street furniture on sidewalks acts as a buffer between pedestrians and vehicular traffic. Benches, water fountains, and bicycle parking racks are recommended types of street furniture because they address needs that a pedestrian may have, such as a place to rest. Street furniture should be placed outside of the walking zone as to not create a hazard to pedestrians. The cost to install street furniture varies by type and vendor.

4.1.17 Landscaping

street trees: $1,000 each (36" box)

palm trees: $900 each

median planting: $6 /square foot

bioswale parkway: $50 /square foot

Installing sidewalk landscaping also creates a buffer between pedestrians and vehicular traffic. Landscaping can make a streetscape more visually appealing and street trees can provide shade for people walking and gathering. Costs of sidewalk landscaping include additional water and maintenance, which can be a challenge for implementation. Drought tolerant plants can reduce the need for irrigation.

4.1.18 Pedestrian Push Buttons

Installing pedestrian push buttons at signalized intersections allows pedestrians to trigger the signal when motor vehicles are not present. Push buttons are appropriate for arterial and congested streets because they can allot more time to pedestrians only when they are present and thus reduce vehicular delay. Push buttons can be enhanced with audible messages for visually impaired.

4.1.19 Pedestrian Countdown Signals

$4,000 each; one head and push button on each end

Pedestrian countdown signals display to pedestrians crossing the street when they have enough time to enter the crosswalk and how much time they have left to cross the street. Countdown signals improve pedestrian safety by helping pedestrians to finish crossing before the end of the signal phase.

4.1.20 Permeable Paving
$25 per square foot

Permeable pavement allows stormwater runoff to seep through and into the soil below where the water is filtered and eventually contributes to the existing aquifer. Permeable pavement is an alternative to typical concrete and asphalt paving and offers a range of utility, strength and sustainable properties. These materials include permeable concrete, asphalt, unit pavers, open grid pavers, gravel pavers or decomposed granite.

4.1.21 Transit Shelters
$35,000 each; shelter and benches

Providing a shelter at all transit stops and stations allows commuters protection from sun and from inclement weather. Shelters should be established outside of the pedestrian walking zone and with sufficient room for bus wheelchair lifts to load and unload passengers. If there is not adequate space to install a dedicated shelter, there should be awnings or overhangs on the surrounding buildings for commuters to stand beneath.

Benches or seats should be provided at all transit stops and stations for commuters to rest while waiting for the bus or train. Elderly and disabled passengers often have difficulty standing for long periods. Seating should be installed within close proximity of transit stops and stations and under the provided shelter if feasible.

At a minimum, all transit stops and stations should provide signage displaying the route number. Providing timetables and maps are recommended to increase convenience for commuters with transfers and those that are less familiar with the network, such as a bicyclist with a flat tire in an unfamiliar location. For major transit stations and terminals, providing passengers with real time information on arriving transit vehicles is a valuable customer service improvement.

4.1.22 Waste Receptacles
$2,000 each

Clean transit stops and stations increase the sense of security that commuters feel when waiting for a bus or train and reduce the likelihood of litter in the area. Providing ample trash containers gives riders and others a place to put their trash to keep waiting areas well-maintained.

Fingerprints
Elm Ave
AIRSTREAM

5.0 priority projects

5.1 Overview of Priority Project Types

5.2 Selection Process

5.3 Profile of Recommended Projects

5.0 priority projects

Over the next 15 years, Long Beach will be dramatically transformed by innovative, pedestrian-supportive public realm improvement projects

This chapter provides a detailed profile of specific improvement projects that have been prioritized through conversations with City staff, key stakeholders, and Long Beach residents. The chapter is divided into the following sections:

5.1 Overview of Priority Project Types
5.2 Selection Process
5.3 Profile of Recommended Projects

Recommended High Priority Projects

	Project Name	Type	Est. Cost ($ millions)
1	**Pacific Station Neighborhood Greenway**	Neighborhood Greenway	7.86
2	**5th Street Station Neighborhood Greenway**	Neighborhood Greenway	5.23
4	**4th Street Stitch Street**	Stitch Street	5.61
6	**6th Street Stitch Street**	Stitch Street	5.35
8	**1st Street Pedestrian Gallery**	Shared Street	2.90
9	**Metro Beach Access Gap Closure**	Transit Access Project	4.98
15	**1st Street Station Green Alley Network**	Green Alley	3.16
16	**Pacific Street Green Alley Network**	Green Alley	1.45
18	**Anaheim Stitch Street**	Stitch Street	9.87
20	**11th Street Streetlet and Stitch Street**	Stitch Street	3.24
24	**Esther Streetlet and Stitch Street**	Stitch Street	3.41
30	Willow Station Transit Access Project	Transit Access Project	6.73
31	Wardlow-Pacific Place Transit Access Project	Transit Access Project	5.61
33	Del Mar Greenbelt	Greenbelt	5.28
		TOTAL FOR ALL PROJECTS	**$70.68 million**

5.1 Priority Project Types

The seven priority project types include a range of improvements, from a greenbelt connecting two Metro Stations, to the first shared street with a pedestrian rambla in Southern California.

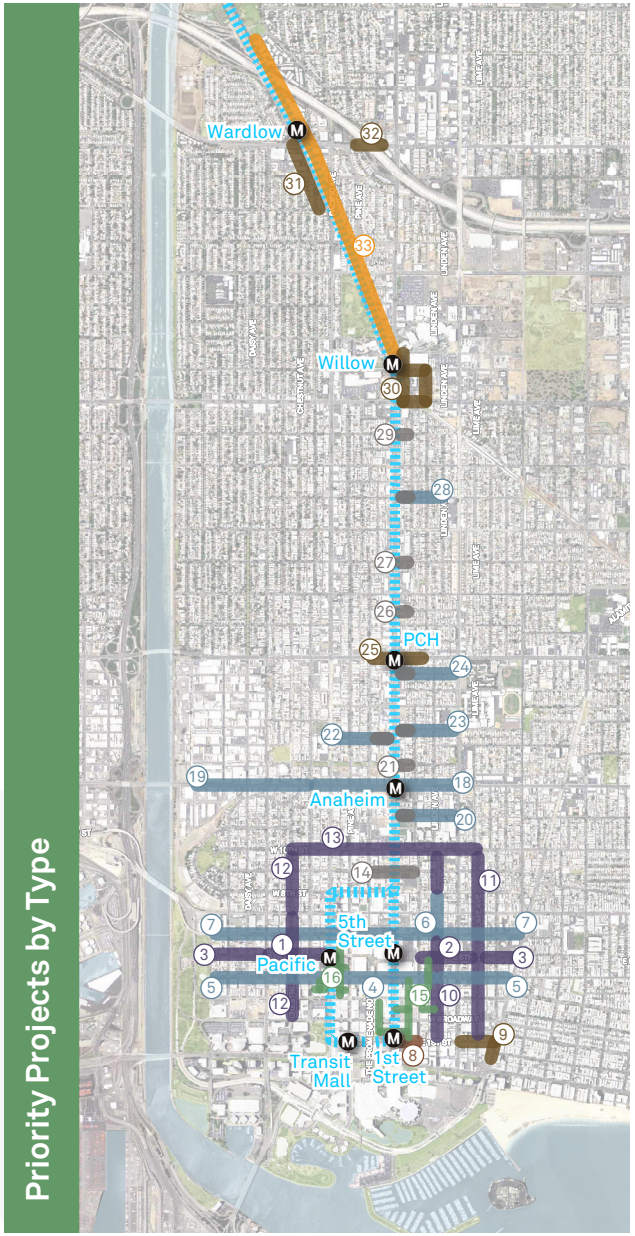
Fully 33 project concepts were developed for The Downtown and TOD Pedestrian Master Plan (PMP). These projects are presented on the table and map at right. They represent seven types of priority projects, which are profiled in the following pages.

Priority Project Types

- Stitch Street
- Neighborhood Greenway
- Green Alley
- Shared Street
- Streetlet
- Greenbelt
- Transit Access Projects

Priority Projects

15	1st Street Station Green Alley Network
16	Pacific Station Green Alley Network
17	Green Alley Strategic Improvement Project
33	Del Mar Greenbelt
1	Pacific Station Stitch Street and Neighborhood Greenway
2	5th Street Station Neighborhood Greenway - Phase 1
3	5th Street Neighborhood Greenway - Phase 2
6	6th Stitch and Linden Neighborhood Greenway
10	Linden Neighborhood Greenway - Phase 2
11	Lime Neighborhood Greenway
12	Chestnut Neighborhood Greenway - Phase 2
13	10th Street Neighborhood Greenway
8	1st Street Pedestrian Gallery
4	4th Street Stitch Street - Phase 1
5	4th Street Stitch Street - Phase 2
7	6th Stitch Street - Phase 2
18	Anaheim Stitch Street - Phase 1
19	Anaheim Stitch Street - Phase 2
20	11th Streetlet and Stitch Street
22	15th Street West Streetlet and Stitch Street
23	15th Street East Streetlet and Stitch Street
24	Esther Streetlet and Stitch Street
28	23rd Street Streetlet and Stitch Street
14	9th Street West Streetlet
21	14th Street Streetlet
26	Rhea Streetlet
27	21st Street Streetlet
29	25th Street Streetlet
9	Metro Beach Access Gap Closure
25	PCH Station Transit Access Project
30	Willow Station Transit Access Project
31	Wardlow Pacific Place Transit Access Project
32	Pedestrian Crossing Improvement at NB 405 On-ramp



A Curb Extensions *to visually and physically narrow the roadway, creating safer and shorter crossings for pedestrians.*

B Street Trees

C Street Furniture
Street furniture and lighting that are unified and reflect the community's desire to retain unique street features and historic character elements. These combined efforts will encourage pedestrian activity while contributing to a sense of place.

D Pedestrian Lighting

E Mid-block Crosswalks *to facilitate crossings to places that people want to go but that are not well served by the existing street network*

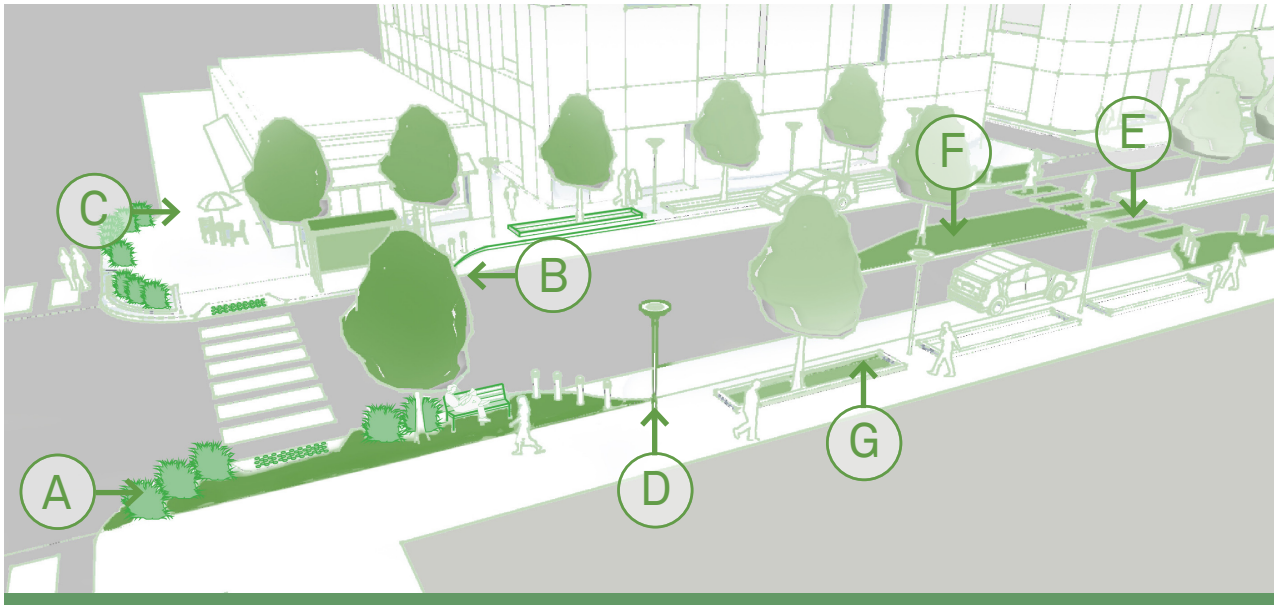
F Landscaped Medians

G Bioswale Parkways *are open, gently sloped vegetated channels with curb cuts that clean and infiltrate stormwater during rain events*

5.1.1 Stitch Streets

Stitch Streets are the backbone of the Downtown Long Beach pedestrian network, connecting residents to the Anaheim Avenue, 5th Street, Pacific Avenue, 1st Street and Downtown Long Beach stations.

They encourage pedestrians to walk further through wayfinding elements and safety improvements. Enhanced crosswalks at existing intersections shorten the crossing distance between curbs, while new mid-block crosswalks promote walking within key retail districts. Planted medians encourage drivers to slow down through the use of key visual cues. The eclectic and unique character of downtown Long Beach is carried into unique streetscape amenities such as bike racks, pedestrian lighting, and seating.



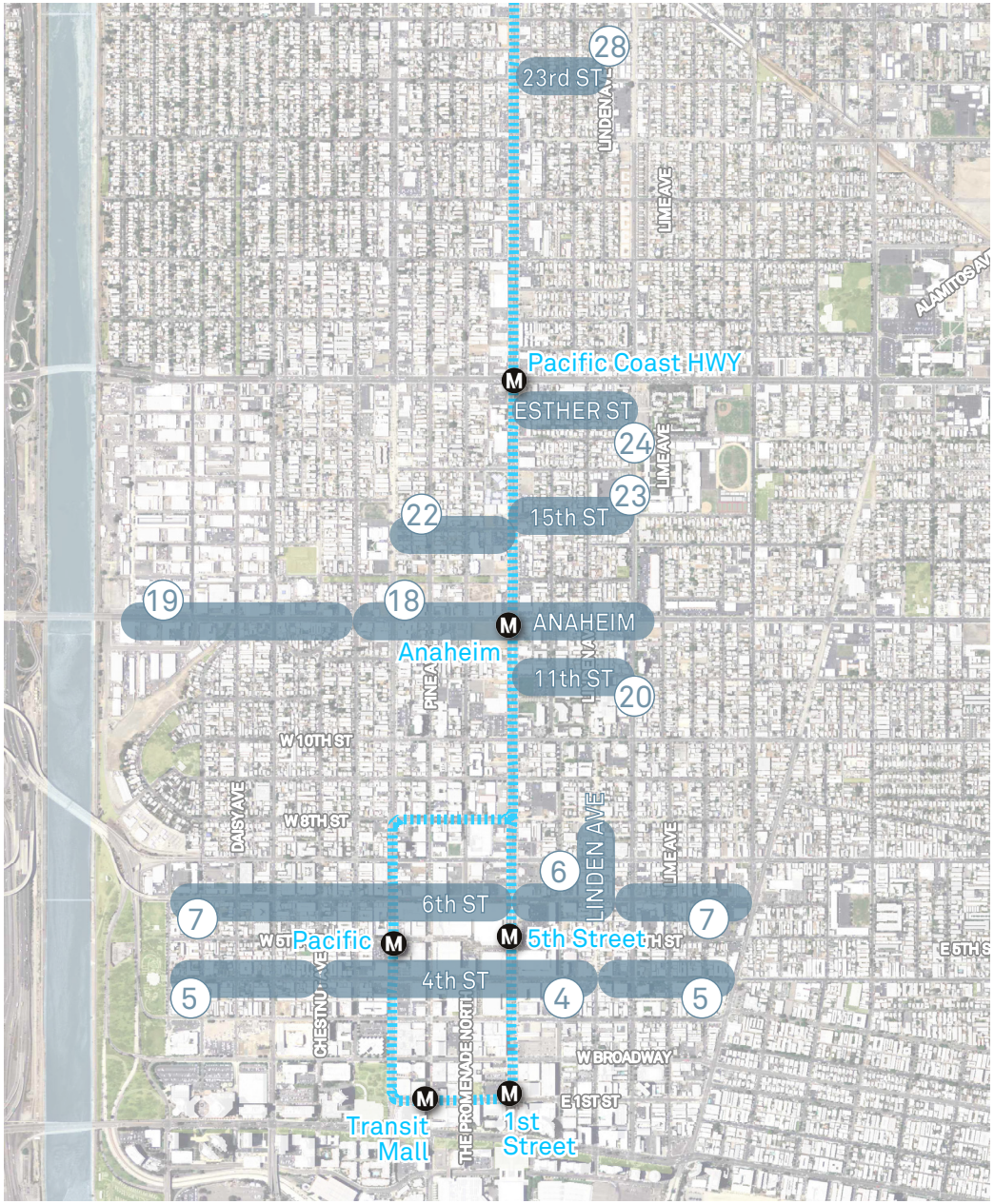
BEFORE

AFTER

Precedents

Figure 5.1 NE Freemont St. Oregon

Location of Stitch Streets



4	4th Street Stitch Street - Phase 1
5	4th Street Stitch Street - Phase 2
6	6th Stitch Street - Phase 1
7	6th Stitch Street - Phase 2
18	Anaheim Stitch Street - Phase 1
19	Anaheim Stitch Street - Phase 2
20	11th Streetlet and Stitch Street
22	15th Street West Streetlet and Stitch Street
23	15th Street East Streetlet and Stitch Street
24	Esther Streetlet and Stitch Street
28	23rd Street Streetlet and Stitch Street

A Curb Extensions

B Street Trees

C Streetscape Furniture

D Pedestrian Lighting

E Traffic Diverters

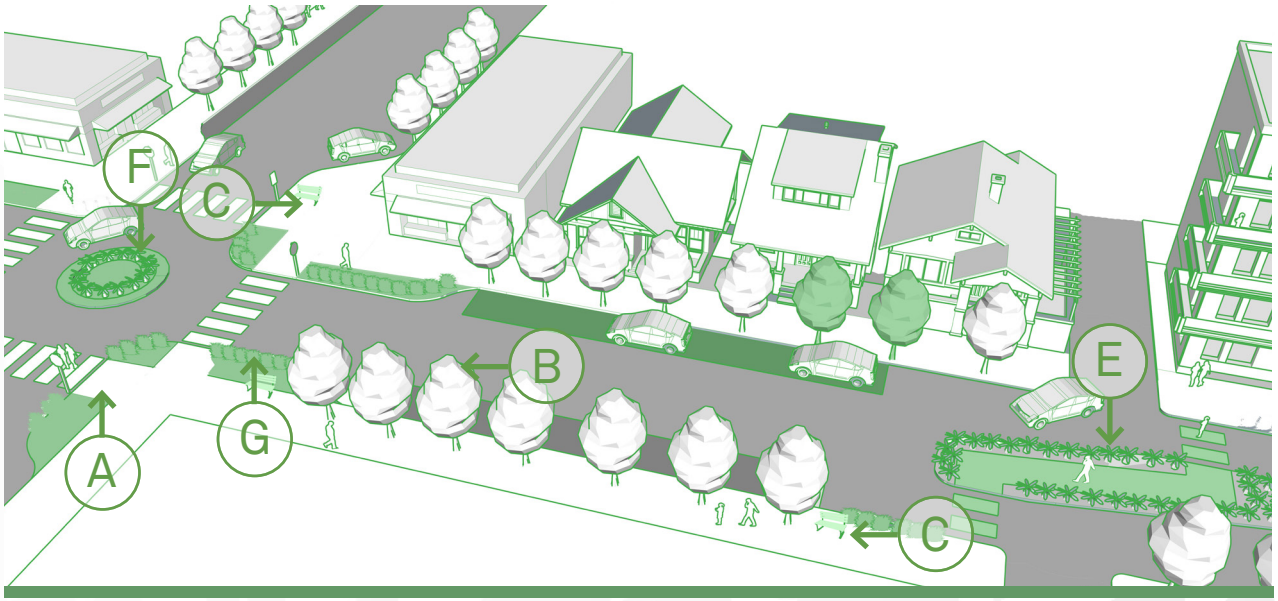
F Traffic Circles

G Bioswale Parkways

5.1.2 Neighborhood Greenways

Neighborhood Greenways are secondary, lower-volume collector streets that link residential areas to the main arterials of the plan area.

Several of these corridors are also classified as “bike boulevards” and encourage the use of bikes or walking over vehicular through traffic. These streets are important connections for neighborhood residents and provide a known “path” to transit and popular destinations. Neighborhood greenways include several toolkit projects that help to calm traffic and encourage more pedestrians to walk to Metro Blue Line stations.



BEFORE

AFTER

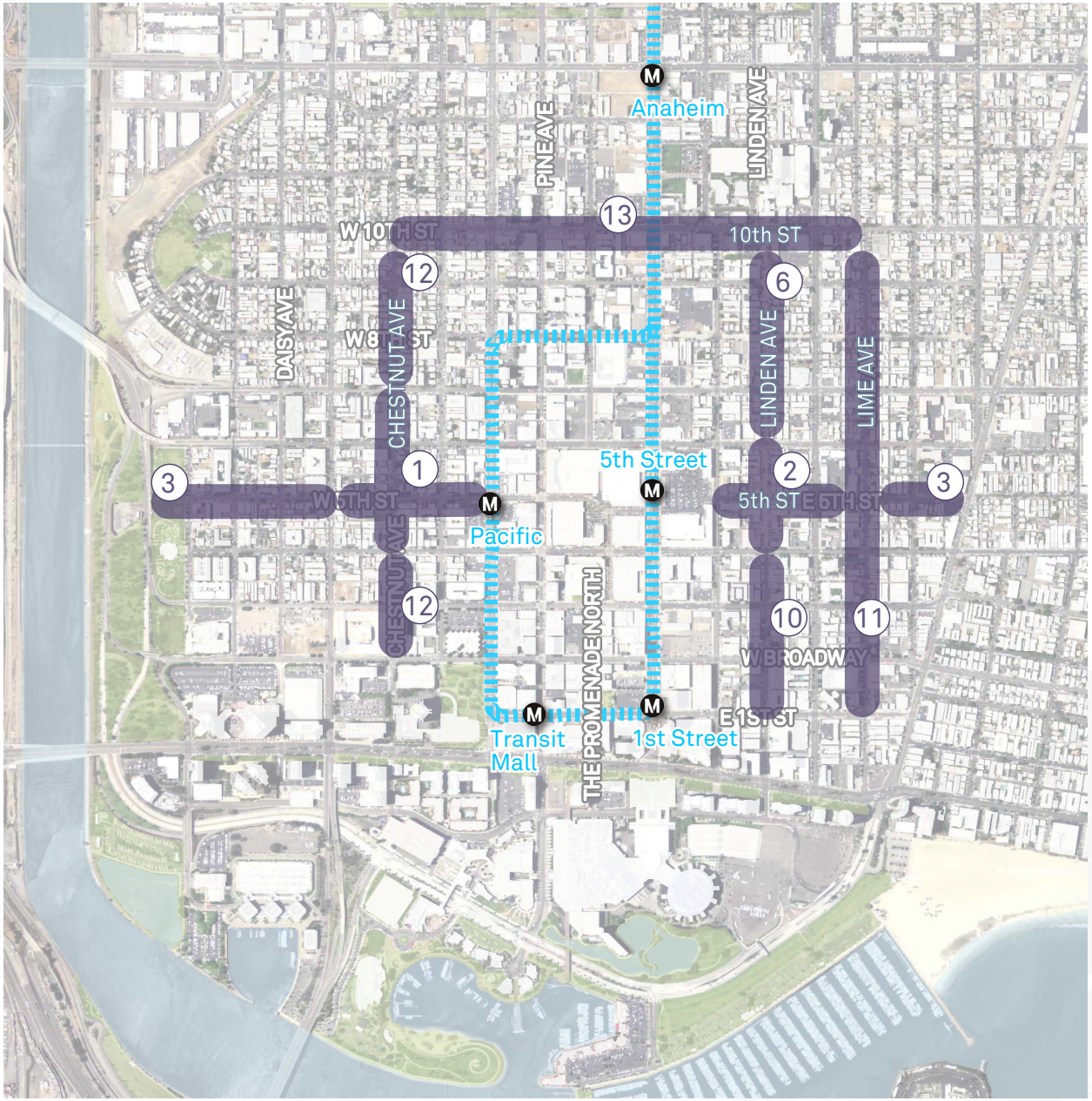
Precedents

Figure 5.2 Norton/Laurel, West Hollywood

Figure 5.3 12th St., Oregon

Figure 5.4 40th St., Minneapolis

Location of Neighborhood Greenways



1	Pacific Station Stitch Street and Neighborhood Greenway
2	5th Street Station Neighborhood Greenway - Phase 1
3	5th Street Neighborhood Greenway - Phase 2
6	6th Stitch and Linden Neighborhood Greenway
10	Linden Neighborhood Greenway - Phase 2
11	Lime Neighborhood Greenway
12	Chestnut Neighborhood Greenway - Phase 2
13	10th Street Neighborhood Greenway

A Permeable Pavers

B Trash Consolidation

C Streetscape Furniture

D Pedestrian Lighting/ Accent Lighting

E Bioswale Planters

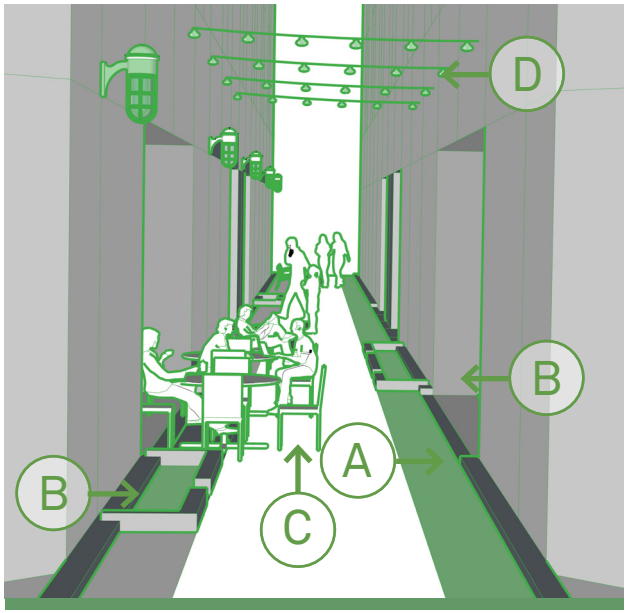
F Storefront/ Restaurant Activation

G Public Art/ Murals

5.1.3 Green Alleys

Green alleys serve as an urban trail that can provide important alternate and accessible routes for pedestrians.

Downtown Long Beach features a number of alleyways that are not wide enough to accommodate delivery trucks. These alleyways, acting as a secondary street grid, are typically less than 20' wide, offering just enough space for pedestrians and small gathering areas. Permeable pavers, catchment basins, bioswales can help to manage stormwater and the alleys can also have a secondary use as gallery space for local artists, supported by a public mural program, through ample lighting, benches and encouraging adjacent property owners to orient restaurants and retail to the alleys. The green alleys can also become lively, human-scaled spaces that offer safe and alternative connections to transit and the blue line stations. Standard alleys can also accommodate one-way vehicles and pedestrian amenities.



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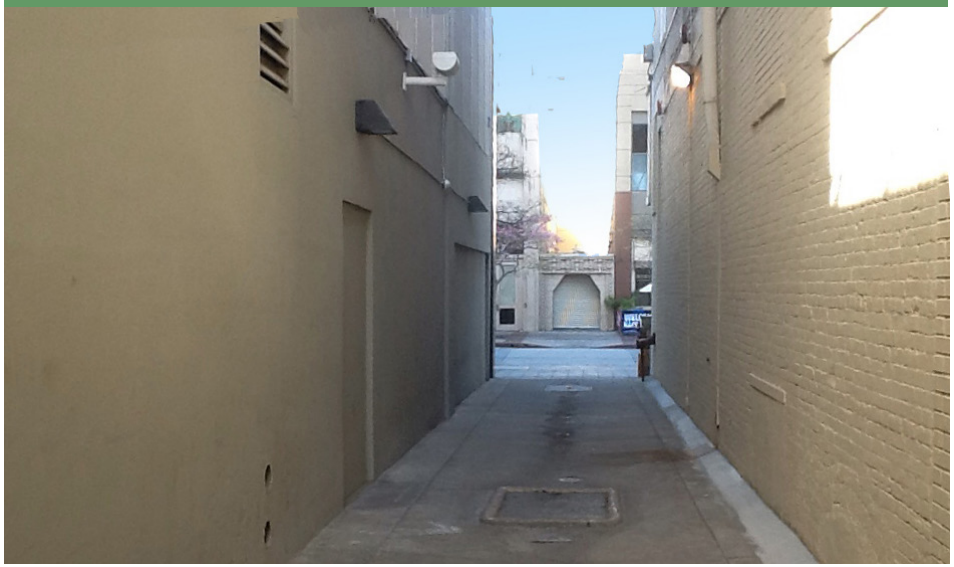

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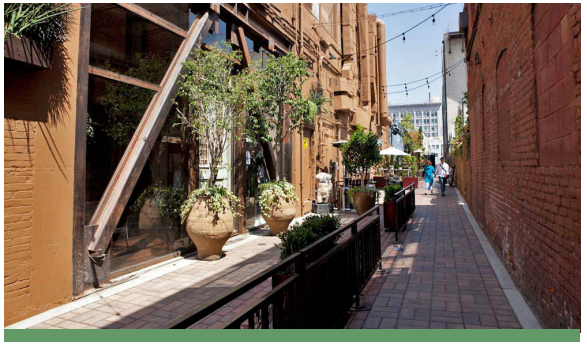


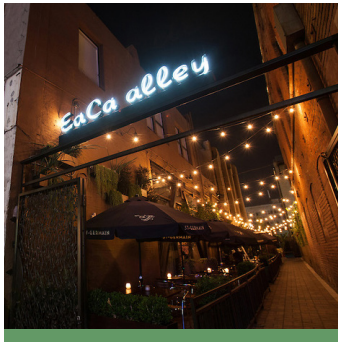


Figure 5.5 EaCa Pedestrian Alley, Hollywood

Figure 5.6 Green Alley, Midtown Detroit

Figure 5.7 Linden Alley, San Francisco

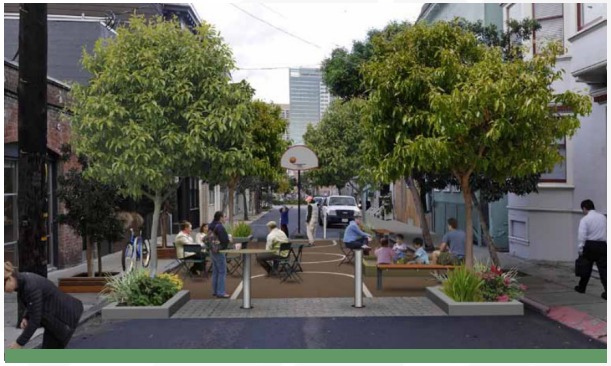
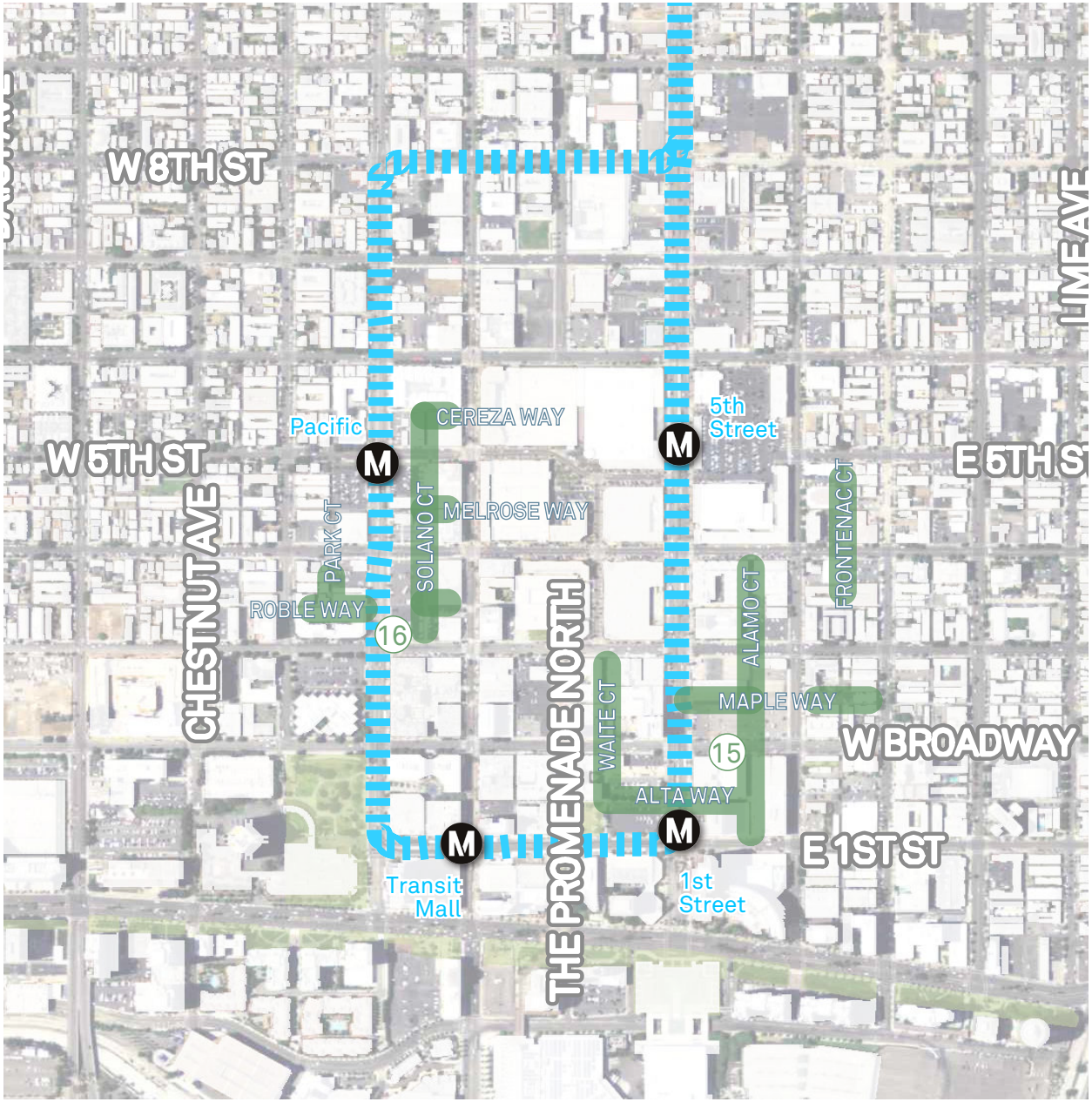


Figure 5.8 Hayes Valley, San Francisco

Location of Green Alleys



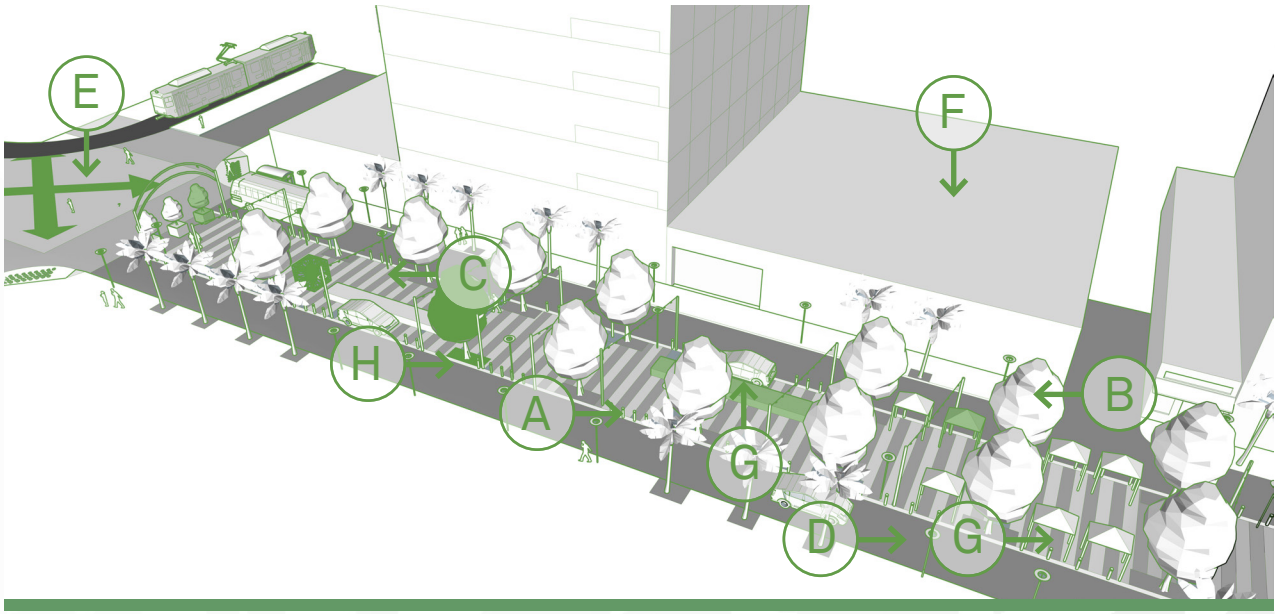
15	1st Street Station Green Alley Network
16	Pacific Station Green Alley Network
17	Green Alley Strategic Improvement Project

- A Pedestrianized “Rambla”
- B Street Trees
- C Streetscape Furniture
- D Pedestrian Lighting
- E Scramble Crosswalk
- F Public Art
- G Temporary micro-businesses
- H Bollards
- I Gallery Paving

5.1.4 Pedestrian Gallery

An exciting new way to experience Long Beach street life, the Pedestrian Gallery will serve as a flexible space that can accommodate events and traffic, all in a protected, shared environment

Just east of the 1st Street Station, walking will take center stage in the Long Beach Pedestrian Gallery. Modeled after the famous Rambla in Barcelona, Spain, a 30’-wide path created exclusively for pedestrians will offer a safe walking environment, places to sit, opportunities for kiosks and public art, while maintaining access for buses and other vehicles. During festivals and other events, the Pedestrian Gallery can be completely pedestrianized, providing a seamless connection between the Blue Line and East Village’s premier community event space.



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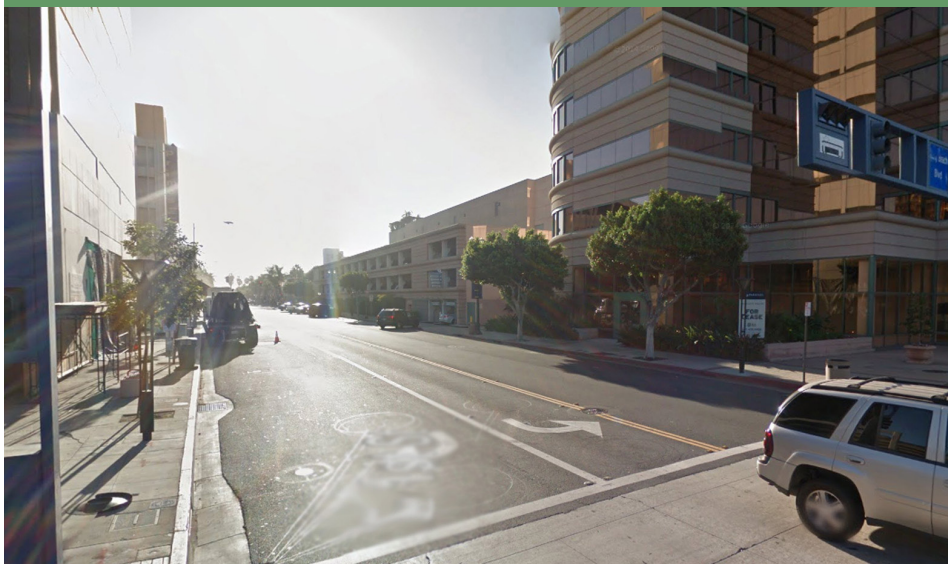


AFTER

Precedents

Figure 5.9 La Rambla, Barcelona, Spain

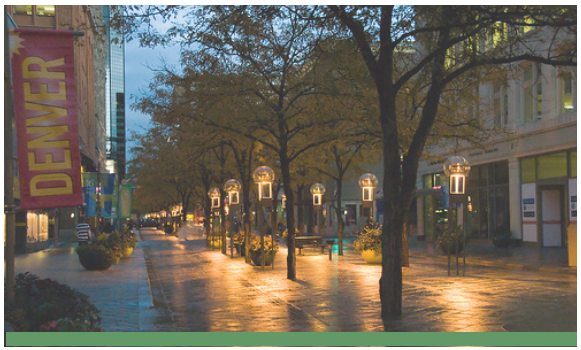


Figure 5.10 16th Street Transit Mall, Denver, CO

Location of Shared Street

8	1st Street Pedestrian Gallery

A Curb Extensions

B Street Trees

C Streetscape Furniture

D Farmers Market/ Temporary Micro-business

E Movable Planters

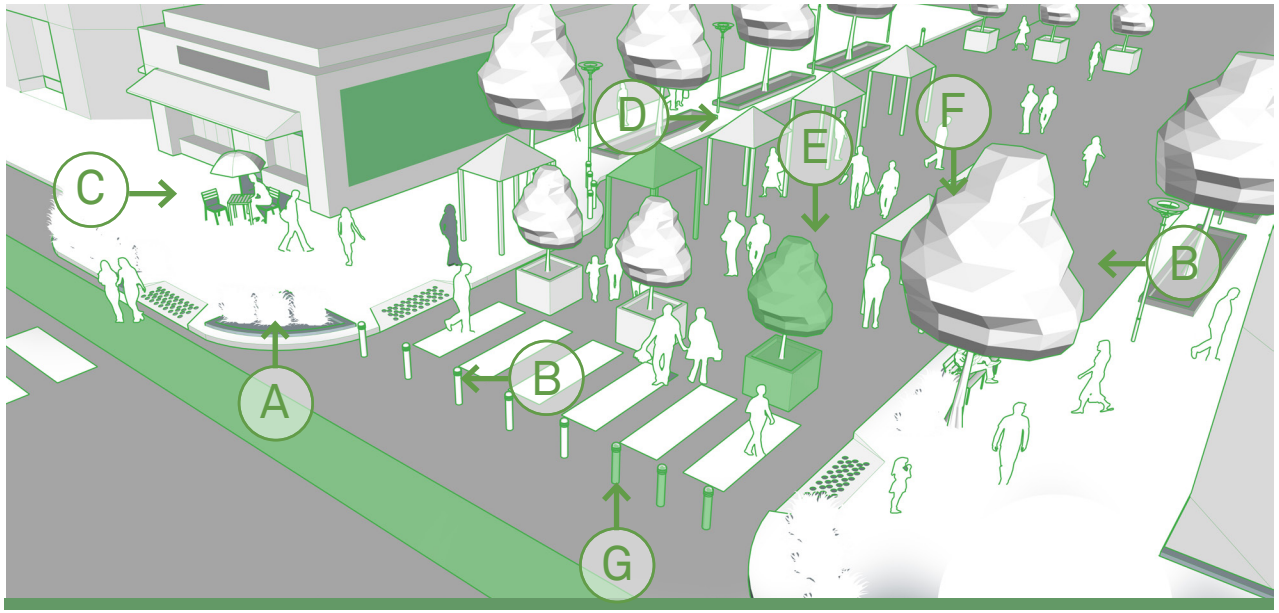
F Public Art Installations

G Pop up Bollards

5.1.5 Streetlets

Typically occurring at mid-block crossings or at T-intersections, Streetlets improve pedestrian connections to major transit corridors and provide shade and resting places for pedestrians.

A re-purposed parking lot or missing link in the street grid can facilitate connections to surrounding amenities and provide intermittent open space access. Streetlets can also host events such as farmers markets, street fairs, and art installations. These Streetlets are intended to be social gathering places, where the community takes ownership of the space and directs the eventual use, design and maintenance of the new space.



BEFORE

AFTER

Precedents

Figure 5.11 Public Events

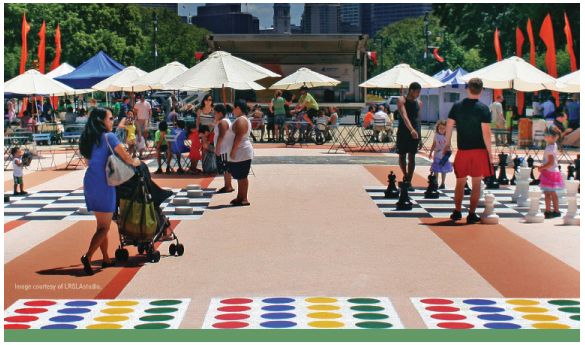


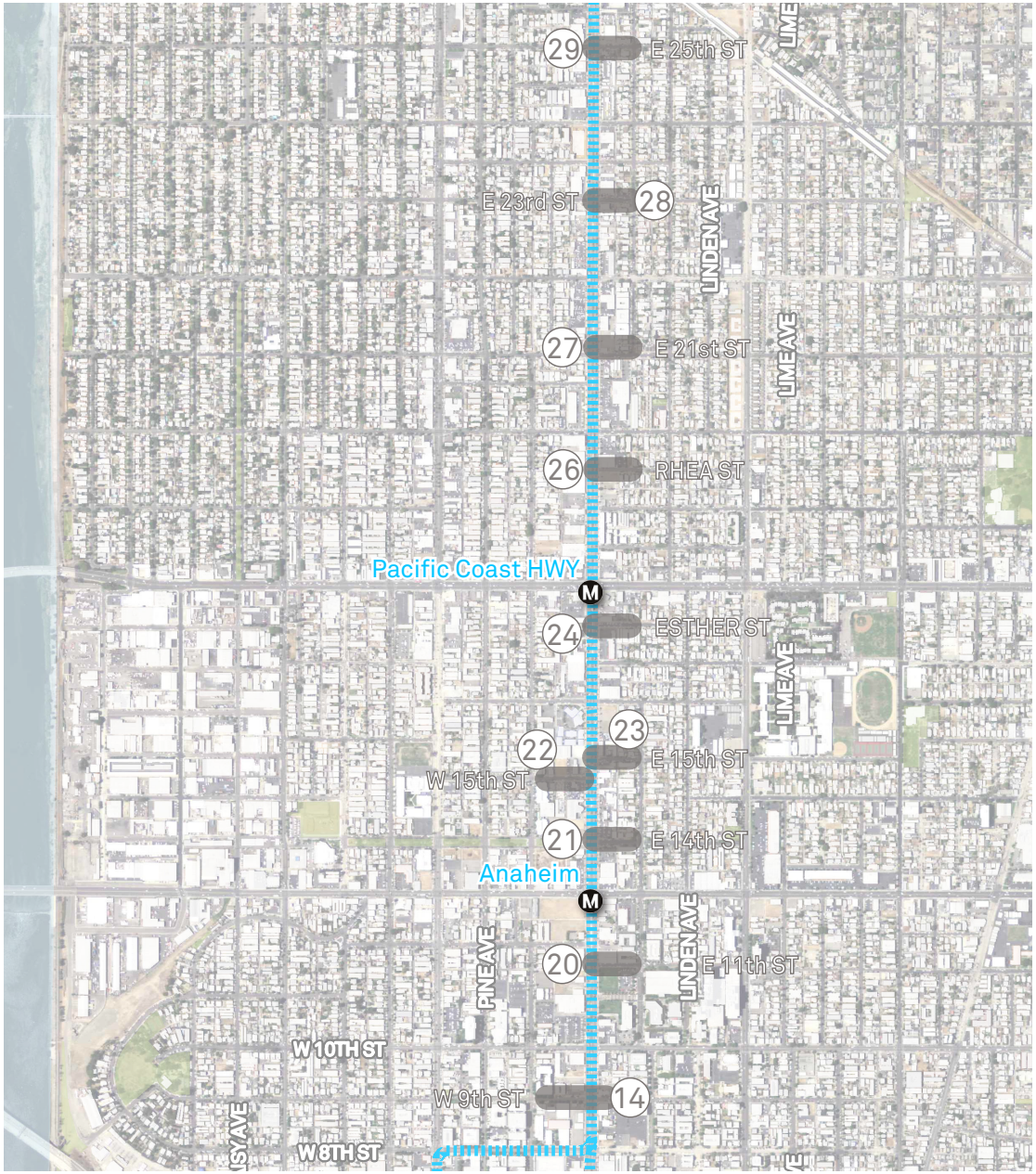
Figure 5.12 Benjamin Franklin Parkway, Philadelphia, PA

Figure 5.13 Pocket Park

Figure 5.14 Interactive events

Figure 5.15 Cultural Trail, Indianapolis, IN

Location of Streetlets



14	9th Street West Streetlet
20	11th Streetlet and Stitch Street
21	14th Street Streetlet
22	15th Street West Streetlet and Stitch Street
23	15th Street East Streetlet and Stitch Street
24	Esther Streetlet and Stitch Street
26	Rhea Streetlet
27	21st Street Streetlet
28	23rd Street Streetlet and Stitch Street
29	25th Street Streetlet

5.1.6 Del Mar Greenbelt

The Greenbelt will serve to provide neighborhoods near the Wardlow and Willow Stations with a safe, direct pedestrian connection

With an abundance of underutilized Metro right of way, there is an opportunity to build a continuous link between the Wardlow and Willow stations. Part of this link will be shared with Del Mar Avenue, a section which is slated to become a bike boulevard. Greenbelts have been successfully implemented in other parts of the country, including Minneapolis, where the Midtown Greenway draws thousands of commuters on a daily basis. The Midtown Greenway, connected to Metro Transit's Blue Line in Minneapolis, has catalyzed the development of thousands of housing units in the Uptown neighborhood, and sustains a vibrant network of fix-it shops and bicycle-oriented retail.

BEFORE

AFTER

Precedents

Figure 5.16 Metro Orange Line, Los Angeles, CA

Figure 5.17 Exposition Corridor, Los Angeles, CA

Figure 5.18 Midtown Greenway, Minneapolis, MN

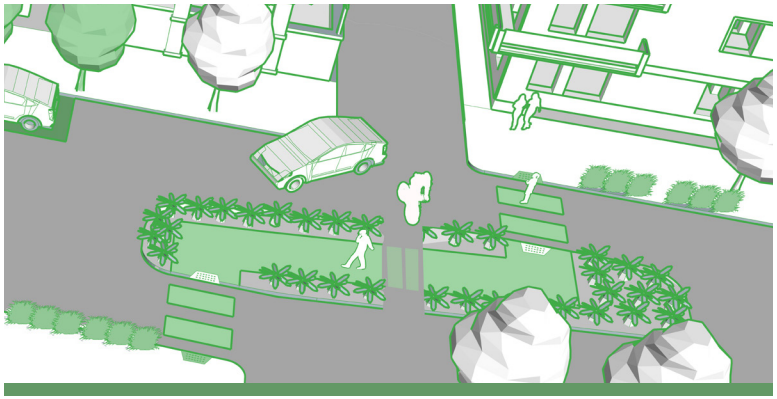
Location of Greenbelt

33	Del Mar Greenbelt

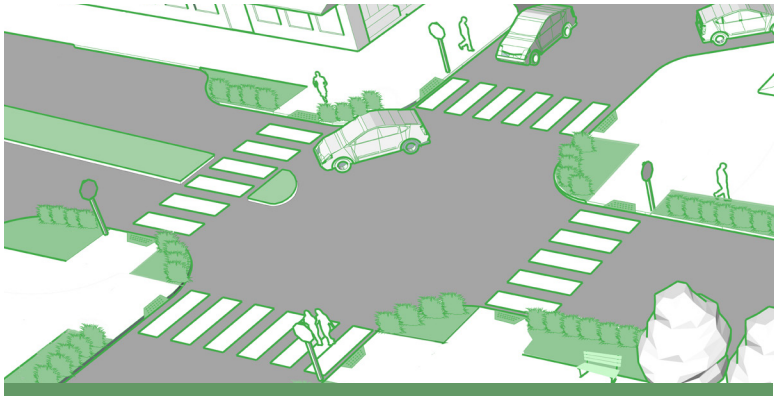
5.1.7 Transit Access Projects

These smaller, more strategic projects will make a significant impact on the safety and livability of neighborhoods near the Metro Blue Line.

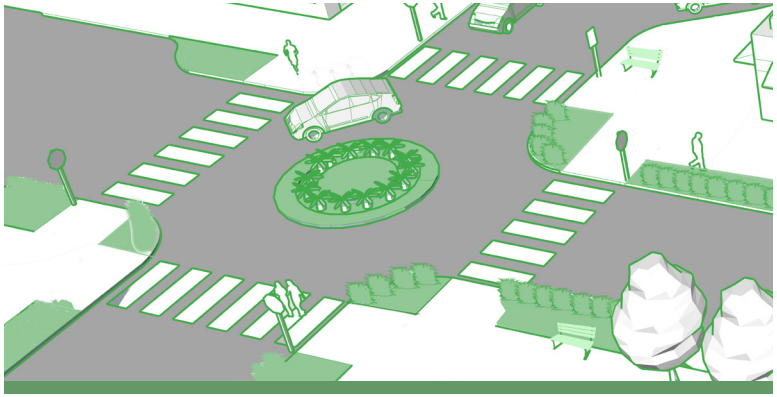
Transit access projects utilize curb extensions, mid-block crosswalks, bollards, and other toolkit projects to calm traffic and create safer connections to the Blue Line.



Diverter



Pedestrian Refuge Island



Traffic Circle

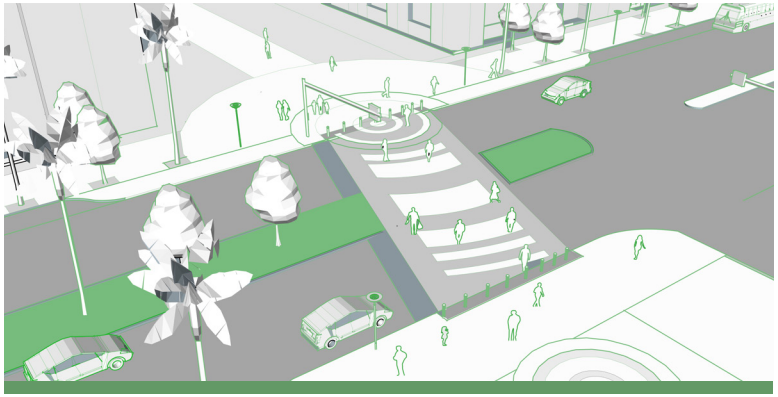
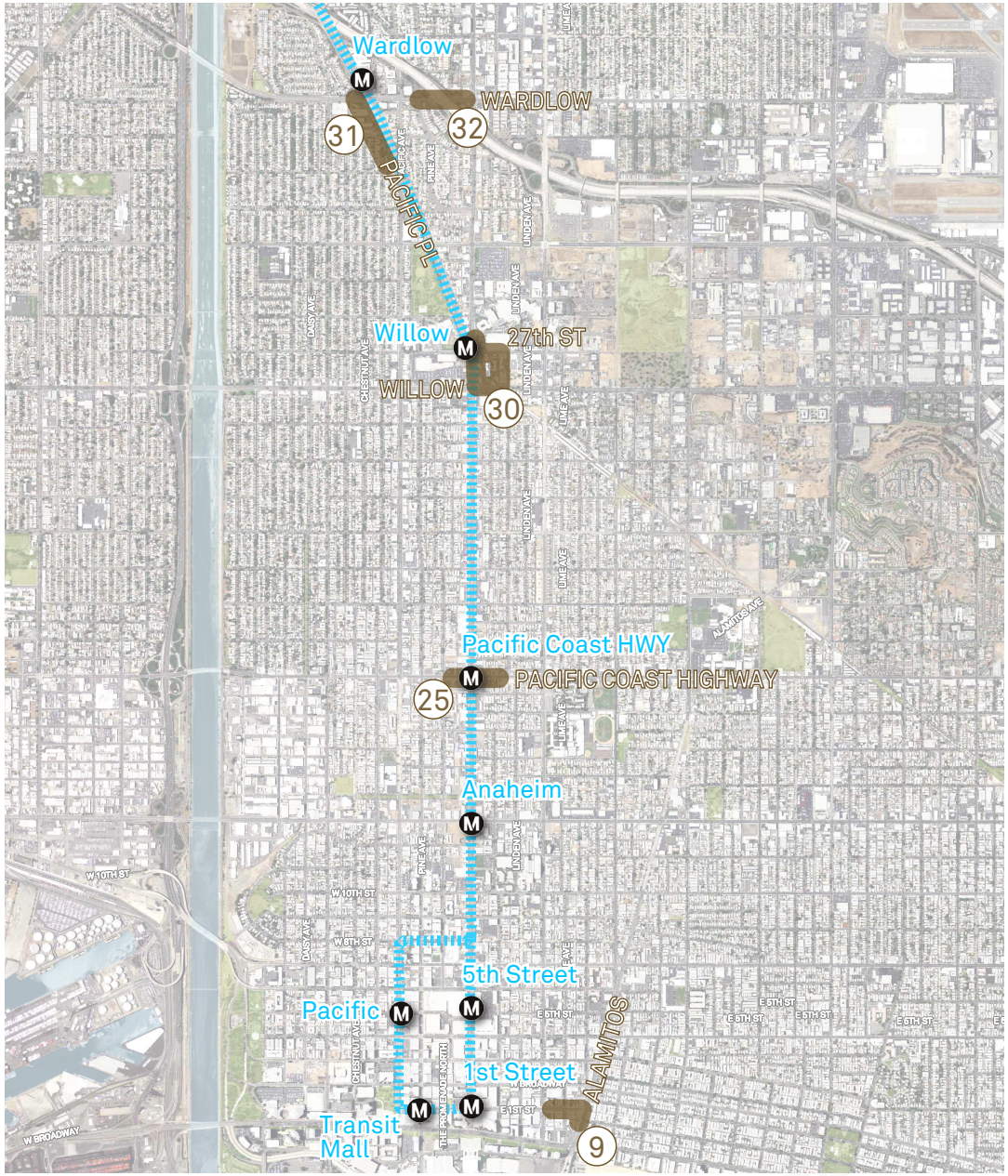


Table Crosswalk

Location of Transit Access Projects



9	Metro Beach Access Gap Closure
25	PCH Station Transit Access Project
30	Willow Station Transit Access Project
31	Wardlow Pacific Place Transit Access Project
32	Pedestrian Crossing Improvement at NB 405 On-ramp

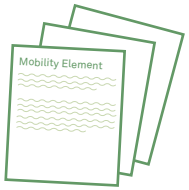
5.2 Selection Process

Priority projects were selected through rigorous analysis, community and stakeholder engagement, and staff involvement

The Long Beach Downtown and TOD Pedestrian Master Plan (PMP) supports the following vision: accessible, safe, and livable neighborhoods near the Metro Blue Line.

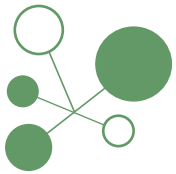
To implement this vision, the PMP identifies public realm investments that the City of Long Beach can make over the next 15 years, supported by cost estimates, design guidelines, and an implementation plan with policies, programs, and funding strategies. These projects have been grouped into high priority (1-5 years), medium priority (6-10 years) and low priority (11-20 years). The team prioritized projects using a comprehensive selection process, outlined at right. Steps 1, 2, and 4 are covered in other chapters, while the results of the Decision Matrix exercise are presented on the following pages.

Figure 5.19: Priority Project Selection Process



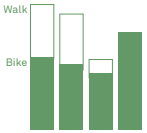
Step 1:
Policy and Plan Analysis
Refer to Chapter 2 of PMP

An inventory of infrastructure projects, programs, and policies that have been identified by previous plans



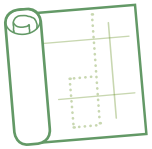
Step 2:
Community & Stakeholder Involvement
Refer to Chapter 3 of PMP

Review of priority project types by the community to understand issues and priorities for future infrastructure projects



Step 3:
Decision Matrix

An analysis of current conditions in the built environment, demographics, collisions, proximity to the Blue Line, and other factors that influence the selection of priority projects



Step 4:
Staff Review

Refer to Chapter 3 of PMP

Review by City of Long Beach staff to determine feasibility

5.2.1: Step 3: Decision Matrix

Comprehensive List of Priority Projects

The priority project types emerged from discussions with the Community, staff, and review of existing conditions and previous plans and policies. Some documents, such as the Metro Blue Line Bicycle and Pedestrian Access Improvement Plan, identified specific improvements at intersections and along corridors in the study area. The project team also reviewed the City's Bicycle Master Plan, Downtown Plan, and recently-adopted Mobility Element, which include design guidelines and profiles of long-range capital improvement projects designed to improve the pedestrian realm.

Once the priority project types were developed, the project team created a list of 33 specific priority projects, using the following selection criteria:

- **A** An equitable distribution of projects throughout the Wardlow/Willow, Midtown, and Downtown planning areas
- **B** Comprehensive, high-impact projects, preferably with a minimum construction cost of $2 million
- **C** Associated "Lighter, quicker, cheaper" projects that serve to demonstrate the value of priority projects in the short-term

The list of all 33 priority projects, organized by type, is presented at right.

Priority Projects

15	1st Street Station Green Alley Network
16	Pacific Station Green Alley Network
17	Green Alley Strategic Improvement Project
33	Del Mar Greenbelt
1	Pacific Station Stitch Street and Neighborhood Greenway
2	5th Street Station Neighborhood Greenway - Phase 1
3	5th Street Neighborhood Greenway - Phase 2
6	6th Stitch and Linden Neighborhood Greenway
10	Linden Neighborhood Greenway - Phase 2
11	Lime Neighborhood Greenway
12	Chestnut Neighborhood Greenway - Phase 2
13	10th Street Neighborhood Greenway
8	1st Street Pedestrian Gallery
4	4th Street Stitch Street - Phase 1
5	4th Street Stitch Street - Phase 2
7	6th Stitch Street - Phase 2
18	Anaheim Stitch Street - Phase 1
19	Anaheim Stitch Street - Phase 2
20	11th Streetlet and Stitch Street
22	15th Street West Streetlet and Stitch Street
23	15th Street East Streetlet and Stitch Street
24	Esther Streetlet and Stitch Street
28	23rd Street Streetlet and Stitch Street
14	9th Street West Streetlet
21	14th Street Streetlet
26	Rhea Streetlet
27	21st Street Streetlet
29	25th Street Streetlet
9	Metro Beach Access Gap Closure
25	PCH Station Transit Access Project
30	Willow Station Transit Access Project
31	Wardlow Road & Pacific Place Transit Access Project
32	Pedestrian Crossing Improvement at NB 405 On-ramp

Decision Matrix Criteria

A healthy pedestrian network is vital to the city of Long Beach and with limited resources available, it is crucial to propose pedestrian projects that have public support and supporting data to back up the decision process.

Informed by the Existing Conditions Analysis and PMP goals and objectives, the team developed a list of 11 factors to use in the decision matrix. For each factor, projects were assigned up to five points, with 55 total points possible. The decision matrix factors, along with the source of supporting data, point values, and applicable PMP goals is presented in the table at right.

Decision Matrix Factors

	Evaluation Criteria	Existing Conditions Supporting Factors	Point Values	PMP Goals Met
A	**Bicycle/Pedestrian Collisions**	Bicycle/Pedestrian Collisions Analysis	**High (5); Medium (3); Low (1)**	**Public Health & Safety**
B	**Linear Distance to Station**	Walkshed Analysis	1/4 mi. (5); 1/2 mi. (3); >1/2 mi. (1)	Legibility, Equity, Alternative Transportation
C	**Elements Proposed in Previous Plan(s)**	Policy Analysis	Yes (3); No (1)	
D	**Cost per Linear Foot**	Cost Estimates	4th quartile (1); 3rd Quartile (2); 1st/2nd Quartile (5)	Economic Development
E	**High Jobs/Residential Density**	Job Density, Residential Density	High (5); Medium (3); Low (1)	Equity
F	**Serves Transit-Dependent Population**	Senior Population (>65), Youth Population (<18)	High (5); Medium (3); Low (1)	Equity, Public Health & Safety, Alternative Transportation
G	**Leverages Development Opportunities**	Vacant Parcels, Parking Lots, Publicly-Owned Properties, Recent Redevelopment Projects in Vicinity, City-identified Redevelopment Area	High (5); Medium (3); Low (1)	Economic Development, Placemaking
H	**Removes Major Barriers to Walking**	Opportunities & Constraints Analysis, Sidewalk Inventory	Significant (5); Moderate (3); Few 9	Legibility, Equity
I	**Enhances Access to Key Destinations**	Pedestrian Activity Generators	2 or more (5); 1 (3); 0 (1)	Legibility
J	**Ridership**	Modal Split, Metro and LBT Ridership Data	>50% walk (5); 25%-5-% walk (3); <25% walk (1)	
K	**Current Condition of Walking Environment**	Opportunities & Constraints Analysis	Poor (5); Moderate (3) Good (1)	

5.2.2: Step 2: Decision Matrix Results

Project Number and Name		Bike/Pedestrian Collisions	Linear Distance to Station	Some/All Elements Proposed in Plans	Proximity to Schools	High Job/Residential Density	Serves Transit-Dependent Population	Leverages Development Opportunities	Removes Major Barriers to Walking	Enhances Access to Key Destinations	Modal Split at Nearest Blue Line Station	Current Condition of Walking Environment	**Total Points (55 possible)**	Rank (out of all projects)
2	5th Street Station Neighborhood Greenway - Phase 1	3	5	3	5	5	5	5	5	4	5	3	48	1
1	Pacific Station Neighborhood Greenway	5	5	3	3	5	4	5	2	5	3	3	43	2
6	6th Street Stitch Street/ Linden Ave Neighborhood Greenway	3	5	3	5	5	3	5	2	4	5	3	43	3
34	Long Beach Boulevard Character Change	3	5	5	3	5	5	5	3	5	3	1	43	4
33	Del Mar Greenbelt	3	5	1	3	4	5	3	5	4	5	4	42	5
4	4th Street Stitch Street - Phase 1	3	5	3	3	4	3	5	2	5	5	3	41	6
18	Anaheim Stitch Street - Phase 1	5	5	3	5	3	4	3	2	3	3	5	41	7
8	1st Street Pedestrian Gallery	2	5	3	1	5	3	5	3	5	5	3	40	8
20	11th Street West Streetlet and Stitch Street	2	5	3	3	4	5	3	4	5	3	3	40	9
31	Wardlow Road and Pacific Place Transit Access Project	2	5	3	3	3	5	3	5	3	3	5	40	10
15	1st Street Station Green Alley Network	2	5	1	3	4	3	5	3	5	5	3	39	11
16	Pacific Station Green Alley Network	2	5	1	3	4	3	5	3	5	5	3	39	12
24	Esther Streetlet and Stitch Street	4	5	3	5	3	4	4	3	2	3	3	39	13
9	Metro Beach Access Gap Closure	2	5	3	1	4	3	4	2	5	5	4	38	14
17	Green Alley Strategic Improvement Project	2	5	1	3	4	2	5	3	5	5	3	38	15
30	Willow Station Transit Access Project	3	5	3	3	4	2	3	4	5	3	3	38	16
10	Linden Ave Neighborhood Greenway - Phase 2	3	5	3	3	3	4	3	2	3	5	3	37	17
12	Chestnut Avenue Neighborhood Greenway - Phase 2	3	3	3	3	4	4	3	2	3	5	3	36	18

5.2.2: Step 2: Decision Matrix Results

Continued

		Bike/Pedestrian Collisions	Linear Distance to Station	Some/All Elements Proposed in Plans	Proximity to Schools	High Job/Residential Density	Serves Transit-Dependent Population	Leverages Development Opportunities	Removes Major Barriers to Walking	Enhances Access to Key Destinations	Modal Split at Nearest Blue Line Station	Current Condition of Walking Environment	**Total Points (55 possible)**	Rank (out of all projects)
7	6th Street Stitch Street - Phase 2	2	3	3	5	3	4	3	2	4	3	3	35	19
13	10th Street Bike Boulevard Pedestrian Improvements	4	3	3	5	3	3	3	2	3	3	3	35	20
19	Anaheim Street Stitch Street - Phase 2	5	3	3	5	2	2	3	2	2	3	5	35	21
21	14th Street East Streetlet	3	5	3	5	3	2	3	3	2	3	3	35	22
25	PCH Station Transit Access Project	5	5	3	1	2	4	2	3	2	3	5	35	23
22	15th Street West Streetlet and Stitch Street	3	5	3	5	2	2	3	3	2	3	3	34	24
23	15th Street East Streetlet and Stitch Street	3	5	3	5	2	2	3	3	2	3	3	34	25
5	4th Street Stitch Street - Phase 2	3	3	3	3	2	4	3	2	4	3	3	33	26
11	Lime Avenue Neighborhood Greenway	3	1	3	5	4	4	3	2	2	3	3	33	27
26	Rhea Streetlet	3	5	3	3	2	3	3	3	2	3	3	33	28
3	5th Street Neighborhood Greenway - Phase 2	2	3	3	5	1	4	3	2	3	3	3	32	29
32	Pedestrian Crossing Improvement at NB 405 on-ramp	2	3	3	1	2	5	2	3	2	5	4	32	30
14	9th Street West Streetlet	3	3	3	3	3	2	3	2	3	3	3	31	31
29	25th Street Streetlet	2	3	3	3	4	2	3	3	2	3	3	31	32
28	23rd Street Streetlet and Stitch Street	2	1	3	3	3	2	3	3	2	3	3	28	33
27	21st Street Streetlet	2	3	3	1	2	2	3	3	2	3	3	27	34

5.3 Profile of Recommended Projects

A draft list of projects was developed by analyzing community input and comparing them with street classifications, sidewalk site conditions, and the pedestrian/vehicular collision data. The priority project designs and the specific toolkit item descriptions give a conceptual idea of the types of pedestrian improvements to be made.

The following section categorizes the elements from the previously described project types and identifies specific corridors for prioritization. It is the intent that these priority projects as presented will create increased access to stations along the Metro Blue Line and significantly enhance the pedestrian experience throughout the City. The study area has been separated into three distinct parts that include the Downtown, Midtown, and Wardlow/Willow districts. Within these districts, the final project list was divided into three prioritization types. Type One (green) represents the highest priority of projects to be completed, Type Two (yellow) those of medium priority, and Type Three (red) the projects with the least priority for completion at this time.

Figure 5.20

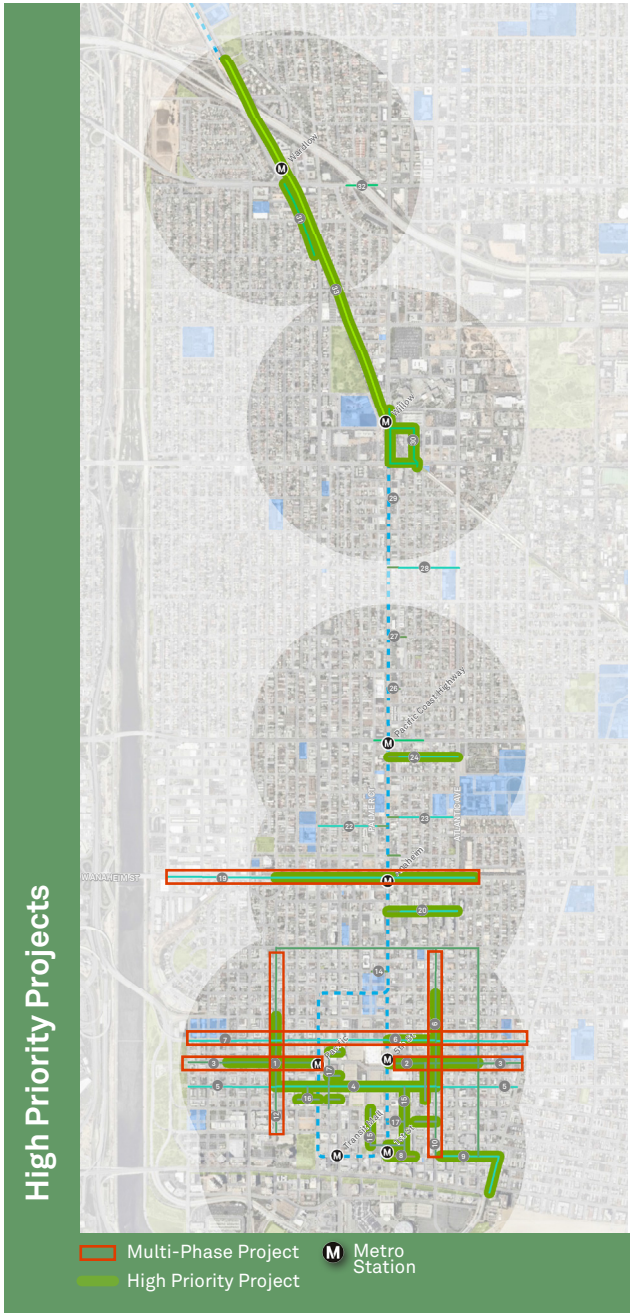
Discussing opportunities during a City meeting on potential Priority Projects.

5.3.1 High Priority Projects

The goal of the PMP is to prioritize a list of pedestrian improvement projects that can be implemented over the next 15-20 years. To that end, larger, more comprehensive streetscape projects were divided into smaller projects for purposes of prioritization. This approach allows smaller projects, such as streetlets and green alleys, to be evaluated alongside more expensive streetscape projects that, if implemented as part of one phase, could take several years to plan, design, and construct. These high priority projects represent last-mile connections to the Metro Blue Line that will have the greatest impact on ridership, safety, and livability.

1	Pacific Station Neighborhood Greenway
2	5th Street Station Neighborhood Greenway - Phase 1
4	4th Street Stitch Street - Phase 1
6	6th Street Stitch Street/ Linden Ave Neighborhood Greenway
8	1st Street Pedestrian Gallery
9	Metro Beach Access Gap Closure
15	1st Street Station Green Alley Network
16	Pacific Station Green Alley Network
18	Anaheim Street Stitch Street - Phase 1
20	11th Street West Streetlet and Stitch Street
24	Esther Streetlet and Stitch Street
30	Willow Station Transit Access Project
31	Wardlow Road and Pacific Place Transit Access Project
33	Del Mar Greenbelt

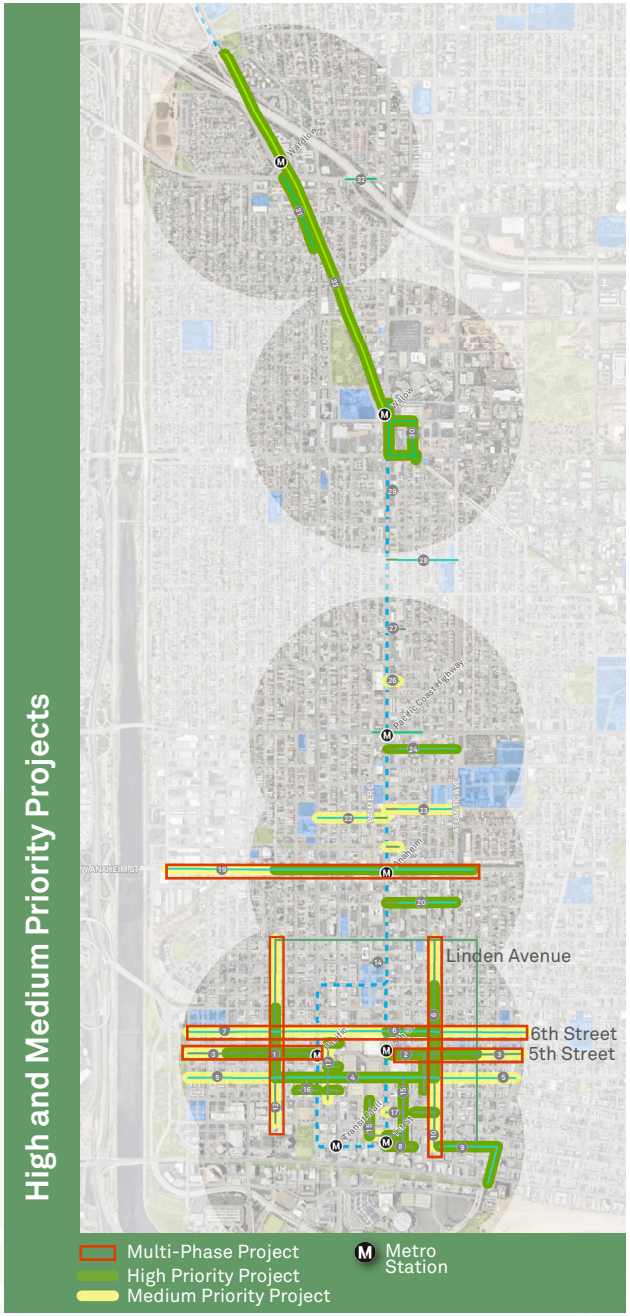
Five of the fourteen high priority projects presented here represent initial segments of projects that will be implemented over two phases. These include projects 1, 2, 4, 6, and 18, outlined in red in the table at right. The corridors include 5th Street West and Chestnut Avenue (Project 1), 5th Street East and Linden Avenue (Project 2), 6th Street (Project 6), 4th Street (Project 4), and Anaheim Street (Project 18). While only the high priority segments will be implemented in the short-term, the full extent of each corridor, including the high and medium-term segments, should be planned and designed at the same time. Construction of medium-priority projects can take place as part of a second phase. Gruen Associates has developed conceptual designs for the high and medium-priority segments of these corridors. However, cost estimates were only prepared for high priority projects.



Pairing of Stitch Streets and Neighborhood Greenways

Projects 1, 2, and 6 include treatments for more than one corridor. Project 1 proposes a neighborhood greenway on West 5th Street between Pacific and Chestnut Avenues, and another neighborhood greenway between West 5th Street and 7th Street. Projects 2 and 6th also span multiple corridors, and propose stitch street treatments on East 5th Street and East 6th Street between Long Beach Boulevard and Linden Avenue. Initial phases of the Linden Avenue neighborhood greenway are also included in these projects. While divided into three separate projects, the planning and design of 5th and 6th Streets and Linden Avenue should be done concurrently. The construction timelines for projects 2 and 6 should also be closely coordinated.

The following pages include descriptions, conceptual plans, and cost estimates for the 14 high priority projects. Medium and low priority projects are presented in the next two sections.



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1 Pacific Station Neighborhood Greenway

Serving as a pedestrian-friendly, low traffic volume alternative to major arterials, this project provides a safe connection for pedestrians traveling to Pacific Station from residential neighborhoods west of Pacific Avenue. The project serves as a catalyst for the reconstruction of 5th Street West, with an initial segment between Pacific and Daisy. A future phase (Project #3) will connect Pacific Station to Cesar Chavez Park and the Los Angeles River. A bike boulevard is currently planned for Daisy Avenue, which will be a model for other proposed neighborhood greenways including Chestnut, Linden, and Lime. An initial segment of the Chestnut neighborhood greenway, between 4th and 7th Streets, is included in this project. Overall, this project will feature pedestrian-friendly treatments typical of neighborhood greenways, such as curb extensions, traffic-calming chicanes, continental crosswalks, canopy trees, and traffic circles. In the Long Beach Bicycle Master Plan, both 5th Street and Chestnut Avenue are proposed to become bike boulevards. These corridors should receive typical bike boulevard treatments such as sharrows and wayfinding signage, and should follow specifications as per City standards.

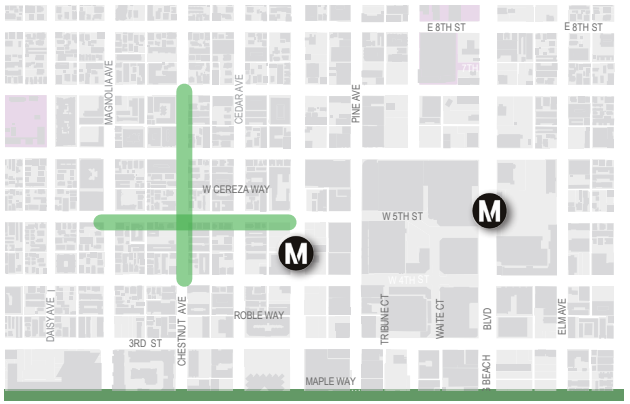


Figure 5.21 Key Map

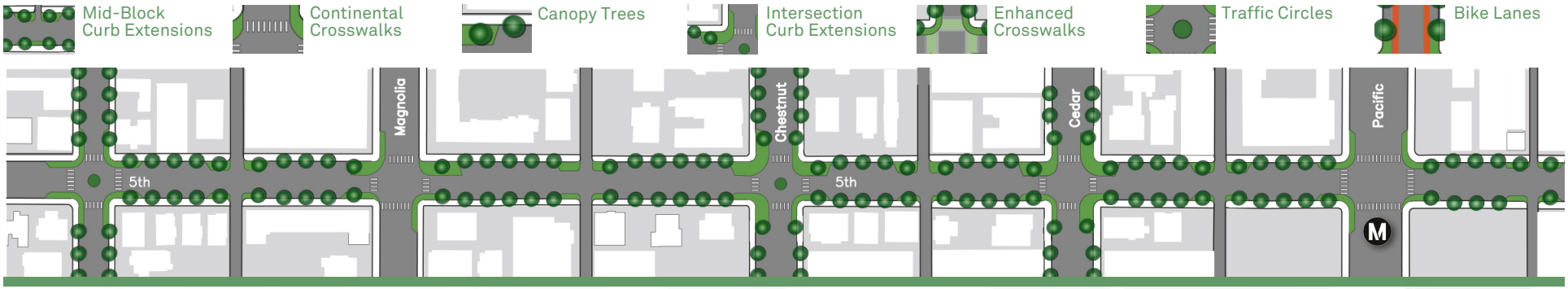


Figure 5.22 SEGMENT 1 - 5th Street- Daisy Avenue to Pacific Avenue

N

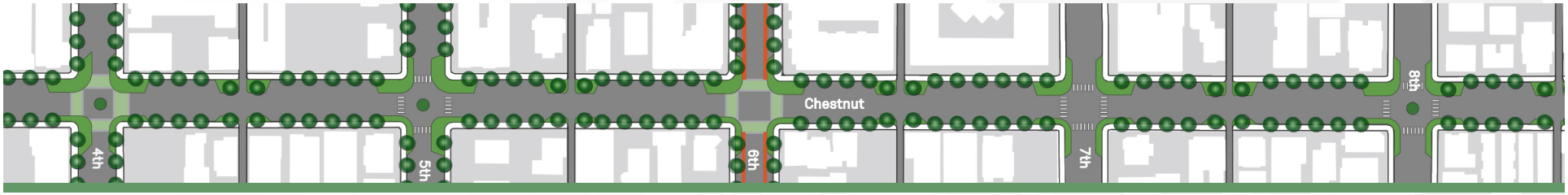


Figure 5.23 SEGMENT 2 - Chestnut Avenue- 4th Street to 7th Street

N

1 Pacific Station Neighborhood Greenway

Cost Estimate

$7.86 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$1,244,050
Site Improvements	$2,629,500
Striping, Marking, Signals	$121,600
Drainage Improvements	$825,500
Wayfinding & Public Art	$25,000
Landscaping	$449,720
Irrigation	$100,920
Electrical & Lighting	$425,000
Site Furnishings	$82,000
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,803,940

Typical Cross Section

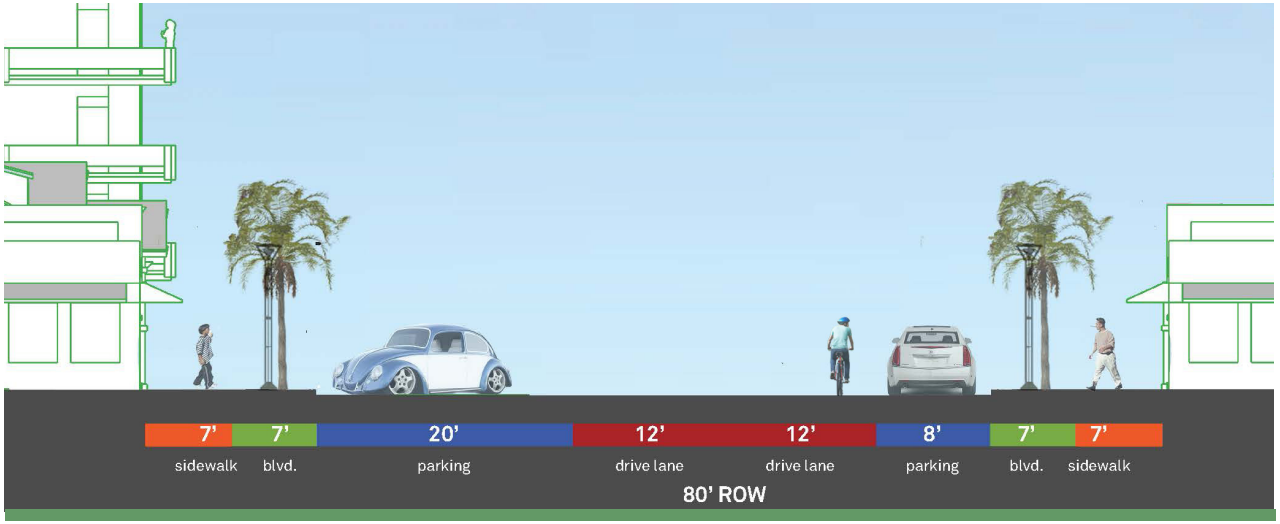


Figure 5.24 5th Street West and Chestnut Avenue

2 5th Street Station Neighborhood Greenway

This project largely mirrors the Pacific Station Neighborhood Greenway. The first segment, along 5th Street East between Elm and Lime, provides an enhanced connection from 5th Street Station to proposed bicycle boulevards at Chestnut and Lime. A future project, not included in this list, could involve the creation of a pedestrian path through what is currently a surface parking lot, in order to directly connect residential areas with the station platform. This project is not included as part of the PMP. Project #3, a future medium-priority project, will complete the 5th Street East neighborhood greenway between Lime and Alamitos.

A second segment of Project #2 includes part of the Linden Neighborhood Greenway between 4th and 6th Streets. Together with Project #6, another high-priority project, an initial stretch of the Linden Greenway will be completed between 4th and 9th streets. Project #10, a medium priority project, will extend the Linden Greenway to 10th and 1st streets. Special features in Project #2 include traffic circles along 5th Street at Linden and Lime Avenues. Unified wayfinding signage should be included to direct pedestrians between the Metro station and points of interest.

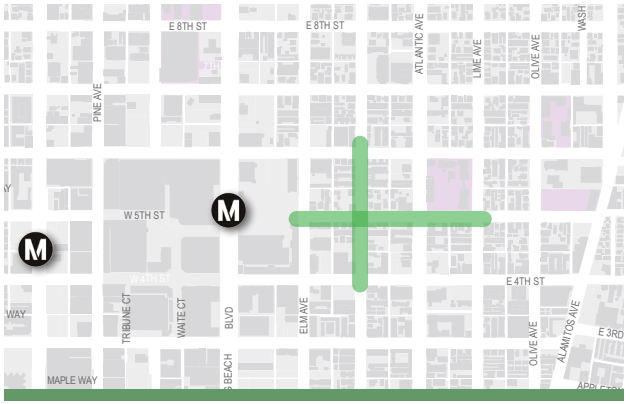


Figure 5.25 Key Map

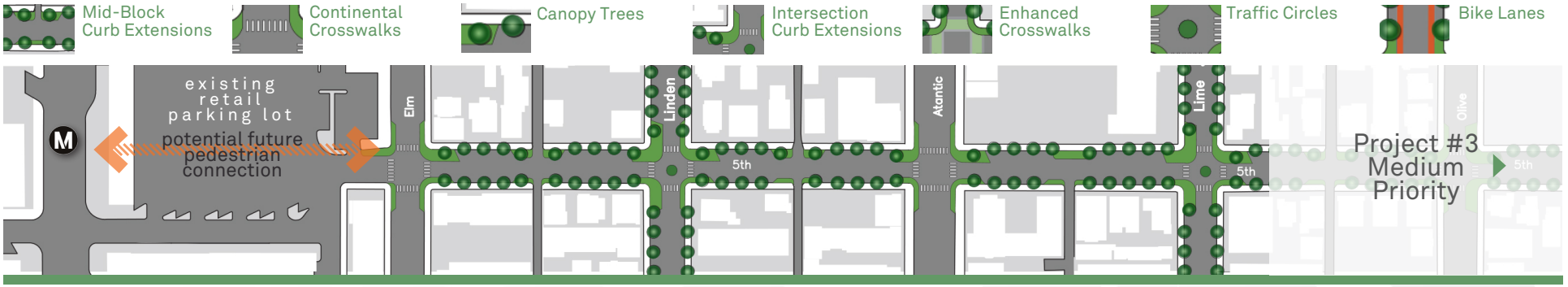


Figure 5.26 5th Street- Elm Avenue to Lime Avenue

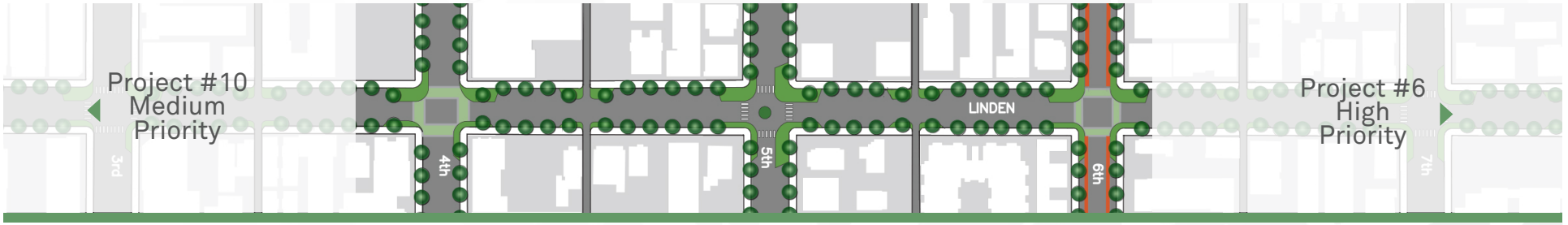


Figure 5.27 Linden Avenue- 4th Street to 6th Street

2 5th Street Station Neighborhood Greenway

Cost Estimate

$5.23 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$761,050
Site Improvements	$1,794,050
Striping, Marking, Signals	$115,180
Drainage Improvements	$455,000
Wayfinding & Public Art	$25,000
Landscaping	$292,580
Irrigation	$74,880
Electrical & Lighting	$300,000
Site Furnishings	$59,400
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,200,088

Typical Cross Section

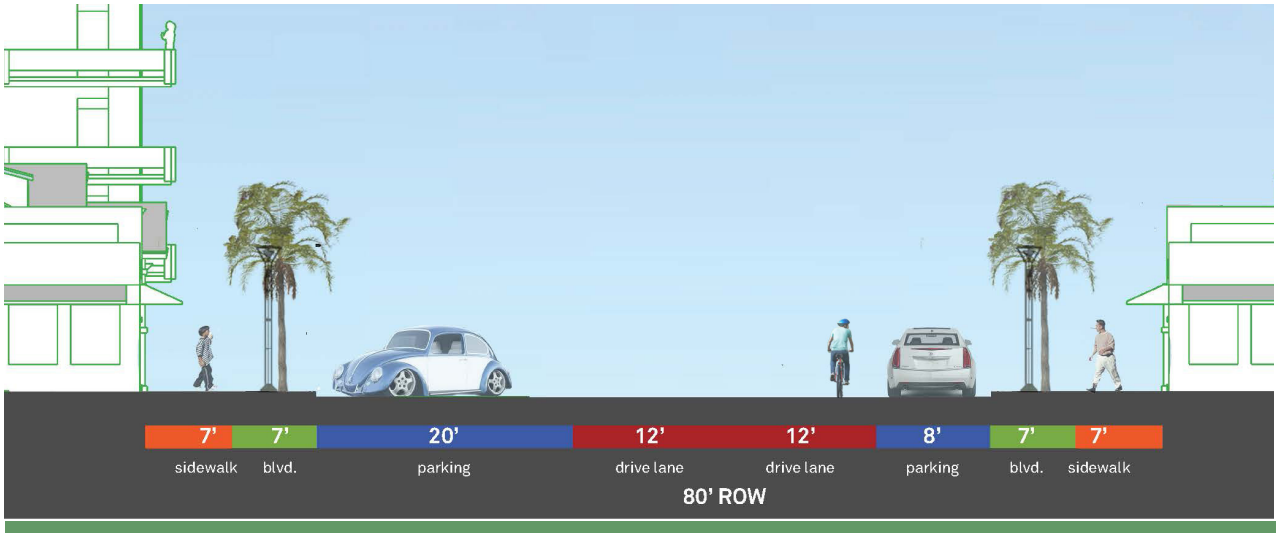


Figure 5.28 5th Street East and Linden Avenue

4 4th Street Stitch Street - Phase 1

4th Street in Downtown Long Beach bisects some of the City's most unique and interesting destinations. From the Metro Blue Line station at Pacific, visitors can walk to Pine Avenue, a bustling, walkable commercial corridor that has recently been rebuilt. The PMP calls for repurposing a network of pedestrianized commercial and multi-use alleyways near the 4th Street Corridor, including Cereza, Roble, and Maple. As redevelopment occurs on large surface parking lots and parcels between Pacific and Pine, a medium-term project could also include reconstructing segments of Solano Court.

East of Pine, pedestrians can walk to City Place, a key shopping hub in Downtown Long Beach. Metro passengers may also choose to alight at 5th Street Station, where they can walk to 4th Street and enter Long Beach's East Village district. A cluster of commercial activity east of Elm will be enhanced by wayfinding installations, mid-block crossings, and enhanced crosswalks.

The 4th Street improvement project will link these key activity centers to the Pacific and 5th Street Metro stations. Landscaped medians will help to calm traffic and provide secure mid-block crossings, effectively making the corridor safer for pedestrians. Project #5, a medium-priority project, will eventually extend the 4th Street corridor to Cesar Chavez Park to the west and Alamitos Avenue to the east.

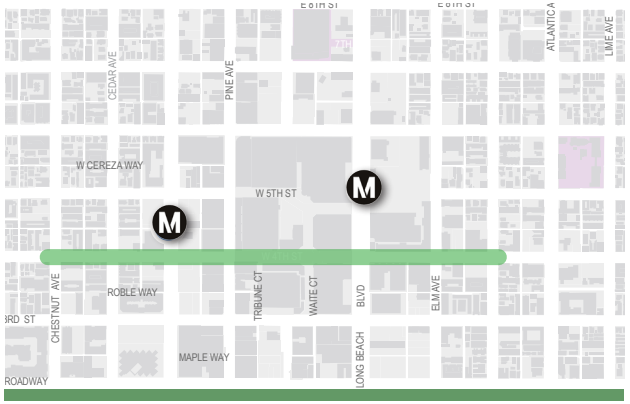


Figure 5.29 Key Map

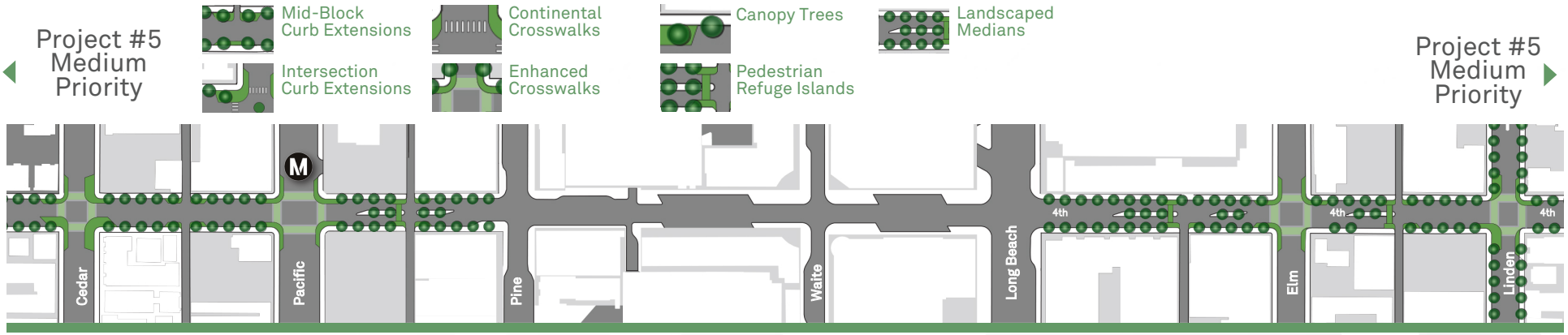


Figure 5.30 4th Street- Chestnut Avenue to Linden Avenue

4 4th Street Stitch Street - Phase 1

Cost Estimate

$5.61 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$706,700
Site Improvements	$2,038,170
Striping, Marking, Signals	$78,200
Drainage Improvements	$545,000
Wayfinding & Public Art	$25,000
Landscaping	$345,600
Irrigation	$67,600
Electrical & Lighting	$300,000
Site Furnishings	$64,200
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,287,500

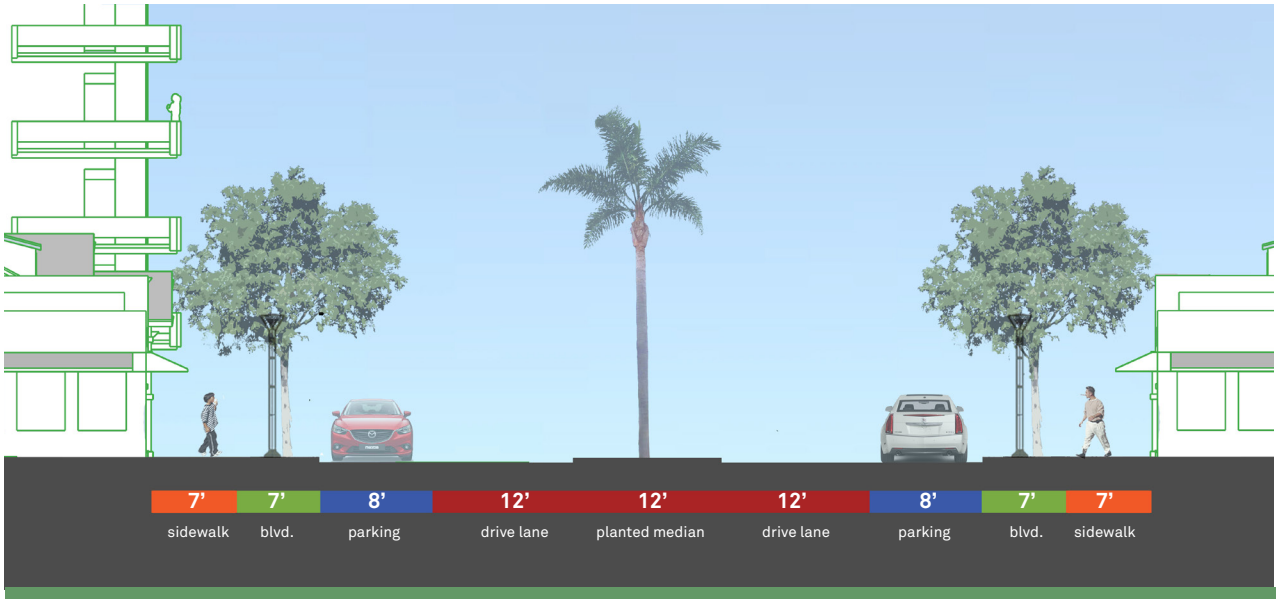


Figure 5.31 4th Street

6 6th Street Stitch Street/Linden Avenue Neighborhood Greenway

Project #6 proposes a stitch street along 6th between Long Beach Boulevard and a continuation of the Linden Neighborhood Greenway north of 6th Street. When paired with project #2 the first phase of the Linden Neighborhood Greenway will be completed between 4th and 8th Streets. The goals of this priority project are to implement an initial phase of proposed bike improvements along 6th Street, and to provide a more direct connection between residential neighborhoods and the 5th Street Metro Blue Line station. There are also several schools in the neighborhood, including Stevenson Elementary School, St. Anthony High School, and Franklin Middle School east of Alamitos.

This improvement project, when combined with Project #7, a medium-priority extension of 6th Street, can offer safer sidewalks and connections for students.

Sixth Street is currently a one-way eastbound corridor, paired with westbound 7th Street. The City's Bicycle Master Plan proposes Class II bike lanes for 6th Street as part of a conversion of the corridor to two-way traffic. The City is also planning for a reconstruction of Shoemaker Bridge at the 7th Street crossing of the Los Angeles River. Therefore, projects #6 and 7 should only be considered once these related planning projects are more fully developed.

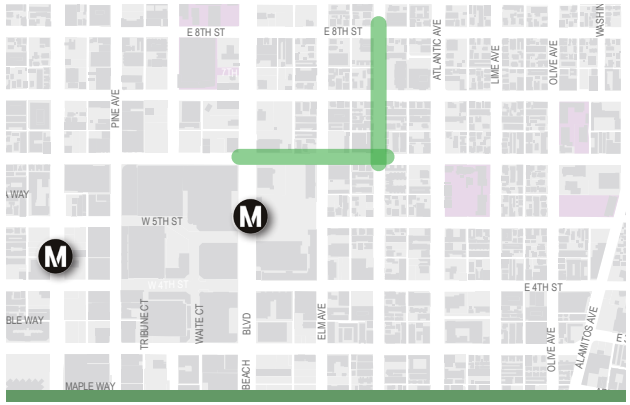


Figure 5.32 Key Map

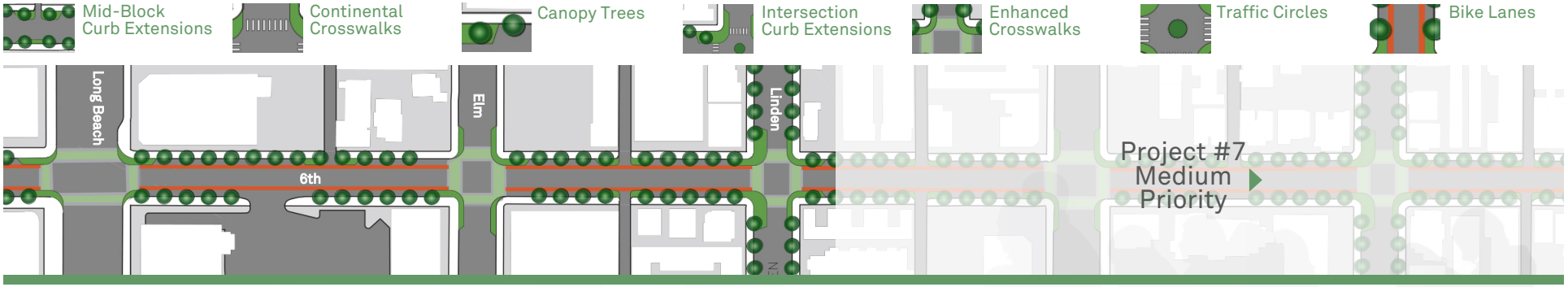


Figure 5.33 6th Street - Long Beach Boulevard to Linden Avenue

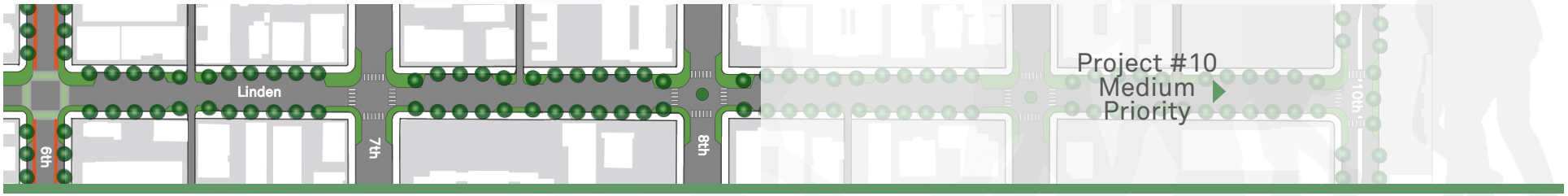


Figure 5.34 Linden Avenue - 6th Street to 8th Street

6 6th Street Stitch Street/Linden Avenue Neighborhood Greenway

Cost Estimate

$5.35 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$741,050
Site Improvements	$2,024,450
Striping, Marking, Signals	$98,800
Drainage Improvements	$413,500
Wayfinding & Public Art	$30,000
Landscaping	$283,740
Irrigation	$78,640
Electrical & Lighting	$250,000
Site Furnishings	$50,400
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,227,933

Typical Cross Sections

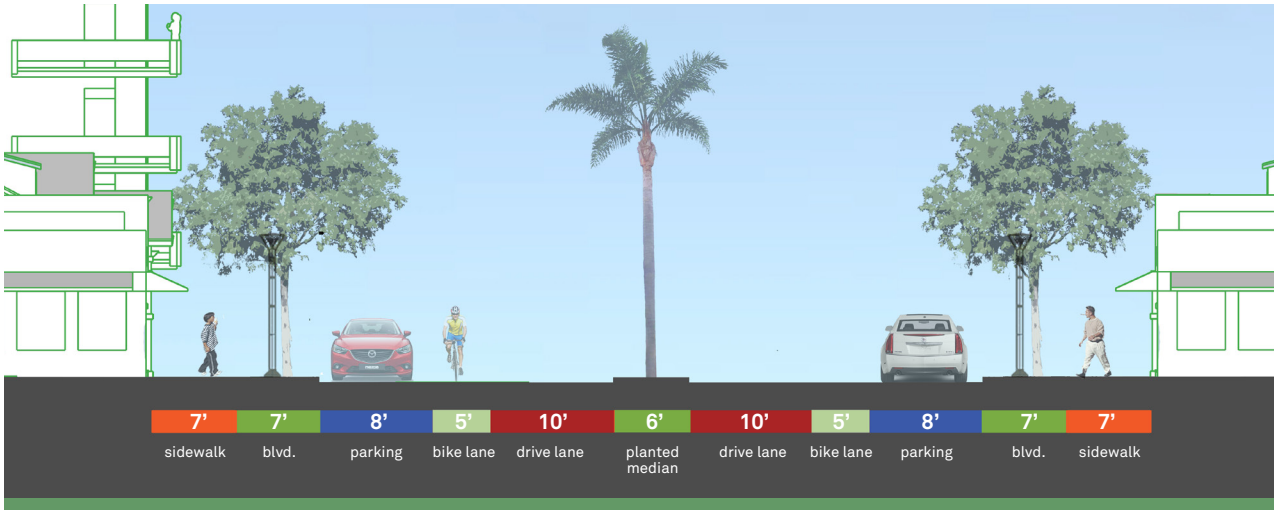


Figure 5.35 6th Street

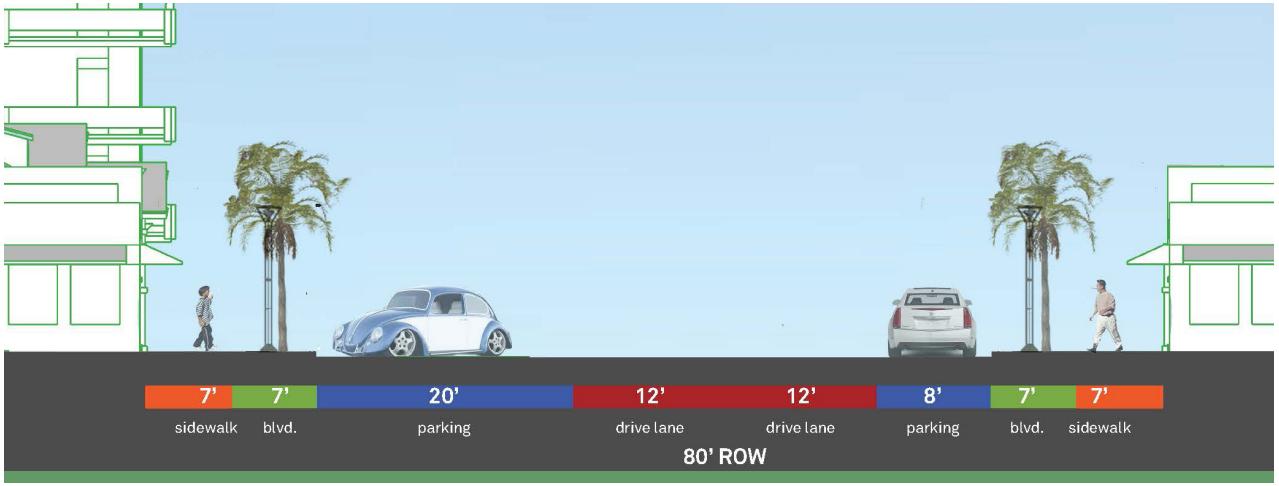


Figure 5.36 Linden Avenue

8 1st Street Pedestrian Gallery

The 1st Street corridor between Long Beach Boulevard and Elm Avenue is currently framed by a parking structure, hotel, and office buildings that do not add vitality or life to the pedestrian realm. This stands in stark contrast to the corridor east of Elm, which features a diverse mix of local businesses, landscaped curb extensions and an attractive selection of street furniture. 1st Street and Linden Avenue is also the epicenter of the monthly East Village Arts Walk and other festivals and community events. The goal of the 1st Street Pedestrian Gallery is to extend this vibrant corridor one block west to connect with the 1st Street Metro Blue Line Station. To that end, the Pedestrian Gallery features a 30'-wide pedestrian rambla along the center of the street, providing shade, respite, and opportunities for farmers markets, lunchtime food vendors, or other micro-businesses. As a shared street, the rambla is curbless, and framed by a line of movable bollards for safety. These bollards can be depressed into the ground to create a completely curbless environment between the sidewalks. During festivals and events, this curbless environment can become completely pedestrianized through temporary closures at both ends of the block, serving as an ideal stage for public events and festivals. Key precedents for the Pedestrian Gallery include the Denver Transit Mall and Barcelona's famed Rambla.

During normal traffic, the corridor will continue to serve as a critical corridor for Long Beach Transit and passenger vehicles. Existing bus stops at Long Beach Boulevard and Elm Avenue will remain, providing a critical point of transfer between Long Beach Transit routes and the Metro Blue Line. To further enhance the pedestrian experience at Long Beach Boulevard, a scramble crosswalk is proposed at the intersection, providing an additional cycle during which pedestrians may cross at any direction. This will allow safe and direct passage for transit riders making a transfer, pedestrians crossing from the A-Line to the Pedestrian Gallery, and those traversing between East Village and Ocean or Downtown.

During the preparation of the PMP, the consulting team partnered with the City of Long Beach to prepare a Metro Call for Projects application for the Pedestrian Gallery. On June 29th, 2015, Metro staff released its "Rainbow Report," recommending full funding for the Pedestrian Gallery. If approved by the Metro Board, SCAG, and ultimately the FTA/FHWA through its TIP program, funding for this project could be awarded to the City of Long Beach as early as 2017.

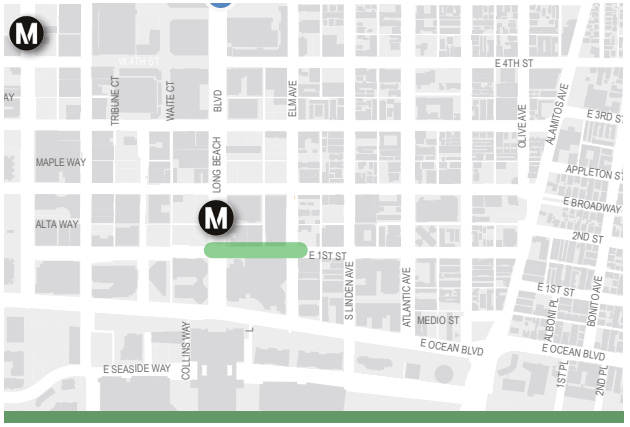


Figure 5.37 Key Map

Figure 5.38 Northeast corner of Long Beach Blvd. and 1st Street.

8 1st Street Pedestrian Gallery

- Scramble Crosswalk
- Movable Bollards
- Gateway Arch
- Movable Planters
- Tree Trenches
- Overhead String lights
- Public Art installations
- Benches
- Parking Bays
- Pedestrian-Level Lighting
- Canopy Trees
- Vendor Tents/ Kiosks

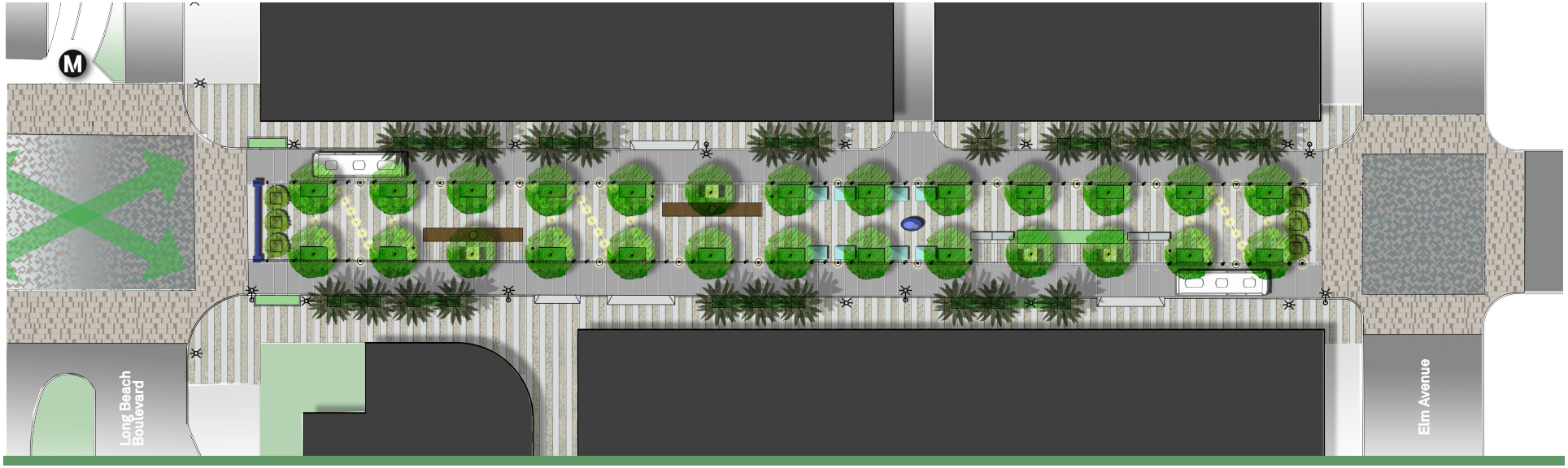


Figure 5.39 1st Street- Long Beach Boulevard to Elm Avenue

N

8 1st Street Pedestrian Gallery

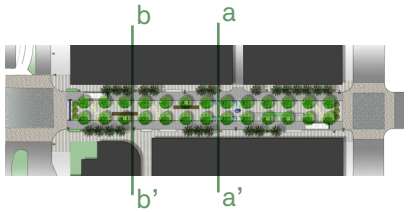
Cost Estimate

$2.90 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$226,110
Site Improvements	$919,022
Striping, Marking, Signals	$112,000
Drainage Improvements	$66,994
Wayfinding & Public Art	$150,000
Landscaping	$136,302
Irrigation	$36,084
Electrical & Lighting	$194,500
Site Furnishings	$239,700
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$664,752

Typical Cross Sections



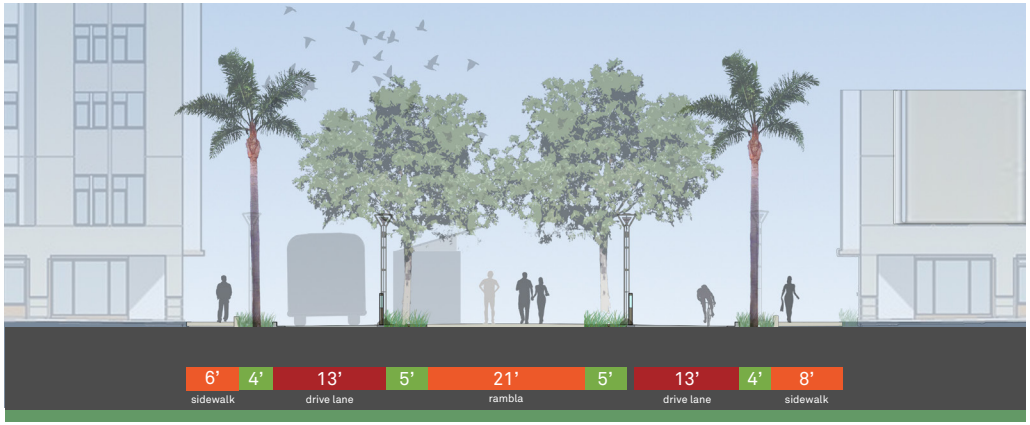


Figure 5.40 Section a-a'

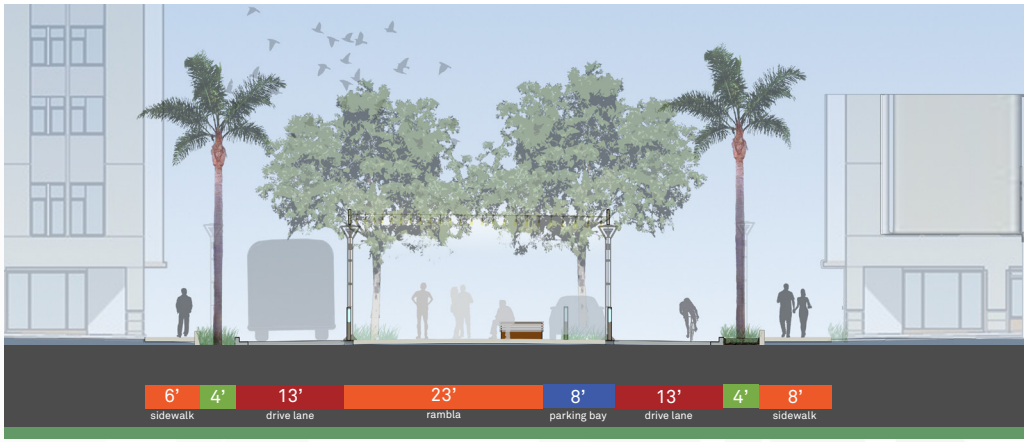


Figure 5.41 Section b-b'

9 Metro Beach Access Gap Closure

This project completes additional gaps along 1st Street. The Pedestrian Gallery (Project #8) is intended to connect the Metro Blue Line 1st Street Station to activity in East Village. However, improvements made by the City of Long Beach along 1st Street largely end at Linden, leaving a gap for pedestrians seeking to access Alamitos and Alamitos Beach. To complete this gap, the project continue existing pedestrian improvements along 1st Avenue, including curb extensions and continental crosswalks. To address narrow sidewalks and a constrained right of way along Alamitos, treelets (see pedestrian toolkit) could be used between parking spaces.

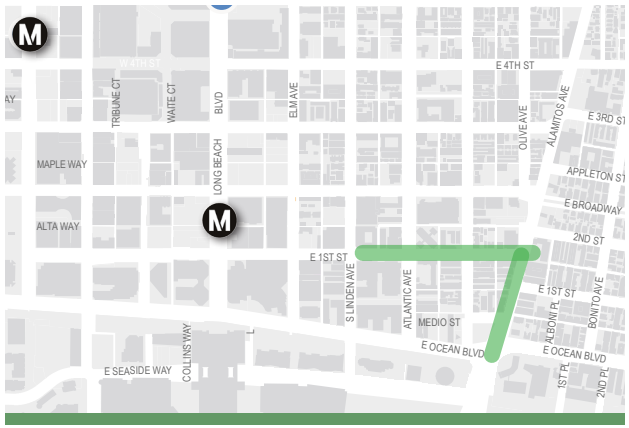


Image 5.42 Key Map

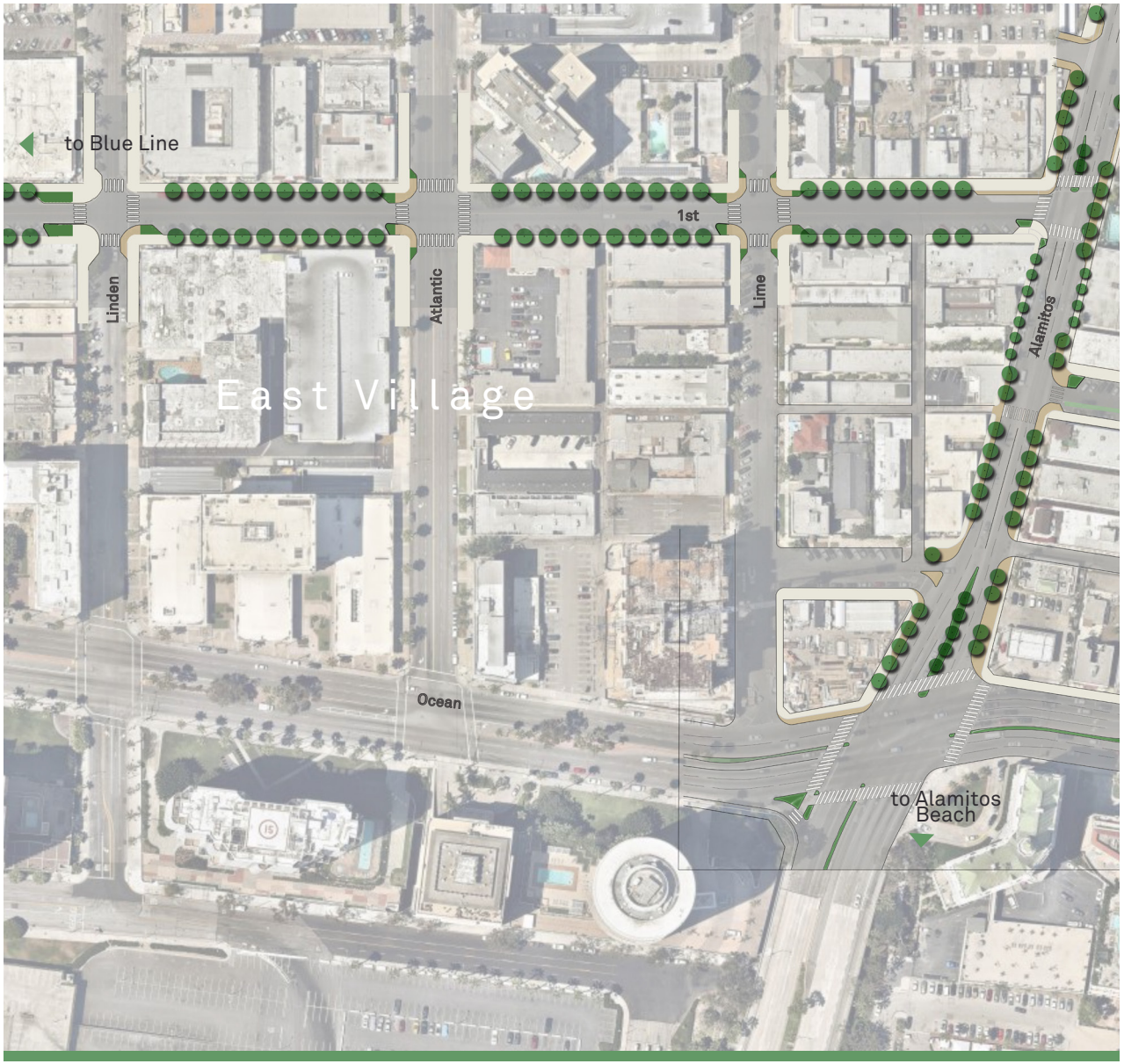


Image 5.43 1st Street and Alamitos

9 Metro Beach Access Gap Closure

Cost Estimate

$4.98 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$805,875
Site Improvements	$1,971,450
Striping, Marking, Signals	$134,900
Drainage Improvements	$432,500
Wayfinding & Public Art	$25,000
Landscaping	$155,800
Irrigation	$49,000
Electrical & Lighting	$75,000
Site Furnishings	$59,400
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,149,960

Typical Cross Section

Figure 5.44 1st Street between Linden and Alamitos

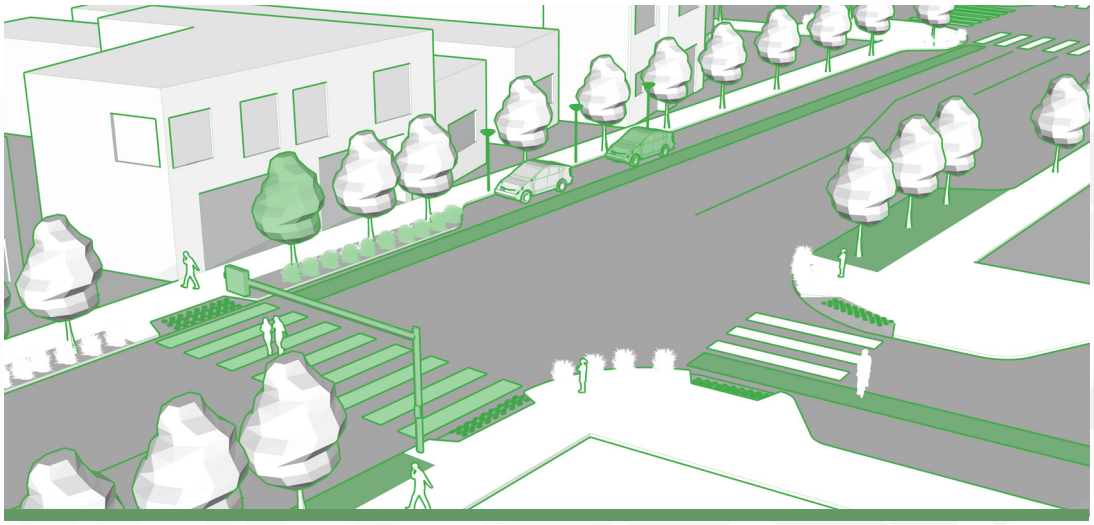


Figure 5.45 Alamitos and Malta Way/East 1st Street, showing pedestrian crossing with overhead beacon and continuation of existing bike path.

15 1st Street Station Green Alley Network

There is an extensive network of alleyways throughout downtown Long Beach. While most of these alleyways continue to function as auto-oriented corridors for making deliveries, collecting trash, and accessing parking lots and structures, a few have been repurposed as areas for pedestrians. Examples include the Pine Square Redevelopment project, which pedestrianized segments of Alta Way and Solano Court along Pine Avenue. In East Village, a segment of Alta Way between Linden Avenue and Frontenac Court has been converted to a fully pedestrianized alley with benches, a table, mural, and landscaping.

While these are great examples, each alley conversion project is relatively isolated and does not function as part of a larger network that facilitates pedestrian movement. To address this need, two high-priority Green Alley networks are proposed for downtown. The 1st Street Station Green Alley network leverages the 1st Street station by proposing improvements to the following corridors (see map at right):

Standard Alleys

Autos and pedestrians share these alleys. Improvements include wayfinding treatments, permeable pavers, bioswale planters, trash consolidation, seating, murals, and lighting

Corridors: Waite Court, Alamo Court, Maple Way, Frontenac Court

Pedestrianized Commercial Alleys

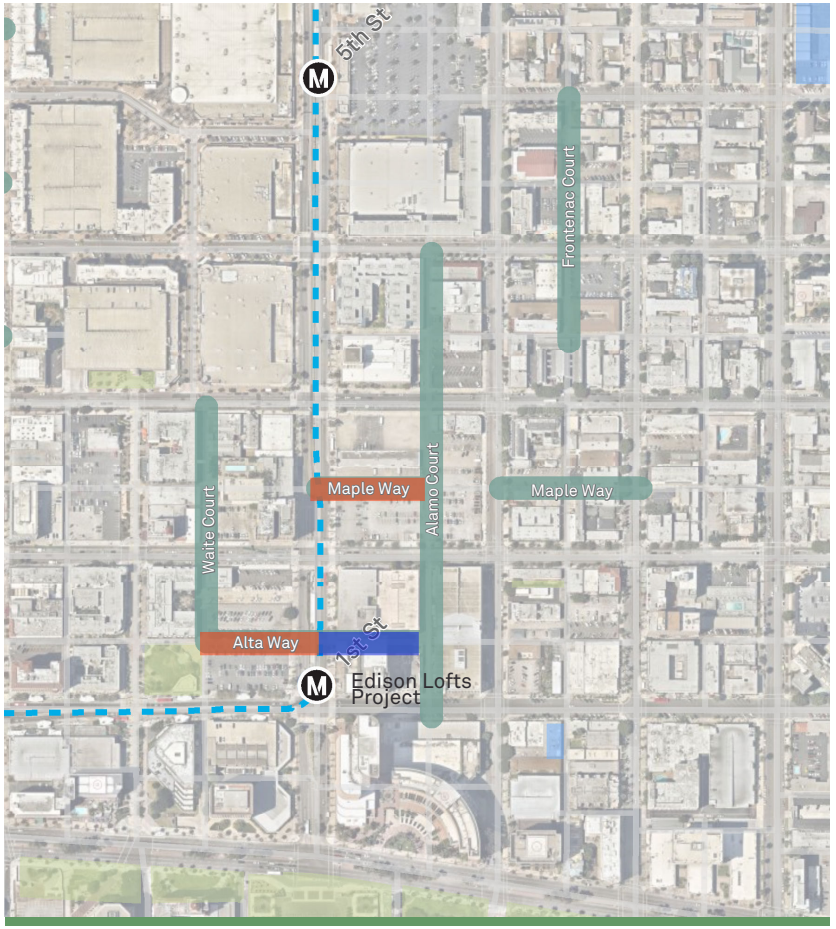
Completely pedestrianized through closing curb cuts and installing bollards. Cafe seating can activate the alleyways. Includes additional seating and permeable pavers throughout the alley, possible through the elimination of heavy vehicles

Corridors: Alta Way

Green Alley Strategic Improvement Project

An ongoing medium-priority project. As redevelopment projects are proposed for key sites downtown, the City should work with developers to complete the Green Alley network. An important precedent will be the Edison Lofts project, profiled at right.

Corridors: Alta Way, Maple Way



Part of Project #17: Green Alley Strategic Improvement Project (medium priority)

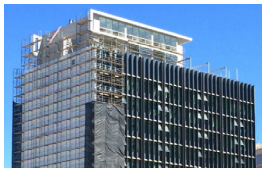
Pedestrianized Commercial Alleys

Standard Alleys

Figure 5.46 1st Street Station Green Alley Network

Alta Way Pedestrianized Commercial Alley

A redevelopment project, known as **Edison Lofts**, is proposed for the City Hall East building at 1st Street and Long Beach Boulevard. This conversion project will bring up to 156 apartments to East Village, leveraging proposed improvements such as the Pedestrian Gallery and Alta Way Green Alley. In light of this project, the Alta Way Green Alley should receive immediate priority to ensure that key green alley elements are incorporated into the PMP, and any ground-level retail is oriented to and takes advantage of planned alley improvements.



Edison Lofts

Image courtesy of Ratkovitch Properties.

15 1st Street Station Green Alley Network

Cost Estimate

$3.16 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$203,500
Site Improvements	$509,600
Striping, Marking, Signals	$0
Drainage Improvements	$425,000
Wayfinding & Public Art	$187,500
Landscaping	$189,500
Irrigation	$142,000
Electrical & Lighting	$600,000
Site Furnishings	$105,000
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$748,606

Typical Green Alley Plans

Figure 5.47 Pedestrianized Commercial Alley

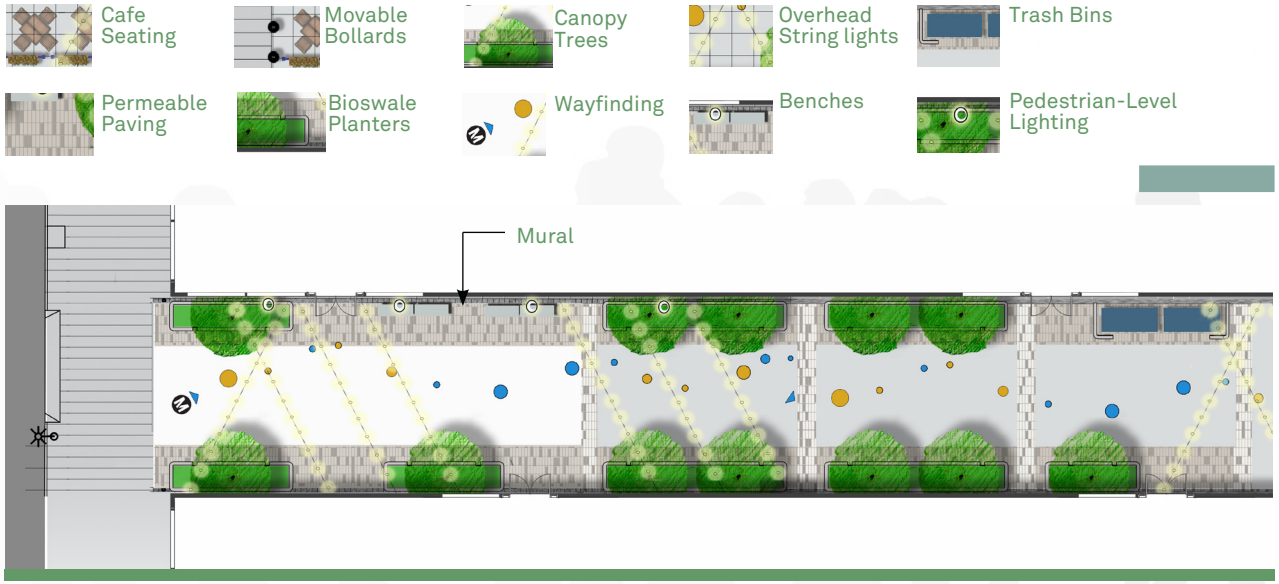
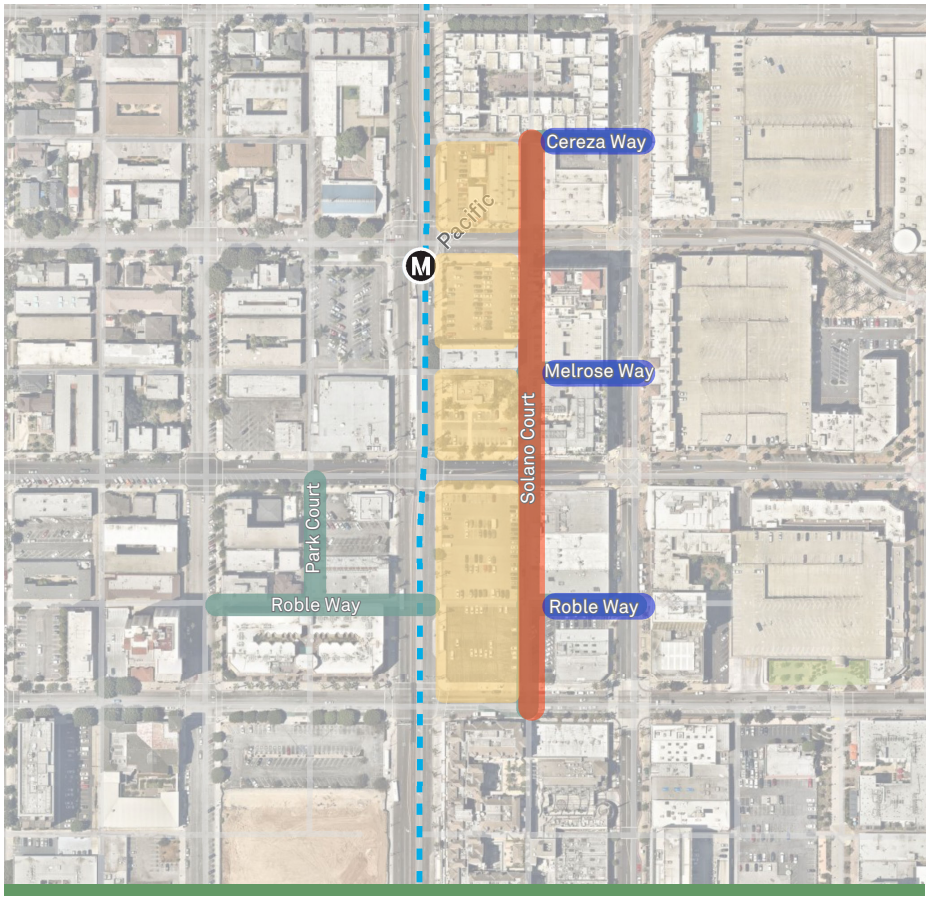


Figure 5.48 Standard Alley

16 Pacific Station Green Alley Network

Similar to the 1st Street Station Green Alley Network, a mix of pedestrianized commercial alleys and standard alleys are proposed for courts and ways near Pacific Station. Pedestrianized commercial alleys are proposed for segments along Cereza, Melrose, and Roble between Solano Court and Pine Avenue. These green alleys will serve as important pedestrian connections between Pacific Station and Pine Avenue. Cafes along Pine Avenue can wrap around the corner to activate the alleyways and wayfinding signage can direct passengers between the Metro Blue Line and activity centers east of Pacific.

As part of a demonstration project for green alleys in residential areas, improvement projects are proposed for Roble Way and Park Court (see map at right). These corridors will receive standard alley treatments. If successful, standard alley treatments could be implemented on other residential courts and ways throughout Long Beach, as funding and political will permits.



Part of Project #17: Green Alley Strategic Improvement Project (medium priority)

Pedestrianized Commercial Alleys

Standard Alleys

Redevelopment Opportunities

Figure 5.49 1st Street Station Green Alley Network

16 Pacific Station Green Alley Network

Green Alley Strategic Improvement Project
(Project #17, medium priority)

There are several redevelopment opportunities between Pacific and Solano Court (indicated in yellow on the map - see previous page). Several of these sites are currently owned by the City's Successor Redevelopment Agency and will be listed for sale within months of the adoption of the PMP. This presents an opportunity to work with developers, as projects are proposed for these sites, to implement a green alley plan for Solano Court between Cereza Way and 3rd Street.

Similar strategies could also be employed for the following projects near 1st Street Station:

Maple Way between Long Beach Boulevard and Alamo Court
Alta Way between Waite Court and Long Beach Boulevard

The plan at right is a concept for how these sites could be redeveloped over time, including potential improvements to Solano Court for which developers and the City could be jointly responsible.

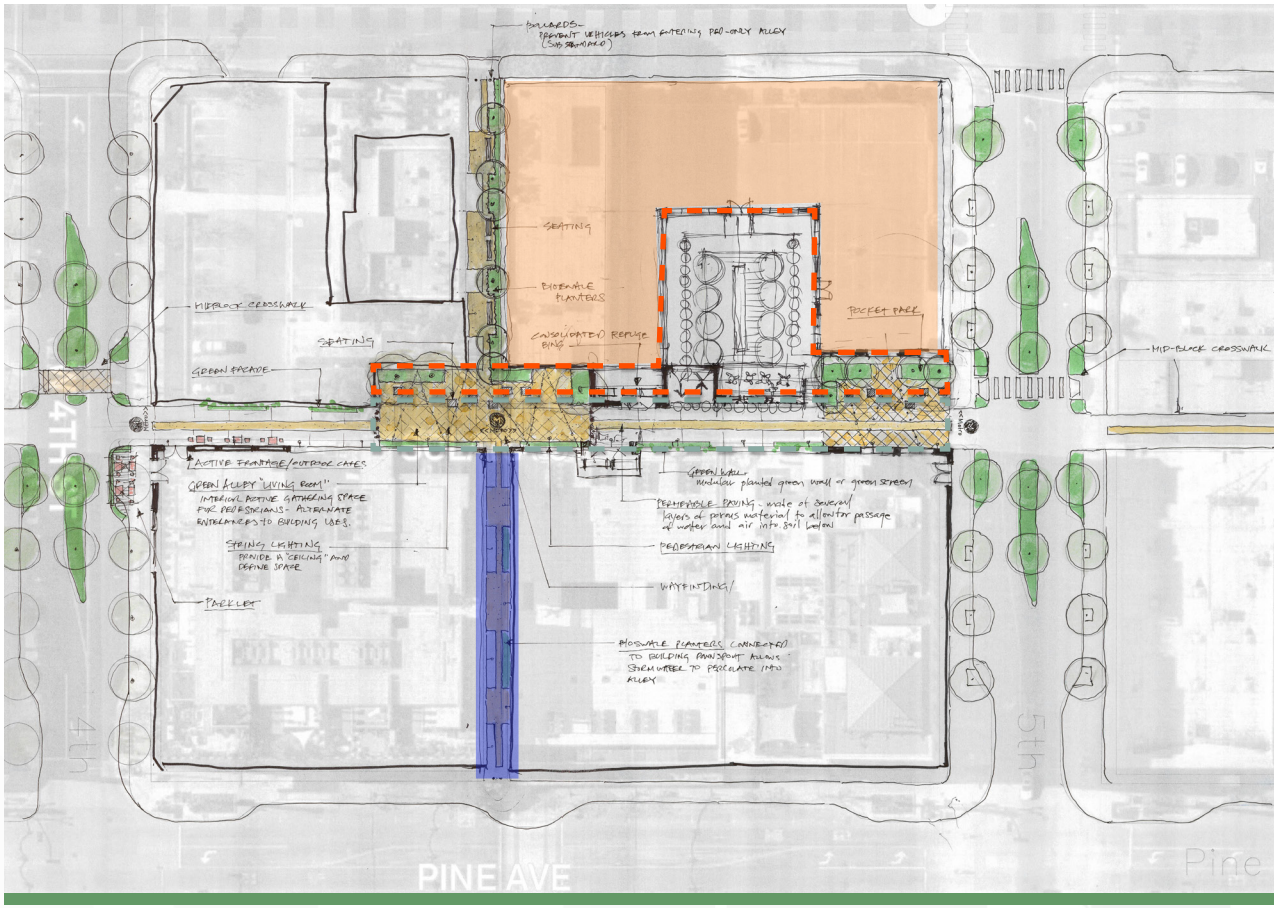


Figure 5.50 Green Alley Strategic Improvement Project - Building Green Alleys through Redevelopment

N

Redevelopment Project

Pedestrianized Commercial Alley to Pine

Potential Improvements on Private Land:

adjacent courtyard
consolidated trash storage
parking garage entrance
pocket park
expansion of central plaza

Potential Standard Alley Improvements within Public ROW:

permeable pavers
lighting
central pedestrianized plaza
wayfinding

16 Pacific Station Green Alley Network

Cost Estimate

$1.45 million
total estimate

see appendix for detailed cost estimate

estimate does not include Project #17: Green Alley Strategic Improvement Project

General Requirements	$150,000
Demolition/Excavation	$85,000
Site Improvements	$215,200
Striping, Marking, Signals	$0
Drainage Improvements	$180,000
Wayfinding & Public Art	$135,000
Landscaping	$87,200
Irrigation	$107,200
Electrical & Lighting	$150,000
Site Furnishings	$30,000
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$339,601

Typical Green Alley Plans

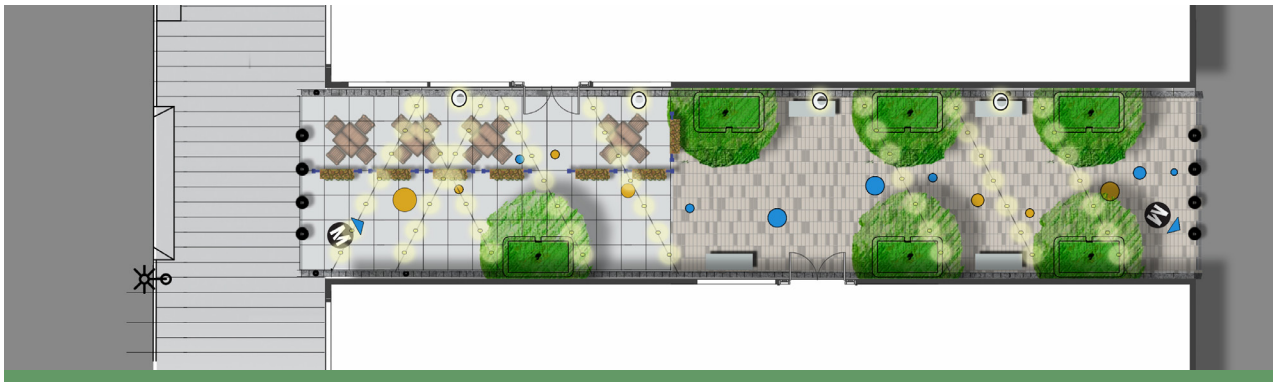


Figure 5.51 Pedestrianized Commercial Alley

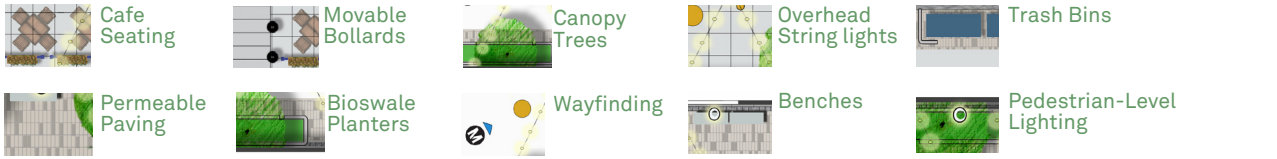


Figure 5.52 Standard Alley

18 Anaheim Stitch Street

The Anaheim corridor has some of the highest rates of auto-pedestrian collisions in the plan area. The intersection of Anaheim and Long Beach Boulevard (next to the Metro station) is particularly dangerous, with several additional hotspots at intersections east of the station. The collisions are a direct result of a poorly-designed pedestrian environment. Factors include inadequate turning radii, a very long crossing distance at intersections, and narrow sidewalks (5'-7') that do not include street furniture or trees to act as a barrier between pedestrians and fast-moving traffic. The Anaheim stitch street will feature landscaped medians and treelets to calm traffic and beautify the streetscape. With a limited right of way, treelets make use of the space between parking stalls to add trees and visually narrow the roadway. Treelets (see the pedestrian toolkit) can be added after street reconstruction as curb cuts are closed for redevelopment. Curb extensions and pedestrian refuges will protect pedestrians as they cross the street. Finally, to widen the sidewalk over time, new developments should include a 7' setback from the property line, following the lead of the Long Beach Senior Arts Colony project at Anaheim and Long Beach Boulevard.

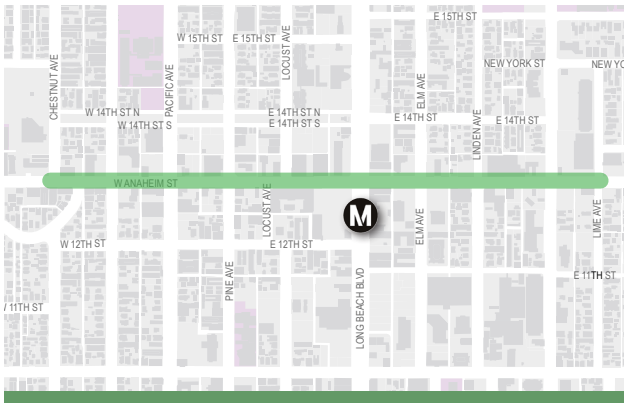


Figure 5.53 Key Map

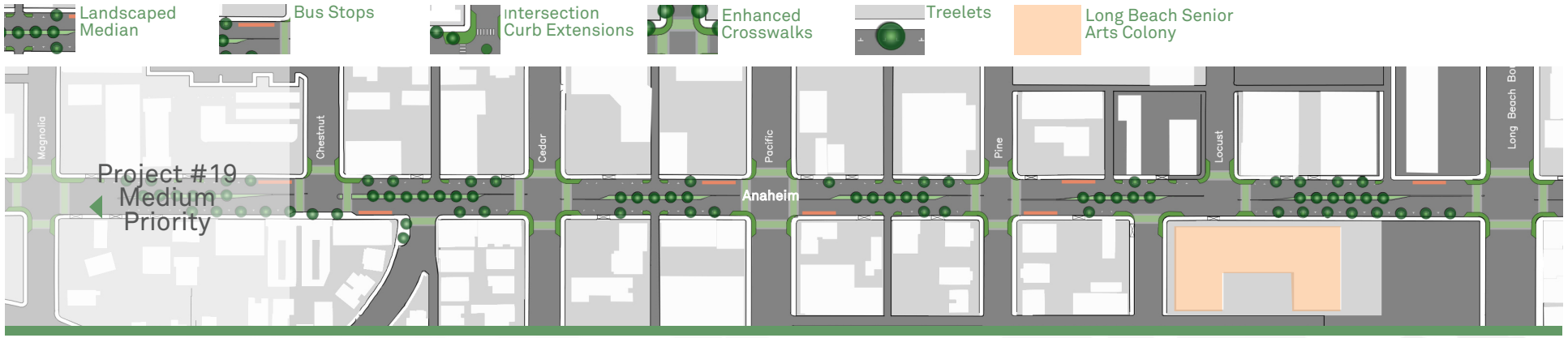


Figure 5.54 Anaheim Street - Typical Block Plan between Chestnut Avenue and Long Beach Boulevard

Figure 5.55 Anaheim Street - Typical Block Plan between Long Beach Boulevard and Lime Avenue

18 Anaheim Stitch Street

Cost Estimate

$9.87 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$1,678,775
Site Improvements	$4,840,750
Striping, Marking, Signals	$164,640
Drainage Improvements	$80,000
Wayfinding & Public Art	$55,000
Landscaping	$232,000
Irrigation	$59,000
Electrical & Lighting	$250,000
Site Furnishings	$151,800
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$2,283,266

Typical Cross Section

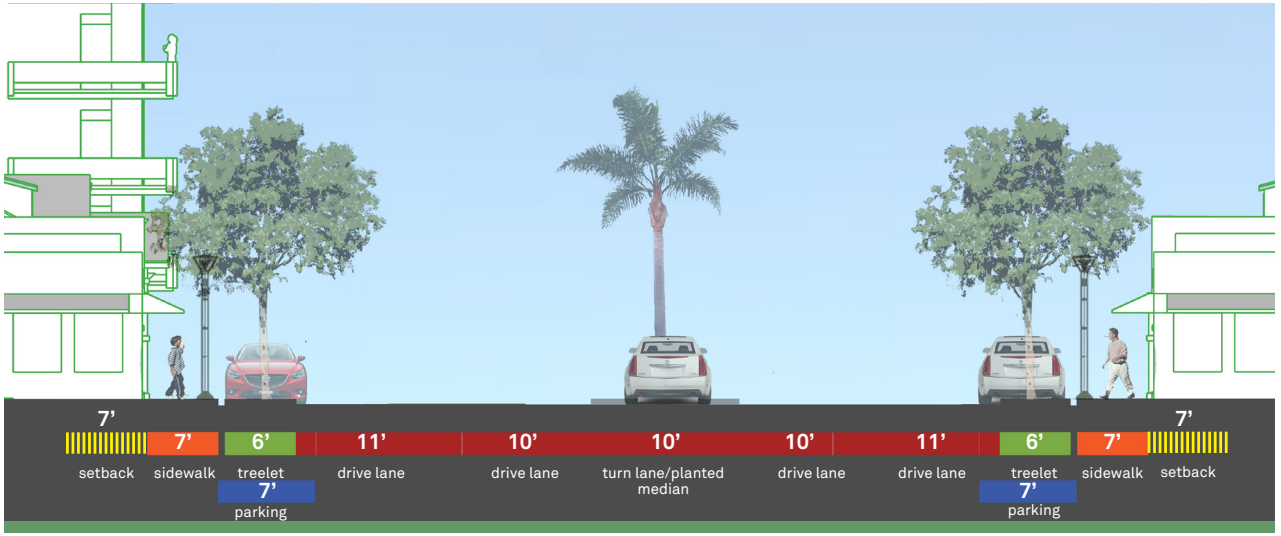
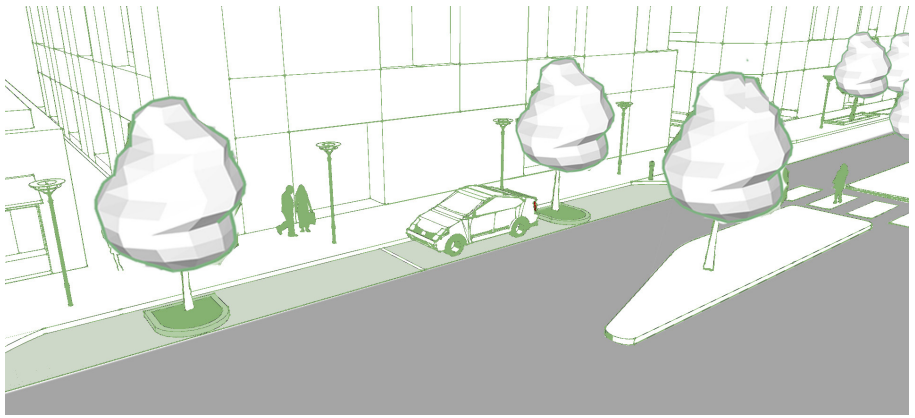


Figure 5.56 Anaheim between Chestnut and Lime Avenues

Proposed Treelet Treatment along Anaheim



Long Beach Senior Arts Colony development project with setback to allow for a wider sidewalk along Anaheim.

20 11th Street West Streetlet and Stitch Street

The streetlet concept emerged from the Midtown Specific Plan. Streetlets, located at cross streets along Long Beach Boulevard, are pedestrianized half-blocks that allow safe passage for pedestrians as they travel between the Metro Blue Line. With a limited supply of park space along the corridor, streetlets will also provide informal gathering spaces and serve to create a sense of place for the surrounding neighborhood. Farmers markets, neighborhood events, or casual conversations with friends can all occur within the streetlet. Given the potential to serve as important pedestrian connections between the Blue Line and the surrounding neighborhood, several streetlets have been paired with stitch street improvements. In the case of 11th Street, the goal is to provide an improved pedestrian connection between Anaheim Station and nearby St. Mary Medical Center, home to over 1,400 employees. A large expanse of lawn is located along the south side of 11th Street at Long Beach Boulevard, presenting an opportunity to create a much larger public space with at least a portion of the land. However, the plan and cost estimate included in the PMP only pertains to the public right-of-way.

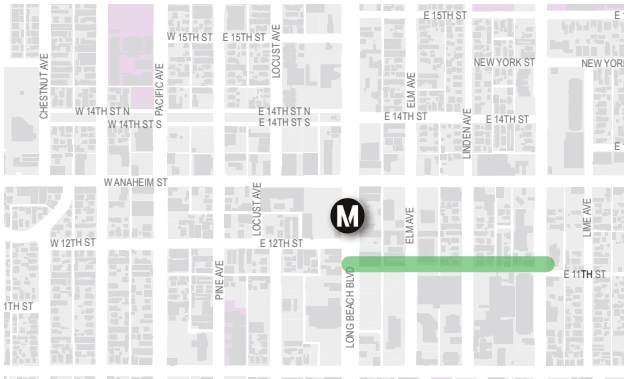


Figure 5.57 Key Map

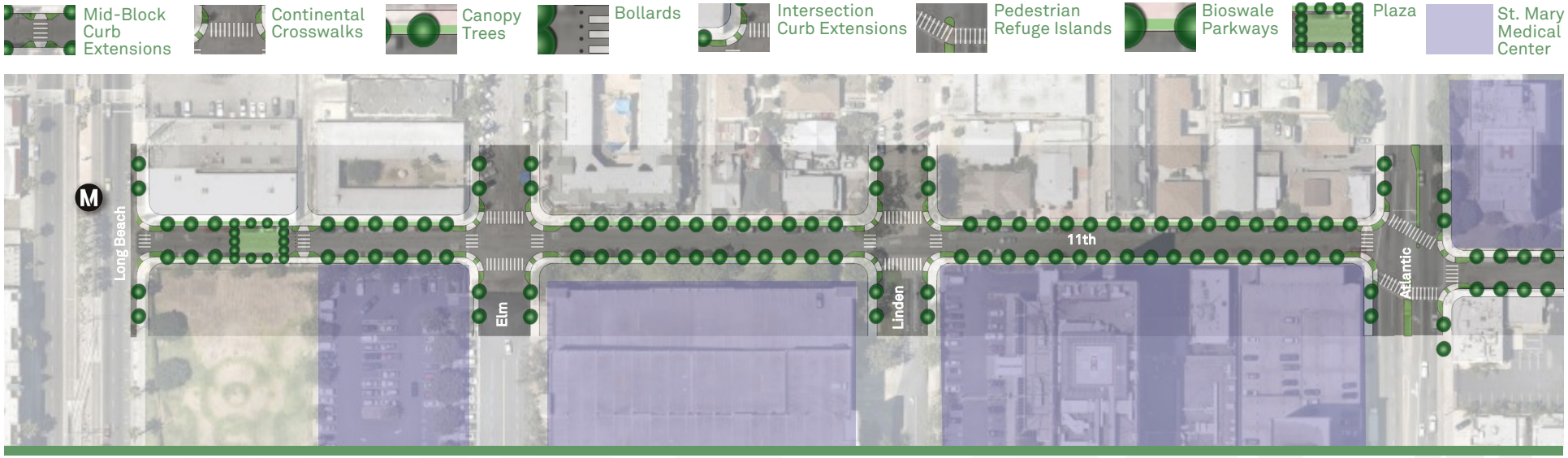


Figure 5.58 11th Street Streetlet (Long Beach Boulevard to Alley) and Stitch Street (Alley to Atlantic)

20 11th Street West Streetlet and Stitch Street

Cost Estimate

$3.24 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$393,550
Site Improvements	$1,066,700
Striping, Marking, Signals	$75,200
Drainage Improvements	$292,500
Wayfinding & Public Art	$45,000
Landscaping	$123,300
Irrigation	$70,600
Electrical & Lighting	$207,500
Site Furnishings	$94,200
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$750,528

Birdseye Perspective

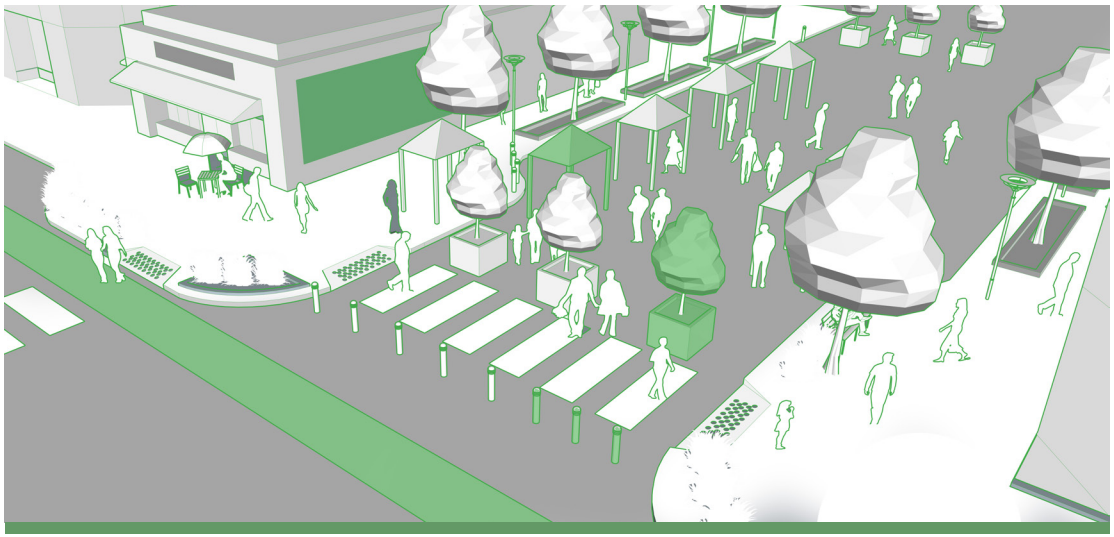


Figure 5.59 11th Avenue and Long Beach Boulevard

24 Esther Streetlet and Stitch Street

Conceptually, the Esther Streetlet and Stitch Street is similar to the 11th Street Streetlet and Stitch Street. In the case of Esther, the goal is to improve pedestrian connections between the Pacific Coast Highway Station and higher-density residential housing east of Long Beach Boulevard. The Midtown Specific Plan included a conceptual design for the streetlet, showing trees in planter boxes, colorful pavement, opportunity sites for micro-businesses, kiosks, and vendors, and the potential for a community garden. This plan is presented on the following page.

Figure 5.60 Key Map

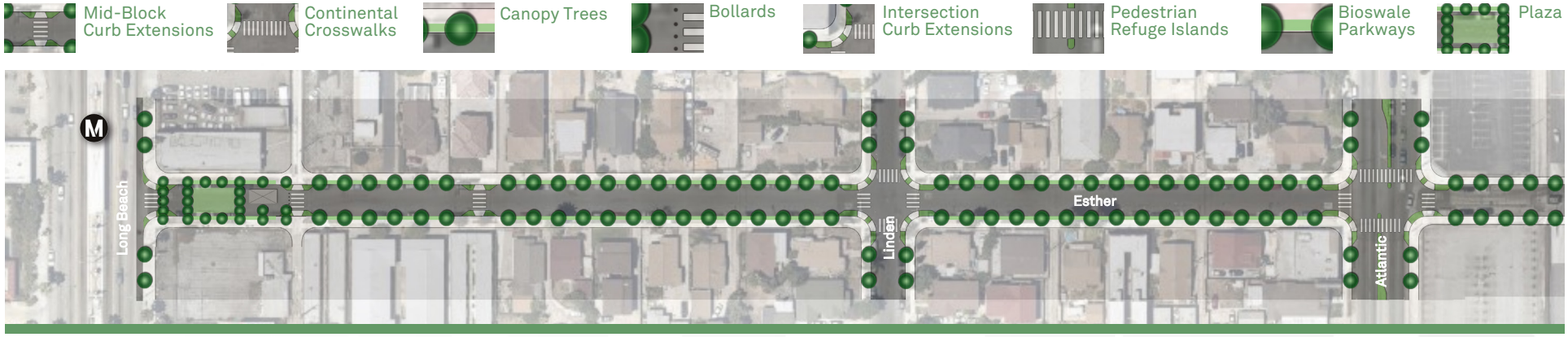


Figure 5.61 Esther Avenue Streetlet (Long Beach Boulevard to Alley) and Stitch Street (Alley to Atlantic)

24 Esther Streetlet and Stitch Street

Cost Estimate

$3.41 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$439,325
Site Improvements	$1,017,500
Striping, Marking, Signals	$38,360
Drainage Improvements	$440,000
Wayfinding & Public Art	$45,000
Landscaping	$143,700
Irrigation	$73,400
Electrical & Lighting	$207,500
Site Furnishings	$94,200
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$789,398

Esther Streetlet Concept from Midtown Specific Plan

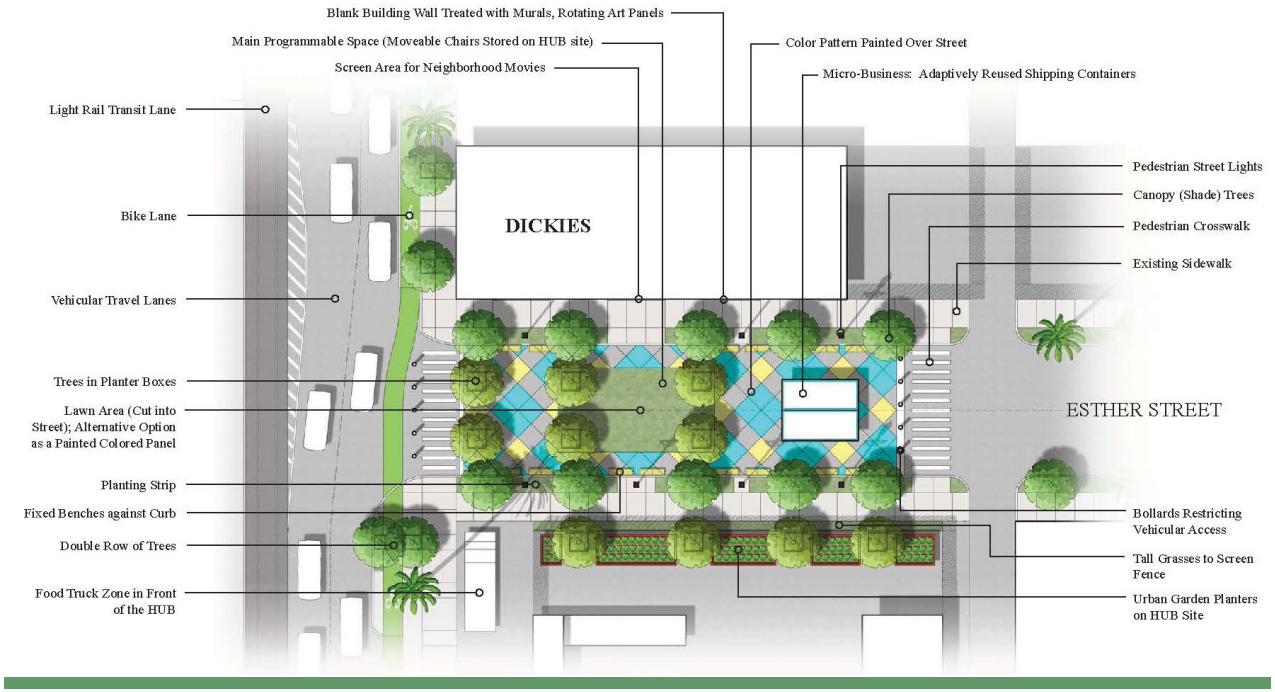


Figure 5.62 Esther Streetlet Concept

30 Willow Station Transit Access Project

The Willow station presents several opportunities for pedestrian improvements, which could lead to reinvestment and new transit-oriented development. There are several underutilized parcels within walking distance of the station, many of which are currently paved for surface parking. Miller Children's Hospital and Long Beach Memorial Medical Center are located directly east of the station, but pedestrian connections across Long Beach Boulevard are currently poor. Moreover, Fellowship Park is located on the south side of Willow, but it is difficult to access the station from the park. To link these important neighborhood and regional destinations to Willow Station, the Willow Station Transit Access Project makes use of mid-block crosswalks, landscaped medians, continental crosswalks, and curb extensions, all found within the PMP pedestrian toolkit. A green alley east of Long Beach Boulevard will repurpose an underutilized corridor and provide a more direct connection between Willow and 27th Street.

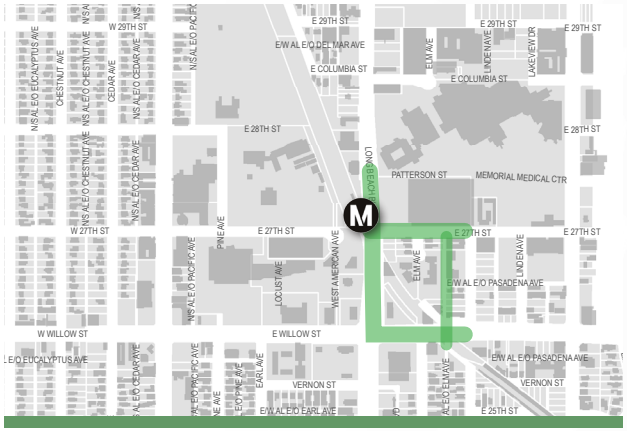


Figure 5.63 Key Map

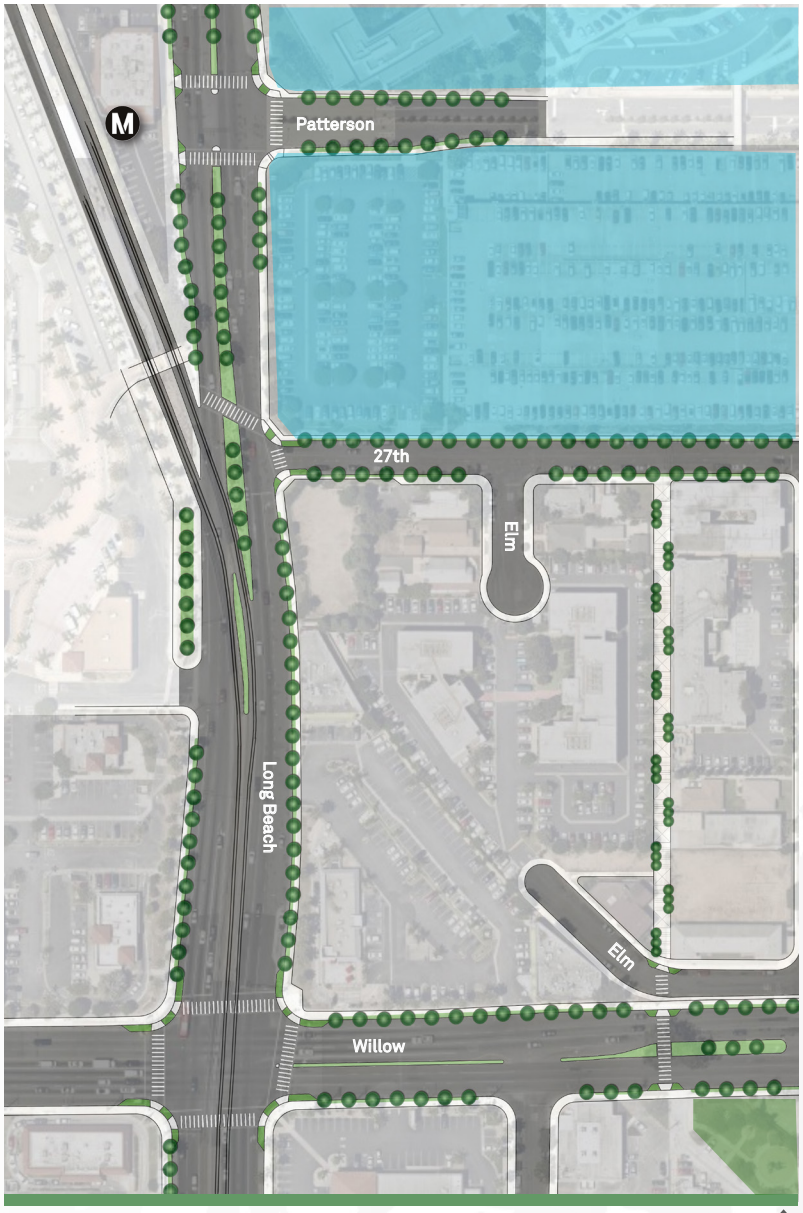
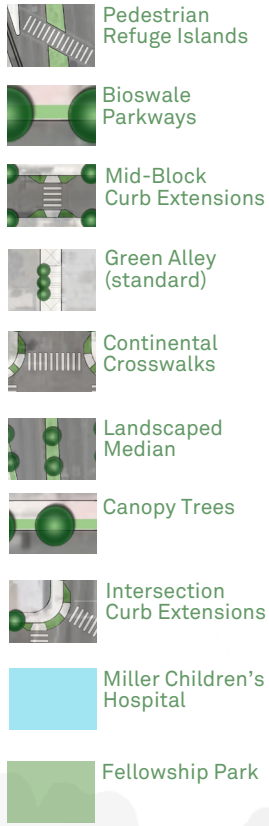


Figure 5.64 Wardlow Transit Access Project



30 Willow Station Transit Access Project

Cost Estimate

$6.73 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$1,154,600
Site Improvements	$2,648,380
Striping, Marking, Signals	$100,720
Drainage Improvements	$425,000
Wayfinding & Public Art	$37,500
Landscaping	$261,200
Irrigation	$112,200
Electrical & Lighting	$220,000
Site Furnishings	$98,600
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,552,044

Figure 5.65 Strengthening connections to Willow Blue Line Station.

31 Wardlow Avenue and Pacific Place Transit Access Project

Similar to the Transit Access Project at Willow, the Wardlow Avenue and Pacific Place Transit Access Project utilizes strategic interventions profiled in the PMP pedestrian toolkit to improve pedestrian safety. As noted in the Existing Conditions Analysis, the Wardlow Station area is home to a significant number of senior citizens. There are clusters of assisted living facilities, senior housing development projects, and other facilities at the NE and SW quadrants of the intersection of Pacific Place and Long Beach Boulevard.

The station area, however, is not particularly walkable or safe for pedestrians. Between the park and ride lot at Wardlow and just south of 32nd Street, the sidewalk ends, forcing pedestrians to cross at an unstriped and unsignalized intersection with fast-moving traffic. Project #31 proposes continental crosswalks at 32nd and 33rd Streets along Pacific Place, protected with pedestrian refuges and a landscaped median. New trees along the median and boulevard will help to calm traffic. An extension of the missing sidewalk link along the Metro right-of-way will provide better north-south connections for Metro passengers seeking to access the station. At Wardlow, curb extensions and pedestrian refuges will narrow the crossing distance across a wide corridor and provide safer passage for vulnerable populations.

Figure 5.66 Key Map

Mid-Block Curb Extensions

Continental Crosswalks

Canopy Trees

Intersection Curb Extensions

Pedestrian Refuge Islands

Bioswale Parkways

Landscaped Median

Figure 5.67 Wardlow Transit Access Project

31 Wardlow Avenue and Pacific Place Transit Access Project

Cost Estimate

$5.61 million
total estimate

see appendix for detailed cost estimate

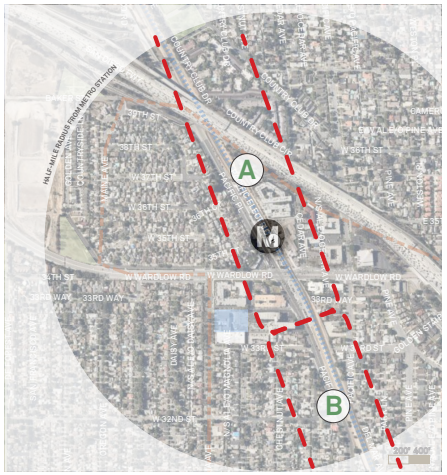
General Requirements	$150,000
Demolition/Excavation	$935,000
Site Improvements	$2,166,300
Striping, Marking, Signals	$66,800
Drainage Improvements	$317,500
Wayfinding & Public Art	$10,000
Landscaping	$419,000
Irrigation	$94,500
Electrical & Lighting	$150,00
Site Furnishings	$30,200
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,293,141

Figure 5.68 Existing Blue Line Wardlow Station.

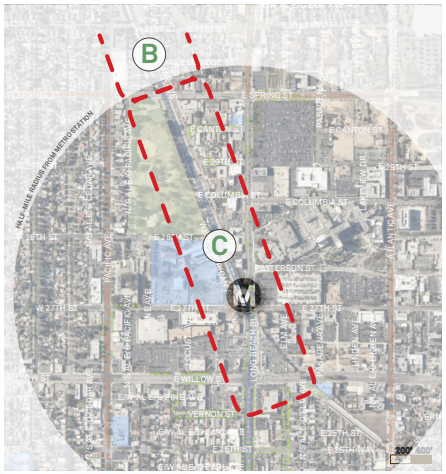
33 Del Mar Greenbelt

The Del Mar Greenbelt is an ambitious project that aims to bring the first greenway to the City of Long Beach. Largely utilizing a portion of the Metro right-of-way, the project will connect Willow Station to Wardlow Station and Los Cerritos Park. Within segments of the Metro right-of-way, a multi-use path parkway is proposed (see map at right and cross section on the following page). A portion of the project also leverages the proposed Daisy Bike Boulevard, part of which will be located along Del Mar Avenue. Along this segment (shown in orange on the maps at right), a bike boulevard/parkway is proposed. While the configuration of the Greenbelt will vary significantly along the length of the corridor due to right-of-way constraints, a 10' minimum multi-use path is possible throughout the length of the corridor. The Greenbelt will serve as an important connection for commuting and recreation, and can become a model for other greenbelt projects within the Los Angeles region.

Wardlow Station Area



Willow Station Area



SECTION A-A' - BIKE BOULEVARD/ PARKWAY (NEXT PAGE)

SECTION B-B'- MULTI-USE PATH PARKWAY (NEXT PAGE)

Figure 5.69 Segment A - Wardlow Station to Los Cerritos Park

Figure 5.70 Segment B - between Wardlow and Willow Stations

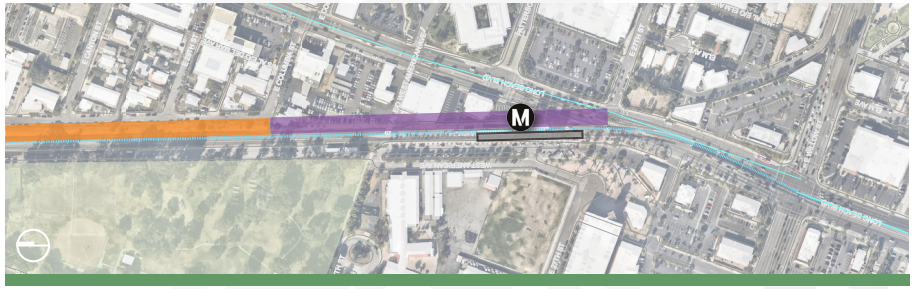


Figure 5.71 Segment C - Willow Station

33 Del Mar Greenbelt

Cost Estimate

$5.28 million
total estimate

see appendix for detailed cost estimate

General Requirements	$150,000
Demolition/Excavation	$197,800
Site Improvements	$1,755,500
Striping, Marking, Signals	$0
Drainage Improvements	$0
Wayfinding & Public Art	$20,000
Landscaping	$958,000
Irrigation	$210,000
Electrical & Lighting	$720,000
Site Furnishings	$154,200
Other includes general conditions & overhead, bonds and insurance, profit, escalation to midpoint, and design contingency	$1,241,319

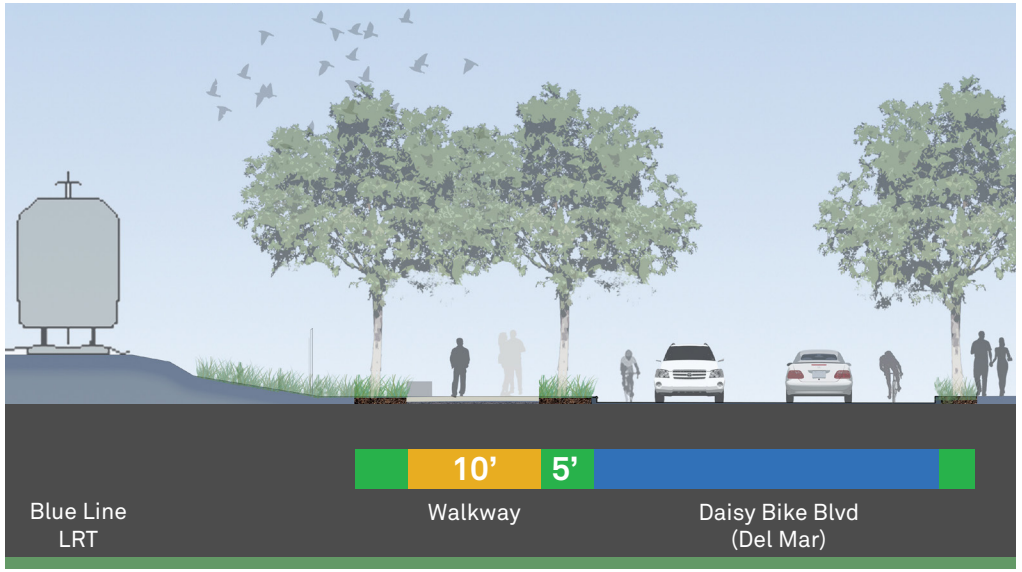


Figure 5.72 Section A-A’: Bike Boulevard/Parkway (see maps on previous page)

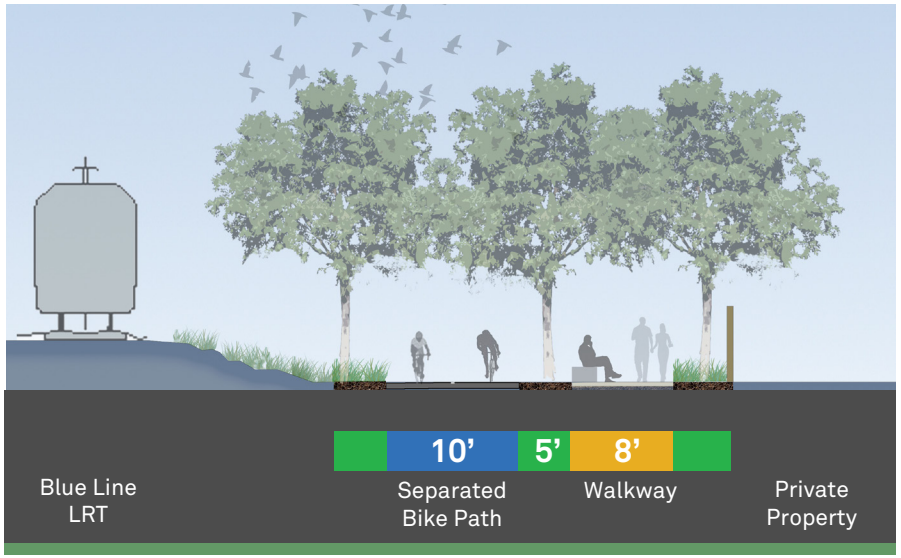


Figure 5.73 Section B-B’: Multi Use Parkway (see maps on previous page)

NO PARKING

6.0 implementation

6.1	Funding Strategy	6-2
6.2	Policy Directions	6-12
6.3	Conclusion and Next Steps	6-28

6.0 implementation

The City of Long Beach has worked diligently to revitalize its downtown for several decades, and those efforts are bearing fruit.

As the Southern California economy moves smartly out of the Great Recession of 2008-09, Downtown Long Beach has garnered considerable development community interest. Numerous projects are either under construction or in various stages of the development application pipeline. With Southern California suburban sprawl approaching its outer practical limits and the new millennial generation preferring a more urban lifestyle, Downtown Long Beach is well poised for the next stage of economic development.

This section outlines a funding strategy for building and maintaining the priority projects, as well as a list of new policies and programs that will help to make the City of Long Beach safer, more livable, and better connected to the Los Angeles Region.

Figure 6.1 On 3rd Street, a recently-built transit-oriented development project supported by City investments in pedestrian and bicycle infrastructure.

6.1 Funding Strategy

The Downtown and Transit-Oriented Development and Pedestrian Master Plan (PMP) will not only guide but also accelerate this next stage of development. These pedestrian improvements will serve as the catalyst that transforms Long Beach into one of Southern California's most vibrant pedestrian districts over the next 20 to 30 years. The benefits of that transformation will accrue largely to three groups:

- Long Beach residents and employees, who will enjoy a more walkable and convenient city center as well as the satisfaction of living in a more prestigious city with higher property values.

- City government, which will see increased revenue from property taxes, sales taxes, as well as other taxes. The City may also benefit from lower service costs.

- Owners of property in the vicinity of these improvements, who will benefit from increased land prices, rents, and property values driven by the combination of the pedestrian improvements and the economic momentum already generated.

It is clearly in the interest of all beneficiaries to ensure these improvements are not only constructed but also maintained at a high level. This section includes a recommended funding approach based on case studies from the cities of San Francisco and Santa Monica, and existing programs and resources within the City of Long Beach.

6.1.1 The Plan and Its Cost

The PMP initially included 34 improvement projects, and the City of Long Beach has selected 14 of these as priority projects. The estimated construction costs of these projects total $71.06 million:

Cost of Recommended Priority Projects

#	Project Name	Construction Cost ($ millions)
1	**Pacific Station Neighborhood Greenway**	7.86
2	**5th Street Station Neighborhood Greenway**	5.23
4	**4th Street Stitch Street**	5.61
6	**6th Street Stitch Street**	5.35
8	**1st Street Pedestrian Gallery**	2.90
9	**Metro Beach Access Gap Closure**	4.98
15	**1st Street Station Green Alley Network**	3.16
16	**Pacific Street Green Alley Network**	1.45
18	**Anaheim Stitch Street**	9.87
20	**11th Street Streetlet and Stitch Street**	3.24
24	**Esther Streetlet and Stitch Street**	3.41
30	Willow Station Transit Access Project	6.73
31	Wardlow-Pacific Place Transit Access Project	5.61
33	Del Mar Greenbelt	5.28
	TOTAL FOR ALL PROJECTS	**$70.68 million**

6.1.2 Case Studies

San Francisco, CA

The Mayor's Office of San Francisco has instituted a Vision Zero Program to respond to public concern over pedestrian safety. The Program's goal is to eliminate serious pedestrian injuries and fatalities over the next ten years. The capital improvement part of this program is called WalkFirst, and the Mayor's Transportation Task Force has recommended that $50 million be made available for this program from the General Fund for 170 high priority locations.

Each identified location uses a unique combination of funding sources. In general, each draws from some combination of the following, listed in approximately in descending order of magnitude:

2014 Proposition K
A voter-passed sales tax of 0.05 percent in the City and County of San Francisco

Bonds
San Francisco Metropolitan Transportation Authority (SFMTA) Revenue Bonds, which cover debt service through transit farebox revenue.
A Transportation General Obligation Bond was passed by the voters in November of 2014.

Development Impact Fees or Exactions
These can be structured as formula fees levied on all development or as fees or capital improvements negotiated as part of specific development agreements.

2010 Proposition AA
A voter-passed vehicle registration fee administered through the San Francisco County Transportation Authority.

State and Federal Grants
Competitive State and Federal Grants Active Transportation Program (ATP), Highway Safety Improvement Program (HSIP), California Office of Traffic Safety, Federal Transportation Investment Generating Economic Recovery (TIGER) grants and other FTA grants.

Corporate sponsorships
As an example of how these different funding sources can be brought together, of the $67 million required for the 22 Fillmore Bus Line and 16th Street Transit Priority Project, $44 million was funded by a combination of local sales tax, developer impact fees and bond funding, with the balance funded by a $20 million TIGER 2015 Grant and $3 million from other FTA grants.

In another example, two blocks of Powell Street between Ellis and Geary Streets near Union Square were improved as a promenade to provide "an innovative public space in the heart of downtown." The Audi automobile company provided the $890,000 necessary to construct the promenade, even though the promenade prohibits official advertising.

Figure 6.2 4th Street, Mission Bay, San Francisco, CA

Santa Monica, CA

The Third Street Promenade in Santa Monica is now one of the most active pedestrian districts in Southern California. Third Street was far from active and successful, however, in the 1970s during the heyday of suburban expansion when the former shopping center struggled and finally closed. The combination of the Santa Monica Redevelopment Agency investing in multiplex cinemas and multiple public parking structures and the property owners investing $13.3 million in Promenade improvements was finally able to revitalize Third Street into what it is today.

As downtown Santa Monica has evolved, there is a mosaic of business improvement districts, benefit assessment districts and a non-profit corporation that assume responsibility for maintenance and marketing of this now expanded pedestrian district. The current approach is that the City of Santa Monica takes the lead in the construction of pedestrian improvements without the benefit of a redevelopment agency, but the property owners support ongoing maintenance and operations of this downtown district. The three organizations that keep the downtown Santa Monica pedestrian district active and successful are:

1) Property Based Assessment District (PBAD),
2) Operation and Maintenance Assessment Fee, and
3) Downtown Santa Monica, Inc. (DTSM, Inc.), a non-profit corporation that is responsible for maintenance, operation and marketing.

Property Based Assessment District (PBAD)

By City Council Resolution in 2008, Santa Monica formed a property and business improvement district in its downtown. The uses of assessment funds include enhanced maintenance, above and beyond the level of service provided by the City, an ambassador program, marketing and special projects. Annual assessments are based on three factors and reflect the benefits received:

Figure 6.3 3rd Street Promenade, Santa Monica, CA

Santa Monica PBAD Assessment Rate per SF	Zone 1	Zone 2	Zone 3
Commercial	$0.822	$0.412	$0.206
Residential/Government	$0.582	$0.292	$0.147
Non-Profits	$0.292	$0.147	$0.073
City Owned Parking Structure	$0.147	$0.147	$0.147

1. The greater of the lot area or building square footage.
2. The property's location within one of three benefit zones with the highest benefit zone paying the highest per square foot rate.
3. The type of property use/ownership – commercial, residential, non-profits and government.

The assessments are calculated on a per square foot basis with assessment rates related to benefits received. No properties are exempt, and even City owned parking structures pay an assessment. The assessments are collected by the Los Angeles County Tax Assessor's Office as a line item on the property tax bill. Downtown Santa Monica, Inc. administers the funds, which total about $4 million currently. Assessments may increase up to five percent per year to keep pace with the Consumer Price Index and program cost are subject to review and approval by the PBAD Board of Directors.

Operation and Maintenance Assessment Fee

There is an Operation and Maintenance Assessment Fee imposed on all businesses within the Third Street Promenade and Bayside District. The funds are collected by the City's Business License Department concurrently with the annual business license fee. Businesses pay according to a schedule based upon gross receipts, but office uses can request to pay $0.16 per square foot if it represents a lower fee. This fee raises about one million dollars currently and is also administered by Downtown Santa Monica, Inc.

Downtown Santa Monica, Inc.

Downtown Santa Monica, Inc. is a private 501c(3) non-profit corporation that works in cooperation with the City of Santa Monica to manage services and operations in the downtown while promoting economic stability, growth and community life. It manages the Property-based Business Assessment District and is governed by a Board of Directors comprised of 13 community volunteers. Six of the directors are appointed by the City Council, six are elected by downtown property owners subject to the Operation and Maintenance Assessment Fee, and the final one is appointed by the City Manager. The annual operating budget of DTSM is in excess of $6 million with a large majority coming from the two sources discussed above.

6.1.3 Recommended Approach

Based upon Long Beach's successful track record of securing grants, and informed by these two case studies, the PMP recommends that the construction of Plan improvements be primarily funded with grants and taxes, like the City of San Francisco. Maintenance of proposed improvements should be funded with fees and assessments borne primarily by those properties directly benefiting from the investment, as in the case of the City of Santa Monica.

Capital Improvements

Grants

The most promising grant sources for pedestrian-related improvements are listed below:

- California State Transportation Agency's Active Transportation Program (ATP)
- Federal Department of Transportation's Transportation, Community and System Preservation Program (TCSP)
- Federal Transit Administration TIGER Grants
- Federal Department of Transportation's Bus Livability Program
- Federal Surface Transportation (STP) programs that are administered by Caltrans
- The State Transportation Improvement Program (STIP) administered by Caltrans
- The Federal Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Los Angeles Metropolitan Transportation Commission (Metro) Call for Projects
-
- The Funders' Network for Smart Growth and Livable Communities (TFN)
- Land and Water Conservation Fund (LWCF)
- Federal Department of Housing and Urban Development (HUD)'s Choice Neighborhood Implementation Grants (CNIG)
- State Department of Fire and Forestry's Urban and Community Forest grants
- Moving Ahead for Progress in the 21st Century (MAP-21) – A Federal Program available through MPOs
- Safe Routes to School Program (SR25) – Federal Grant Administered through Caltrans
- Proposition C 20 Percent Local Return Funds – Allocated to cities based upon population
- Measure R Transportation 15 percent Local Return Funds - Allocated to cities based upon population
- Two Percent Transportation Development Act (TDA) Article 3 – 85 percent allocated to local jurisdiction based upon population and 15 percent to county unincorporated areas

Local Taxes and Fees

Since these pedestrian improvements will enhance property values and improve the economics of development projects, some recapture of that value to help fund these improvements is appropriate. The methods for value recapture could include the following:

- Development Impact Fees – There is a solid case to be made for having new development that benefit from these pedestrian improvements to pay a Development Impact Fee to help with their construction. These improvements will accelerate absorption, elevate rents or sales prices, and improve a developer's pro forma. A nexus study will likely be required for the Pedestrian Improvements Impact Fee to be implemented.
- Developer Contribution – For major development projects that benefit from a specific section of pedestrian improvements, a reasonable requirement would be for the developer to pay for all or a major portion of said improvement as a condition of entitlement. If an effective Pedestrian Improvement Impact Fee were adopted, the rationale for developer contribution or exaction would be substantially reduced.
- Surcharge on Property Transfer Tax – For land or improvements that turn over, the pedestrian improvements will enhance

their market value on sale. A modest surcharge on the Property Transfer Tax is a reasonable method for the City to recapture a portion of that value increase. The City Attorney would need to determine if a zonal property transfer tax or surcharge could be implemented.

- Enhanced Infrastructure Financing Districts (EIFD) – An EIFD may be used to fund the construction of public infrastructure with the property tax increments of those taxing agencies, excluding school districts, which consent. Only effective if other taxing jurisdictions (county, transit districts, special districts, etc.) agree to forego some portion of their future property tax revenue stream above the base year level.
- A Storm-water User Fee – For certain specific improvements that facilitate storm-water flow, a Storm-water User Fee could be considered.

Sponsorships and Donation

Like the Audi case in San Francisco, Long Beach is in a position to solicit corporate and foundation sponsorships for selected high profile pedestrian improvements. Based on companies that have a significant presence in Long Beach, we can envision a Mediterranean Shipping Company Greenway, or Horizon Lines Greenbelt. It will require staff time and City resources to solicit such sponsorships.

Maintenance and Operation

The Downtown Long Beach Property-Based Business Improvement District

Downtown Long Beach PBID Annual Assessment Rate	Standard Zone	Premium Zone
All Properties for Lot Frontage per Linear Foot	$9.692	$15.655
Plus Lot SF + Building SF per Square Foot		
Commercial and Government Properties	$0.0423	$0.0465
Parking Structures	$0.0277	$0.0318
Residential and Non-Profit Properties	$0.0130	$0.0172

Similar to Santa Monica, Long Beach has a Downtown Long Beach Property-Based Business Improvement District. This PBID is a special assessment district formed in 1998 and renewed in 2003 and again in 2013. It levies assessments on downtown properties located within the district boundaries that receive special benefits. The assessments fund enhanced maintenance, public safety, beautification, marketing, and economic development programs, above and beyond the levels provided by the City of Long Beach.

If the City of Long Beach builds these Plan improvements with grants and tax revenue, it would be reasonable for the property owners in the immediate vicinity of the improvements who stand to benefit from them to agree to take on the maintenance responsibility. In this manner, the property owners ensure that the improvements are well maintained over the course of decades, probably at a level beyond what the City is able to sustain. The existence of the Downtown PBID indicates that an experienced organization is already available for the levying of assessments and performance of maintenance functions.

Amendments to the California State Constitution have changed the application of assessment law, including PBIDs, to allocate cost to all parcels receiving benefit, including public agency owned parcels. The Downtown Long Beach PBAD levies assessments based upon a combination of lot front-footage and lot plus building square footage, and the current schedule and benefit zones are shown in the table above.

For these additional or overlay assessments to be accepted by a majority of the property owners, the following considerations are extremely important:

The benefits of the improvements built and the cost of maintenance assessment must align in terms of timing and location. Because of the price tag of $71.06 million, the improvements will be built in separate phases or as separate projects. This means that the assessments would be levied against benefiting properties, primarily properties with frontage on the improved streets or alleys, only after the improvements are built. If the assessments are instituted first and the construction of improvements are delayed, there will be risk of litigation based on "unfair assessment" derailing the project.

The cost impact on each property must be understood and communicated effectively. Assessment legislation requires that an Engineer's Report be prepared that allocates the additional cost to each property being assessed. Without each property owner understanding his or her future assessment burden, support will be tepid at best.

Figure 6.4 Downtown Long Beach properties currently participating in the PBID.

An updated PBID Management Plan will be needed to formalize the overlay assessment process. To build support, the previous PBID Management Plan process included round-table meetings with property owners, one-on-one sessions with key property owners, meetings with condominium homeowners associations, and open houses for residents. Without a majority vote of property owners, tabulated by the dollar amount of annual assessments, this overlay assessments will not be approved by the Long Beach City Council.

The City has leverage and may need to use it. Because the annual maintenance assessments will be relatively modest as compared to the City's front-end capital cost, the City has leverage to prioritize the improvement projects in accordance to the willingness of property owners to take on the maintenance responsibility. In another words, streets where a majority of property owners agree to the maintenance assessment will receive the early rounds of capital improvements.

Several of the proposed priority projects lie outside the Downtown PBID boundary and that challenge needs to be resolved. The possible solutions include: 1) expand the PBID, 2) form one or more additional districts for assessment purposes, 3) fund the maintenance of Plan improvements outside the PBID boundary with some other instrument, and/or 4) defer the construction of those Plan improvements until maintenance funding can be secured.

Downtown Long Beach Associates (DLBA)

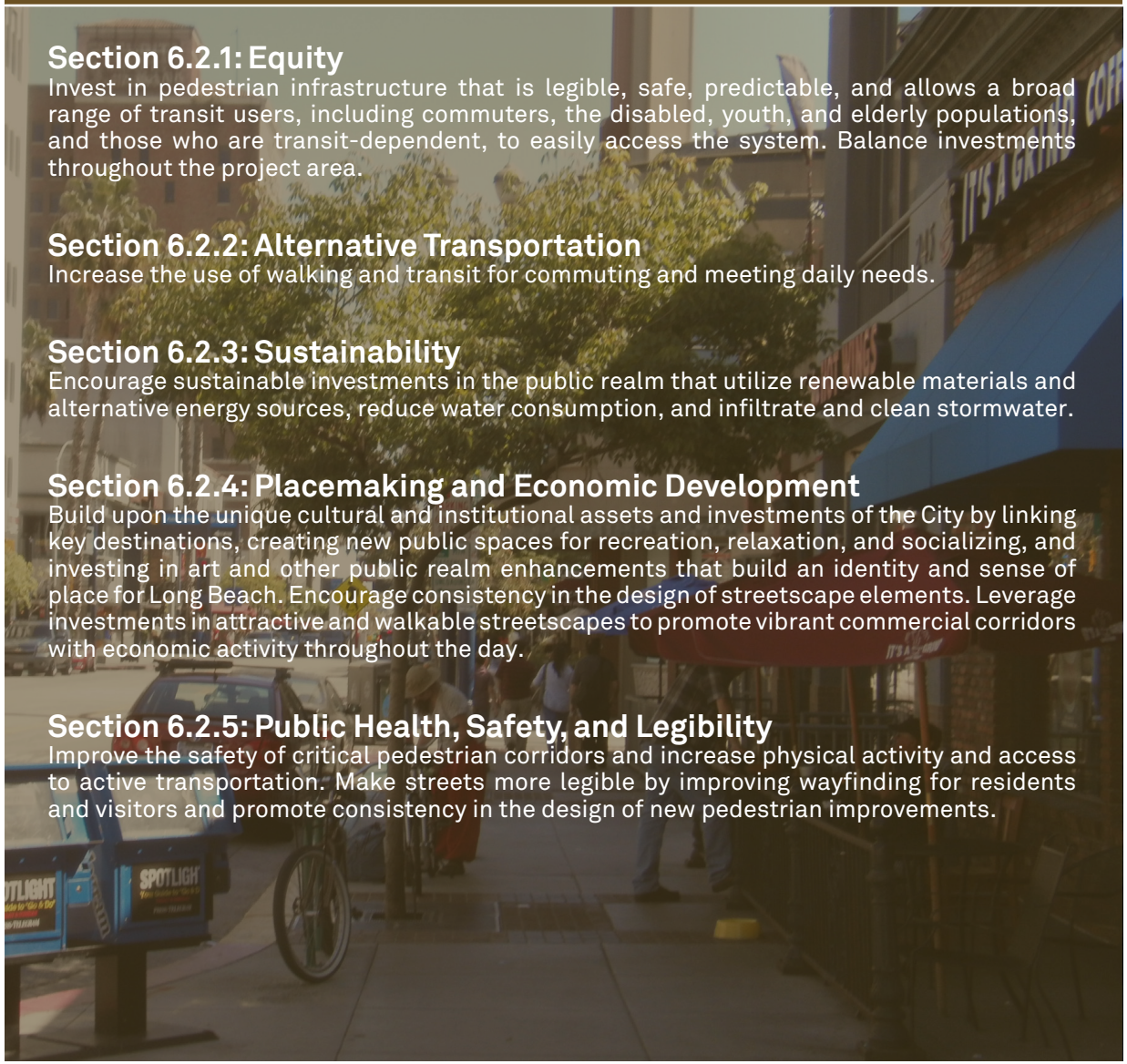
This PBID is governed by the Downtown Long Beach Associates, a 501(c)6 non-profit organization representing property owners, businesses and residents within the district. The DLBA board currently has 19 voting members, of which nine are commercial property owners and two are residents. DLBA determines budgets, sets assessments rates within the parameters contained in the Management Plan, and monitors service delivery by its staff and contractors. If the City of Long Beach is to invest some $50 million or more in pedestrian improvements within this PBID, which will contribute greatly to the area's future prosperity, it would certainly be in a position to argue for increased representation on the DLBA board of directors.

6.2 Policy Directions

Over the past 20 years, many cities have realigned their approach to mobility to be more inclusive of non-motorized forms of transportation. The most important change has been the introduction of "complete streets," a movement that views streets not just as a means of moving people from one place to another, but as places for exercise, social interaction, relaxation, and community events. Further, as the City of Long Beach is almost completely built-out and vacant land becomes scarce, public rights-of-way are becoming an important resource as the acquisition, construction, and maintenance of park space becomes increasingly expensive.

This section provides an overview of general policy directions for the City of Long Beach to consider as it continues to create a safe, livable and welcoming environment for pedestrians, transit users, and other non-motorized modes of travel. Objectives, potential programs, and other initiatives are organized by the five overall PMP goals presented at right.

Goals for the Long Beach Downtown and TOD Master Plan



Section 6.2.1: Equity
Invest in pedestrian infrastructure that is legible, safe, predictable, and allows a broad range of transit users, including commuters, the disabled, youth, and elderly populations, and those who are transit-dependent, to easily access the system. Balance investments throughout the project area.

Section 6.2.2: Alternative Transportation
Increase the use of walking and transit for commuting and meeting daily needs.

Section 6.2.3: Sustainability
Encourage sustainable investments in the public realm that utilize renewable materials and alternative energy sources, reduce water consumption, and infiltrate and clean stormwater.

Section 6.2.4: Placemaking and Economic Development
Build upon the unique cultural and institutional assets and investments of the City by linking key destinations, creating new public spaces for recreation, relaxation, and socializing, and investing in art and other public realm enhancements that build an identity and sense of place for Long Beach. Encourage consistency in the design of streetscape elements. Leverage investments in attractive and walkable streetscapes to promote vibrant commercial corridors with economic activity throughout the day.

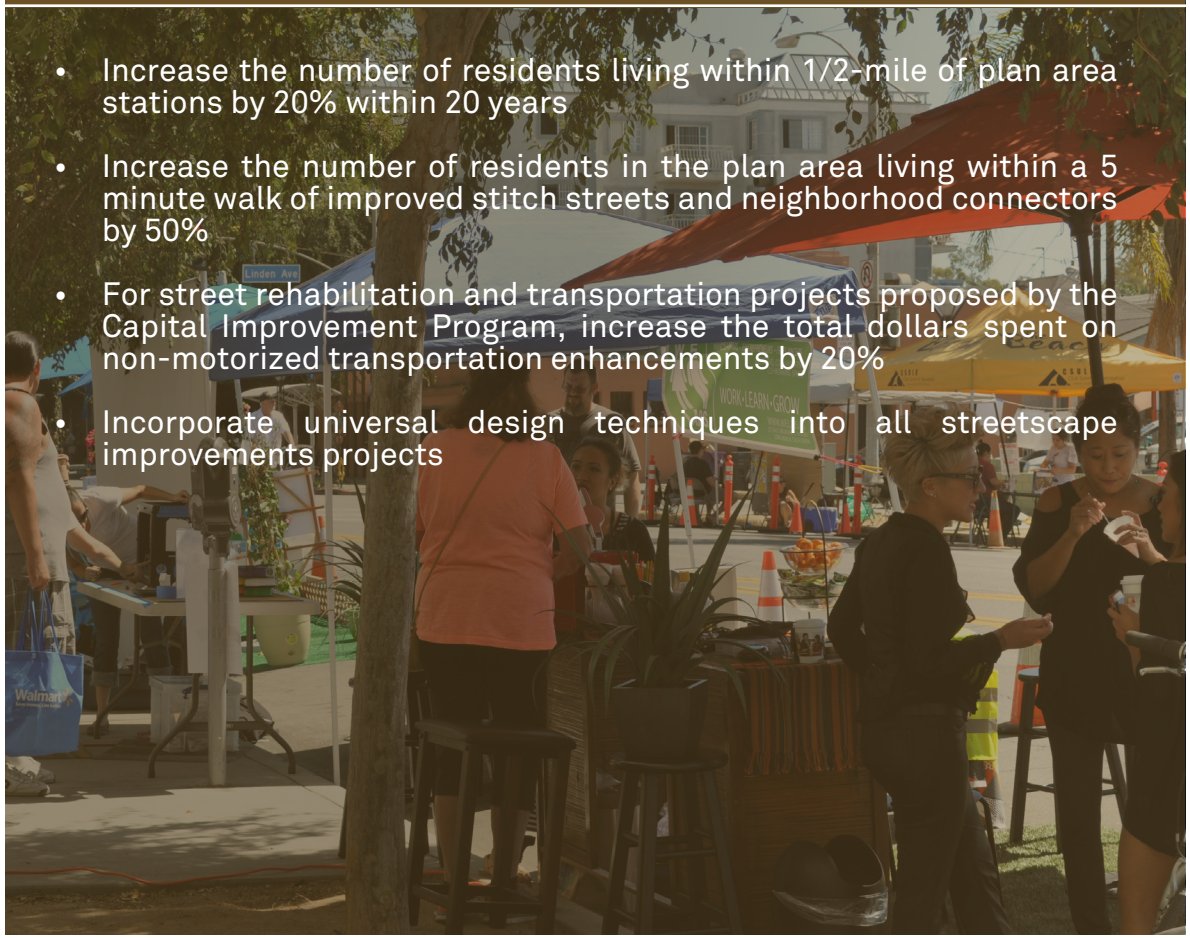
Section 6.2.5: Public Health, Safety, and Legibility
Improve the safety of critical pedestrian corridors and increase physical activity and access to active transportation. Make streets more legible by improving wayfinding for residents and visitors and promote consistency in the design of new pedestrian improvements.

6.2.1 Equity

GOAL

Invest in pedestrian infrastructure that is legible, safe, predictable, and allows a broad range of transit users, including commuters, the disabled, youth, and elderly populations, and those who are transit-dependent, to easily access the system. Balance investments throughout the project area and among modes, with consideration given to non-motorized forms of transportation.

OBJECTIVES



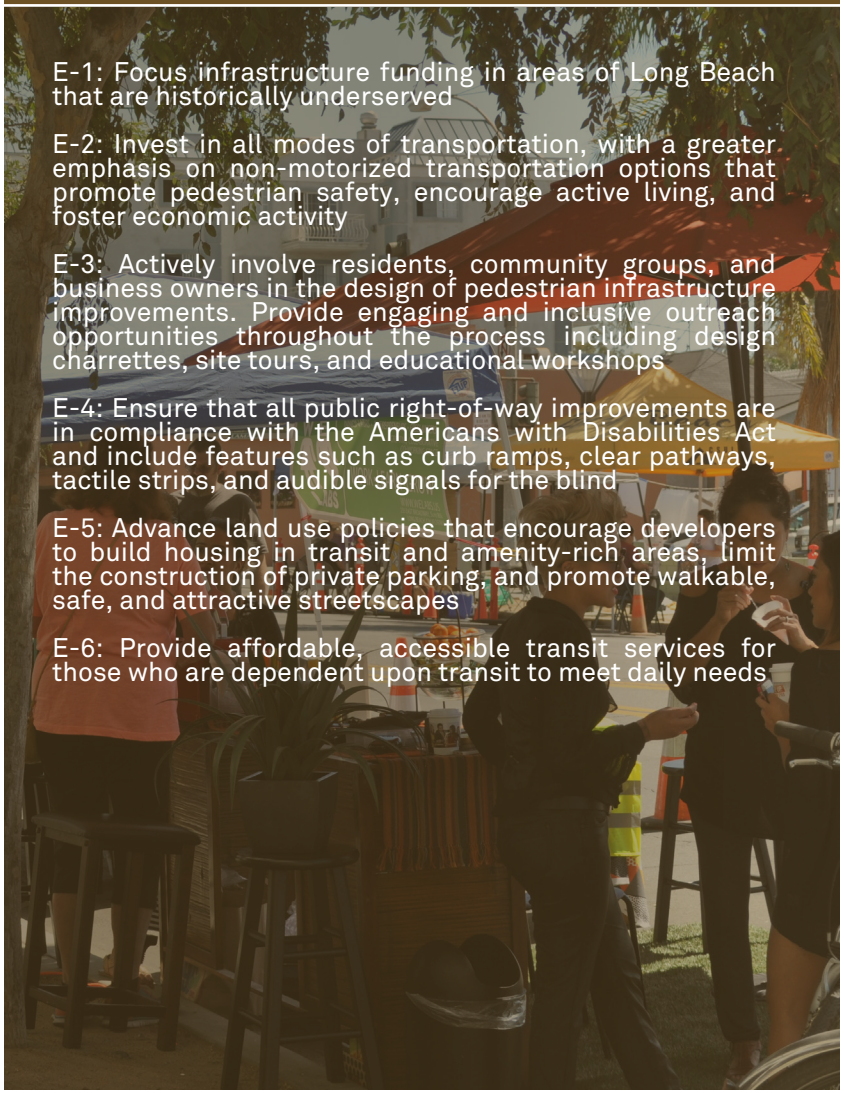
- Increase the number of residents living within 1/2-mile of plan area stations by 20% within 20 years
- Increase the number of residents in the plan area living within a 5 minute walk of improved stitch streets and neighborhood connectors by 50%
- For street rehabilitation and transportation projects proposed by the Capital Improvement Program, increase the total dollars spent on non-motorized transportation enhancements by 20%
- Incorporate universal design techniques into all streetscape improvements projects

6.2.1 Equity

EXISTING POLICIES RELATED TO EQUITY

	Community Health Improvement Plan 2014-2020	Downtown Plan	Land Use Element	Blue Line Bicycle and Pedestrian Access Improvement Plan	Mobility Element	Parks and Open Space Element	Safe Long Beach Violence Prevention Plan	Bicycle Master Plan
Develop a series of action strategies and design solutions to improve the physical environment for residents	x							
Involve citizens in transportation planning and project design decisions for improving the City's "complete streets" and bicycle and pedestrian networks					x			
Increase multi-modal access to major employers and educational institutions, including Long Beach Community College					x			
Consider every street in Long Beach as a street that bicyclists and pedestrians will use					x			
Consider effects on overall mobility and various travel modes when evaluating transportation impacts of infrastructure projects					x			
Encourage non-motorized transportation services, such as pedi-cabs, bicycle, and other non-motorized vehicle rentals.					x			
Collaborate with the Long Beach Health Access Collaborative to identify barriers to access and advocate for improved access to prevention-oriented services in accessible locations such as school-based clinics	x							
Use universal design techniques to accommodate pedestrians of all ages and abilities and ensure compliance with the Americans with Disabilities Act				x				
Identify streets or street segments where special design treatments are desired to achieve community goals					x			
Replace any displaced publically-owned recreational open space on a per-acre basis, in kind, within areas of the City most underserved by recreational open space						x		
In creating additional recreational opportunities, priority shall be given to areas of the City that are the most underserved						x		
Give special consideration to handicapped and disadvantaged residents in accessing public recreational resources						x		

POLICIES



E-1: Focus infrastructure funding in areas of Long Beach that are historically underserved

E-2: Invest in all modes of transportation, with a greater emphasis on non-motorized transportation options that promote pedestrian safety, encourage active living, and foster economic activity

E-3: Actively involve residents, community groups, and business owners in the design of pedestrian infrastructure improvements. Provide engaging and inclusive outreach opportunities throughout the process including design charrettes, site tours, and educational workshops

E-4: Ensure that all public right-of-way improvements are in compliance with the Americans with Disabilities Act and include features such as curb ramps, clear pathways, tactile strips, and audible signals for the blind

E-5: Advance land use policies that encourage developers to build housing in transit and amenity-rich areas, limit the construction of private parking, and promote walkable, safe, and attractive streetscapes

E-6: Provide affordable, accessible transit services for those who are dependent upon transit to meet daily needs

6.2.1 Equity

PROGRAMS AND INITIATIVES

Infrastructure Equity Task Force
Convene a City Manager-appointed task force to annually review projects proposed for the Capital Improvement Plan to ensure that the City's equity goal is met. Using equity-focused criteria, the task force should prioritize investments that are geographically balanced, focus on non-motorized forms of transportation, and improve mobility in areas with a high percentage of residents who are economically disadvantaged and those who are physically disabled. The task force should be comprised of elected officials, equity advocacy groups, and residents, with technical support from City staff.

Transportation Equity Assessment
Conduct an in-depth study to understand the state of pedestrian infrastructure and options for mobility in historically disadvantaged areas of the City of Long Beach. The study should include a baseline of current pedestrian infrastructure and socio-economic conditions, and prioritize investments that will expand opportunities for quality housing and improve non-motorized access to living-wage jobs, educational institutions, shopping, recreation, and community services.

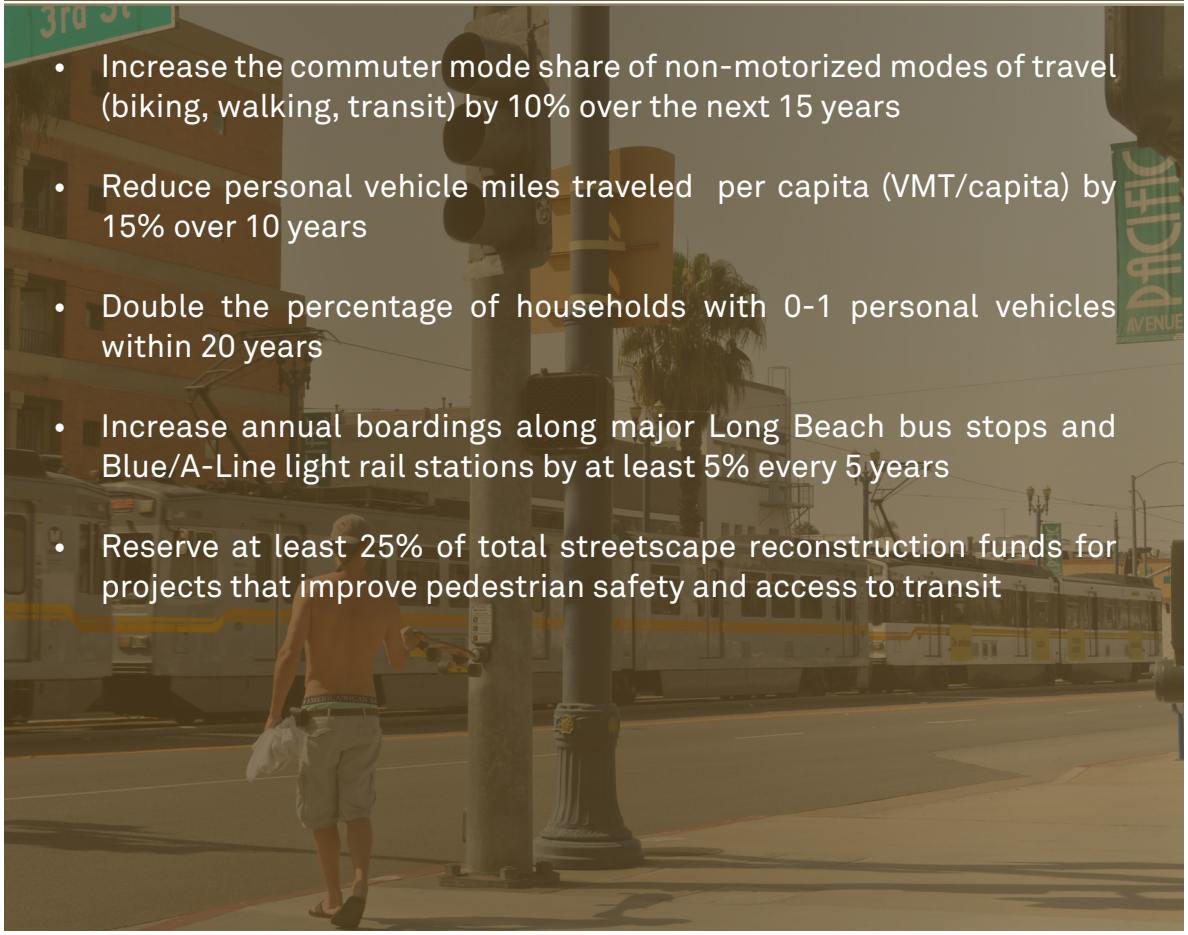
Accessible Sidewalk Initiative (ASI)
Conduct an inventory of all sidewalks within the plan area to identify, evaluate, and recommend the removal of barriers that make travel difficult for the elderly and physically disabled. These barriers could include replacing sidewalk segments damaged by tree roots, installation of curb ramps at intersections to facilitate the movement of wheelchairs, or adding audible signals to improve safety for the blind. Incorporate ASI principles and recommendations into all PMP priority projects.

6.2.2 Alternative Transportation

GOAL

Increase the use of walking and transit for commuting and meeting daily needs.

OBJECTIVES



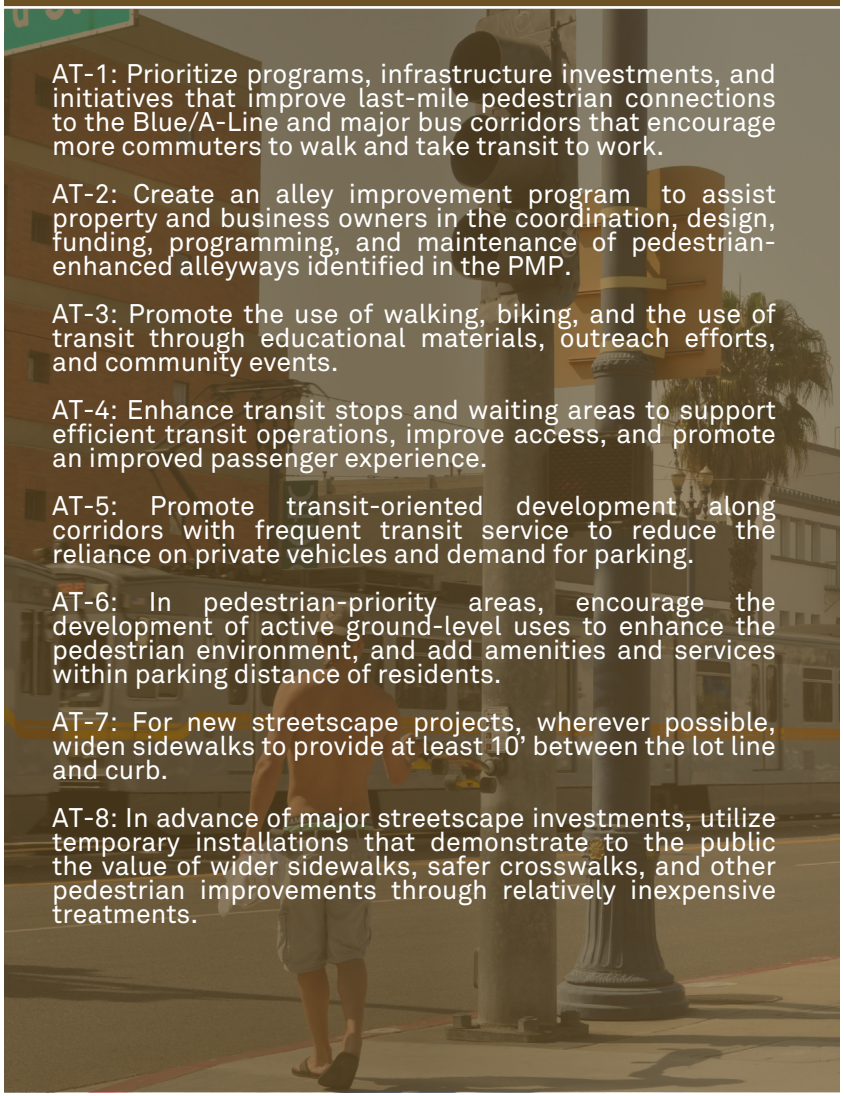
- Increase the commuter mode share of non-motorized modes of travel (biking, walking, transit) by 10% over the next 15 years
- Reduce personal vehicle miles traveled per capita (VMT/capita) by 15% over 10 years
- Double the percentage of households with 0-1 personal vehicles within 20 years
- Increase annual boardings along major Long Beach bus stops and Blue/A-Line light rail stations by at least 5% every 5 years
- Reserve at least 25% of total streetscape reconstruction funds for projects that improve pedestrian safety and access to transit

6.2.2 Alternative Transportation

EXISTING POLICIES RELATED TO ALTERNATIVE TRANSPORTATION

	Community Health Improvement Plan 2014-2020	Downtown Plan	Land Use Element	Blue Line Bicycle and Pedestrian Access Improvement Plan	Mobility Element	Parks and Open Space Element	Safe Long Beach Violence Prevention Plan	Bicycle Master Plan
Promote shared parking, shared transit, and pedestrian and cyclist use on key transit streets		x						
Establish pedestrian and bicycle priority zones in primary and secondary streets within Downtown. Use traffic-calming measures to ensure safety for bicyclists riding in the street, and at pedestrian crosswalks.		x						
To improve the performance and visual appearance of Long Beach's streets, design streets holistically using the "complete streets" approach, which considers walking, those with mobility constraints, bicyclists, public transit users, and various other modes of mobility in parallel.					x			
Increase mode shift of transit, pedestrians, and bicycles					x			
Support the temporary closure of streets for community and commercial activity that encourages residents to see their streets as public spaces and promote biking and walking in the City					x			
Provide adequate sidewalk widths and clear path of travel as determined by street type classification, adjoining land uses, and expected pedestrian uses					x			
Where feasible, widen sidewalks to improve the pedestrian environment by providing space for necessary infrastructure, amenities, and streetscape improvements					x			
Maintain all transit vehicles, stops, and centers in a clean, safe, and attractive condition					x			
Identify streets or street segments where special design treatments are desired to achieve community goals					x			
Recognize the important function of alleys in the transportation network. Consider alleys, especially continuous alleys, a valuable resource for pedestrian connectivity, access to abutting properties for loading and unloading, utilities, and store/dispose of waste					x			

POLICIES



AT-1: Prioritize programs, infrastructure investments, and initiatives that improve last-mile pedestrian connections to the Blue/A-Line and major bus corridors that encourage more commuters to walk and take transit to work.

AT-2: Create an alley improvement program to assist property and business owners in the coordination, design, funding, programming, and maintenance of pedestrian-enhanced alleyways identified in the PMP.

AT-3: Promote the use of walking, biking, and the use of transit through educational materials, outreach efforts, and community events.

AT-4: Enhance transit stops and waiting areas to support efficient transit operations, improve access, and promote an improved passenger experience.

AT-5: Promote transit-oriented development along corridors with frequent transit service to reduce the reliance on private vehicles and demand for parking.

AT-6: In pedestrian-priority areas, encourage the development of active ground-level uses to enhance the pedestrian environment, and add amenities and services within parking distance of residents.

AT-7: For new streetscape projects, wherever possible, widen sidewalks to provide at least 10' between the lot line and curb.

AT-8: In advance of major streetscape investments, utilize temporary installations that demonstrate to the public the value of wider sidewalks, safer crosswalks, and other pedestrian improvements through relatively inexpensive treatments.

6.2.2 Alternative Transportation

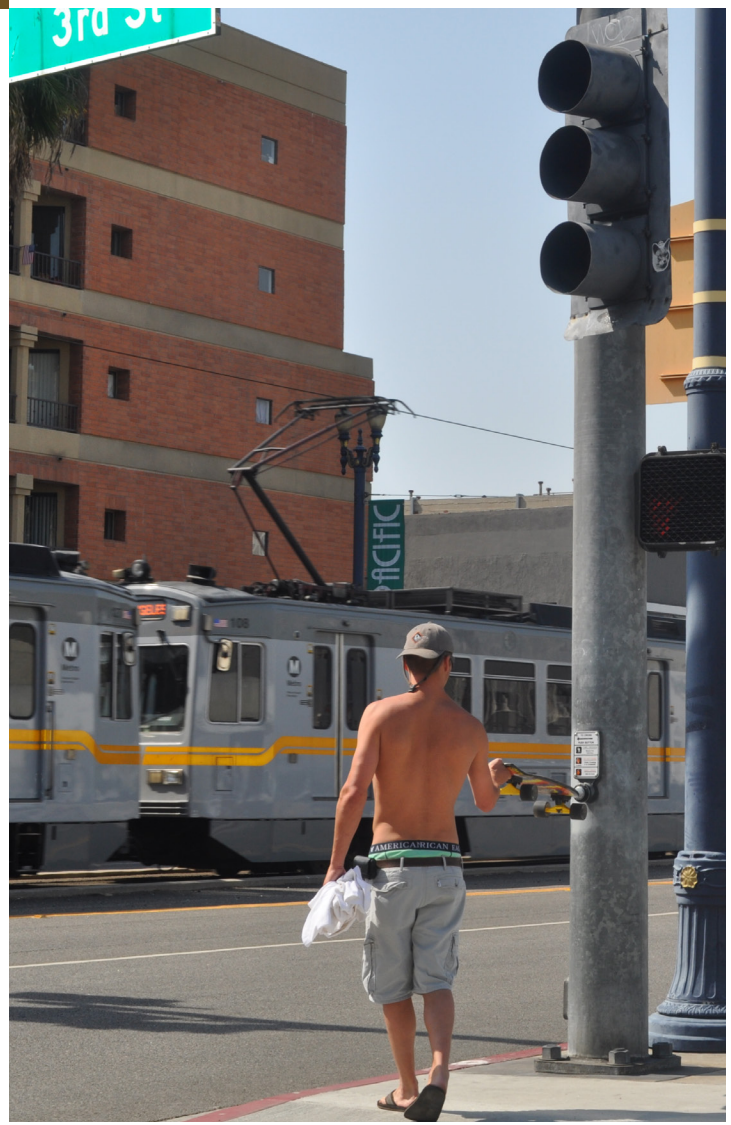
PROGRAMS AND INITIATIVES

Car-Free Long Beach

Organize regular car-free events to encourage Long Beach residents to walk, bike, and take transit to work. September 22nd is officially World Car Free Day, but Long Beach Car-Free days could take place on a monthly basis. Coordinate with Metro, Long Beach Transit, major employers, and other groups to provide information, sponsor events, and offer incentives. Create a website and membership database that allows participants to stay connected to the car-free community and take advantage of services, promotions, and information. Use this database and other survey instruments to track the impact on traffic and transit ridership, and utilize this information as a tool to promote the environmental and health benefits of going car-free.

Multi-Modal Metrics

Track the impact of new PMP priority projects on nearby car and bike usage, local traffic, and pedestrian activity for at least five years after implementation. Utilize in-person and online surveys, traffic count data, and other tools. Prepare ongoing analyses of this data to demonstrate the effectiveness of complete streets improvements and make the case for the implementation of future PMP priority projects.



6.2.3 Sustainability

GOAL

Encourage sustainable investments in the public realm that utilize renewable materials and alternative energy sources, reduce water consumption, and infiltrate and clean stormwater

OBJECTIVES

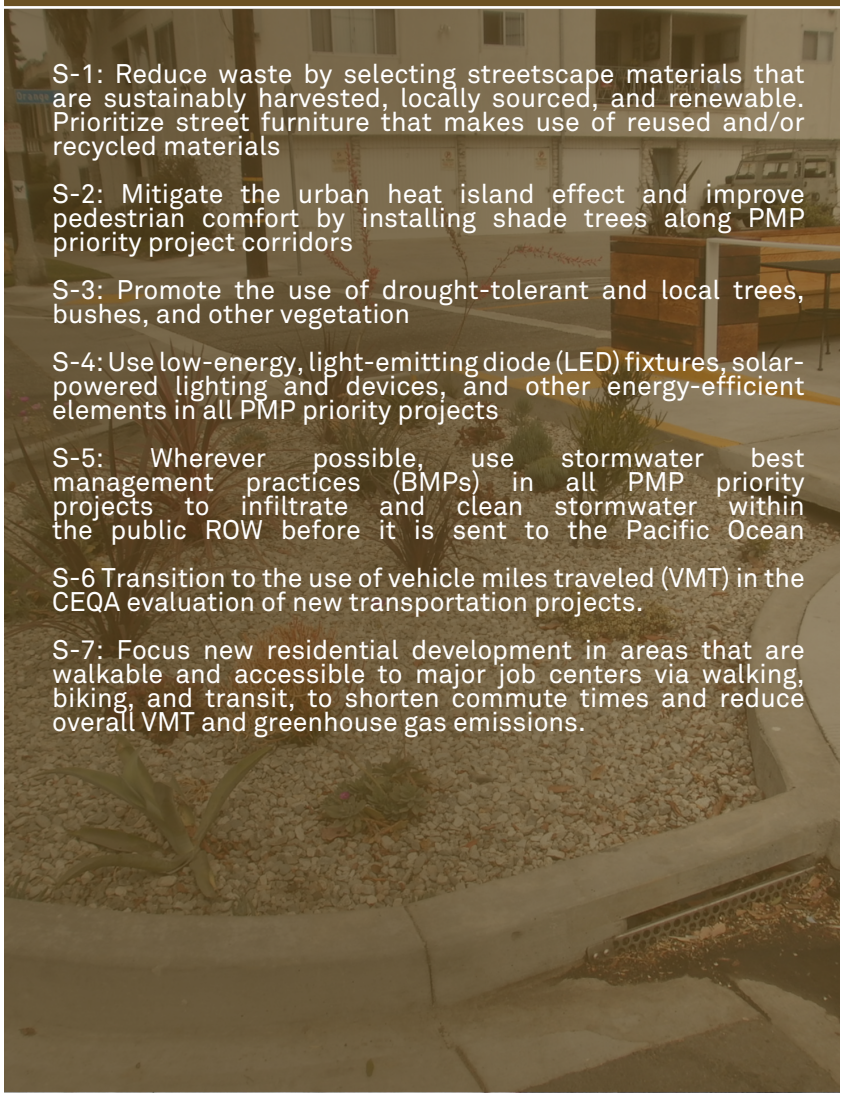
- Mitigate the urban heat island effect by adding trees and vegetation within the public right of way. Increase tree canopy coverage within the plan area by 30% within 15 years
- Reduce the percentage of impervious surface area by 5% within 10 years
- Support the 2035 SCAG Regional Transportation Plan goal to reduce Long Beach GHG emissions by 9% per capita over the next 25 years
- Reduce energy usage within the public right-of-way by 50% over 20 years
- Increase the use of renewable, reused, and recycled materials in all new streetscape projects by at least 50%
- Reduce the number of unhealthy particle pollution days by 40% over the next 15 years
- Increase the number of residents who both live and work within the plan area by 25% over 10 years

6.2.3 Sustainability

EXISTING POLICIES RELATED TO SUSTAINABILITY

	Community Health Improvement Plan 2014-2020	Downtown Plan	Land Use Element	Blue Line Bicycle and Pedestrian Access Improvement Plan	Mobility Element	Parks and Open Space Element	Safe Long Beach Violence Prevention Plan	Bicycle Master Plan
Treat streets as an important part of the public open space system, and integral part of the City's urban forest					x			
Incorporate "green infrastructure" design and similar low impact development principles for stormwater management and landscaping in streets					x			
Reduce vehicle miles traveled (VMT) and vehicle trips through the use of alternative modes of transportation and Transportation Demand Management (TDM)					x			
Sustain the recent improvements in air quality and achieve further significant progress in such improvements to meet State and Federal mandates					x			
Implement low-impact development techniques to reduce and improve the quality of stormwater runoff					x			
Incorporate environmentally sustainable practices in City programs and projects						x		
Protect and wisely-manage groundwater recharge areas and groundwater aquifers						x		

POLICIES



S-1: Reduce waste by selecting streetscape materials that are sustainably harvested, locally sourced, and renewable. Prioritize street furniture that makes use of reused and/or recycled materials

S-2: Mitigate the urban heat island effect and improve pedestrian comfort by installing shade trees along PMP priority project corridors

S-3: Promote the use of drought-tolerant and local trees, bushes, and other vegetation

S-4: Use low-energy, light-emitting diode (LED) fixtures, solar-powered lighting and devices, and other energy-efficient elements in all PMP priority projects

S-5: Wherever possible, use stormwater best management practices (BMPs) in all PMP priority projects to infiltrate and clean stormwater within the public ROW before it is sent to the Pacific Ocean

S-6 Transition to the use of vehicle miles traveled (VMT) in the CEQA evaluation of new transportation projects.

S-7: Focus new residential development in areas that are walkable and accessible to major job centers via walking, biking, and transit, to shorten commute times and reduce overall VMT and greenhouse gas emissions.

6.2.3 Sustainability

PROGRAMS AND INITIATIVES

Transition to VMT Measurement

In 2014, Pasadena became the first city in Southern California to begin measuring transportation-related project impacts in terms of vehicle-miles traveled (VMT), as opposed to level of service (LOS). This development followed the adoption of Senate Bill 743 in 2013, which enables California cities to use the VMT metric under the California Environmental Quality Act (CEQA).

By evaluating projects with LOS, priority is placed on the impacts to vehicular movement. Other modes, such as the use of public transit, walking, or biking, are not factored into this analysis. The typical approach to mitigating impacted intersections has been to widen intersections and add driving lanes, which ultimately disadvantage pedestrians, create unsafe walking environments, and increase greenhouse gas emissions. By evaluating transportation projects with VMT, the City of Long Beach can evaluate potential impacts on overall and per capita vehicle miles traveled, prioritizing alternative modes of transportation and greenhouse gas reduction.

Long Beach Eco-Streets

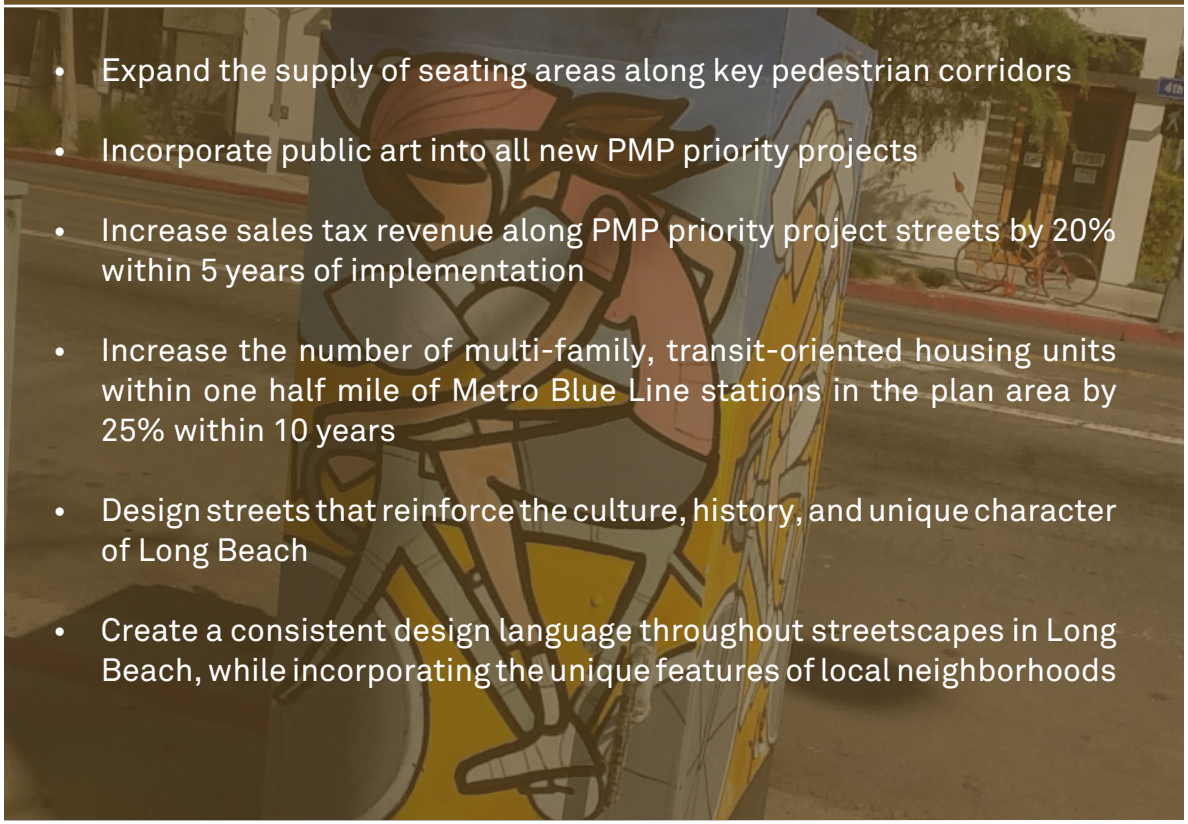
Long Beach Eco-Streets (LBES) is a new City sustainability initiative that aims to reduce the environmental impact of new street reconstruction projects. The first task will be to establish a baseline for typical streetscape projects built in the City of Long Beach to understand the sourcing of materials, pre- and post-operational use by pedestrians, cars, and bicyclists, and impact on greenhouse gas emissions, water quality, energy, and overall livability. With this information, the City should establish targets for limiting waste, improving energy efficiency, reducing vehicle miles traveled, and other key metrics. Using these metrics, all future street reconstruction projects will be evaluated based on their ability to meet new environmental targets.

6.2.4 Placemaking and Economic Development

GOAL

Build upon the unique cultural and institutional assets and investments of the City of Long Beach by linking key destinations, creating new public spaces for recreation, relaxation, and socializing, and investing in art and other public realm enhancements that build an identity and sense of place for Long Beach. Encourage consistency in the design of streetscape elements. Promote vibrant commercial corridors with economic activity throughout the day by investing in attractive streetscapes and public spaces.

OBJECTIVES



- Expand the supply of seating areas along key pedestrian corridors
- Incorporate public art into all new PMP priority projects
- Increase sales tax revenue along PMP priority project streets by 20% within 5 years of implementation
- Increase the number of multi-family, transit-oriented housing units within one half mile of Metro Blue Line stations in the plan area by 25% within 10 years
- Design streets that reinforce the culture, history, and unique character of Long Beach
- Create a consistent design language throughout streetscapes in Long Beach, while incorporating the unique features of local neighborhoods

6.2.4 Placemaking and Economic Development

EXISTING POLICIES RELATED TO PLACEMAKING AND ECONOMIC DEVELOPMENT

	Community Health Improvement Plan 2014-2020	Downtown Plan	Land Use Element	Blue Line Bicycle and Pedestrian Access Improvement Plan	Mobility Element	Parks and Open Space Element	Safe Long Beach Violence Prevention Plan	Bicycle Master Plan
Create new connections and corridors as larger sites are developed		x						
Incorporate mid-block connections, paseos, or small plaza spaces to enhance the pedestrian realm, and provide pedestrian gathering spaces and stopping points		x						
Enhance the attractiveness of streetscapes to raise user awareness and comfort		x						
Provide active retail and pocket parks along pedestrian zones to encourage eyes on the street and active uses		x						
Long Beach will support efforts aimed at preserving its significant historic and cultural buildings and sites			x					
Recognize the important function of alleys in the transportation network. Consider alleys, especially continuous alleys, a valuable resource for pedestrian connectivity, access to abutting properties for loading and unloading, location of utilities, and storage/ disposal of waste					x			
Acquire public rights-of-way dedication and improvements as development occurs					x			
Support the temporary closure of streets for community and commercial activity that encourages residents to see their streets as public spaces and promote biking and walking in the City					x			
Require all new developments to provide usable open space tailored to the recreational demands they would otherwise place on public resources						x		
Provide pedestrian-oriented uses and pocket parks in pedestrian zones to encourage “eyes on the street” and active uses		x						
Provide distinctive design treatments for streets with important Citywide functions					x			
Identify streets or street segments where special design treatments are desired to achieve community goals					x			

POLICIES

PED-1: Provide attractive and creative options for sitting in all new streetscape reconstruction projects, including benches and chairs

PED-2: Engage a diverse group of local residents, businesses, and property owners in the design of PMP priority projects to reinforce the unique qualities of the City of Long Beach

PED-3: Partner with local residents, businesses, advocacy groups, and property owners to assist in the maintenance and stewardship of streetscapes and other public realm improvements

PED-4: For new development projects, work with developers within the plan area to dedicate land to improve and expand streetscapes through wider sidewalks, plazas and open space, and seating

PED-5: Encourage developers to build privately-owned public spaces (POPS), including paseos, pocket parks, plazas, and courtyards, that serve as seamless extensions of the public right-of-way along streets and alleyways selected for priority project improvements

PED-6: Promote active use of streets through community events, festivals, and performances

PED-7: Ensure that all new streetscape improvement projects include trees, street furniture, public art, and other elements that serve to create a sense of place

PED-8: Wherever possible, encourage shared streets and alleyways that place a greater emphasis on pedestrian activity, while safely allowing for the efficient movement of vehicles and service functions

PED-9: Encourage a collaborative approach to streetscape design involving artists, design professionals, and residents that generates fun, creative, innovative, and unique urban design solutions for PMP priority projects

6.2.4 Placemaking and Economic Development

PROGRAMS AND INITIATIVES

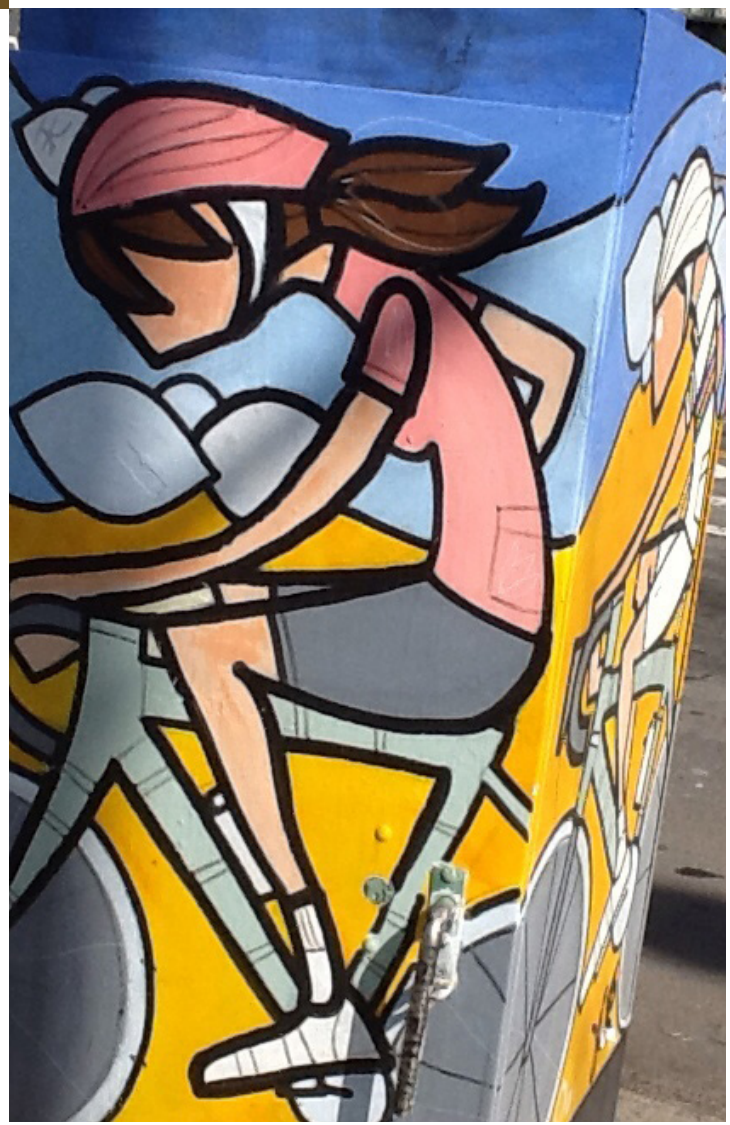
Green Alley Improvement Program

Building on the success of City of Long Beach's parklet program, the City should establish a program to help design, build, and maintain alley improvement projects identified in the PMP. The PMP calls for a network of standard alleys and pedestrianized commercial alleys that link Downtown Long Beach neighborhoods to Blue/A-Line stations. A City-led program could help to mobilize staff and direct resources to fund construction, while also establishing a mechanism by which nearby property owners can manage and maintain alleyway improvement projects. This public-private partnership could include City partners such as the Downtown Long Beach Associates (DLBA) and neighborhood groups. Using a set of metrics and ongoing analysis, the program should track the impact of new green alley projects on nearby retail and restaurant spending, stormwater quality, and the use of these enhanced routes for access to transit.

Streetscape Kit of Parts

The City of Long Beach is known for its eclectic, vibrant, and original art and public realm design, through initiatives such as the utility box painting project (see image at right), Pine Avenue Streetscape, Promenade, and 1st Street Improvement Project. Absent Citywide design standards, however, these projects have produced a piecemeal approach to streetscape design. There is little consistency in design elements between, for example, the Pine Avenue Streetscape and commercial corridors in East Village. Further, the unique, "eclectic" nature of some streetscapes can often result in clutter.

While the unique character of each neighborhood should be reflected in the design of these corridors, the City should develop universal streetscape design standards for all new projects. These standards should limit the menu of options for lighting, benches, and other street furniture, promote a consistent wayfinding scheme along major corridors connecting Metro Blue/A-Line stations, and recommend street dimensions that maximize sidewalk and public space wherever possible.

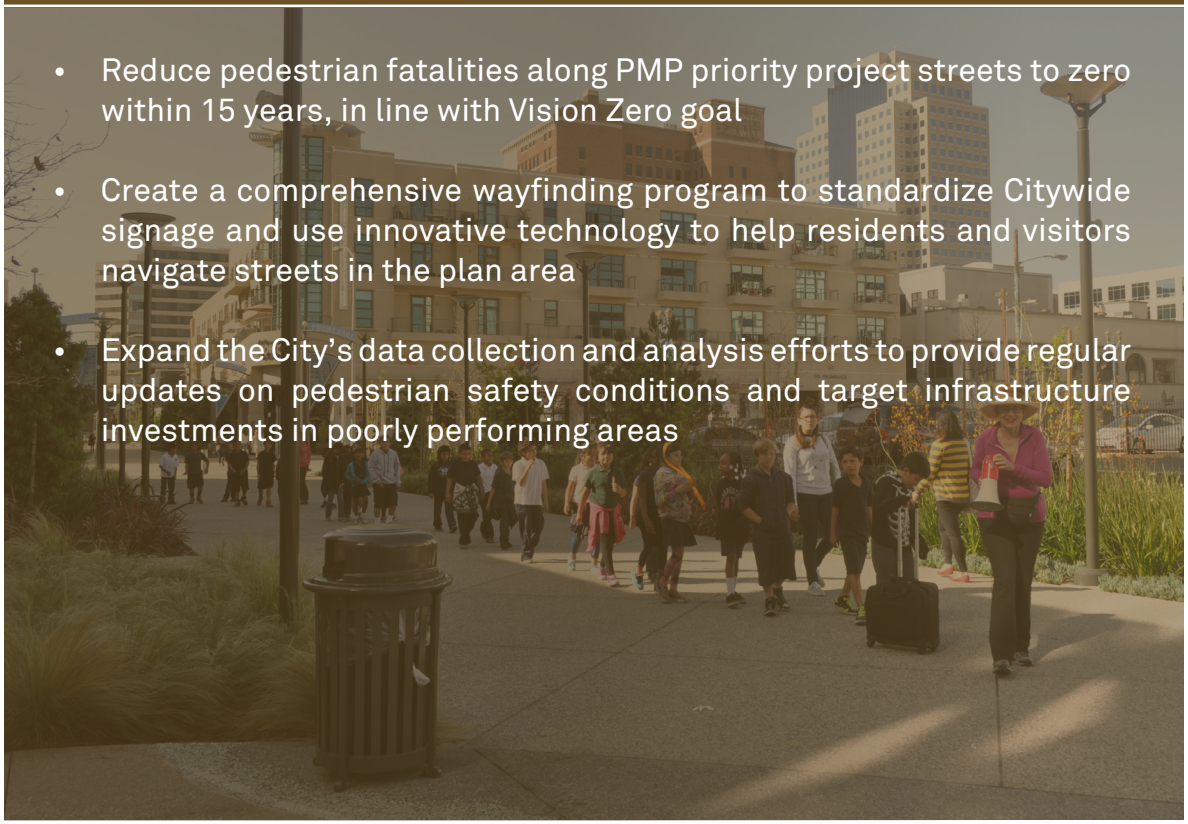


6.2.5 Public Health, Safety, and Legibility

GOAL

Improve the safety of critical pedestrian corridors and increase physical activity and access to active transportation. Make streets more legible by improving wayfinding for residents and visitors.

OBJECTIVES



- Reduce pedestrian fatalities along PMP priority project streets to zero within 15 years, in line with Vision Zero goal
- Create a comprehensive wayfinding program to standardize Citywide signage and use innovative technology to help residents and visitors navigate streets in the plan area
- Expand the City's data collection and analysis efforts to provide regular updates on pedestrian safety conditions and target infrastructure investments in poorly performing areas

6.2.5 Public Health, Safety, and Legibility

EXISTING POLICIES RELATED TO PUBLIC HEALTH, SAFETY, AND LEGIBILITY

	Community Health Improvement Plan 2014-2020	Downtown Plan	Land Use Element	Blue Line Bicycle and Pedestrian Access Improvement Plan	Mobility Element	Parks and Open Space Element	Safe Long Beach Violence Prevention Plan	Bicycle Master Plan
Include lighting along all streets, sidewalks, pedestrian connections, and on private property to ensure comfort and safety		x						
Add high-visibility crosswalks and countdown signals at new and redesigned intersections				x				
Develop a comprehensive wayfinding plan				x				
Improve auto-oriented streets (such as Pacific Coast Highway and Lakewood Boulevard) so that pedestrians using the stores or local services can walk comfortably and feel safer navigating the busy thoroughfare, regardless of their point of origin.					x			
Continue to use innovative designs to expand and enhance the bikeway network and increase public safety					x			
Monitor and track the implementation of health and other elements that contribute to healthy living in the City's General Plan	x							
Maintain all roadways, paths, and sidewalks in a state of good repair					x			
Increase safety in and around schools							x	

POLICIES

HSL-1: Create a Vision Zero program in Long Beach and direct staff to create partnerships and programs, and design infrastructure investments with an overall goal to eliminate fatal pedestrian crashes by 2030

HSL-2: In the design of new streetscape reconstruction projects, ensure that pedestrians are protected from moving traffic through trees, street furniture, on-street parking, and other barriers

HSL-3: Modify crosswalk signals to increase street crossing times in areas with a high percentage of elderly residents and those who are physically disabled

HSL-4: Use traffic calming techniques to slow traffic in areas with a high rate of pedestrian crashes

HSL-5: Reduce speed limits and lane widths in pedestrian priority areas to the extent possible

HSL-6: Support efforts to educate pedestrians and drivers about crosswalk violations and the impact of speeding on pedestrian crashes

HSL-7: Explore technology solutions that provide updated, intuitive, multi-modal wayfinding information for Long Beach residents and visitors

HSL-8: Use Crime Prevention through Environmental Design (CPTED) techniques to make streets safer and more comfortable for pedestrians

HSL-9: Support programs that reduce obesity by encouraging residents to walk, bike, and take transit whenever possible

HSL-10: Minimize crosswalk distances for pedestrians through curb extensions, protected medians, and other devices

HSL-11: Expand the Safe Routes to Schools (SRTS) program to coordinate with and evaluate the impacts of priority projects proposed by the PMP

6.2.5 Public Health, Safety, and Legibility

PROGRAMS AND INITIATIVES

Vision Zero Long Beach

Originating in Sweden, Vision Zero is a movement that aims to reduce pedestrian fatalities caused by cars to zero. While drivers pedestrians will inevitably make mistakes, the Vision Zero approach is to design streets with redundancies to minimize crashes. Investments in street infrastructure should make pedestrians visible, provide protection from moving vehicles, and slow traffic in pedestrian-priority areas. Many of these traffic calming devices, such as chicanes, curb extensions, and traffic circles, are included in the PMP Pedestrian Toolkit. Vision Zero programs also include strict enforcement of traffic laws to lower the risk of fatalities due to high driving speeds. These initiatives should be coupled with a robust public outreach effort. Vision Zero programs are being implemented throughout California, including Los Angeles, San Diego, and San Francisco.

Wayfinding Program

Long Beach, with over 6 million annual visitors, has adopted a Downtown wayfinding scheme to direct pedestrians to major destinations such as the Aquarium of the Pacific, Performing Arts Center, Queen Mary, Pine Avenue, and other locales. Signage has been installed along the Promenade, Ocean Avenue, and the Transit Gallery. Wayfinding signage, however, should be more robust, and provide better orientation to and from key destinations and Metro Blue/A-Line stations. While the PMP has shown wayfinding medallions and kiosks along stitch streets and green alleys, Long Beach should commission a study to recommend a variety of creative, coordinated, and effective wayfinding installations throughout the plan area. The study should also explore the use of mobile technology to assist visitors with identifying destinations and routes. Coordination among Long Beach departments, Metro, and Long Beach Transit will be important, as the system should closely integrate with transit service and a proposed bike share program.

6.3 Conclusion and Next Steps

A proactive, multi-pronged approach to mobility will allow the City to realize the goals and objectives in the Long Beach Downtown and TOD Pedestrian Master Plan

The PMP identifies a number of demonstration projects, priority projects, policies, and programs that will engage residents in the development of safer, more attractive, and economically viable corridors in the City of Long Beach. The PMP is an example of "planning while doing;" the City secured grant funding for priority projects while preparing the PMP. In addition, the City, as it did with the temporary, painted cycle tracks for bicyclists along 3rd and Broadway, will engage the community through temporary demonstration projects to solicit feedback, test assumptions, and build support before permanent priority projects are constructed. The City should take this proactive and inclusive approach as it launches a number of priority projects in the near future.

As priority projects are implemented, the City should continue to foster a culture of mobility through the policies, initiatives, and programs outlined in the PMP. Through strategic partnerships with local organizations and community representatives, the City of Long Beach will become an even more attractive and active destination and serve as a model for developing last-mile connections in the Los Angeles region.

LOFTS