August 9, 2017

PIER 70 SUD

TRANSPORTATION PLAN

EXECUTIVE SUMMARY

The Pier 70 SUD Transportation Plan (the Plan) outlines a management and operations plan intended to accommodate access for multiple modes of transportation to the Pier 70 Project (the Project). The Project is located on the Central Waterfront, adjacent to the Dogpatch neighborhood, and covers a 35-acre site. This site is part of a historic shipyard that will be revitalized into a mixed-use development, comprised of housing, commercial uses, waterfront parks, retail, arts, and light industrial facilities. The Plan is intended to reduce the number of vehicle trips and the impacts of vehicular traffic within the Project, the Pier 70 Area, and its surrounding neighborhoods, while promoting and facilitating an array of safe, efficient, and sustainable means of transportation—such as transit services and pedestrian and bicycle facilities—for residents, workers, and visitors to the site.

The Plan includes a summary of the Project's goals, land-use program, and site design; existing transportation conditions, such as transit, streets, and bicycle and pedestrian facilities; the Project's transportation demand management strategies; and performance and monitoring standards.

This Plan is intended to be a working document that will be refined as the site evolves and any new technology and network improvements come to fruition. Performance standards and monitoring systems will be implemented to understand the impacts of the plan and to make any adjustments as development progresses.

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1 INTRODUCTION

This introductory chapter outlines the purpose of the Pier 70 SUD Transportation Plan and establishes the multi-modal and trip reduction goals of the Project; discusses the key stakeholders involved in implementation of the Plan, including their roles and responsibilities; and provides an overview of the existing context of roadways and transit, pedestrian, and bicycle facilities serving the Project, as well as ongoing and future development projects in the area that will enhance or change the transportation network.

FIGURE 1.1: Pier 70 SUD Map

1.1 PURPOSE, GOALS, AND OBJECTIVES OF THE PIER 70 TRANSPORTATION PLAN

The purpose of the Plan is to outline strategies that support access to the Project for residents, workers, and visitors. The primary goal of the Plan is to create safe and efficient access to the Project for all modes of transportation, with a particular emphasis on promoting pedestrian, bicycle, and transit access to the Project to minimize traffic impacts in the site and the surrounding Dogpatch neighborhood. The Plan establishes the goals, objectives, and strategies to guide the design, development, and operation of the site.

As the Project develops, the project team will expand upon and refine these objectives with input from the City and County of San Francisco (City) and the surrounding neighborhoods. The Plan will also be amended to reflect new opportunities presented by nearby developments, infrastructure, and transit improvement projects progress.

The objectives of the Plan are described below.

01. CREATE A DENSE, MIXED-USE, TRANSIT-ORIENTED DISTRICT
02. ACHIEVE A 20 PERCENT REDUCTION IN ONE-WAY VEHICLE TRIPS
03. PROMOTE SUSTAINABLE TRANSPORTATION OPTIONS THROUGH EDUCATION AND COMMUNICATION
04. FACILITATE AND MAXIMIZE BICYCLE USE
05. DESIGN THE SITE TO CREATE A HIGH-QUALITY PEDESTRIAN EXPERIENCE
06. MAXIMIZE SAFETY FOR ALL MODES OF TRANSPORTATION THOUGHTFUL STREET AND ROADWAY DESIGN
07. EXTEND THE BLUE GREENWAY THROUGH PIER 70
08. MANAGE PROJECT PARKING DEMAND AND MINIMIZE EFFECTS ON PARKING SUPPLY IN THE SURROUNDING NEIGHBORHOOD
09. ENCOURAGE SUSTAINABLE ACCESS AND TRAVEL BEHAVIOR WITH A SUITE OF AMENITIES, PROGRAMS, AND POLICIES
10. HELP IMPROVE NEIGHBORHOOD TRANSPORTATION OPTIONS

1.1.1 DESIGN GOALS

The design goals for the Project are intended to foster multi-modal transportation and meet the Plan objectives, including reducing vehicular traffic and promoting sustainable modes of transportation.

The transportation-related design goals for the Project are:

- **EXTEND THE DOGPATCH COMMUNITY.**
  The intent of the Project is to extend the fabric of the Dogpatch neighborhood and connect it to Pier 70 and the San Francisco Bay. This will be achieved by extending 20th and 22nd Streets to the waterfront.
- **OPEN THE WATERFRONT TO THE PUBLIC.**
  The street layout is designed to connect the site's new and historic buildings, as well as the adjacent Dogpatch neighborhood, to the waterfront. The project includes nine acres of new parks and a multi-modal connection to extend the Blue Greenway along the shoreline.
- **PRIORITIZE BICYCLES AND PEDESTRIANS.**
  This will be achieved by designing a well-connected network of streets, sidewalks, and trails throughout the Project. Streets will be designed with pedestrian and bicycle access and safety as a top priority.

FIGURE 1.2: Dogpatch Character

1.1.2 COMMUNITY GOALS

Forest City began engaging community stakeholders in 2011 to learn more about priorities in the surrounding Dogpatch neighborhood and to ensure that the Project is well integrated into the local culture and community. At the time of writing, more than 120 open houses, focus groups, events, and reviews of project materials have taken place, in which thousands of people have participated. Throughout the learning period, neighbors have consistently expressed several transportation related goals for the Project and surrounding neighborhoods, including:

- Connect Dogpatch and Potrero Hill neighborhoods to the waterfront;
- Ensure that the Project feels connected to the surrounding neighborhoods through its character and accessibility;
- Improve transit access to the Eastern Neighborhoods;
- Increase opportunities and maximize safety for bicyclists and pedestrians; and
- Minimize the Project's impact on the neighborhood's parking supply.

These community goals are reflected in the Plan objectives and design goals (described above) and in strategies described in subsequent chapters of this document.

FIGURE 1.3: Site Context

Pier 70 Project Site

1.1.3 CITY TRANSPORTATION GOALS

The City has numerous transportation-oriented goals that affect the Project. Overall, these goals aim to create a safer transportation experience for all road users; make mass transit, walking, bicycling, and taxi/ride-share/car-share more appealing and accessible; improve the environment and quality of life for San Franciscans; and retain economic competitiveness with improved transit and services to accommodate growth. The following City transportation goals will help improve the transportation network serving Pier 70 and underlie Pier 70's approach to transportation.

TRANSIT FIRST POLICY

In 1998, the San Francisco voters amended the City Charter (Charter Article 8A, Section 8A.115) to include a Transit First Policy, which was first articulated as a City priority policy by the Board of Supervisors in 1973. The Transit First Policy is a set of principles that underscore the City's commitment that travel by transit, bicycle, and foot be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required, by law, to implement transit-first principles in conducting City affairs.

VISION ZERO

Vision Zero is a policy that seeks to eliminate all traffic deaths in the City by 2024. Nearly 1,000 people are injured or killed annually while walking in San Francisco, and more than 200 are severely injured or killed annually in traffic collisions. Through education, evaluation, enforcement, and engineering, the City seeks to reduce severe and fatal traffic injuries across transportation modes, populations, and neighborhoods.

MUNI FORWARD

The overarching goals of the Muni Forward program are to enhance safety, create a rapid network, improve rider experience, and create a more efficient and smarter system. A Rapid Network would prioritize frequency on heavily used routes and improve the system's reliability. To enhance safety, there will be better boarding zones and improved signage. Improvements that directly affect the Project include improved frequency on the 22 Fillmore and T Third Street lines, as well as future improvements to transit service on the 16th Street corridor as part of the 22 Fillmore Transit Priority Project.

SAN FRANCISCO BICYCLE PLAN

The San Francisco Bicycle Plan describes a City program to provide the safe and attractive environment needed to promote bicycling as a transportation mode. The Bicycle Plan identifies the citywide bicycle route network and establishes the level of treatment (i.e., Class I, Class II, or Class III facility) on each route. The Bicycle Plan also identifies near-term improvements that could be implemented within the next 5 years, as well as policy goals, objectives, and actions to support these improvements. It also includes long-term improvements and minor improvements that would be implemented to facilitate bicycling in San Francisco.

BETTER STREETS PLAN

The San Francisco Better Streets Plan focuses on creating a positive pedestrian environment and improving pedestrian safety through measures such as careful streetscape design and traffic calming. The Better Streets Plan includes guidelines for the pedestrian environment, defined as the areas of the street where people walk, sit, shop, play, or interact. Generally speaking, the guidelines are for design of sidewalks and crosswalks. However, in some cases the Better Streets Plan includes guidelines for other areas of the roadway, particularly at intersections.

CLIMATE ACTION STRATEGY

San Francisco's Climate Action Strategy calls for 50% of all trips to be made by non-auto modes by 2017 and 80% of all trips to be made by non-auto by 2030. Other transportation related goals outlined in the Climate Action Strategy include increasing public transportation options and expanding alternative transit infrastructure like dedicated spots for car sharing, van-pooling, etc. The document also sets a goal of making public transportation vehicles clean and efficient, including moving Bay Area Rapid Transit (BART) to 100% renewable energy and Muni buses to 100% renewable fuels.

1.2 KEY STAKEHOLDERS

Table 1.1 lists the key stakeholders involved with the development, implementation, and management of the Plan, along with their roles and responsibilities.

TABLE 1.1: Key Stakeholders, Roles, and Responsibilities

KEY STAKEHOLDERS	ROLE AND RESPONSIBILITIES
Forest City	Forest City is a Project sponsor and is responsible along with the Port of San Francisco for master planning of the Project. Over the build-out of the Project, Forest City will be one of many entities responsible for implementing the Plan.
Pier 70 SUD Vertical Developers	It is likely that Forest City will not build all future buildings at the Project Site. Other vertical developers may build out some parcels. These other developers will also be responsible for implementation of the Plan.
Port	The Port is a Project Sponsor and has jurisdiction over the waterfront, including the majority of the Project site. The Port is also trustee for purposes of the public trust at the site, and will have jurisdiction over many streets. The Port also convenes and staffs the Central Waterfront Advisory Group.
Caltrans	Caltrans oversees the state highway system. Both I 280 and U.S. 101 offer regional access to the Project for vehicular traffic.
SFMTA	SFMTA manages transportation and parking in the City of San Francisco. SFMTA also operates the Muni system, including the light rail and buses. Currently, the T Third Street light rail is the primary transit service connecting the Project and downtown San Francisco. The SFMTA also operates the 22 and 48 bus lines, which provide supplementary access to Pier 70. The SFMTA also led the Waterfront Transportation Assessment to help coordinate a safe and reliable transportation network for the growing San Francisco waterfront.
OEWD	OEWD oversees development projects in the city to ensure a high quality of life for San Franciscans. OEWD is also the coordinating agency behind the Southern Bayfront strategy, which looks to coordinate transportation, parks, affordable housing, and infrastructure benefits across development projects in the southeastern portion of the city.
San Francisco Planning Department	The Planning Department oversees urban planning for the City and County of San Francisco, providing input on the Project's design and managing the Project's environmental review process.
DPW	DPW is in charge of street maintenance and design throughout the city.
SFPD	SFPD is in charge of emergency response and will manage any incidents at the Project. SFPD will have oversight and the ability to override traffic control plans.
SFFD	SFFD is in charge of emergency response, fire suppression, and medical services.
Pier 70 TMA	The Pier 70 TMA will be created to implement and manage the Plan and TDM strategies. The TMA will document monitoring data and efforts in an Annual TMA Report. Coinciding with publication of the Annual TMA Report, the TMA will also host an annual public presentation to share report findings with the community. The Pier 70 TMA will work with other TMAs in the area, such as the Mission Bay TMA, to coordinate TDM efforts.
Caltrain	Caltrain is the main commuter rail line providing access to the Peninsula and South Bay. It has a station at 22nd Street, within walking distance from Pier 70 and also accessible by Muni's 48 bus line.
BART	BART is a regional transportation system that operates in four counties across the Bay Area. The downtown Montgomery Street station is approximately 2.7 miles away from the Project and the 16th Street station in the Mission is 2.5 miles away. When completed, the Central Subway, a 1.7 mile extension of the Muni T Third light rail, will improve access to BART via a connection to Powell Street Station.
Mission Bay/Ballpark Coordinating Committee	The Mission Bay/Ballpark Coordinating Committee ensures that events at AT&T Park, the Warriors Area, and other sites along the central waterfront, including Pier 70, are coordinated and overlapping events are avoided, to the extent feasible.
Community Groups	Community groups in Dogpatch and Potrero Hill offer feedback and insight on the Project design and operations. These groups include the Dogpatch Neighborhood Association, Potrero Boosters, Potrero Dogpatch Merchants Association, and Dogpatch Business Association.

Notes:
BART = Bay Area Rapid Transit
Caltrans = California Department of Transportation
DPW = Department of Public Works
I-280 = Interstate 280
Muni = San Francisco Municipal Railway
OEWD = Office of Economic and Workforce Development
Port = Port of San Francisco
SFFD = San Francisco Fire Department
SFMTA = San Francisco Municipal Transportation Agency
SFPD = San Francisco Police Department
SUD = Special Use District
TDM = Transportation Demand Management
TMA = Transportation Management Association
U.S. 101= United States Highway 101

1.3 PROJECT CONTEXT

In 2007, the Port commenced a master planning and community outreach process for the Pier 70 Area. The planning and community outreach process culminated in 2010 with the endorsement of the Pier 70 Preferred Master Plan. The Master Plan Area consists of five sub-districts:

- **THE COVE.** Includes a nine-acre public park to be developed by the Port;
- **20TH STREET HISTORIC CORE.** A collection of six buildings being rehabilitated for public and private use by Orton Development;
- **SHIP REPAIR.** A 19-acre active ship repair facility;
- **28-ACRE SITE.** A mixed use, infill development site; and
- **ILLINOIS PARCELS.** A seven-acre mixed use infill development site that includes a 3.4-acre Port-owned parcel and a 3.6-acre PG&E parcel called the "Hoedown Yard."

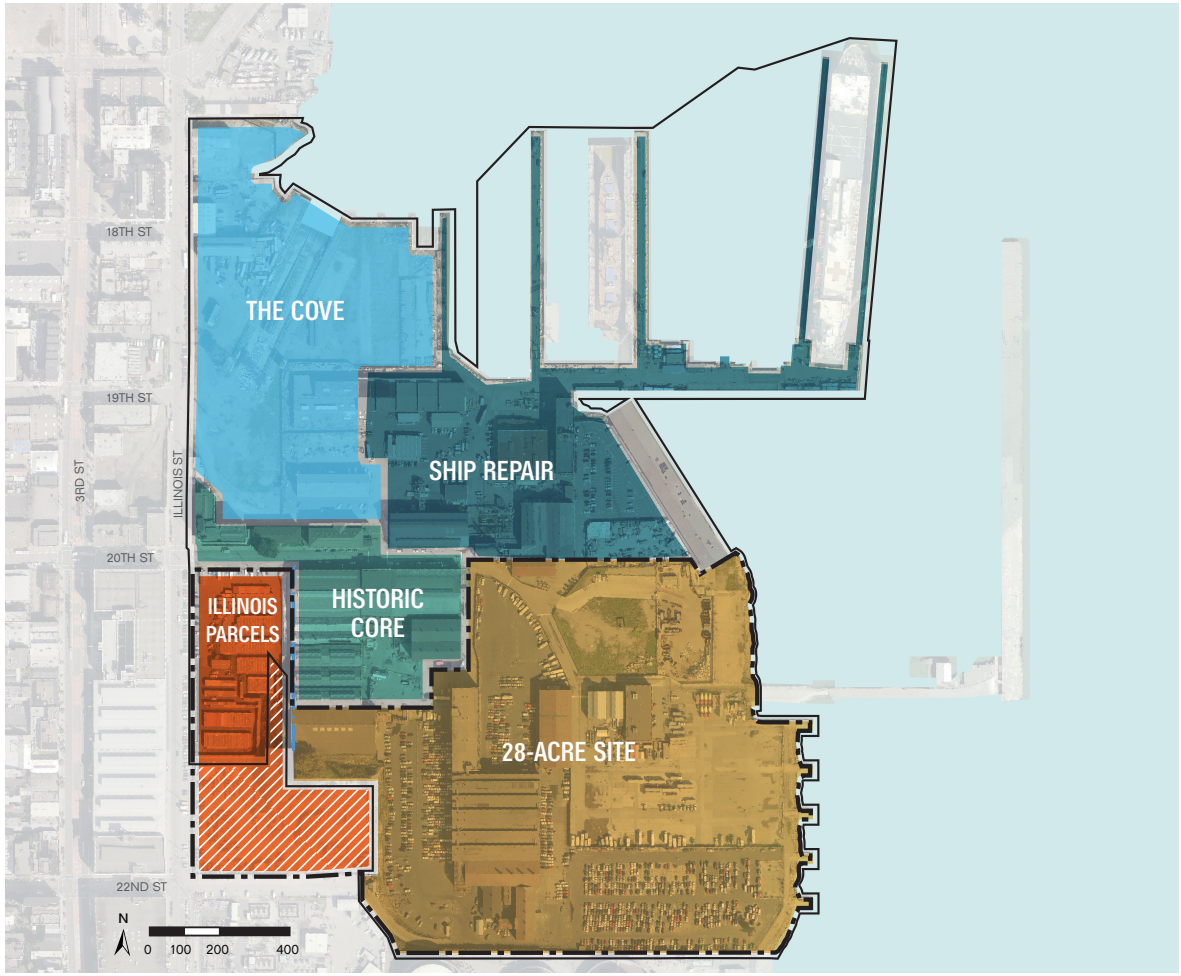

FIGURE 1.4: Pier 70 Sub-Districts

1.3.1 PROJECT SITE AND LOCATION

The Project development area is comprised of the 28-Acre Site and the Illinois Parcels, which in total cover 35 acres and form the Pier 70 SUD. The SUD is bounded by the San Francisco Bay, 22nd Street, Illinois Street, and 20th Street. The 35-acre Project site is just south of Mission Bay and east of the Potrero Hill and Dogpatch neighborhoods. To the south of the Project are the Pacific Gas and Electric Company (PG&E) Potrero Substation and the decommissioned Potrero Power Plant, which is slated for redevelopment in the future. The Project site is currently occupied by storage uses and facilities, artists' studios, vacant buildings, and surface parking lots.

The Project is served by local and regional transit, including the San Francisco Municipal Railway (Muni) and Caltrain. One can currently access the site by 20th Street through the Historic Core, and by 22nd Street, which together form a loop. Illinois Street, which runs on the western boundary of the site, is a main trucking route and also serves as the temporary Blue Greenway bicycle route to Mission Bay, South of Market, and Downtown San Francisco.

1.3.2 TRANSIT IMPROVEMENT PROJECTS

There are several transit improvement projects in progress that will improve transit access for the various users of the Project site.

CENTRAL SUBWAY

The Central Subway is a 1.7 mile extension of the Muni T Third Street light rail line north from Fourth and King Station that will provide a direct link from Bayshore, Dogpatch, and Mission Bay to downtown and Chinatown. It is the second phase of the Third Street Light Rail Project and is slated to open in 2019. The extension north to Chinatown and North beach is expected to bring major service changes to the T Third Street line with related major capacity increases.

MISSION BAY LOOP

In the immediate vicinity of the Project site, a Muni T Third Line station is provided at 3rd Street/20th Street, with additional stations at 3rd Street/ Mariposa Street and 3rd Street/23rd Street. A turnaround loop, known as the Mission Bay Loop, was originally designed in 1998 and is integral to the Central Subway project, and would allow trains to turn around for special events and during peak periods to accommodate additional service. The Loop is under construction and will be completed in 2018.

CALTRAIN MODERNIZATION PROGRAM

Caltrain has a station at 22nd Street, underneath the I 280 aerial structure between Pennsylvania Avenue and Iowa Street, approximately one-half mile west of the Project site. The Caltrain Modernization Program would modernize the Caltrain corridor through a new signaling system, electrification, and introduction of a new fleet of electric trains designed to maximize capacity and reliability, increasing the schedule from 92 trains per day to 114 trains per day. Separately, the Downtown Extension, part of the Transbay Program, would extend Caltrain north of its current terminus at Fourth and King Station to the Transbay Transit Center.

22 RAPID BUS

The 22 Fillmore connects the Central Waterfront/ Dogpatch with Potrero Hill, the Mission District, Duboce Triangle, Lower Haight, Western Addition, Pacific Heights, Cow Hollow, and the Marina. As part of this project, the San Francisco Municipal Transportation Agency (SFMTA) is planning transit priority and pedestrian safety improvements for the 22 Fillmore route along 16th Street. These improvements include transit-only lanes, transit bulbs and islands, new traffic signals, and enhancements for pedestrian safety. This project will correlate with several infrastructure upgrades along 16th Street, including repaving and utility work, and will also include extending the overhead contact system (OCS) from Kansas Street to Third Street to allow for zero-emission transit service into Mission Bay.

10, 11, 12, XX LINES

SFMTA will be upgrading the existing 10 and 12 lines and adding a new 11 and xx (working name) line. Together, these lines will provide improved access for the neighborhood to the Financial District, Montgomery Street BART, and northward to the Marina and Fort Mason (10 and 11), the Mission (including 16th St. BART), Muni Metro at either Church or Castro Station (xx), and Rincon Hill (12).

1.3.3 COMPLETE STREETS PROJECTS

Currently, the Dogpatch and Potrero Hill neighborhoods are experiencing significant growth. There are several pedestrian, bicycle, and public realm improvements underway to accommodate growth and increase the quality of life in the Central Waterfront neighborhoods, while also facilitating a reduction in personal automobile use.

22ND STREET STREETSCAPE PROJECT

A community-initiated master plan for improving the 22nd Street streetscape through Dogpatch was prepared by GreenTrustSF – Central Waterfront, a community-based nonprofit organization, to assess how the street might be redesigned as proposed under the Eastern Neighborhoods Program. The plan focuses on greening strategies such as minimizing sewer and stormwater overflow into San Francisco Bay as well as increasing community open space amenities, by proposing streetscape improvements that draw from principles in the Better Streets Plan, the Pavement to Parks program, and other City initiatives. The plan's goals include supporting 22nd Street as a small-business-oriented, neighborhood street and designing safe streets that decrease the likelihood of pedestrian injuries and fatalities. The plan is now being facilitated in tandem with the City as part of their wider Dogpatch Public Realm Plan. Improvements include sidewalk widening at corner bulb-outs, replacement of sidewalk paving, installation of turf block treatments, infill tree planting and understory planting, new pedestrian lights, new painted crosswalks, and bike route markings.

DOGPATCH PUBLIC REALM PLAN

The City has initiated a program to bring the community together to help prioritize and plan streetscape, open space and other public realm improvement projects in Dogpatch. The initiative helps gather neighbors to set priority projects, determine their needs and desires for the space, determine funding mechanisms, and provide a platform for agency coordination. The goals of the program are to address linkages between parks and other open spaces, ensure that all projects receive a high standard of design and execution, and help create implementation plans and budgets that are reflective of programmed funds.

BLUE GREENWAY

The Blue Greenway is an urban design effort, led by the Port, to create a network of public open spaces and enhance shoreline access through the Central and Southern Waterfront from Mission Creek south to Candlestick Point and Executive Park. The effort will improve the existing San Francisco Bay Trail and create green corridors ("Connector Streets") that connect surrounding neighborhoods and opportunities for recreation along the waterfront. The network of public open spaces and Connector Streets will be linked by a series of key streets that form the "spine" of the Blue Greenway.

EAST-WEST BICYCLE CONNECTION

The SFMTA is conducting a feasibility study to identify a preferred east-west bicycle connection between 17th Street and Owens Street. This connection would close a critical gap in the bicycle transportation network.

INDIANA STREET BICYCLE CONNECTION

The SFMTA is pursuing north-south bicycle access on Indiana Street to close a gap in the bicycle network.

STREET IMPROVEMENTS ALONG OWENS AND MARIPOSA STREETS AT THE I 280 RAMPS

Planned improvements include widening Mariposa Street, adding left-turn lanes, and creating a new signalized intersection at Owens Street. The widening of Mariposa Street includes new sidewalks and crosswalks at the intersections of Mariposa Street and the I 280 on- and off-ramps.

FIGURE 1.5: Bay Trail and Blue Greenway Plan

- Bay Trail Proposed by the Blue Greenway Plan
- Port Proposed Permanent Bay Trail Connection Through the Pier 70 Area
- Proposed Temporary Bay Trail Connection
- Pier 70 Area

FIGURE 1.6: Diagram from Central Waterfront Public Realm Plan

CHASE CENTER INFRASTRUCTURE IMPROVEMENTS

As part of the Chase Center and Mixed-Use Development, the future home of the Golden State Warriors, several transportation infrastructure improvements will be implemented in and around the site, including:

- Restriping 16th Street from 3rd Street to Terry François Boulevard;
- Restriping South Street;
- New intersection controls:
    - The intersection of Terry François Boulevard/South Street will be signalized.
    - The intersection of Bridgeway/South Street will be made a side-street stop-controlled intersection.
    - The intersection of Terry François Boulevard/16th Street will be signalized.
    - The intersection of Illinois Street/16th Street will be made an all-way stop-controlled intersection. If determined by SFMTA that a traffic signal is warranted, the intersection will be signalized.
    - The intersection of Terry François Boulevard/Illinois Street/Mariposa Street will be signalized.
- Construction of new sidewalks along the perimeter of the site (South Street, Terry A. François Boulevard, 16th Street, and 3rd Street); and
- Bicycle network improvements:
    - Class II Bicycle lanes on 16th Street will be extended to Terry A. François Boulevard.
    - With relocation of Terry A. François Boulevard between South and 16th Streets, existing bicycle lanes on both sides of the street will be replaced with a 13 foot-wide two-way protected bicycle lane, known as a cycle-track.
    - At the intersections of Terry A. François/16th Street and Illinois/Mariposa, where new traffic signals are proposed, new bicycle signals will be provided.
    - At the intersection of Terry A. François/16th Street, two-stage turn queue boxes would be installed to facilitate turns between the bicycle lanes on 16th Street and the two-way cycle track on Terry A. François Boulevard.

OTHER SIGNALS AND STREET IMPROVEMENT PROJECTS

New signals and signal modification projects have recently been completed at intersections within one mile of the Project including intersections along Third Street, 16th Street and Mariposa Street. Street repairs and restriping projects have been completed at intersections along 7th Street and Mariposa Streets, as well as street widening projects on 3rd Street, 16th Street and Mariposa, including connections to the University of California, San Francisco Mission Bay Campus. There are numerous other localized intersection and safety improvements planned for the area.

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2 PROJECT DESCRIPTION

This chapter describes the Project's land use plan, proposed roadway network, bicycle and pedestrian improvements, parking, transportation network improvements, and special events at Pier 70.

2.1 LAND USE

The Project is a mixed-use development that will include residential units; commercial spaces; production, distribution, and repair [PDR] uses; retail/restaurant uses; arts and cultural uses; and a network of new streets, alleyways, and open spaces. By design, the Project encourages non-motorized travel as by creating a network of streets, pedestrian paths and public spaces that prioritize walking and biking. The new streets and public open spaces extend from the Dogpatch neighborhood to the waterfront, serving as an expansion of the existing community. The Project also extends the Bay Trail and Blue Greenway along the shoreline, improving pedestrian and bicycle connectivity along the waterfront.

The Project EIR analyzes two scenarios: a maximum residential scheme and a maximum commercial scheme. These scenarios represent two ends in a spectrum of a mix of uses for the Project. For example, if the Project were to be built with the maximum amount of commercial space, only the minimum amount of residential space would be built, and vice versa.

TABLE 2.1: Project Summary

	MAX COMMERCIAL		MAX RESIDENTIAL	
	28-Acre Site	Illinois Parcels	28-Acre Site	Illinois Parcels
RESIDENTIAL (UNITS)	1,100	545	2,150	875
COMMERCIAL (GSF)	2,024,050	238,300	1,095,650	6,600
RALI (GSF)	441,215	43,735	445,180	34,800
OFF-STREET PARKING	2,849	647	2,708	662
ON-STREET PARKING	253	32	253	32
OPEN SPACE (ACRES)	6.5	2.5	6.5	2.5

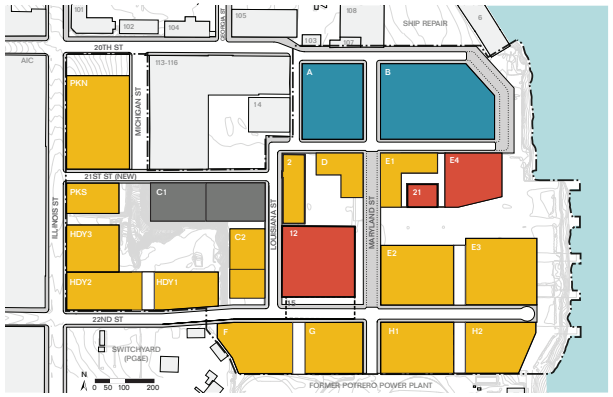


FIGURE 2.1: Illustrative Land Use Plan, Max-Residential Scenario

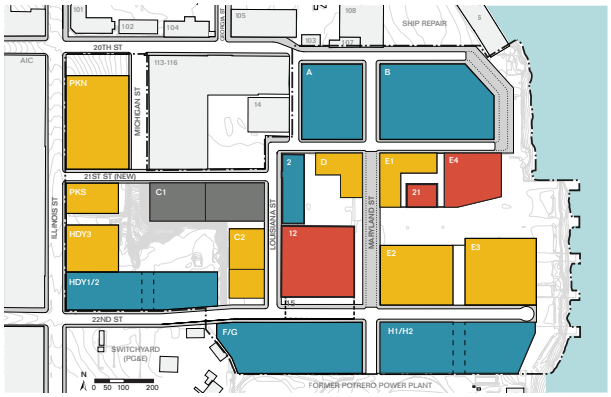


FIGURE 2.2: Illustrative Land Use Plan, Max-Commercial Scenario

Pier 70 Project Site
Commercial-Office
Residential
Retail, Arts, and Light Industrial
District Parking

2.2 STREETSCAPE MASTER PLAN

The Pier 70 SUD Streetscape Master Plan (SSMP) establishes the design of new streets throughout the Project. The SSMP builds upon the Pier 70 SUD Design for Development (D4D), and contains design standards and guidelines for all aspects of the streetscape at Pier 70, including street trees, planting, paving, lighting, furnishing, parking loading zones, and utilities. The SSMP will be administratively approved after the entitlement of the Pier 70 Project.

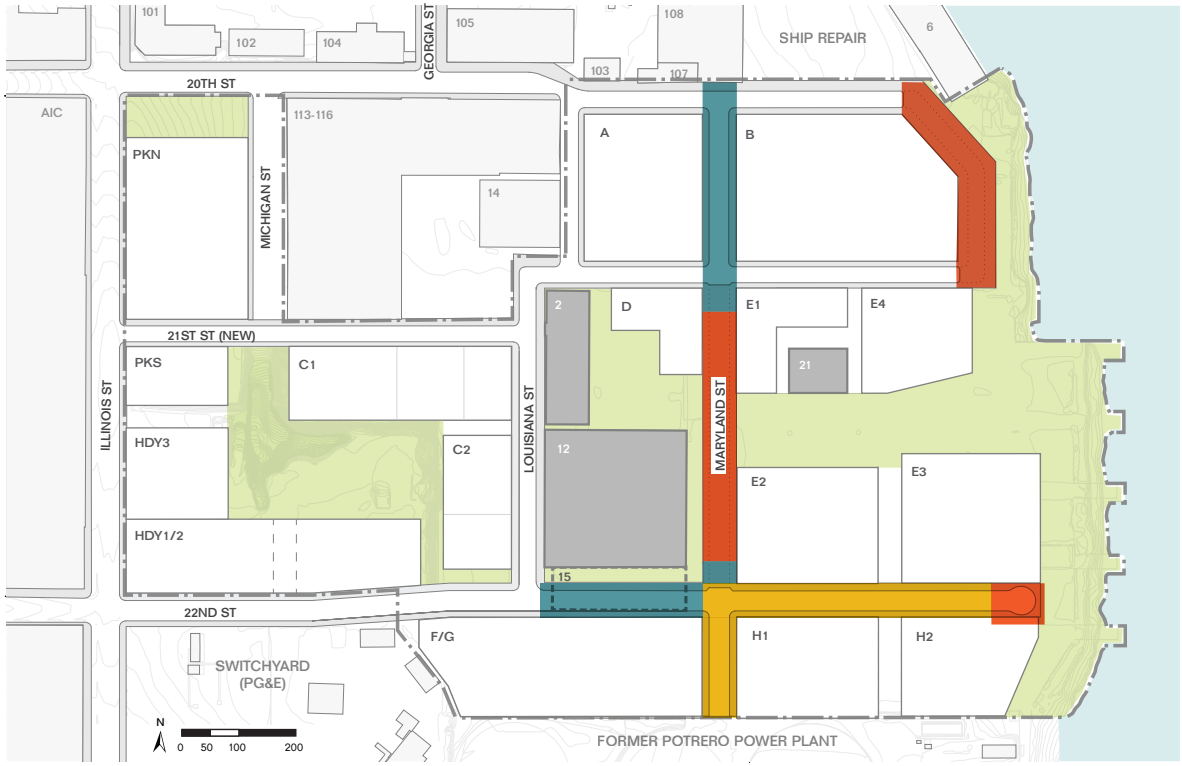


FIGURE 2.3: Special Treatment Zones

Raised Street + Tactile Treatment
Tactile Treatment Only
Optional Location for Tactile Treatment

2.3 PROPOSED ROADWAY NETWORK

The Project will be accessible by Illinois Street at 20th Street, 22nd Street, and a new 21st Street connection. The Project adopts a street hierarchy that defines roadways according to their designed function, with each functional type assigned a range of potential cross-section widths and accommodating a subset of specific design features (such as general-purpose travel lanes, bicycle lanes, on-street parking, sidewalks, etc.).

The street hierarchy calls for a gradual transition in vehicle access from Illinois Street and the western edge of the site to the Bay shoreline and the eastern edge of the site, with areas at the western edge accommodating the most vehicle access and areas at the eastern edge along the waterfront accommodating secondary or limited vehicle access (or none at all). This transition is in keeping with the principles of prioritizing non-motorized travel and creating an attractive pedestrian realm.

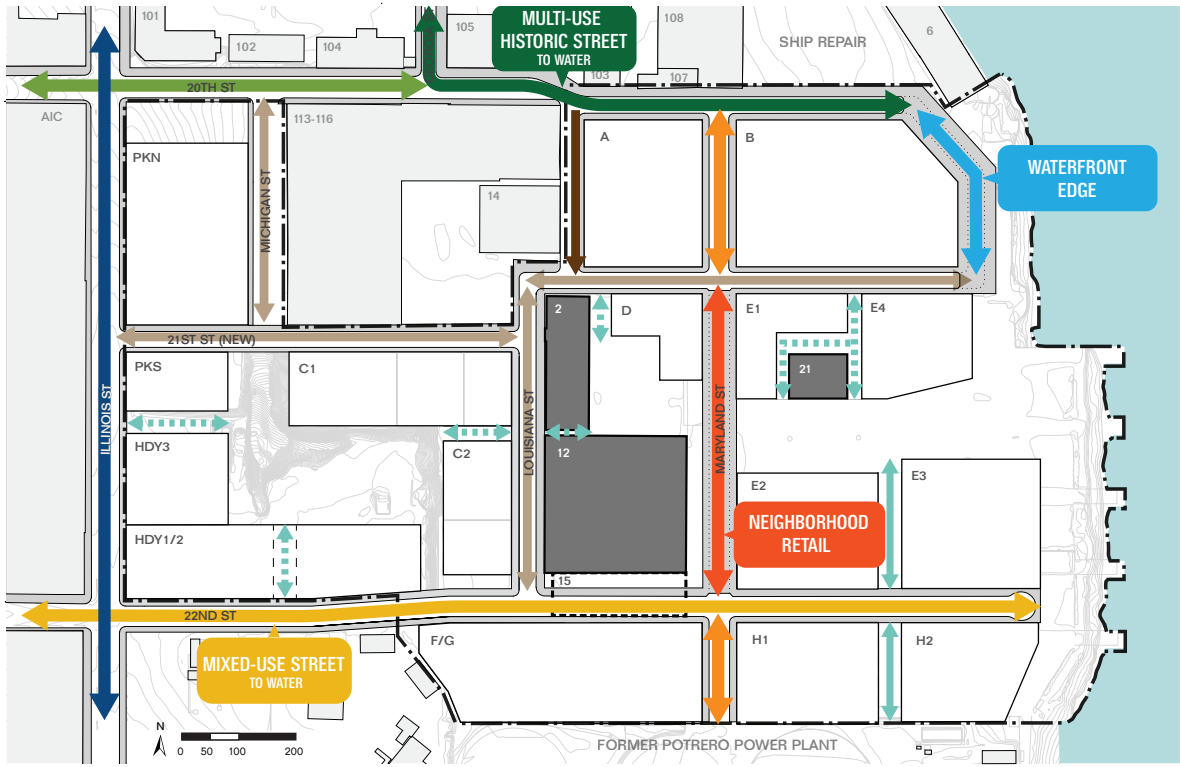


FIGURE 2.4: Street Hierarchy Map

The Project proposes to construct several new streets, including 21st Street, Maryland Street, and Louisiana Street, discussed in more detail below.

2.3.1 20TH STREET

20th Street provides a key pedestrian and bicycle connection to the waterfront, while serving the needs of the Historic Core and local businesses. Running between Illinois Street and the waterfront, 20th Street reflects the historic character of its context, while accommodating high levels of pedestrians, bicycles and vehicular traffic (between Illinois Street and Louisiana Street). 20th Street at the waterfront is a park edge street that is designed to accommodate high levels of pedestrian and bicycle activity, and vehicular traffic along the waterfront. The street provides drop-off and parking, and includes a segment of the Bay Trail and Blue Greenway. The proposal for improvements along 20th Street includes bicycle lanes and sidewalks, and provides for continued access for the Ship Repair area.

2.3.2 21ST STREET

The Project will construct a new 21st Street extending east from Illinois Street to provide an alternative access point for motorized traffic, improve overall connectivity for pedestrians and bicyclists, and accommodate critical emergency vehicle access and commercial loading needs. A new 21st Street will relieve vehicular traffic load generated by the Project and ensure that the vital pedestrian and bikeway connections along 20th Street and 22nd Street safely accommodate walkers and bicyclers. East of the Louisiana Street "S" curve, 21st Street would continue past Maryland Street to the waterfront, looping north to connect into the eastern end of an extended 20th Street, creating a loop that accommodates turn-around functionality and access for large trucks and emergency vehicles.

2.3.3 22ND STREET

22nd Street runs parallel to 20th Street connecting Illinois Street and the waterfront on the southern side of the site and will accommodate pedestrian, bicycle and vehicular traffic. 22nd Street is designed to accommodate pedestrian and moderate levels of bicycle activity, and low levels of vehicular traffic. 22nd Street also serves as a primary connector to the 22nd Street Caltrain Station. Muni anticipates operating a new xx line east-west on 22nd Street into the Project site, turning south on Maryland and will turn around in the adjacent project site (former Potrero Power Plant).

2.3.4 MARYLAND STREET

The Project will construct a new north-south street to serve as a vital commercial and neighborhood retail street and key collector street, providing vehicular, emergency vehicle, and freight loading access for most of the eastern half of the Project site and connecting into the primary vehicular access routes (20th Street and 22nd Street). Maryland Street (between 21st Street and 22nd Street) will feature a shared public way or raised street condition. This shared street will have limited vehicular traffic and give priority to pedestrians over automobiles. The proposed shared public way will allow for temporary closures of the street to vehicular traffic for markets and events, and is adjacent to the open space connecting to the Bay Trail and Blue Greenway. The design for Maryland Street anticipates a potential extension south into the Potrero Power Plant site. The Project will construct the street as a stub terminating at the southern edge of the site that could eventually be integrated into any proposed street network constructed as part of a redevelopment of the Power Plant site.

2.3.5 LOUISIANA STREET/MICHIGAN STREET

The Project will improve existing minor streets at the Project site. In particular, Louisiana Street will be improved and extended to serve as a north-south minor street connecting into all three of the site's east-west access routes (20th Street, 21st Street, and 22nd Street). The existing Michigan Street will also be improved, but will not connect into 21st Street due to roadway grade issues.

The designs for both Louisiana Street and Michigan Street carefully consider the needs of the adjacent Historic Core. Specifically, these streets will accommodate freight loading and other specialized needs for the southern half of the Historic Core (Buildings 14, 113, and 116).

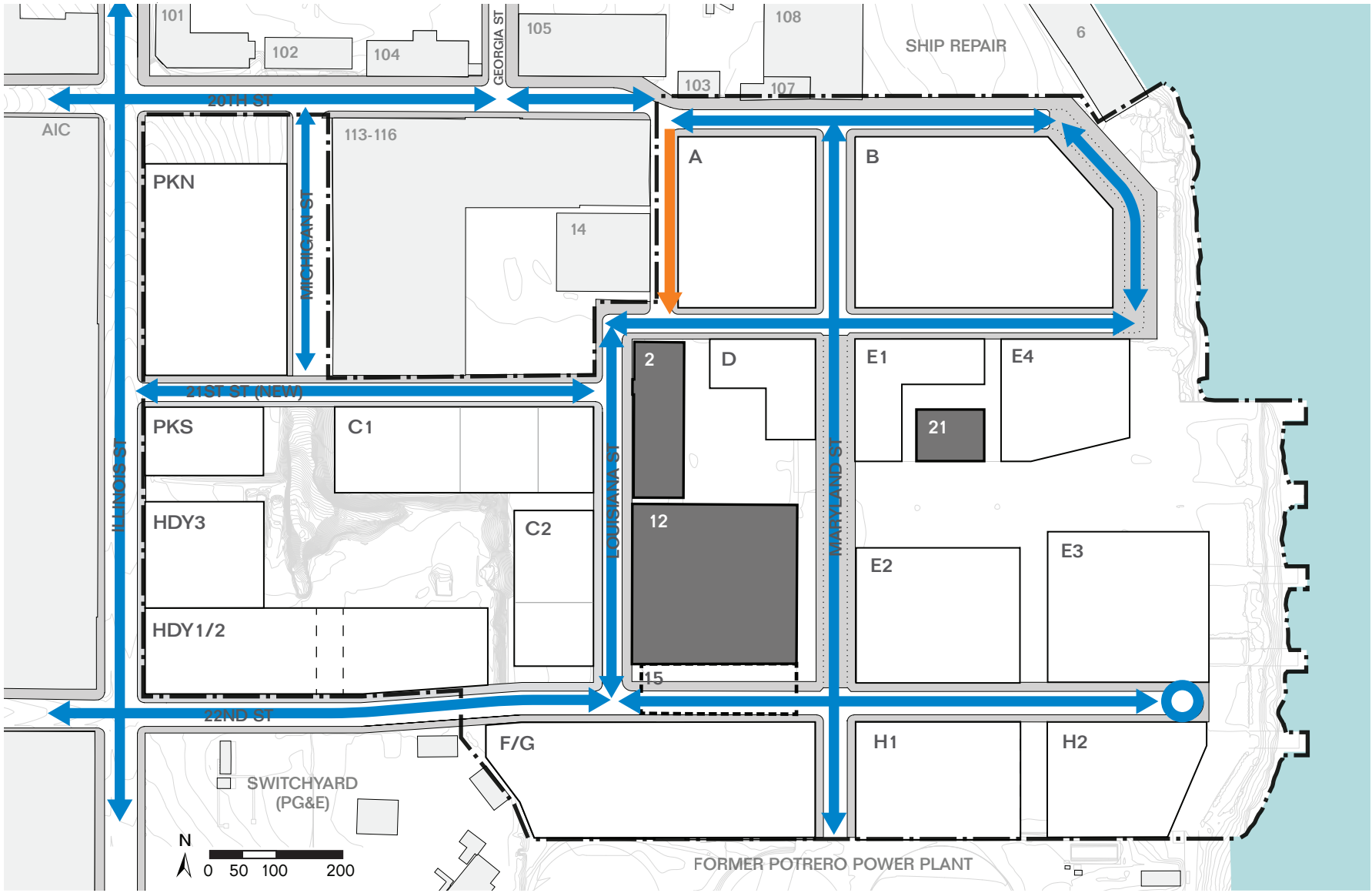


FIGURE 2.5: Vehicular Network Map

2.4 BICYCLE IMPROVEMENTS

The need for enhanced bikeway connectivity serving Pier 70 and the rest of the Central Waterfront has been analyzed at a conceptual level in other planning efforts, including the San Francisco Bicycle Plan, the Blue Greenway project, and the Eastern Neighborhoods Program.

2.4.1 BICYCLE NETWORK

To foster safe and efficient bicycle circulation, the Project extends the Bay Trail and Blue Greenway along the shoreline and adds additional designated Class II and sharrow (Class III) bicycle routes for internal circulation. The Bay Trail and Blue Greenway extends from Crane Cove Park at Georgia and 20th Streets. It continues as a shared-use trail, along 20th Street to the water, then along the shore through the waterfront park. At the southern end, the trail will temporarily access Illinois Street via 22nd Street, but will be designed to connect to any future extension of the Bay Trail directly south of the site. The western portion of 22nd Street from Illinois Street to Louisiana Street accommodates a 6-foot-wide Class II bicycle lane on northern side of the street to facilitate uphill movement. The east portion of the 22nd Street is a sharrow connecting the neighborhood to the waterfront. Maryland is designated as a sharrow, creating a north-south connection between the bicycle facilities at 20th and 22nd Streets.

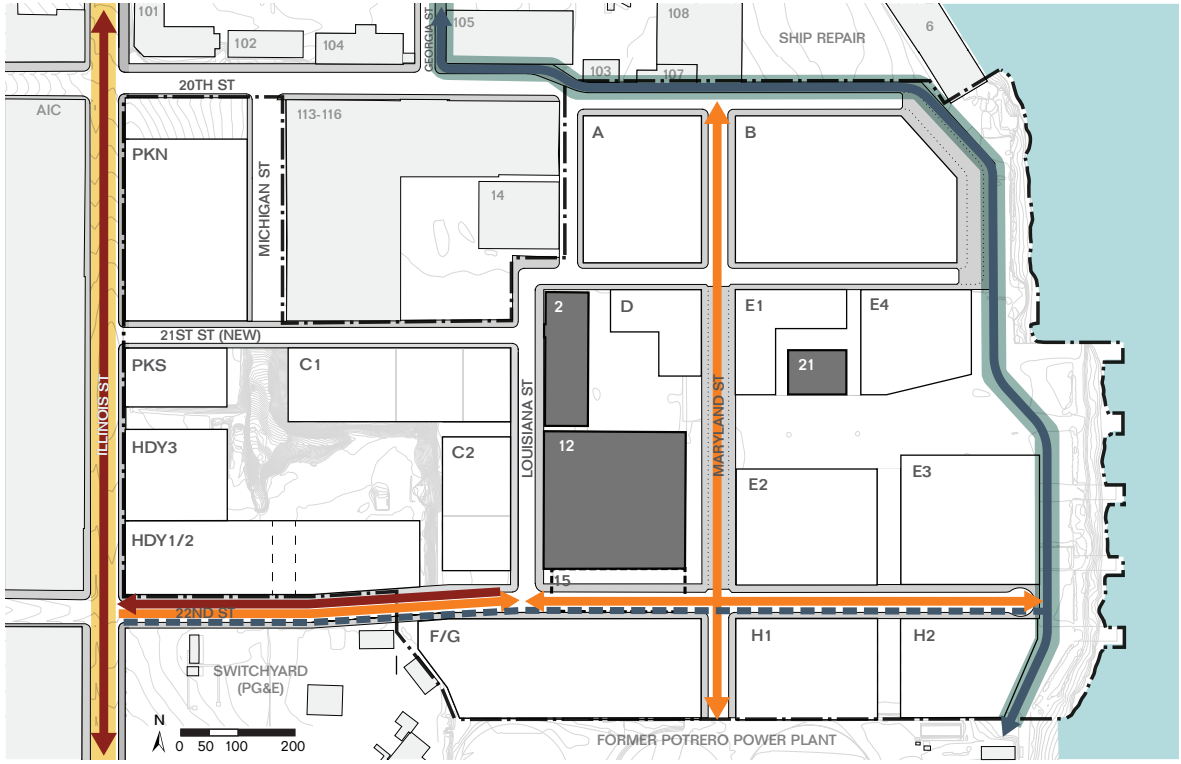


FIGURE 2.6: Bicycle Network Map

2.4.2 BICYCLE PARKING AND AMENITIES

Providing safe and secure bicycle parking and associated amenities, including shower facilities and lockers for commercial uses, will protect equipment from theft and damage and reduce some of the barriers to bicycle use. In particular, showers and lockers make bicycling a viable option for employees on commute trips, by providing dedicated facilities to freshen up and change into office attire or work uniforms.

The Project will provide a greater supply of bicycle parking, showers, and lockers than currently required by the Planning Code. Uses for which the Planning Code does not explicitly mandate the provision of bicycle parking, such as open space and other specialized uses, will be designed with consideration of bicycle parking and other needs of bicycle users. In particular, public open spaces will be designed with recreational bicycle users in mind and feature adequate and well-maintained water fountains and bike parking.

Bicycle rental, maintenance, and other auxiliary functions that supplement recreational bicycle use will be encouraged to locate at the Project. Plug-in stations for electric bicycles could also be provided at a few strategic locations in the site to facilitate bicycle use among those who may be less able-bodied. During major events of 2,000 attendees or more at the Project site—including (but not limited to) festivals, performances, and sporting events—a valet service will be provided per SF Administrative Code, Section 2.76 for visitors arriving by bicycle, similar to programs provided during home games at AT&T Park and at music festivals in Golden Gate Park.

2.4.3 BIKE SHARE STATION(S)

Ford GoBike (formerly Bay Area Bike Share) has about 40 stations throughout downtown San Francisco and along the Northeast Waterfront, and will be expanding to at least 300 stations starting in 2017. Forest City will work with appropriate agencies to sponsor one or more stations at the Project site. Expanding bike sharing to the Project site and other areas along the Central Waterfront will better connect these areas with the existing service area and improve recreational access to shoreline open space and recreational resources. Bike sharing could serve a variety of potential site users, including commuters and visitors requiring a first-mile/lastmile connection between Pier 70 and BART or Caltrain; residents on site and in the surrounding neighborhoods making local trips; and tourists enjoying San Francisco's waterfront.

Potential locations for bike sharing stations would primarily be focused on areas in the "active core" of the site, which offers access to the proposed shoreline open space and Blue Greenway, as well as retail, arts and light industrial spaces, including a contemplated market hall in Building 12. These uses would be expected to attract a large share of visitor (i.e., offsite) trips, which would be the primary target of a bike share expansion into the Pier 70 area. In addition, these sites are in close proximity to residential uses, anticipated to be another user of bike share facilities. Given the size of the Project site, it is expected that one or two locations, each with approximately eight to ten docks, would be sufficient to provide adequate coverage. Stations could be expanded with additional docks should demand eventually exceed the available supply.

FIGURE 2.7: Illustrative Plan of Bicycle Parking

FIGURE 2.8: GoBike Bike Share

2.5 PEDESTRIAN IMPROVEMENTS

All users, regardless of mode of transportation, travel by foot during at least one part of their journey, so improving existing rights-of-way to accommodate safe pedestrian connectivity is a benefit to all site users. Streets in the Project are designed to create a safe and comfortable experience for users of all modes of transportation, especially pedestrians.

2.5.1 STREET DESIGN AND PEDESTRIAN MOVEMENT

The Project's street designs will facilitate and encourage travel by foot in the site. High levels of pedestrian activity will be accommodated on 20th Street, 22nd Street, and Maryland Street. In addition, a network of pathways will further encourage walking through the network of open spaces.

Street design will include infrastructure (e.g., sidewalks, crosswalks, curb ramps, and pedestrian signal heads) to facilitate the safe movement of pedestrians. Crosswalks will feature treatments to enhance visibility, including striping (continental/ zebra or ladder), painting, or texture treatments, and could be designed with raised pavement to signal motorists to slow. Street corners will feature bulb-outs and tight corner radii, except where vehicles requiring larger turning radii (such as trucks or buses) are expected to make turns on a frequent basis. Pedestrian-oriented wayfinding systems will direct site visitors to major destinations on and off site, as well as to transit stops, transit kiosks, bike share stations, bicycle parking, and car-share pods.

FIGURE 2.9: Sidewalk and Public Realm Precedents

2.5.2 PRIORITY PEDESTRIAN ZONE

The open space and streets—from the Historic Core through Maryland Street to the waterfront—are collectively designed as a priority pedestrian zone. These areas will feature limited automobile access (emergency vehicles, commercial loading, and other specialized needs), with priority given instead to pedestrians and bicyclists. Streets in this area will also feature ground floor retail uses, making Pier 70 an inviting and lively place to walk.

The priority pedestrian zone includes raised streets (curbless streets) on 20th Street at the waterfront, and Maryland Street between 21st and 22nd Streets, where pedestrian activity in the vicinity of retail, adjacent plazas, and parks will be more intensive than other parts of the site. Raised streets are intended to calm traffic moving through this area to create a safe environment that encourages pedestrian movement and socialization.

2.5.3 CONNECTIONS TO TRANSIT

Special consideration will be given to improving pedestrian facilities along existing street alignments that serve a key function in connecting the site to offsite transit hubs, such as T Third at 20th Street and Caltrain's 22nd Street Station. Signalization on Illinois Street at 20th Street, 21st Street and 22nd Street will include construction of new curb ramps and improve safety for pedestrians crossing Illinois to access the T-Line.

A new xx (working name) bus line will connect the site and others in the neighborhood. While routing is still being finalized, the line will connect the Central Waterfront, Dogpatch and Potrero neighborhoods with 16th St. BART and either the Castro or Church Street Muni Metro stations. 2.6

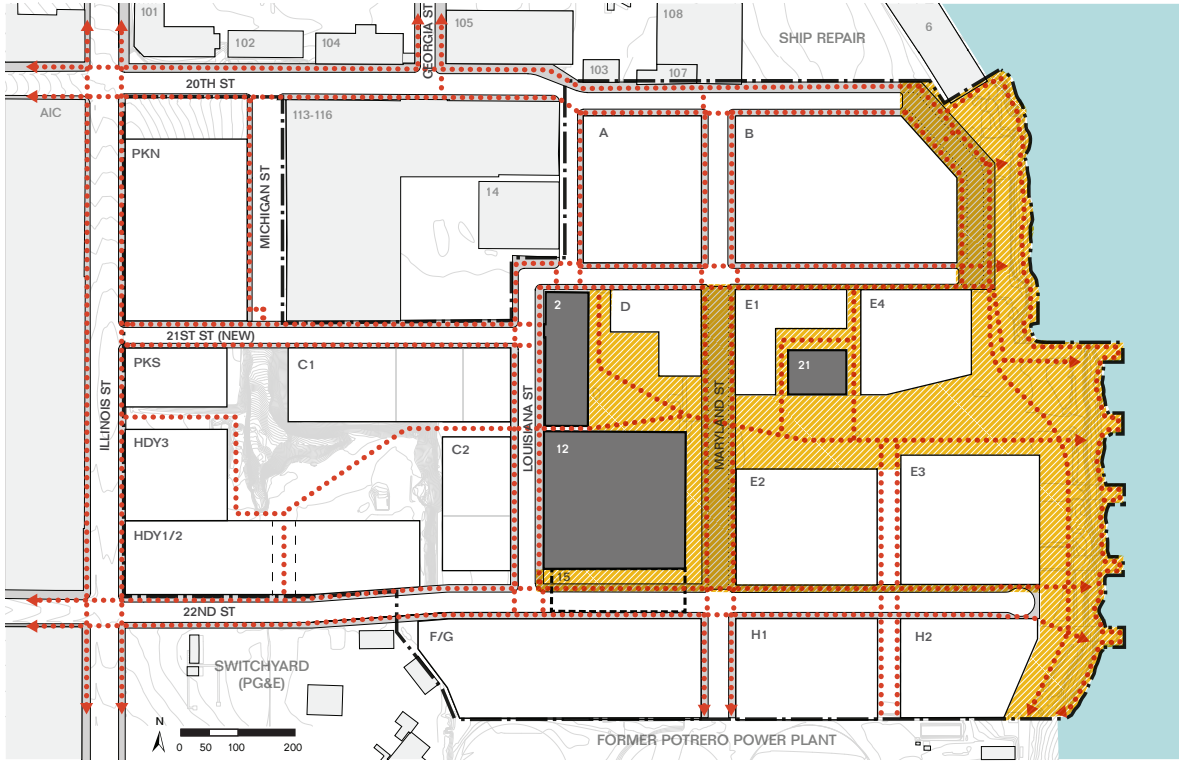


FIGURE 2.10: Priority Pedestrian Zone

2.6 AUTOMOBILE PARKING

Given the relationship between parking supply, parking pricing, and travel choice, parking at the Project site will be carefully designed and managed to provide an appropriate amount of on-site parking to support accessibility while also attaining mode share and trip reduction goals. The plan for automobile parking at the site includes a combination of on- and off-street spaces, and is supported by complementary strategies such as district parking facilities shared among multiple buildings; parking pricing, time limits, and other use restrictions; and other measures. In addition to a balanced approach, the Project's approach to parking also includes flexibility. As described in greater detail below, parcels designated for district parking would only be built as parking if demand warrants.

2.6.1 ON-STREET PARKING

On-street parking will be provided at the Project site in a balanced fashion to support retail, parks, and other uses. Pricing, time restrictions, and other policies for on-street parking at the Project site will be designed to work synergistically with other principles and strategies, such as the construction of shared (consolidated) parking facilities serving the entire site and limiting vehicle intrusion into the center and eastern half of the site. On-street parking can also serve as a buffer to protect the sidewalk from moving traffic, enhancing the quality of the pedestrian realm. All on-street spaces will be metered and managed by the SFMTA.

In general, on-street parking is proposed for segments of Maryland Street, 21st Street, and 22nd Street. It should be noted that not all portions of these segments will provide on-street parking—spaces may only be provided on one side of the street due to right-of-way constraints, or portions of the curb may be designated for other important functions such as commercial and passenger loading. The exact layout of on-street parking and commercial and passenger loading zones will be determined as site and building design progress.

The installation of parking meters will ensure that there is sufficient turnover in on-street spaces to satisfy their intended function. The pricing scheme will adapt the lessons learned from SFMTA's SFpark pilot program, which integrated dynamic pricing schemes with the latest in information technology. Occupancy of metered spaces will be regularly monitored and adjustments made monthly as needed to ensure that at least some spaces are available for use to avoid circling and the resulting secondary effects.[1] Based on the results of the SFpark program, SFMTA generally recommends maintaining on-street parking occupancy at 60–70 percent during the morning, midday, afternoon, and early evening (effectively, 7:00 AM to 9:00 PM). Higher maximum occupancies may be sufficient for situations where turnover is less important, such as at other times of the day or if the on-street parking in question primarily serves low-turnover uses such as residential uses.

2.6.2 DISTRICT PARKING

Although off-street parking will generally be provided in each building, the Project includes two development parcels that may be built as structured parking if demand warrants. This allows the Project to respond to a need for a greater or lesser supply of parking, within an established maximum parking ratio. These district parking garages would be located on 21st Street and Louisiana Street, minimizing vehicle intrusion into the center and eastern half of the site, thereby limiting the amount of "cruising" by people in search for on-street parking, which can contribute to congestion within Project Site. The proposed shared parking facilities and other off-street parking proposed at the Project site are illustrated on Figure 2.11.

1 Secondary effects of circling the block in search of parking spaces include increased exhaust emissions, delays to transit service, and safety conflicts with bicyclists and pedestrians.

FIGURE 2.11: Illustrative Plan of District Parking Garage and Accessory Parking

Possible location for District Parking Garage
Below-grade Parking
Podium Parking
Wrapped Garage

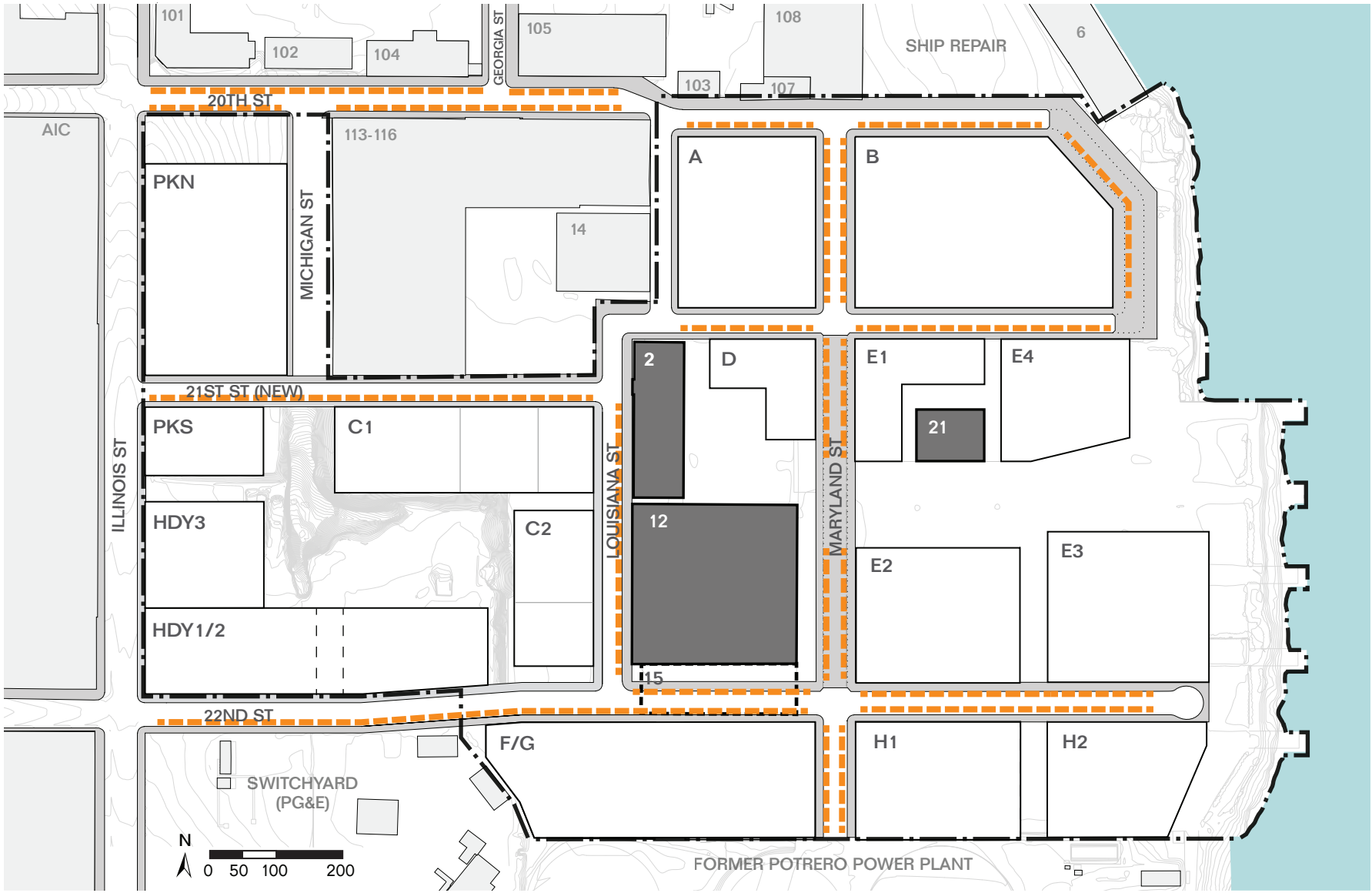


FIGURE 2.12: Illustrative Locations for On-street Parking

2.6.3 SPACE-EFFICIENT PARKING

Where feasible, the Project will implement space-efficient designs in off-street parking facilities constructed as part of the Project. Specific solutions (tandem, valet, or mechanical/stacked) will be determined as the design of each building or facility progresses and cost-benefit analyses are conducted to determine the most cost-effective solution. Uses with high turnover such as retail may function more effectively with valet than with mechanical/stacked solutions, which may be more appropriate for longer-term parking needs generated by uses such as residential or office. During major events at the Project site—such as festivals, performances, and sporting events—a valet service could be provided to minimize traffic congestion and associated impacts in the site and prevent spillover into the surrounding neighborhood.

2.6.4 PARKING MAXIMUMS FOR BUILDINGS

To encourage walking in the Project site, off-street parking is not required for any use. Instead, parking may be located in a district parking garage or one building may provide parking for other nearby buildings. Despite this ability to share parking, the Project is still subject to an aggregate, site-wide maximum based on the following ratios:

- Residential parking maximums are set to 0.60 spaces per residential unit; and
- Commercial Office parking minimums are set to 1 space per 1,500 gross square feet; and
- Retail provides no parking spaces.

2.6.5 PROHIBITION OF RESIDENTIAL PARKING PERMITS

SFMTA currently operates a residential permit parking (RPP) program in 28 designated areas of the City. The program restricts on-street parking in RPP areas to vehicles displaying the corresponding RPP area permit, which can only be obtained by residents living in the given RPP area. Residents of Pier 70 would not be eligible for the neighboring Dogpatch RPP and RPP will be prohibited at the Project site. This approach to RPP is intended to complement the Project's unbundled parking policy by ensuring that residents pay market rate for parking and that residential parking does not spill over onto neighborhood RPP streets.

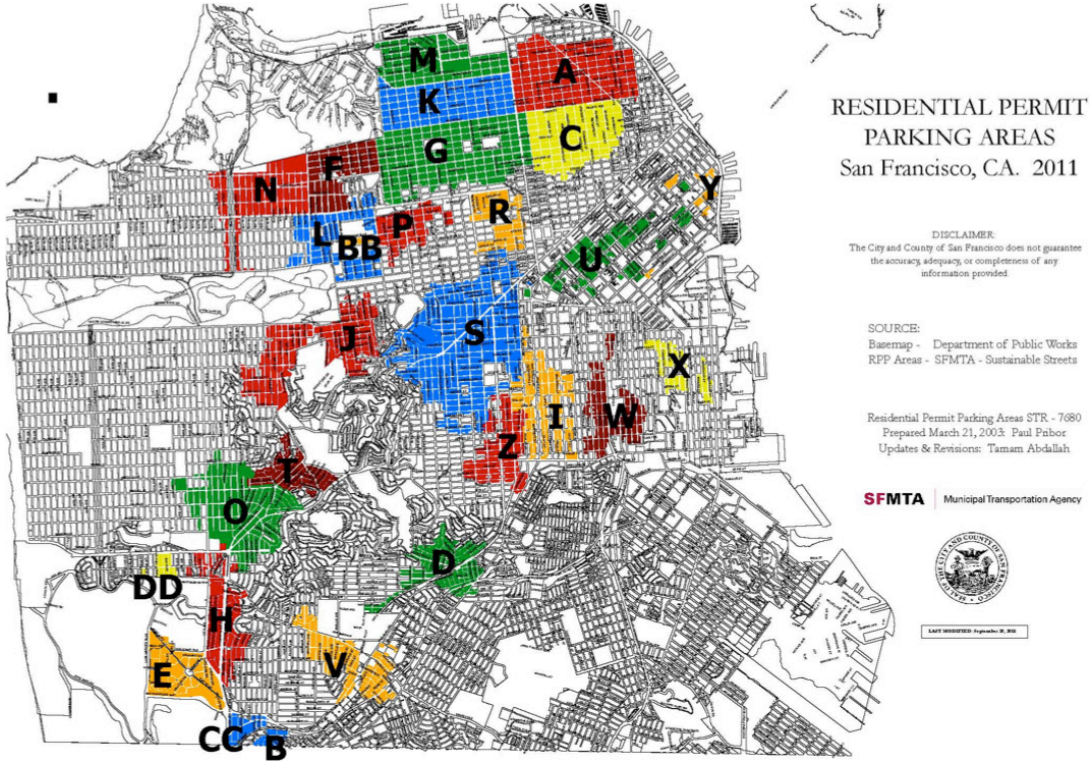


FIGURE 2.13: Residential Permit Parking Areas

2.6.6 SPECIAL EVENTS

Events at the Project site may include outdoor markets, street fairs and festivals, night markets, food events, art exhibits, and street performances. Typical events may occur several times a month on weekdays and weekends. Larger-scale events may occur up to four times a year. For all events held at Pier 70 parks and open spaces, the event sponsor must obtain permits from the Port. As part of the permitting process, the sponsor must submit a plan for managing travel to and from the event safely, and with minimal effect on surround neighborhoods. Examples of management strategies may include special event pricing of parking, special event shuttles, promotion of transit services, and parking management (e.g., valet parking). Further discussion of TDM measures that would be in effect during events at Pier 70 are provided in Chapter 4.

2.6.7 COMMERCIAL TRUCK ACCESS

The Project is generally designed for SU-30 vehicles on all streets, allowing for access by parcel delivery trucks and other similarly sized delivery vehicles throughout the site. WB-40 vehicles can be accommodated with assistance using flaggers and loading attendants. Additionally, for continued commercial uses at the Historic Core, a route will be provided to allow for WB-50 vehicles to access 20th and Louisiana Streets, and exit the site at 22nd Street. Signage will be provided directing large trucks to enter at 20th Street. See Figure 2.14 indicating the WB-50 truck route.

Forest City will prepare and submit for review a Driveway and Loading Operations Plan (DLOP) to the Planning Department and SFMTA. The DLOP will provide a set of guidelines outlining specific truck routing, size restrictions, assisted guidance by flaggers, vehicular access restrictions, loading/unloading procedures and time limits, and permitting for curbside loading. Building owners and operators will be obligated to comply with DLOP through purchase and sale agreements or leases. The DLOP would need to be approved with the permit for Phase I and updated with each subsequent phase. As appropriate, the DLOP could be periodically reviewed by with Planning Department and SFMTA and revised to more appropriately respond to changes in street or circulation conditions.

The Project's Transportation Coordinator will coordinate with building tenants and delivery services to minimize deliveries during am and pm peak periods. Additionally, Forest City will conduct a study of the utilization of on- and off-street commercial loading spaces following the first phase of development (and after each subsequent phase). If fewer than 15 percent of commercial loading spaces are available during the peak loading period,[2]Forest City will convert existing or proposed general purpose on-street parking spaces to commercial parking spaces, in addition to the required off-street spaces.

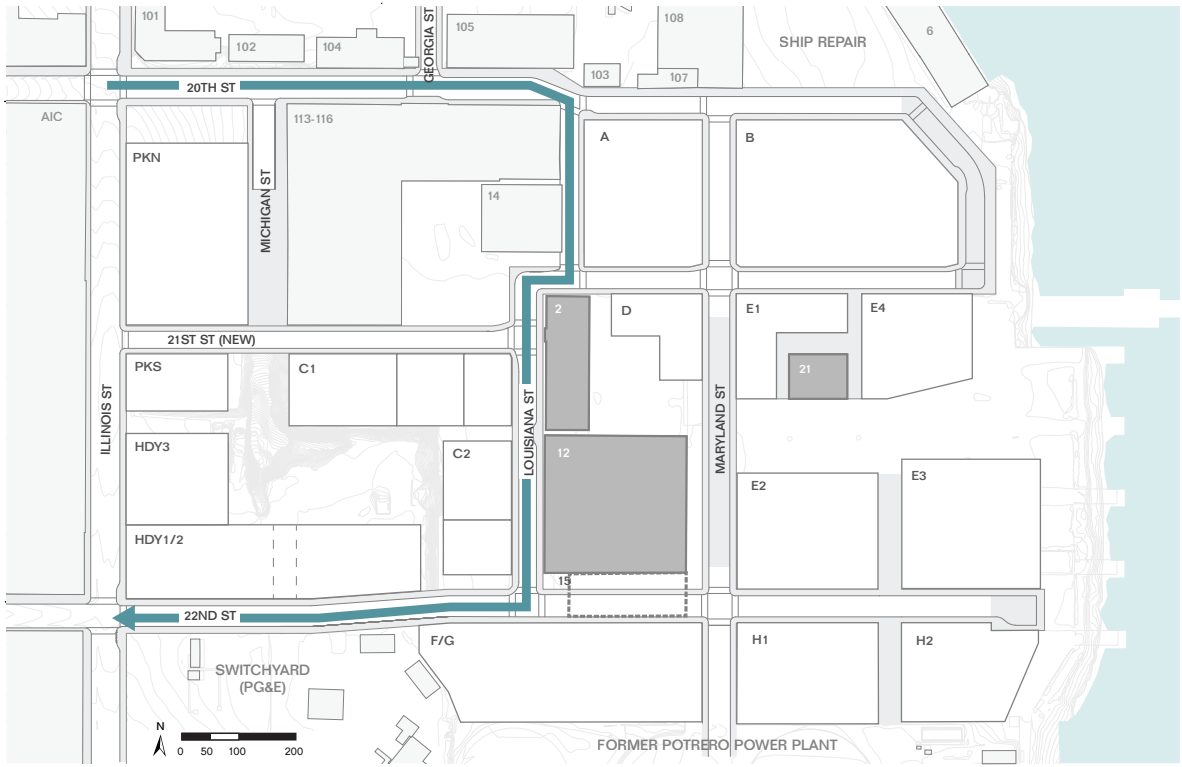


FIGURE 2.14 Commercial Truck Turning Route

2 The peak loading period is typically between 10:00 am and 1:00 pm, but varies by land use.

3 EXISTING CONDITIONS

This chapter describes the existing transportation systems that serve the Pier 70 site, including the existing roadways, transit service, bicycle networks, pedestrian facilities, regional transit, freeways, and truck routes. Many of these facilities are undergoing significant changes and are expected to be completed as the Project site begins to develop. The information provided in this chapter is for contextual purposes. The Environmental Impact Report (EIR) for the Project includes a more comprehensive analysis of the existing conditions.

3.1 STREET NETWORK AND PEDESTRIAN FACILITIES

3.1.1 3RD STREET

3rd Street is the major north-south arterial roadway serving the Central and Southeast Waterfront, including Mission Bay, Dogpatch, India Basin, Hunters Point, Bayview, and Candlestick Point. In the immediate vicinity of the Project site, 3rd Street features two travel lanes in each direction and a median right-of-way for light rail service operated by Muni. As the only major continuous north-south surface roadway through this part of San Francisco, 3rd Street serves important functions for vehicular traffic circulation, including accommodating trucks and other industrial traffic, and transit access. On-street parking is generally provided along both sides of 3rd Street, but is prohibited near some intersections to accommodate light rail platforms and/or left-turn pockets.

3.1.2 ILLINOIS STREET

Illinois Street is a north-south collector roadway that parallels 3rd Street through the Central Waterfront area, from approximately 16th Street in the north to Islais Creek and Cargo Way (via the Illinois Street Bridge) in the south. Sidewalks are discontinuous in some sections (such as the eastern side of Illinois Street north of 20th Street, abutting the future Crane Cove Park), or may be narrow or in poor condition. Illinois Street serves minor functions for vehicular traffic and bicycle circulation, but does not accommodate transit service. Illinois accommodates loading and truck access in the Project vicinity.

Illinois Street is one of the main trucking routes in San Francisco. There are loading docks along Illinois Street, directly across from the Project between 20th Street and 22nd Street, serving the American Industrial Center, a collection of more than 300 local manufacturers, designers, and creatives. The docks are active throughout business hours. In addition to Illinois Street, I-280 and Cesar Chavez are major truck routes that feed into Illinois Street and provide direct access to the Project.

3.1.3 20TH STREET

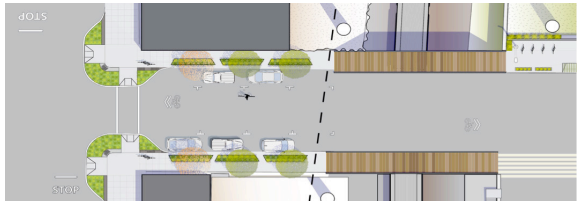
20th Street is an east-west collector roadway that serves as one of the two primary access routes directly into the Project site, continuing west into Potrero Hill on an overpass above I-280. East of Illinois Street, the street serves primarily local access functions for industrial uses at Pier 70 and is only partially improved, lacking sidewalks on one or more sides. 20th Street primarily serves a minor function for vehicular traffic circulation, as well as minor functions for transit circulation, accommodating terminal loops for the 22 Fillmore and 48 Quintara–24th Street routes on one-block segments to the east and west of 3rd Street.

Concepts for bicycle and pedestrian improvements to 20th Street have been proposed by the San Francisco Bicycle Plan, the Blue Greenway project, and the Eastern Neighborhoods Program.

3.1.4 22ND STREET

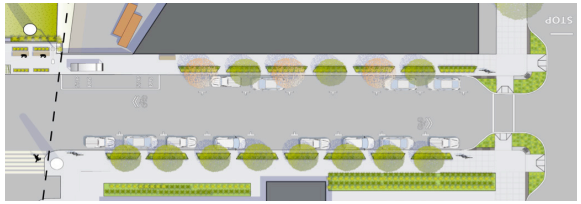
22nd Street is a minor east-west collector roadway that serves as one of two primary access routes directly into the Project site, connecting into the north-south Texas Street in Potrero Hill. East of Illinois Street, the street serves primarily local access functions for the Pier 70 site. The street is largely unimproved east of Illinois Street, lacking sidewalks along both sides. As a result, the current (de facto) on-street parking layout on this segment of the street is perpendicular parking.

Various concepts for bicycle and pedestrian improvements to 22nd Street have been proposed by the San Francisco Bicycle Plan, the Blue Greenway project, Eastern Neighborhoods Program, and the Dogpatch 22nd Street Greening Master Plan.



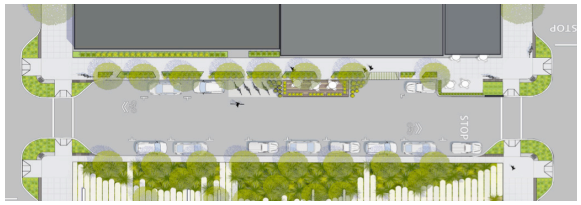
Pennsylvania Avenue to Iowa Street

Iowa Street to Indiana Street



Indiana Street to Minnesota Street

Minnesota Street to Tennessee Street



Tennessee Street to Third Street

View looking west from Tennessee Street / 22nd Street

FIGURE 3.1: 22nd Street Greening Master Plan

3.2 LOCAL TRANSIT

Muni provides transit service within the City, including bus, light rail, cable car, and electric streetcar lines. Muni routes serving the Project include the T Third Street light rail line and 22 Fillmore, 48-Quintara and 55-16th Street bus lines. The Project will coordinate with Muni regarding opportunities to increase service to the Project site and adjoining areas.

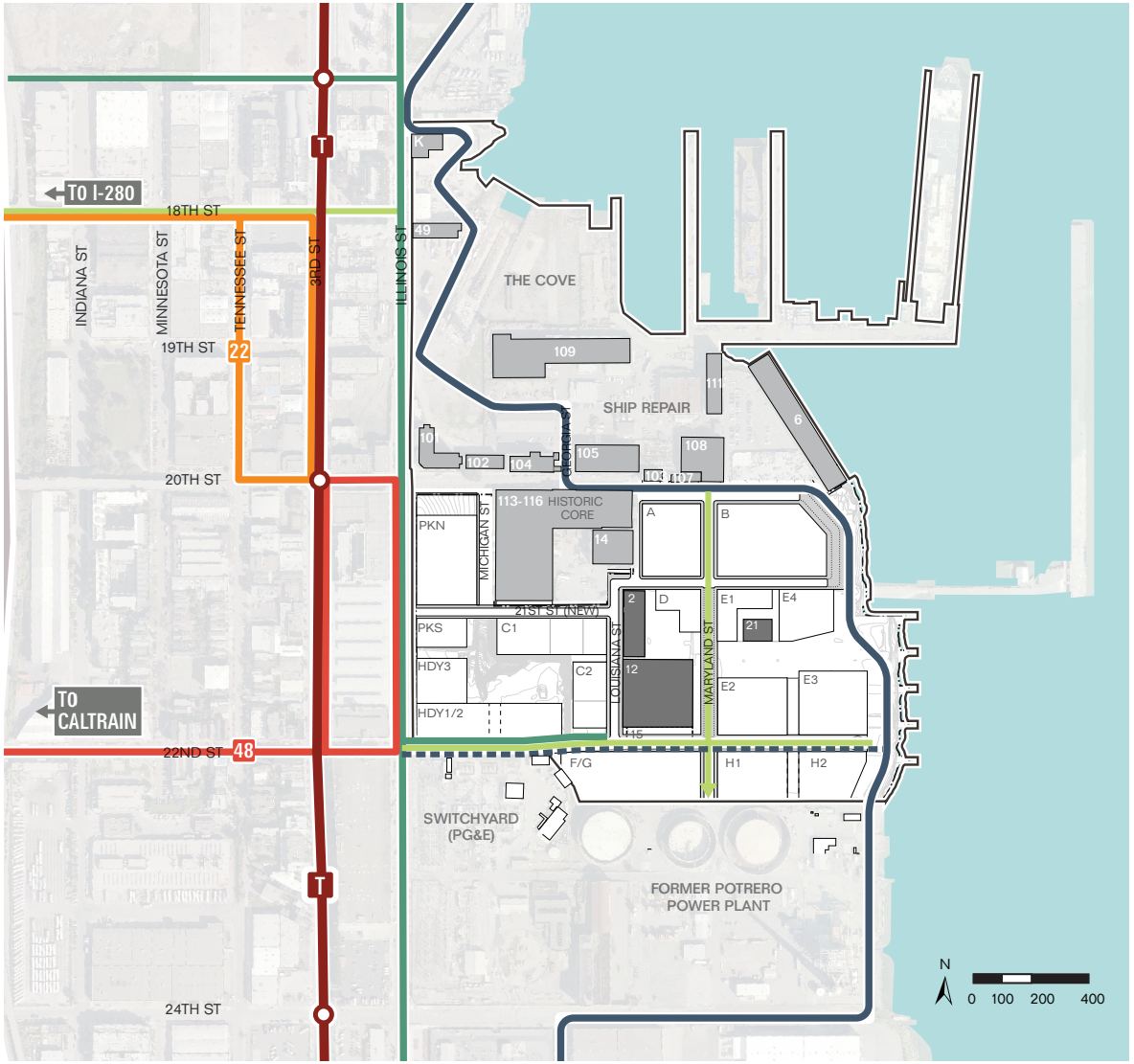


FIGURE 3.2: Transit Lines Near Project

3.2.1 MUNI T THIRD STREET LINE

The T Third Street line opened in 2007 as a modern light rail service operating in an exclusive median right-of-way with high level accessible platforms at all stations. The line follows Bayshore Boulevard connecting Visitacion Valley, Bayview/Hunters Point, Dogpatch and Mission Bay neighborhoods to the existing Muni Metro system along the southern Embarcadero.

Once the Central Subway becomes operational the T Third Street line will no longer share identities with the K Line, and will enter the underground subway at Bryant Street Portal and continue under Fourth Street to Yerba Buena, Union Square and Chinatown. Future extensions could include a stop at Washington Square. The Central Subway project will bring major service changes to the T Third Street line, along with major capacity increases.
The Central Subway is scheduled to open to riders in 2019 before any buildings at the Project are occupied.

Stations located in the immediate vicinity of the Project included 3rd Street/20th Street, 3rd Street/ Mariposa Street and 3rd Street/23rd Street. A turnaround loop (southbound 3rd Street to 18th Street, Illinois Street, 19th Street, and back to northbound 3rd Street) is under construction.

TABLE 3.1: T Third Street – Existing and Future Service Plans (Weekday)

	EXISTING				FUTURE (WITH CENTRAL SUBWAY)			
	WEEKDAY PEAK		WEEKDAY MIDDAY		WEEKDAY PEAK		WEEKDAY MIDDAY	
ROUTE SEGMENT	HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)
DOWNTOWN TO CHINA BASIN	-	-	-	-	2.0	3,600	8.0	2,160
CHINA BASIN TO MISSION BAY	9.0	800	10.0	720	4.0	2,400	8.0	1,440
MISSION BAY TO VISITACION VALLEY					8.0	1,200	8.0	720

3.2.2 22 FILLMORE

The 22 Fillmore is the busiest MUNI bus route that does not directly serve downtown (based on daily ridership). The route primarily follows two major neighborhood commercial corridors (16th Street and Fillmore Street), connecting the Central Waterfront/ Dogpatch with Potrero Hill, the Mission, Duboce Triangle, Lower Haight, the Western Addition, Pacific Heights, Cow Hollow, and the Marina. The service is operated with standard (40-foot) electric trolley coaches running on overhead lines. Owl service is provided half-hourly over the full length of the line. The 22 will be extended to Mission Bay in 2020.

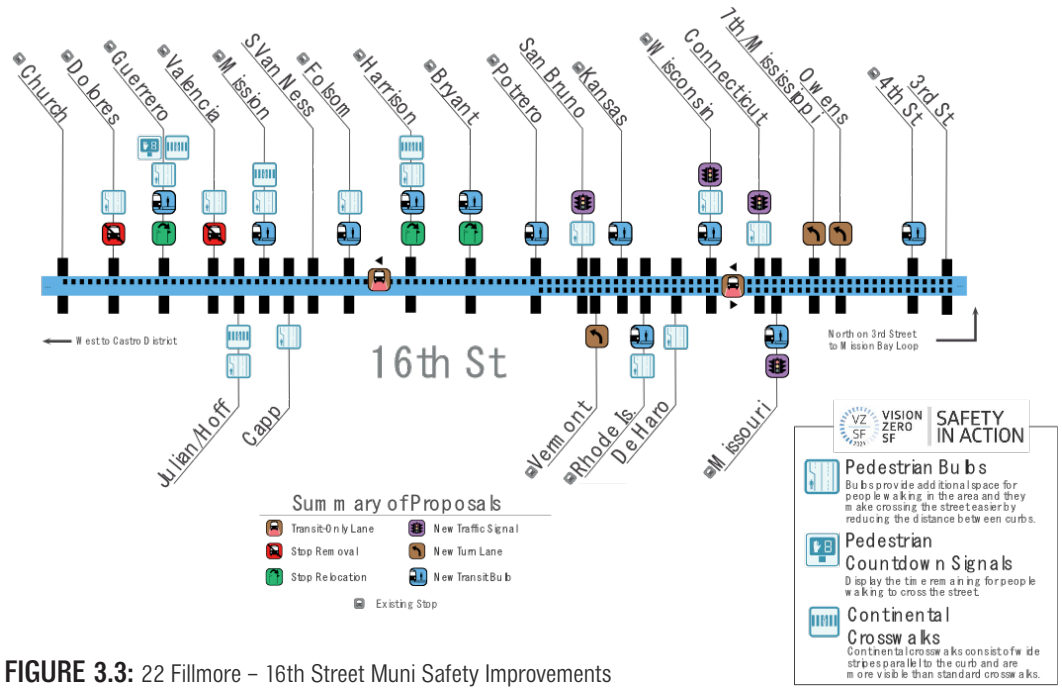


FIGURE 3.3: 22 Fillmore – 16th Street Muni Safety Improvements

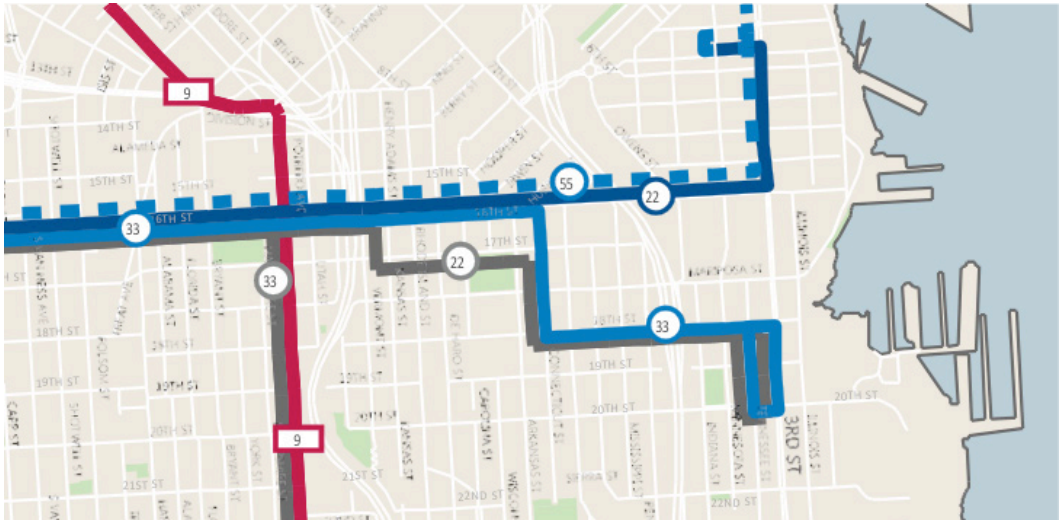


FIGURE 3.4: 22 Fillmore – 16th Street Muni Service Changes

3.2.3 55-16TH STREET

Muni added the 55-16th Street service in January 2015 as part of the Muni Forward program. The route is a temporary route connecting riders from the growing 16th Street corridor to the UCSF Campus and Hospital until the 22 Fillmore is extended into Mission Bay.

TABLE 3.2: 22 Fillmore & 55-16th Street – Existing and Future Service Plans (Weekday)

ROUTE SEGMENTS (EXISTING ROUTE)	EXISTING					FUTURE				
	LINE	WEEKDAY AM PEAK		WEEKDAY PM PEAK		LINE(S)	WEEKDAY AM PEAK		WEEKDAY PM PEAK	
		HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)		HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)
MARINA TO MISSION	22	9.0	420	8.0	473	22	6.0	630	8.0	473
MISSION TO POTRERO	22	9.0	420	8.0	473	22	6.0	630	8.0	473
	33	15.0	252	15.0	252	33	12.0	315	12.0	315
	55	15.0	252	15.0	252	-	-	-	-	-
	-	-	-	-	-	XX	12.0	315	12.0	315
	Total	4.1	1,344	3.9	1,449	Total	4.0	1,575	4.8	1,280
POTRERO TO MISSION BAY	55	15.0	252	15.0	252	22	6.0	630	8.0	473
POTRERO TO DOGPATCH/ CENTRAL WATERFRONT	22	9.0	420	8.0	473	33	12.0	315	12.0	315
	-	-	-	-	-	XX	8.0	473	8.0	473
	Total	5.6	672	5.2	725	Total	4.0	945	4.8	788

3.2.4 48 QUINTARA–24TH STREET

The 48 Quintara–24th Street connects the Project to 22nd Street Caltrain stop before traveling along 24th Street, Portola Drive, and Quintara Street, connecting the Central Waterfront/Dogpatch with Potrero Hill, the Mission, Noe Valley, Diamond Heights/Twin Peaks, Laguna Honda, West Portal, Outer Sunset, and Ocean Beach. The service is operated with standard (40-foot) motor coaches. Half-hourly owl service is provided between the Central Waterfront and Noe Valley.

3.2.5 ADDITIONAL LINES PLANNED

The SFMTA is proposing improvements to the 10, 11, 12, and a new xx (working name) line. All of which will serve the area.

Although the specific connect routing of these lines is still being developed, the general concepts being considered include:

- Adding the southern portion of the 10 route onto an 11 route, which would then connect to the Financial District and Chinatown.
- An xx line that would connect the neighborhood to 16th Street BART via 16th Street and then to Muni Metro either at the Church or Castro station.
- An improved 12 line to serve Rincon Hill.

TABLE 3.3: 48 Quintara – 24th Street – Existing and Future Service Plans (Weekdays)

	EXISTING					FUTURE				
	LINE	WEEKDAY AM PEAK		WEEKDAY PM PEAK		LINE(S)	WEEKDAY AM PEAK		WEEKDAY PM PEAK	
ROUTE SEGMENTS (EXISTING ROUTE)		HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)		HEADWAY (MINUTES)	CAPACITY (PPHPD)	HEADWAY (MINUTES)	CAPACITY (PPHPD)
OCEAN BEACH TO NOE VALLEY	48	11.0	344	12.0	315	48	15.0	252	15.0	252
NOE VALLEY TO POTRERO HILL		12.0	315	12.0	315	48	7.5	504	7.5	504
POTRERO HILL TO DOGPATCH/ CENTRAL WATERRONT		11.0	344	12.0	315	58	15.0	252	15.0	252

3.3 REGIONAL TRANSIT

Regional public transit service to and from the Project site is provided primarily by the San Francisco Bay Area Rapid Transit District (BART) and Caltrain.

In addition to BART and Caltrain, regional public transit service to and from San Francisco is provided by a variety of other operators, including the Alameda–Contra Costa Transit District (AC Transit); the San Mateo County Transit District (SamTrans); the Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit and Golden Gate Ferry); and the Water Emergency Transportation Authority (WETA) (San Francisco Bay Ferry). Most of these services can be accessed from major transit hubs such as the Transbay Temporary Terminal or the Ferry Building.

3.3.1 BART

BART provides regional rail service between San Francisco and the East Bay (with outer terminals at Pittsburg/Bay Point, Richmond, Dublin/Pleasanton, and Fremont), as well as down the Peninsula to San Francisco International Airport and Millbrae. During the weekday AM peak period, midday, and PM peak period, trains heading to and from each of the four outer East Bay terminals operate at 15-minute headways, with additional trains providing supplementary peak period service to and from stations on the Pittsburg/Bay Point line.

The BART alignment through San Francisco generally follows Market Street, Mission Street, and I-280, and existing stations are located outside the typical walkshed distance (half-mile radius for high-quality transit facilities) from the Project site. Consequently, passengers traveling to and from the Project site on BART are expected to require a connecting mode of access to travel to and from BART stations, such as local transit; private transit options such as shuttle services; taxis/ride-shares; or bicycles. In addition, passenger flow would likely be distributed across several different stations (e.g., Embarcadero or Powell for passengers heading to/from the East Bay, and 16th Street/Mission or 24th Street/Mission for passengers heading to/from the Peninsula and southern San Francisco).

FIGURE 3.5: BART Map

3.3.2 CALTRAIN

Caltrain provides commuter rail service along the 51-mile corridor between San Francisco and San Jose, with some services extending south to Gilroy.

Caltrain operates bi-directional service all-day, beginning northbound service from the Tamien Station at 4:55 am and southbound service from the San Francisco Station also at 4:55 am. The last northbound train arrives at the San Francisco Station at 12:05 am and the last southbound train arrives at the San Jose Diridion Station at 1:38 am, but no all-night service is provided. The typical commute-period service pattern features a mix of limited-stop and "Baby Bullet" (fast) services, with as many as five trains per hour per direction. Outside of the commute periods, however, service consists almost exclusively of local (all-stop) trains operating at headways of one hour or longer.

Caltrain has a station at 22nd Street, underneath the I-280 aerial structure between Pennsylvania Avenue and Iowa Street approximately half-a-mile west of the Project site. Access to the station platforms is by stairwell only, and is provided only from 22nd Street (southbound platform) and Iowa Street (northbound platform). The station includes 27 bicycle racks, and does not have dedicated vehicle parking (passengers must use nearby on-street parking).

Service at 22nd Street Station is designed primarily to cater to "reverse" commuters—i.e., San Francisco residents commuting to the Peninsula and South Bay. All limited-stop and Baby Bullet services in the southbound direction during the morning commute and in the northbound direction during the evening commute call at the station. In contrast, service at the station in the "traditional" commute pattern (northbound into San Francisco in the morning and southbound from San Francisco in the evening) consists only of hourly limited-stop trains (no Baby Bullet trains).

Caltrain is currently in the process of modernizing its service through a new train control system, electrification, and new rolling stock, which will allow them to increase service during the peak periods from five trains per hour per direction (tphpd) to six tphpd. Separately, the City and County of San Francisco is evaluating potential options for undergrounding Caltrain and relocating and redeveloping the Fourth & King railyards, in conjunction with replacing portions of I-280 with a surface boulevard. These options could affect existing grade crossings in Mission Bay at 16th Street and Mission Bay Drive, as well as Caltrain's alignment through Mission Bay and the approach into the Transbay Transit Center from the south.

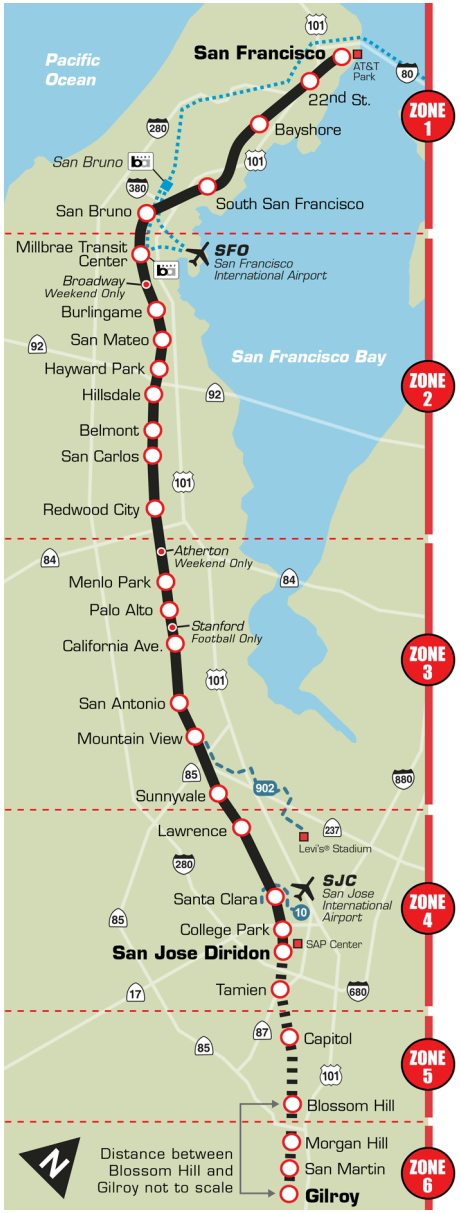


FIGURE 3.6: Caltrain Map

3.4 OTHER TRANSIT AND TRANSPORTATION SERVICES

3.4.1 SHUTTLE SERVICES

MISSION BAY TMA SHUTTLE

The Mission Bay Transportation Management Association (Mission Bay TMA) provides two shuttle bus routes between Mission Bay and the Powell Muni/BART station, one shuttle bus route to Caltrain and the temporary Transbay Terminal, and a Mission Bay loop route. The shuttle service is free of charge and available for use by all employees, residents, and visitors to the Mission Bay area. The closest shuttle stop to the Project is approximately one-half mile away. With implementation of the Chace Center, the existing Mission Bay TMA shuttle service will be expanded to feature more frequent service, and a new shuttle stop would be located adjacent to Chase Center.

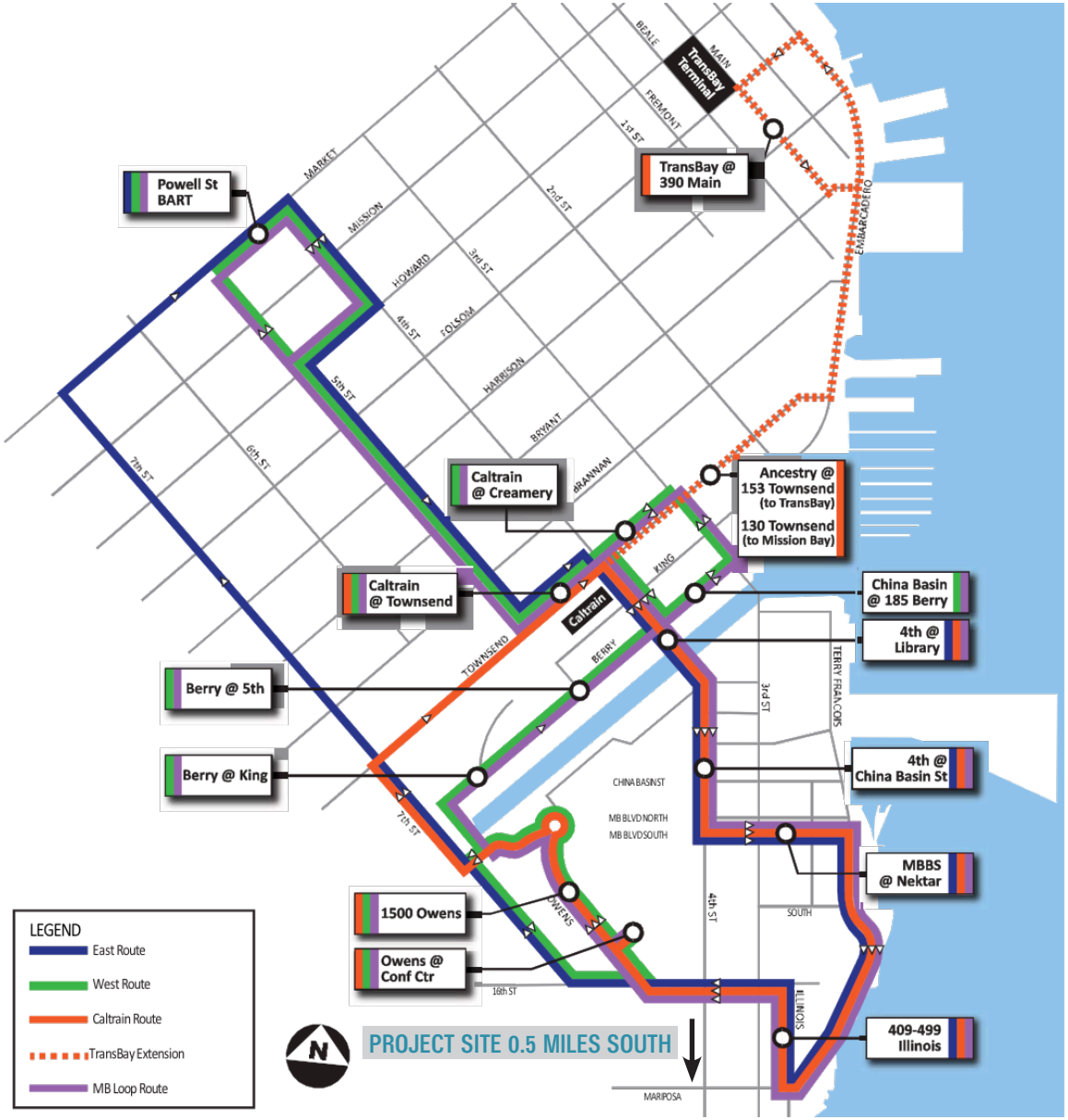


FIGURE 3.7: Mission Bay TMA Shuttle Network

UCSF SHUTTLES

UCSF provides shuttles for university personnel, including faculty, staff, technicians, and students, to travel between the university's campuses in San Francisco. These shuttles help reduce single-occupant vehicle trips and relieve capacity constraints for the Mission Bay TMA shuttles. People not affiliated with the university are not permitted to ride UCSF shuttles.

3.4.2 16TH STREET FERRY TERMINAL

The Port is in the design and permitting stages for a ferry boat terminal in Mission Bay, approximately one-half mile from the Project. In March 2016, the Port released a planning study that evaluated four alternative ferry landing locations and a water taxi landing. The Port is moving forward with design and permitting for a ferry landing at either the 16th Street location or an alternative location 100 feet north within the former Pier 64 footprint.

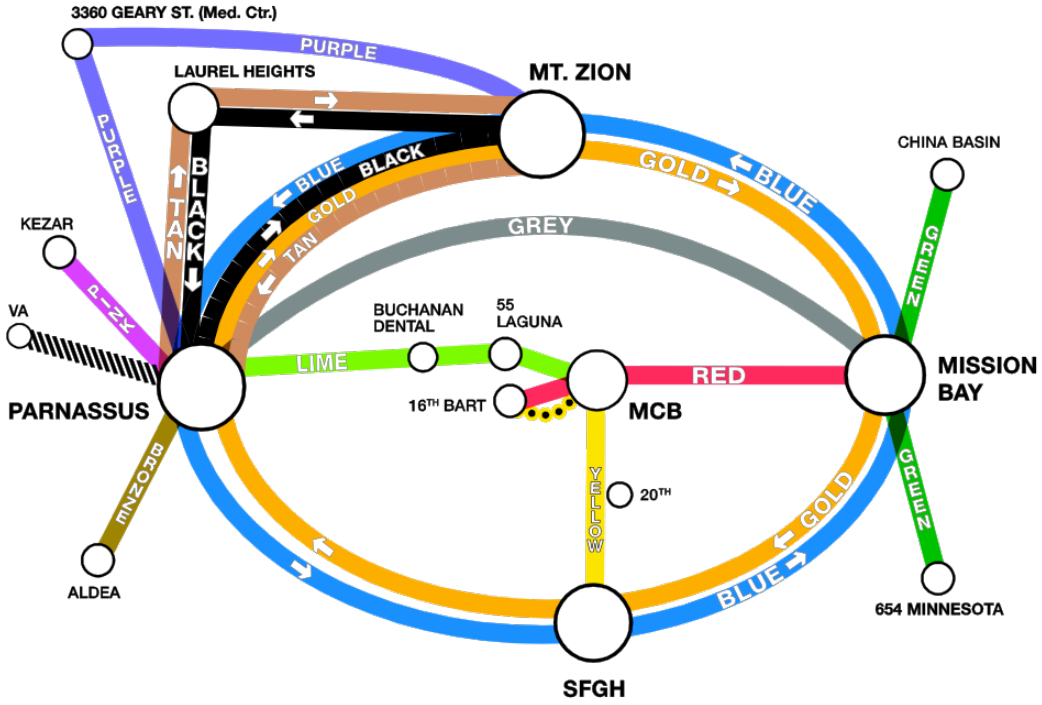


FIGURE 3.8: UCSF Shuttle Network

3.5 EXISTING BICYCLE FACILITIES

Although all roadways are technically accessible by bicycles, San Francisco has been working to build an extensive bicycle network throughout the city. The Project site is served by several existing bikeways, comprising a mixture of Class I, Class II, and Class III bikeways. Bikeway facilities are typically classified according to the level of safety and separation from other vehicular traffic afforded to the bicyclist.

CLASS I

Class I bikeways are dedicated off-street paths or trails. These facilities are usually, but not always, paved and may be designated either for the exclusive use of bicyclists or shared with other users such as walkers, joggers, hikers, and horseback riders.

CLASS II

Class II bikeways have dedicated roadspace in the paved right-of-way. These facilities are most frequently associated with marked bicycle lanes, but may also include cycle tracks or other facilities with a variety of treatments such as raised pavement or curbs, high-visibility paint, or protective barriers.

CLASS III

Class III bikeways share roadspace in the paved right-of-way, operating in mixed flow with other vehicles such as cars, buses, and trucks. Typically known as bicycle routes, these facilities usually offer little physical protection for bicyclists, but will usually be accompanied by signage and pavement markings such as sharrows.

FIGURE 3.9: Class I Facility – Bicycle Path or Multi-Use Trail

FIGURE 3.10: Class II Facility – Bicycle Lane

FIGURE 3.11: Class III – Signed Bicycle Route

Existing bicycle facilities located in the vicinity of the project are shown on Figure 3.12 and summarized below:

- North Point Street to the San Mateo County Line: This route begins at North Point Street and continues south along the Embarcadero, ultimately connecting southbound, all the way to the county line. This route connects with Third Street and crosses the China Basin Channel. The route continues on Terry A Francois Boulevard before connecting to Illinois Street. This route comprises a mixture of Class II and Class III facilities. This bike route connects to Mission Bay and much of downtown, including the Financial District, Transbay District, Rincon Hill, East SoMa, and key transit hubs such as Embarcadero Station, the Transbay Temporary Terminal, and the Ferry Building.
- Mariposa to Third Street: This route runs along Indiana Street, connecting to Mariposa Street in the north and to Third Street via Cesar Chavez in the south. This route primarily comprises Class III facilities, with signage and pavement markings (painted sharrows).
- Market to Illinois Street: This route runs north-south along Seventh Street to Mariposa Street via Mississippi Street and terminates at Illinois Street. This route primarily comprises Class II facilities along 7th Street/8th Street and Mississippi Street, but the segment closest to the Project site along Mariposa Street features Class III facilities with signage and pavement markings (painted sharrows).
- Illinois Street to the Great Highway: This route runs east-west along Cesar Chavez Boulevard. It is signed and striped as a Class II bicycle lane between Third Street and Pennsylvania Avenue and is designated a Class III bicycle route west of Pennsylvania Avenue.
- Owens to 17th East-West Bicycle Connector: SFMTA is conducting a feasibility study to identify a preferred connection between 17th St. bikeway and the 4th St. bikeway, likely by crossing over the Caltrain right-of-way and connecting 17th St. and Owens.

FIGURE 3.12: Existing Bicycle Network

3.5.1 BIKE SHARING

Bike sharing systems facilitate casual bicycle use by eliminating the need to make committed investments in a bicycle, helmet, and other equipment. Ford GoBike is the regional bike sharing system for the Bay Area. The first phase currently encompasses 70 stations and 700 bicycles in San Francisco and four Peninsula/South Bay cities along the Caltrain corridor (Redwood City, Palo Alto, Mountain View, and San Jose). Of the 70 total stations, about 40 are in San Francisco, concentrated in Downtown and along the Northeast Waterfront. Currently, there are no stations in the immediate vicinity of the Project site. Starting in spring 2017, prior to any buildings at the Project being occupied, Ford GoBike is expanding to about 300 stations with 7,000 bicycles across the Bay Area, including stations every few blocks in San Francisco. The service will expand service to the East Bay and expand the San Jose service area.

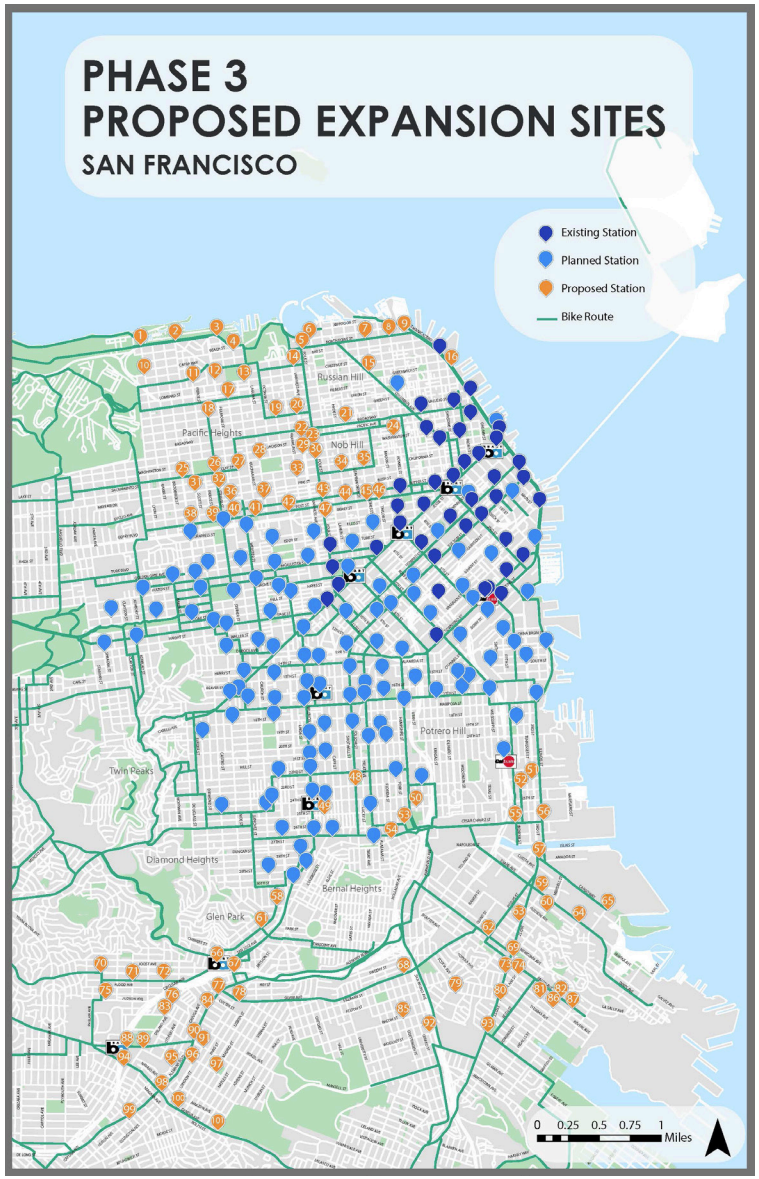


FIGURE 3.13: Bay Area Bike Share Service Area (Existing and Phase 2)

3.6 REGIONAL DRIVING ACCESS

Regional access to and from the Project site is provided by United States Highway 101 (U.S. 101), I-80, and I-280.

3.6.1 INTERSTATE 80

Regional access to and from the Pier 70 area and the East Bay is provided by I-80 and the San Francisco–Oakland Bay Bridge. Access to and from I-80 is provided by on- and off-ramps located downtown near Rincon Hill, Central SoMa, and Western SoMa. Motorists using these ramps would be expected to use the major local access routes such as 3rd Street/4th Street and 7th Street/16th Street to travel directly to and from the Project site.

3.6.2 U.S. 101

Regional access to and from the Project site and the North Bay is provided by U.S. 101 and the Golden Gate Bridge. U.S. 101 follows major surface arterials including Mission Street/South Van Ness Avenue, Van Ness Avenue, and Lombard Street.

3.6.3 INTERSTATE 280

Regional access to and from the Peninsula and South Bay is provided by U.S. 101 and I-280. I-280 provides the most direct access to the Project site, with an off-ramp at Pennsylvania Avenue/Cesar Chavez Street and an on-ramp at Pennsylvania Avenue/25th Street. Motorists using U.S. 101 along the Peninsula and South Bay can access I-280 via the U.S. 101/I-280 interchange at the confluence of Bayshore Boulevard, Alemany Boulevard, San Bruno Avenue, and Industrial Street in the southeastern quadrant of San Francisco. Alternatively, motorists along U.S. 101 can continue north along U.S. 101, exiting at Cesar Chavez Street to reach the Project site.

4 TRANSPORTATION DEMAND MANAGEMENT

The Project (defined as the area within the Pier 70 Special Use District) will implement TDM measures designed to produce 20% fewer driving trips than identified by the project's Transportation Impact Study ("Reduction Target") for project build out, as identified in Table 4.1, below.

TABLE 4.1: Trip Reduction Targets from EIR Trip Estimates

PERIOD	EIR AUTO TRIP ESTIMATE AT PROJECT BUILD-OUT	AUTO TRIPS REFLECTING 20% REDUCTION ("REDUCTION TARGET")
DAILY	34,790	27,832

To do this, the TDM Plan creates a TDM Program that will support and promote sustainable modes and disincentivize the use of private automobiles, particularly single-occupancy vehicles, among residents, employees, and visitors. This chapter outlines the different strategies that Project, initially, will employ to meet those goals, including the formation of a Transportation Management Association (TMA). The TMA will be responsible for the administration, monitoring, and adjustment of the TDM Plan and program over time. In addition to meeting the Reduction Target, the following overall TDM goals are proposed to ensure that the Project creates an enjoyable, safe, and inviting place for residents, workers, and visitors.

4.1 TDM GOALS

In addition to meeting the Reduction Target described above, the TDM program will include measures that contribute to the following goals:

- Encourage residents, workers, and visitors to the Project site to use sustainable transportation modes and provide resources and incentives to do so.
- Make the Project site an appealing place to live, work and recreate by reducing the number of cars on the roadways and creating an active public realm.
- Integrate the Project into the existing community by maintaining the surrounding neighborhood character and seamlessly integrating the Project into the established street and transportation network.
- Provide high quality and convenient access to open space and the waterfront.
- Promote pedestrian and bike safety by integrating bicycle and pedestrian-friendly streetscaping throughout the Project site.
- Improve access to high quality transit, including Caltrain, BART, and Muni light rail.
- Reduce the impact of the Project on neighboring communities, including reducing traffic congestion and parking impacts.

4.2 TDM APPROACH

The fundamental principle behind the TDM program is that travel habits can be influenced through incentives and disincentives, investment in sustainable transportation options, and educational and marketing efforts. Recognizing this principle, the following section describes the TDM program, including its basic structure, as well as logistical issues, such as administration and maintenance of the program.

The Project's land use and site design principles, including creating a dense, mixed-use area that provides neighborhood and office services within walking distance from residential and commercial buildings and the creation of walkable and bicycle-friendly streets, will work synergistically with the TDM program to achieve the Project's transportation goals.

Planning Code Section 169 (TDM) requires that master planned projects such as Pier 70 meet the spirit of the TDM Ordinance, and acknowledges that there may be unique opportunities and strategies presented by master planned projects to do so. If, in the future, the Port establishes its own TDM program across its various properties, the Project will have the right, but not the obligation, to consolidate TDM efforts with this larger plan. In all cases, the Project will coordinate with a Port-wide TDM program, should it exist. In the absence of such a Port-wide program now, the Project is proposing the site-specific TDM program structure outlined below.

As previously mentioned, in order to meet the Project goals to reduce Project-related one-way vehicular traffic by 20%[1] — and to create a sustainable development, the Project's TDM program will be administered and maintained by a TMA. Existing examples of TMAs include the Mission Bay TMA and TMASF Connects.

The TMA will provide services available to all residents and workers at the Project site. The TMA will be funded by an annual assessment of all buildings in the Pier 70 Special Use District area (excluding Buildings 12, 21 and E4). The TMA will be responsible for working with future subtenants of the site (e.g., employers, HOAs, property managers, residents) to ensure that they are actively engaging with the TDM program and that the Program meets their needs as it achieves or exceeds the driving trip reduction targets. Upon agreeing to lease property at the Project, these subtenants will become "members" of the TMA and able to take advantage of the TDM program services provided through the TMA. The TMA will be led by a board of directors which will be composed of representatives from diverse stakeholders that will include the Port (as the current property owner), the SFMTA (as the public agency responsible for oversight of transportation in the City), and representatives of various buildings that have been constructed at the site. The board of directors may also include representatives from commercial office tenants or homeowners' associations.

Day-to-day operations of the TMA will be handled by a staff that would work under the high-level direction provided by the board of directors. The lead staff position will serve as the onsite Transportation Coordinator (TC) (also referred to as the "TDM Coordinator"), functioning as the TMA's liaison with subtenants in the implementation of the TDM program and as the TMA's representative in discussions with the City.

The TC will perform a variety of duties to support the implementation of the TDM program, including educating residents, employers, employees, and visitors of the Project site about the range of transportation options available to them. The TC would also assist with event-specific TDM planning and monitoring, and reporting on the success and effectiveness of the TDM program overall. The TC may be implemented as a full-time position, or as a part-time position shared with other development projects. The TMA will have the ability to adjust TDM program to respond to success or failure of certain components.

4.2.1 THE TMA WEBSITE

The TMA, through the onsite TC, would be responsible for the creation, operation, and maintenance of a frequently updated website that provides information related to the Project's TDM program. The TMA's website would include information on the following (and other relevant transportation information):

- Connecting shuttle service (e.g., routes and timetables);
- General information on transit access (e.g., route maps and real-time arrival data for Muni, Caltrain, and BART);
- Bike sharing stations on site and in the vicinity;
- On- and off-street parking facilities pricing (e.g., pricing, location/maps and real-time occupancy);
- Car-sharing pods on site and in the vicinity,
- Ridematching services; and
- Emergency Ride Home (ERH) program.

1 Reduction in trips is in comparison to trip generation expectations from the EIR.

4.3 SUMMARY OF TDM MEASURES

Table 4.2 provides a summary of the TDM measures to be implemented at the Project by the TMA. The following sections provide more detail on the measures as organized by measures that are applicable site-wide, those that target residents only, and those that target non-residents (workers and visitors) only. The applicable measures will be ready to be implemented upon issuance of each certificate of occupancy.

TABLE 4.2: Summary of Pier 70 TDM Measures

MEASURE[1]	DESCRIPTION	APPLICABILITY		
		SITE-WIDE	RESIDENTIAL	NON-RESIDENTIAL
Improve Walking Conditions	Provide streetscape improvements to encourage walking	✔		
Bicycle Parking	Provide secure bicycle parking	✔		
Showers and Lockers	Provide on-site showers and lockers so commuters can travel by active modes			✔
Bike Share Membership	Property Manager/HOA to offer contribution of 100% toward first year membership; one per dwelling unit		✔	
Bicycle Repair Station	Each market-rate buildings shall provide one bicycle repair station		✔	
Fleet of Bicycles	Sponsor at least one bike share station at Pier 70 for residents, employees, and/or guests to use	✔		
Bicycle Valet Parking	For large events (over 2,000), provide monitored bicycle parking for 20% of guests	✔		
Car Share Parking & Membership	Provide car share parking per code. Property Manager/HOA to offer contribution of 100% toward first year membership; one per dwelling unit		✔	
Delivery Supportive Amenities	Facilitate deliveries with a staffed reception desk, lockers, or other accommodations, where appropriate.	✔		
Family TDM Amenities	Encourage storage for car seats near car share parking, cargo bikes and shopping carts	✔		
On-site Childcare	Provide on-site childcare services	✔		
Family TDM Package	Require minimum number of cargo or trailer bike parking spaces		✔	
Contributions or Incentives for Sustainable Transportation	Property Manager/HOA to offer one subsidy (40% cost of MUNI "M" pass) per month for each dwelling unit		✔	
Shuttle Bus Service	Provide shuttle bus services	✔		
Multimodal Wayfinding Signage	Provide directional signage for locating transportation services (shuttle stop) and amenities (bicycle parking)	✔		
Real Time Transportation Information Displays	Provide large screen or monitor that displays transit arrival and departure information	✔		
Tailored Transportation Marketing Services	Provide residents and employees with information about travel options	✔		
On-site Affordable Housing	Provide on-site affordable housing as part of a residential project		✔	
Unbundle Parking	Separate the cost of parking from the cost of rent, lease or ownership	✔		
Prohibition of Residential Parking Permits (RPP)	No RPP area may be established at or expanded into the Project site		✔	
Parking Supply	Provide less accessory parking than the neighborhood parking rate	✔		
Emergency Ride Home Program	Ensure that every employer is registered for the program and that employees are aware of the program			✔

Note:
1. Where applicable, measure names attempt to be consistent with names of menus in San Francisco's TDM Program

4.4 SITE-WIDE TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

The following are site-wide TDM strategies that will be provided to support driving trip reductions by all users of the Project.

4.4.1 IMPROVE WALKING CONDITIONS

The Project will significantly improve walking conditions at the site by providing logical, accessible, lighted, and attractive sidewalks and pathways. Sidewalks will be provided along most new streets and existing streets will be improved with curbs and sidewalks as necessary. The street design includes improvements to streets and sidewalks to enhance the pedestrian experience and promote the safety of pedestrians as a top priority. In addition, ground floor retail will create an active ground plan that promotes comfortable and interesting streetscapes for pedestrians.

4.4.2 ENCOURAGE BICYCLING

Bicycling will be encouraged for all users of the site by providing well-designed and well-lit bike parking in residential and commercial buildings, in district parking, and also in key open space and activity nodes. Bicycle parking will be provided in at least the amounts required by the Planning Code at the time a building secures building permits. Furthermore, valet bicycle parking will be provided for large events (over 2,000) to accommodate 20% of guests. In addition to bicycle parking, the Project will fund at least one bike share station on site, including the cost of installation and operation for three years, for residents, employees, and or guests to use. This will help reduce the cost-burden of purchasing a bike and increase convenience. Bicycle facilities provided at the Project site will help improve connectivity to existing bike facilities on Illinois Street and the Bay Trail.

4.4.3 TAILORED TRANSPORTATION MARKETING SERVICES AND COMMUTER BENEFITS

Tailored marketing services will provide information to the different users of the site about travel options and aid in modal decision making. For example, the TMA will be responsible for notifying employers about the San Francisco Commuter Benefits Ordinance, the Bay Area Commuter Benefits Program, and California's Parking Cash-Out law when they sign property leases at the site and disseminating general information about the ordinances on the TMA's website. The TMA will provide information and resources to support on-site employers in enrolling in pre-tax commuter benefits, and in establishing flex time policies.

Employers will be encouraged to consider enrolling in programs or enlisting services to assist in tracking employee commutes, such as Luum and Rideamigos. The services offered by these platforms include the development of incentive programs to encourage employees to use transit, customized commute assistance resources, tracking the environmental impact of employee commutes, and assessing program effectiveness. As the TMA works with on-site employers, other useful resources that support sustainable commute modes may be identified and provided by the TMA.

4.4.4 CAR SHARE PARKING

The Project will provide car share parking in the amounts specified by Planning Code Section 166 for applicable new construction buildings.

4.4.5 SHUTTLE SERVICE

A shuttle will be operated at Pier 70 serving to connect site users (residents, employees, and visitors) with local and regional transit hubs. The shuttle service will aim to augment any existing transit services and it is not intended to compete with or replicate Muni service. Shuttle routes, frequencies, and service standards will be planned in cooperation with SFMTA staff. In addition, coordination and integration of the shuttle program with other developments in the area will be considered, including with Mission Bay and future development at the former Potrero Power Plant. The necessity of the shuttle service will continue to be assessed as transit service improves in the Pier 70 area over time.

Any shuttles operated by the Project will secure safe and legal loading zones for passenger boarding and alighting, both in the site and off-site. Shuttles will be free and open to the public and be accessible per ADA standards. Shuttles will comply with any applicable laws and regulations.

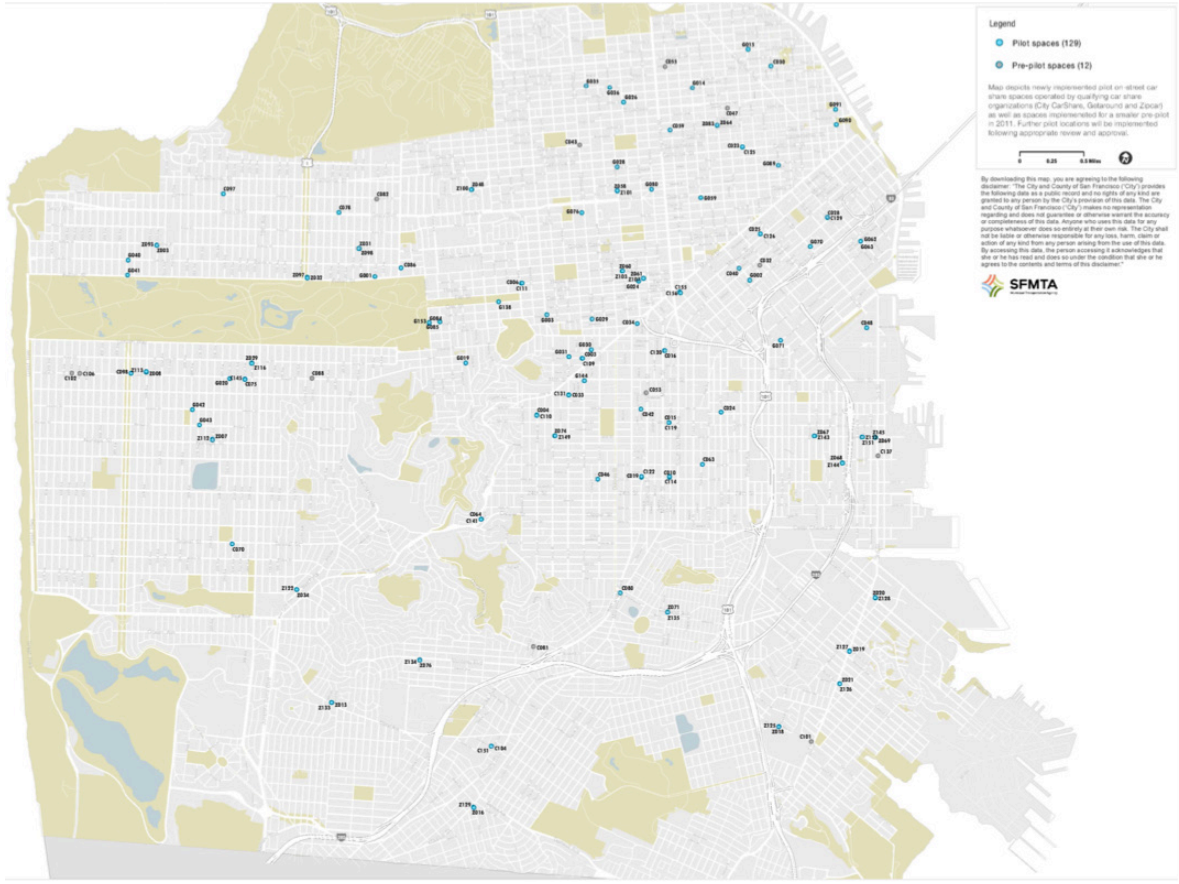


FIGURE 4.1: Existing On-street Car-share Spaces

4.4.6 PARKING

The Project is subject to an aggregate, site-wide parking maximum based on the following ratios:

- Residential parking maximums are set to 0.60 spaces per residential unit; and
- Commercial Office parking maximums are set to 1 space per 1,500 gross square feet; and
- Retail shall have 0 parking spaces.

The cost of parking will be unbundled, or separate from the cost of rent, lease, or ownership at the Project. Complying with San Francisco Planning Code, residential parking will not be sold or rented with residential units in either for-sale or rental buildings. Residents or workers who wish to have a car onsite will have to pay separately for use of a parking space. Residential and non-residential parking spaces will be leased at market rate.

Non-residential parking rates shall maintain a rate or fee structure such that:

- Base hourly and daily parking rates are established and offered.
- Base daily rates shall not reflect a discount compared to base hourly parking rates; calculation of base daily rates shall assume a ten-hour day.
- Weekly, monthly, or similar-time specific periods shall not reflect a discount compared to base daily parking rates, and rate shall assume a five-day week.
- Daily or hourly rates may be raised above base rate level to address increased demand, for instance during special events.

4.4.7 DISPLAYS AND WAYFINDING SIGNAGE

Real time transportation information displays (e.g., large television screens or computer monitors) will be provided in prominent locations (e.g., entry/exit areas, lobbies, elevator bays) on the project site highlighting sustainable transportation options. The displays shall be provided at each office building larger than 200,000 SF and each residential building of more than 150 units, and include arrival and departure information, such as NextBus information, as well as the availability of car share vehicles and shared bicycles as such information is available. In addition, multimodal wayfinding signage will be provided to help site users locate transportation services (such as shuttle stops) and amenities (such as bicycle parking). Highly visible information and signage will encourage and facilitate the use of these resources.

4.4.8 FAMILY AMENITIES

Five percent of residential Class 1 bicycle parking will be designated for cargo and trailer bicycles. In addition, services and amenities will be encouraged to support the transportation needs of families, including storage for strollers and car seats near car share parking. On-site child care services will also be provided to further support families with children and reduce commuting distances between households, places of employment, and childcare.

4.5 RESIDENTIAL TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Strategies for reducing automobile use for residents of Pier 70 are discussed in the following sections.

4.5.1 ENCOURAGE TRANSIT

All homeowners' associations and property managers will offer one subsidy (equivalent to 40% cost of Muni M pass or future equivalent Muni monthly pass) per month for each dwelling unit. These would likely consist of Clipper Cards that work for Muni, BART, and Caltrain and are auto-loaded with a certain cash value each month. In addition, tailored marketing services will provide information to residents about travel options and aid in modal decision making.

4.5.2 BICYCLES

Indoor secure bicycle parking will be provided for residents in at least the amounts required by the Planning Code at the time the building secures building permits. Property Managers and HOA's will offer a contribution of 100% towards the first year's membership cost in a bike share program at a rate of one membership per dwelling unit. In addition, each market-rate residential building shall provide a bicycle repair station in a secure area of the building.

4.5.3 CAR SHARE MEMBERSHIP

Property managers and HOA's will offer a contribution of 100% towards the first year's membership cost in a car share program at a rate of one membership per dwelling unit. Any user fees will be the responsibility of the resident member.

4.5.4 FAMILY TDM PACKAGE

Amenities for families residing at the Project will be encouraged, such as car share memberships and other family amenities, including stroller and car seat storage and cargo bicycle parking.

4.5.5 PROHIBITION OF RESIDENTIAL PARKING PERMITS

Residential permit parking (RPP) will be prohibited at the Project site, and residents of Pier 70 will not be eligible for the neighboring Dogpatch RPP. This restriction is recorded within the Project's Master Covenants, Codes and Restrictions (CC&R) documents. This approach to RPP is intended to complement the Project's unbundled parking policy by ensuring that residents pay market rate for parking and that residential parking does not spill over onto neighborhood RPP streets.

4.6 NON-RESIDENTIAL TRANSPORTATION MANAGEMENT STRATEGIES

As with residents, there are several ways to encourage public transit and other sustainable modes of travel for employees and visitors to the Project site.

4.6.1 EMERGENCY RIDE HOME PROGRAM

San Francisco provides an emergency ride home (ERH) program that reimburses the cost of a taxi ride home for an employee who commutes to work by a sustainable mode (transit, bicycling, walking, or carpool/vanpool) and has an unexpected emergency such as personal or family related illness or unscheduled overtime. Any employee in San Francisco is eligible as long as the employer has registered. Registration is free for employers. The ERH program is a safety net that may remove a barrier to sustainable commute choices. The TMA will ensure that every employer tenant on-site is registered for the Emergency Ride Home program and that employees are aware of the program.

4.6.2 BICYCLES

Indoor secure bicycle parking will be provided for employees at least in the amount required by the Planning Code at the time the building secures building permits. Showers and lockers for employee use will also be provided at least in the amount required by the Planning Code in order to support active travel modes for commuting. Employees will be encouraged to participate in Bike to Work Day events by the TMA. As previously mentioned, the Project will provide at least one bike share station that would be available to residents, employees, and visitors.

4.7 SPECIAL EVENT TRANSPORTATION MANAGEMENT STRATEGIES

The Project's open spaces will host a variety of public events, including evening happy hours, outdoor film screenings, music concerts, fairs and markets, food events, street festivals art exhibitions and theatre performances. Typical events may occur several times a month, with an attendance from 500 to 750 people. Larger-scale events would occur approximately four times a year, with an attendance up to 5,000 people. All events in parks or open spaces require permitting approval by the Port.

The TMA will work with the open space management team and any building managers or retailers to establish and implement transportation management plans for specific events. Transportation management plans will consider best practices and lessons learned from other San Francisco events and event venues. Event scheduling will attempt to minimize overlapping of events with AT&T Park and the Chase Event Center as required by the Environmental Impact Report. Event transportation management plans can include the following mechanisms:

- Directional signage for vehicles accessing the site
- Charging event pricing for parking associated with special events;
- Dedicated passenger loading zones in the site;
- Staffed and secure bicycle valet parking;
- Identifying and rewarding guests who ride their bicycles, walk, or transit to events (i.e., free giveaways);
- Encouraging customers at the time of ticket sales to take public transportation, walk, or bicycle to the events, and providing reminders and trip planning tools to support them in doing so;
- Disseminating the recommended transportation options on different marketing outlets (with ticket receipt, online channels, Pier 70 website, TMA website, etc.);
- Identifying offsite parking and using shuttles to transport visitors between the event venues, offsite parking, and transit hubs, as needed; and,
- Encouraging guests to arrive early and stay onsite longer by promoting local vendors, restaurants, etc., to spread and reduce pre- and post-event peaking effects.

Successful special event transportation management plans will minimize driving trips and promote sustainable modes of access to events. The TMA will monitor the effectiveness of these event management strategies, and at SFMTA's request, meet with SFMTA to consider revised approaches to event management.

4.7.1 STREET CLOSURES

During larger events and temporary programming, Maryland Street between 21st and 22nd Streets is expected to seek permits to be closed to motor vehicle traffic through the City's Interdepartmental Staff Committee of Traffic and Transportation (ISCOTT) process. Street closures would be in effect anywhere from a few hours to an entire day. In advance and during any street closure, event organizers must provide sufficient street signage to discourage driving to the site during the event and to route motor vehicles through the site and minimize queuing and impacts to circulation in and around the Project site. The recommended vehicular loop will be through 22nd Street (west of Louisiana Street), Louisiana Street (south of 21st Street), and 21st Street (west of Louisiana Street), with drop-off zones located on Louisiana Street. 21st Street (east of Louisiana Street) would serve as a loading/service alley for events.

Photo Credit: Shae Rocco / Forest City

FIGURE 4.2: Pier 70 Urban Air Market

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5 SHUTTLE PROGRAM

It is anticipated that a shuttle will be operated at Pier 70 serving to connect site users (residents, employees, and visitors) with local and regional transit hubs. The shuttle service will aim to augment any existing transit services and it is not intended to compete with or replicate service. The necessity of the shuttle service will continue to be assessed as transit service changes in the Pier 70 area over time.

Any shuttles operated by the Project will have secure, safe and legal loading zones for passenger boarding and alighting, both in the site and off-site. Shuttles will be free and open to the public and be accessible per ADA standards.

5.1 PRECEDENTS

There are many relevant existing precedents for privately operated transit in San Francisco, including several shuttle services operated in Mission Bay and surrounding areas in Showplace Square and the Design District. Perhaps the most relevant of these examples is the shuttle system operated by the Mission Bay TMA, which connects residents, employees, and visitors of the Mission Bay South area with Fourth and King Station (Caltrain), Powell Street Station (BART and Muni), and the Transbay Temporary Terminal (Muni and regional bus operators).

Although the total development in Mission Bay South at build-out will be substantially larger than that proposed for Pier 70, the mixed-use nature of Mission Bay South—including residential, office, and retail—is similar to the development concept for Pier 70. In addition, the geographical and transportation context of Mission Bay South is similar to Pier 70, being located outside the traditional boundaries of downtown San Francisco and generally beyond walking distance of major regional transit hubs. Therefore, the Mission Bay TMA shuttle system offers an important precedent of developing a shuttle service concept for Pier 70.

5.2 PROPOSED ROUTES AND KEY DESTINATIONS

The primary goal of the proposed shuttle service at Pier 70 is to provide a first-mile/last-mile connection for transit riders traveling to or from the site, particularly for riders looking to access frequent local and regional transit. These riders would be expected to take regional transit services operated by BART, Caltrain, AC Transit, Golden Gate Transit, SamTrans, or other regional transit providers, but would need an additional connection to access these services when traveling to or from Pier 70. Although these riders would have the option of taking local transit services operated by Muni, the shuttle system would offer complementary service to meet their needs, similar to the way in which the Mission Bay TMA shuttle system complements existing Muni service.

As indicated by the discussions above, the exact structure of any shuttle service provided for the Project site is undetermined at this stage and depends on factors that may not be known at this time. In terms of minimum requirements, however, shuttle service should be provided that connects the Project site with both BART and Caltrain, because these are the primary regional transit providers expected to serve ridership generated by the Project. Exact routes and operating schemes can be determined at a later time, depending on factors such as peak-period traffic congestion along specific streets and BART and Caltrain service plans and schedules at specific stations.

5.3 SERVICE HOURS

While the details on shuttle service hours will be determined at a later date, conceptually the shuttle service could be provided at minimum during the extended weekday commute periods (7:00 AM to 10:00 AM and 3:00 PM to 7:00 PM) and should function as a bi-directional service, reflecting the mixed-use residential and commercial nature of the Project. Shuttle service during other time periods (e.g., weekends or midday) or during special events should also be considered on an as-needed basis. If necessary, a trial program for regular weekend or midday service could also be implemented to determine the feasibility of permanent shuttle operation during these time periods. Additionally, the shuttle would likely begin with a less robust service plan in the earliest phases of the Project when ridership and demand would be lowest, and ramp up to increase frequency as the Project is built out.

5.4 STOPS

Because the proposed shuttle service is intended to complement rather than duplicate Muni service, and is primarily oriented to the needs of residents, employees, and visitors of Pier 70, the number of stops on shuttle routes should be restricted. High-frequency stopping patterns would increase travel time and reduce the operational efficiency of the shuttles. In general, stops should only be provided at the offsite transit hub and on the Pier 70 site itself, with some allowance for intermediate stops that may serve local transit hubs.

5.5 ADJUSTMENTS TO SHUTTLE SERVICE

The efficacy of the shuttle service and the potential for service enhancements—including, but not limited to, improvements to the route network and alignment, schedule and service hours, and vehicle capacity—will be routinely evaluated by the TMA to ensure that the shuttle service is appropriately complementary to Muni service and coordinated with connecting BART and Caltrain service and making an adequate contribution to the Project's transportation mode share goals.

Consideration should also be given to working collaboratively with the Mission Bay TMA and developments in the vicinity of the Project on a potential shared shuttle solution that would operate some or all trips or routes jointly, serving both Mission Bay South and Pier 70. Although joint operation would potentially minimize operating costs for the service and improve transit connections between Mission Bay and Pier 70, such a solution would need to be carefully designed to minimize any negative effects to travel times or to the attractiveness of the shuttle as a travel option for Pier 70 site users.

6 MONITORING, EVALUATION, AND REFINEMENT

The Pier 70 TMA, through an on-site Transportation Coordinator, shall collect data and make monitoring reports available for review and approval by the Planning Department staff. Monitoring data shall be collected and reports shall be submitted to Planning Department staff every year (referred to as "reporting periods"), until five consecutive reporting periods display the project has met the reduction goal, at which point monitoring data shall be submitted to Planning Department staff once every three years. The first monitoring report is required 18 months after issuance of the First Certificate of Occupancy for buildings that include off-street parking or the establishment of surface parking lots or garages that bring the project's total number of off-street parking spaces to greater than or equal to 500. Each trip count and survey (see below for description) shall be completed within 30 days following the end of the applicable reporting period.

Each monitoring report shall be completed within 90 days following the applicable reporting period. The timing shall be modified such that a new monitoring report shall be required 12 months after adjustments are made to the TDM Plan in order to meet the reduction goal, as may be required in the "TDM Plan Adjustments" heading below. In addition, the timing may be modified by the Planning Department as needed to consolidate this requirement with other monitoring and/or reporting requirements for the project.

Table 6.1 below provides the EIR trip estimates for each phase identified in the EIR, as well as the number of trips for each phase reflecting a 20 percent reduction. Annual monitoring reports will compare progress against the trip estimates in Table 6.1 to assess progress, however the Project will not be considered out of compliance with either this Plan or Project mitigation measure M-AQ-1f unless the Reduction Target calculated for the fully built out project (see Table 4.1) has been exceed.

The findings will be reported out to the Planning Department, as described in the Mitigation Monitoring and Reporting Program (MMRP). The monitoring reports are intended to satisfy the requirements of Project mitigation measure M-AQ-1f, M-TR-5, M-C-TR-4A, and M-C-TR-4B. If, however, separate reporting is preferred by the TMA, separate reports are acceptable.

Based on findings from the evaluation and with input from SFMTA and the Planning Department, the Project will refine the TDM Plan by improving existing measures (e.g., additional incentives, changes to shuttle schedule), including new measures (e.g., a new technology), or removing existing measures, in order to achieve the Project's Reduction Target, as well as monitor progress against the trip estimates for each phase outlined below. It will be especially important to refine strategies as new transportation options are put into place in the area and as the TMA learns which strategies are most effective in shaping the transportation behaviors of the site users.

TABLE 6.1: Auto Trip Estimates by Phase

	RESIDENTIAL			COMMERCIAL			PHASE TRIP ESTIMATES	
PHASES	UNITS	CUM. UNITS	%	GSF	CUM. UNITS	%	EIR AUTO TRIP ESTIMATES (BY PHASE)	AUTO TRIP TARGET[1]
Phase 1	300	300	18%	6,600	6,600	0%	1,072	858
Phase 2	690	990	60%	348,200	354,800	16%	9,970	8,834
Phase 3	375	1,365	83%	673,900	1,028,700	45%	7,662	14,963
Phase 4	280	1,645	100%	747,450	1,776,150	79%	12,241	24,756
Phase 5	0	1,645	100%	486,200	2,262,350	100%	3,845	27,832

NOTE:
1 Represents 20 percent reduction target.

6.1 PURPOSE

The Plan has a commitment to reduce daily one-way vehicle trips by 20 percent compared to the total number of one-way vehicle trips identified in the project's Transportation Impact Study at project build-out ("Reduction Target"). To ensure that this reduction goal could be reasonably achieved, the TDM Plan will have a monitoring goal of reducing by 20 percent the one-way vehicle trips calculated for each building that has received a Certificate of Occupancy and is at least 75% occupied compared to the one-way vehicle trips anticipated for that building based on anticipated development on that parcel, using the trip generation rates contained within the project's Transportation Impact Study. The Plan must be adjusted if three consecutive monitoring results demonstrate that the TDM program is not achieving the TDM objectives. TDM adjustments will be made in consultation with the SFMTA and the Planning Department until three consecutive reporting periods' monitoring results demonstrate that the reduction goal is achieved.

If the TDM Plan does not achieve the Reduction Target for three consecutive monitoring results, the Plan must also be adjusted as described above. If, following the three consecutive monitoring periods, the TDM Plan still does not achieve the Reduction Target, the Planning Department may impose additional measures on the Project including capital or operational improvements intended to reduce VMT, or other measures that support sustainable trip making, until the Plan achieves the Reduction Target.

6.2 MONITORING METHODS

The Transportation Coordinator shall collect data (or work with a third party consultant to collect this data) and prepare annual monitoring reports for review and approval by the Planning Department and the SFMTA. The monitoring report, including trip counts and surveys, shall include the following components or comparable alternative methodology and components as approved or provided by Planning Department staff:

- Trip Count and Intercept Survey: Trip count and intercept survey of persons and vehicles arriving and leaving the project site for no less than two days of the reporting period between 6:00 a.m. and 8:00 p.m. One day shall be a Tuesday, Wednesday, or Thursday during one week without federally recognized holidays, and another day shall be a Tuesday, Wednesday, or Thursday during another week without federally recognized holidays. The trip count and intercept survey shall be prepared by a qualified transportation or qualified survey consultant and the methodology shall be approved by the Planning Department prior to conducting the components of the trip count and intercept survey. It is anticipated that the Planning Department will have a standard trip count and intercept survey methodology developed and available to project sponsors at the time of data collection.
- Travel Demand Information: The above trip count and survey information shall be able to provide travel demand analysis characteristics (work and non-work trip counts, origins and destinations of trips to/from the project site, and modal split information) as outlined in the Planning Department's Transportation Impact Analysis Guidelines for Environmental Review, October 2002, or subsequent updates in effect at the time of the survey.
- Documentation of Plan Implementation: The TDM Coordinator shall work in conjunction with the Planning Department to develop a survey (online or paper) that can be reasonably completed by the TDM Coordinator and/or TMA staff to document the implementation of TDM program elements and other basic information during the reporting period. This survey shall be included in the monitoring report submitted to Planning Department staff.
- Degree of Implementation: The monitoring report shall include descriptions of the degree of implementation (e.g., how many tenants or visitors the TDM Plan will benefit, and on which locations within the site measures will be/have been placed, etc.)
- Assistance and Confidentiality: Planning Department staff will assist the TDM Coordinator on questions regarding the components of the monitoring report and shall ensure that the identity of individual survey responders is protected.

Additional methods (described below) may be used to identify opportunities to make the TDM program more effective and to identify challenges that the program is facing.

6.3 MONITORING DOCUMENTATION

Monitoring data and efforts will be documented in an Annual TMA Report. Monitoring data shall be collected and reports shall be submitted to Planning Department staff every year (referred to as "reporting periods"), until five consecutive reporting periods display the project has met the reduction goal, at which point monitoring data shall be submitted to Planning Department staff once every three years. The first monitoring report is required 18 months after issuance of the First Certificate of Occupancy for buildings that include off-street parking or the establishment of surface parking lots or garages that bring the project's total number of off-street parking spaces to greater than or equal to 500. Each trip count and survey (see section 1.8.2 for description) shall be completed within 30 days following the end of the applicable reporting period. Each monitoring report shall be completed within 90 days following the applicable reporting period. The timing shall be modified such that a new monitoring report shall be required 12 months after adjustments are made to the TDM Plan in order to meet the reduction goal, as may be required in the "Compliance and TDM Plan Adjustments" heading below. In addition, the timing may be modified by the Planning Department as needed to consolidate this requirement with other monitoring and/or reporting requirements for the project.

6.4 COMPLIANCE AND TDM PLAN ADJUSTMENTS

The Project has a compliance commitment of achieving a 20 percent daily one-way vehicle trip reduction from the EIR's analysis of full build out, as described in Table 1. To ensure that this reduction could be reasonably achieved, the project will employ TDM measures to ensure that each phase's auto trips generated are no more than 80% of the trips estimated for the development within that phase, as shown in Table 6.1.

Monitoring data will be submitted to Planning Department staff every year, starting 18 months after the certificate of occupancy of the first building, until five consecutive reporting periods indicate that the fully-built Project has met the Reduction Target. Following the initial compliance period, monitoring data will be submitted to the Planning Department staff once every three years.

If three consecutive reporting periods demonstrate that the TDM Plan is not achieving the Reduction Target, or the interim target estimates identified in Table 6.1, TDM adjustments will be made in consultation with the SFMTA and the Planning Department and may require refinements to existing measures (e.g., change to subsidies, increased bicycle parking), inclusion of new measures (e.g., a new technology), or removal of existing measures (e.g., measures shown to be ineffective or induce vehicle trips).

If three consecutive reporting periods' monitoring results demonstrate that measures within the TDM Plan are not achieving the Reduction Target, or the interim target estimates identified in Table 6.1, the TDM Plan adjustments shall occur within 270 days following the last consecutive reporting period. The TDM Plan adjustments shall occur until three consecutive reporting periods' monitoring results demonstrate that the reduction goal is achieved. If the TDM Plan does not achieve the Reduction Target then the Planning Department shall impose additional measures to reduce vehicle trips as prescribed under the development agreement, which may include restriction of additional off-street parking spaces beyond those previously established on the site, capital or operational improvements intended to reduce vehicle trips from the project, or other measures that support sustainable trip making, until three consecutive reporting periods' monitoring results demonstrate that the reduction goal is achieved.

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Photo Credit: Shae Rocco / Forest City

Pier 70
Building 2 and Building 12